iWay

iWay Adapter for Microsoft Message Queueing
(MSMQ) User's Guide
Version 5 Release 5

Updated for J2EE CA 1.5

Preface

This document is written for system integrators who develop client interfaces between MSMQ and other applications.

How This Manual Is Organized

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

Chapter		Contents
1	Introducing the iWay Adapter for MSMQ	Explains how the iWay Adapter for MSMQ (Microsoft Message Queuing) integrates with an MSMQ system and describes the key features of the adapter.
2	Creating XML Schemas or Web Services	Describes how to create schemas to enable interaction between the adapter and a Microsoft Message Queuing (MSMQ) system and how to use iWay Servlet Application Explorer as deployed to a Sun Java System Application Server.
3	Listening for Events	Describes how iWay Servlet Application Explorer deployed to a Sun Java System Application Server enables you to listen for messages arriving at an Microsoft Message Queuing (MSMQ) system queue.
4	Using Web Services Policy-Based Security	Describes how to configure Web services policy-based security.
5	Management and Monitoring	Describes how you can use managing and monitoring tools provided by iBSE and JCA to gauge the performance of your run-time environment.

What You Need to Know

This document is written for system integrators who develop client-server interfaces between MSMQ and other applications.The iWay Adapter for MSMQ provides a means to exchange real-time business data between MSMQ systems and other application, database, or external business partner systems. The adapter allows for inbound and outbound processing with MSMQ. It is assumed that readers have:

- General knowledge of the MSMQ environment and how to configure MSMQ tasks.
- General knowledge of MSMQ concepts and processes.
- Specific knowledge of MSMQ business applications.
- General knowledge of client-server concepts.

Requirements

- Installation of the proper iWay components.
- Developer access to MSMQ interfaces and components.

Documentation Conventions

The following table lists and describes the conventions that apply throughout this manual.

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.
<u>underscore</u>	Indicates a default setting.
this typeface	Represents a placeholder (or variable) in a text paragraph, a cross-reference, or an important term.
this typeface	Highlights a file name or command in a text paragraph that must be lowercase.
this typeface	Indicates a button, menu item, or dialog box option you can click or select.
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.

Customer Support

Do you have questions about iWay Adapter for MSMQ?

If you bought the product from a vendor other than iWay Software, contact your distributor.

If you bought the product directly from iWay Software, call Information Builders Customer Support Service (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 MSMQ 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 number (*xxxx.xx*) when you call.

You can also access support services electronically, 24 hours a day, with InfoResponse Online. InfoResponse Online is accessible through our World Wide Web site, http://www.informationbuilders.com. It connects you to the tracking system and known-problem database at the Information Builders support center. Registered users can open, update, and view the status of cases in the tracking system and read descriptions of reported software issues. New users can register immediately for this service. The technical support section of www.informationbuilders.com also provides usage techniques, diagnostic tips, and answers to frequently asked questions.

To learn about the full range of available support services, ask your Information Builders representative about InfoResponse Online, or call (800) 969-INFO.

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?	
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

XML schema
Trace and log files
Log transaction

User Feedback

In an effort to produce effective documentation, the Documentation Services staff welcomes your opinions regarding this manual. Please use the Reader Comments form at the end of this manual to communicate suggestions for improving this publication or to alert us to corrections. You also can go to our Web site, http://www.iwaysoftware.com and use the Documentation Feedback form.

Thank you, in advance, for your comments.

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Interested in technical assistance for your implementation? Our Professional Services department provides expert design, systems architecture, implementation, and project management services for all your business integration projects. For information, visit our World Wide Web site, http://www.iwaysoftware.com.

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CHAPTER 1

Introducing the iWay Adapter for MSMQ

Topics:

- Features of the iWay Adapter for MSMQ

- Using the iWay Application Explorer With the iWay Adapter for MSMQ

- Using the iWay Application Explorer With the iWay Adapter for MSMQ

- Using the iWay Application Explorer With the iWay Adapter for MSMQ

- Deployment Information for the iWay Adapter for MSMQ

This section explains how the iWay Adapter for MSMQ (Microsoft Message Queuing) integrates with an MSMQ system. It also describes the key features of the adapter.

Features of the iWay Adapter for MSMQ

Microsoft Message Queuing (MSMQ) is a messaging infrastructure and a development tool for creating distributed, loosely-coupled, messaging applications for the Windows 2000 operating system. Applications developed for Message Queuing send messages to queues, which are temporary storage locations used to ensure that messages reach their destination. These applications can communicate across heterogeneous networks and with computers that are offline.

Message queuing provides guaranteed message delivery, efficient routing, security, transactional support, and priority-based messaging. Software that includes these features often is referred to in the industry as message-queuing software, store-and-forward software, or message-oriented middleware.

With message queuing, you can communicate across networks and with computers that are offline independent of the current state of the network and computers. System administrators can use message queuing to efficiently manage large, complex networks of computers and message queues.

Message queuing provides applications with reliable communication and efficient use of network resources. Developers can focus on business logic instead of networking issues, because message queuing guarantees network communication.

Interaction with an MSMQ system are defined as follows:

- **Services:** Applications use this capability to direct messages to an MSMQ queue.

- **Events:** Applications use this capability to read messages arriving on an MSMQ queue.

After deployment, the iWay Adapter for MSMQ:

- Provides bi-directional message interactions and transactional support, facilitating the exchange of messages between Microsoft Message Queues and other enterprise systems.

- Enables an application to read messages arriving on a queue and route those messages to another queue or to a non-MSMQ destination.

- Includes the iWay Application Explorer (iAE), a GUI tool that enables the configuration of the adapter.

- Enables messages to be directed to a named queue.

Using the iWay Application Explorer With the iWay Adapter for MSMQ

The iWay Application Explorer (iAE) enables you to create XML schemas and Web services for interaction with an MSMQ system. External applications that interact with an MSMQ system through the iWay Adapter for MSMQ use either XML schemas or Web services to pass data between the external application and the adapter.

The steps required to create XML schemas for Web services are illustrated in *Chapter 2, Creating XML Schemas or Web Services*.

Key Features of iWay Application Explorer

Key features of iWay Application Explorer include:

- The ability to connect to and explore a variety of application systems.

- Access to application system object metadata.

- A point-and-click process for generating XML schemas and Web services.

Installing and Configuring the Servlet iWay Application Explorer

iWay Application Explorer must be deployed through a servlet container or application server (for example, Sun Java System Application Server, BEA WebLogic, Apache Tomcat, SAP J2EE Engine, or IBM WebSphere).

In addition, the MSMQ system must be installed, configured, and available for client access. The iAE need not reside on the same system as the MSMQ system, but network access is required.

For more information on installing and configuring the Java Servlet iWay Application Explorer, see the *iWay 5.5 Installation and Configuration* documentation.

Deployment Information for the iWay Adapter for MSMQ

The iWay Adapter for MSMQ works in conjunction with iWay Application Explorer and either of the following components:

- iWay Business Services Engine (iBSE)

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

iWay Application Explorer, used to configure MSMQ connections and create Web services and events, can be configured to work in a Web services environment in conjunction with the iWay 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 with iWay Application Explorer and the adapters.

The iWay Business Services Engine (iBSE)

The iWay 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.

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 solves Enterprise Application Integration (EAI) hurdles that other programming models cannot. It enables programs to communicate with one another using a text-based, platform- and language-independent message format called XML.

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 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 the Sun Java System Application Server.

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

Two connectors are distributed in the iWay installation package. One conforms to the JCA 1.0 specification, with extensions that allow for the consumption of events. The other conforms to the JCA 1.5 specification. The JCA 1.0 connector provides for event functionality through the configuration of ports and channels. When using the adapter in conjunction with a JCA 1.5 connector, there is no need to create event ports to dispose of event data. However, you must create a channel to enable event listening capabilities. For more information on event capabilities of the iWay JCA connectors, see Chapter 3, *Listening for Events*. For more information on installing and deploying both connectors, see *iWay Installation and Configuration*.

Deployment Information Roadmap

The following table lists the location of deployment information for the iWay Adapter for MSMQ.

Deployed Component	For more information, see
iWay Application Explorer	• Chapters 2 and 3 of this guide • *iWay Installation and Configuration*
iWay Business Services Engine (iBSE)	• *iWay Installation and Configuration*
iWay Enterprise Connector for J2EE Connector Architecture (JCA)	• *iWay Connector for JCA User's Guide* • *iWay Installation and Configuration*

Creating XML Schemas or Web Services

Topics:

- Processing Overview
- Starting Servlet iWay Application Explorer
- Managing a Connection
- Creating a Schema
- Creating a Web Service

This section provides the information you require to create schemas for allowing interaction between the adapter and a Microsoft Message Queuing (MSMQ) system. It describes how to use iWay Servlet Application Explorer as deployed to a Sun Java System Application Server.

Although this section describes the Java™ servlet implementation of Application Explorer, other implementations provide the same functionality by means of similar graphical user interfaces.

Processing Overview

The iWay Adapter for MSMQ enables interaction an with MSMQ system. It enables you to create services for posting messages to an MSMQ system. Services are configured using the iWay Application Explorer.

Starting Servlet iWay Application Explorer

The server must be started where Servlet iWay Application Explorer is running.

Procedure: How to Start Application Explorer

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 your application server and iWay Version 5.5 are installed.

   port

   > Is the port number where the application server is listening.

   Application Explorer opens, as shown in the following image. 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:

   • iWay Adapters, where you create and manage connections to an MSMQ system and create and view schemas.

   • iWay Events, where you configure MSMQ event listening.

   • iWay Business Services, where you create and view business services.

   The left pane of the window contains an expandable list of adapter nodes, 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 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 new targets.

Managing a Connection

To connect to an MSMQ system, you must define a target. After you define the target, the parameters are automatically saved. You create a new target from the iWay Adapters tab of Application Explorer.

Procedure: How to Define a Target

The following image shows a list of adapters in the left pane and information about the selected adapter in the right pane.

To define a target:

1. In the left pane, select the *MSMQ* node.

2. In the right pane, move the pointer over *Operations* and select *Define a New Target*.

The Add a new MSMQ target pane appears on the right, as shown in the following image.

a. In the Target Name field, type a name for the new target, for example, NewMSMQ.

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

c. In the Target Type drop-down list, MSMQ appears as the default transport.

3. Click Next.

The Set connection info pane appears on the right.

The following table lists and defines the parameters for establishing a connection.

Parameter	Description
Queue Name	Machine name and name of the queue where messages are placed, for example: `localhost/private$/MyQueue`
Correlation ID	The correlation ID used in the MSMQ message header.
Priority	Sets the priority of the message in the message queue and can be used to determine the order in which messages are retrieved from the queue; 0 is the lowest priority, and 9 is the highest priority.
Return	Specify to receive a status notification or the input document.

4. Click OK.

In the left pane, the target you create appears under the MSMQ node.

Procedure: How to Connect to a Defined Target

To connect to a previously defined target:

1. Click the target name under the MSMQ node.

2. In the right pane, move the cursor over *Operations* and select *Connect*.

   The MSMQ target icon now includes a plus sign to indicate that you are connected to the MSMQ system, as shown in the following image.

Disconnecting From a Defined Target

Although you can maintain multiple open connections to different application systems, it is good practice to close connections when not in use.

Procedure: How to Disconnect From a Target

To disconnect from an MSMQ target:

1. In the left pane, click the target to which you are connected.

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

   Disconnecting from the application system drops the target, but the node remains. The node in the left pane changes to reflect that the target was closed.

Modifying a Target

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

Procedure: How to Edit a Target

To edit a target:

1. In the left pane, click the target node.

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

The Edit pane opens on the right. This pane contains three fields (Target Name, Description, and Target Type), and two active buttons.

Edit MSMQ target MyMSMQ

Targets represent configured connections to instances of backend systems. Choose a name and description for the new target that you wish to create.

Target Name: MyMSMQ

Description:

Target Type: MSMQ Transport

[Help]   [< Back]   [Next >]   [Cancel]

3. Modify the target information.

4. Click *Next*.

   Edit additional connection information in the Set connection info fields that appear.

5. Click *Finish*.

Deleting a Target

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

Procedure: How to Delete a Target

To delete a target:

1. In the left pane, click the target you want to delete.

2. In the right pane, move the cursor over *Operations* and select *Delete*.

   A confirmation dialog box opens.

3. Click *OK* to delete the target you selected.

   The node disappears from the left pane.

Creating a Schema

You create an XML schema for MSMQ using iWay Application Explorer when you deploy the iWay Adapter for MSMQ to Sun Java System Application Server for use either in a JCA (iWay Enterprise Connector for J2EE Connector Architecture) environment or a Web services environment.

When deployed to the Sun Java System Application Server and used in conjunction with an iBSE configuration, Application Explorer stores the schemas it creates in subdirectories under the Sun directory structure on the machine where the Sun Java System Application Server is installed. When used in conjunction with an iWay JCA configuration, Application Explorer stores schemas in a subdirectory of the iWay home directory.

When using the adapter with an iBSE configuration, the schemas are stored under a \schemas subdirectory in the Sun Java System Application Server installation directory, for example,

```
C:\SUN\AppServer\domains\domain1\applications\j2ee-apps\ibse\ibse_war\wsd
l\schemas\service\MSMQ\MyMSMQ
```

where:

MyMSMQ

Is the name of the connection to the MSMQ 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\MSMQ\MyMSMQ
```

where:

MyMSMQ

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

If you plan to deploy the iWay Adapter for MSMQ in a Web services environment, see also *Creating a Web Service* on page 2-10.

Procedure: How to Create an XML Schema

To generate service request and response schemas:

1. If you have not started the explorer, start Application Explorer and connect to your MSMQ system.

2. In the left pane, expand the MSMQ node.

The following image shows the MSMQ node expanded in the left pane.
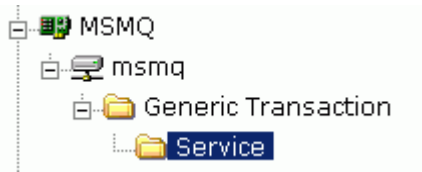
3. Continue expanding nodes to reach the Service node.

4. In the right pane, move the cursor over *Operations* and select *Generate Schema*.

Application Explorer builds schemas.

A schemas table similar to the one in the following image appears in the right pane. This table contains three columns labeled Part, Root Tag, and Schema. The Schema column provides hyperlinks to the different schemas.

Schemas

Part	Root Tag	Schema
Request	MSMQ	...
Response	emitStatus	...
Event	N/A	N/A
EventReply	N/A	N/A

| Help | | OK | Cancel |

5. To view a schema, click the ellipsis (…) in the row corresponding to the schema you want to view.

The following image shows an example of a request schema.

```
<?xml version="1.0" encoding="UTF-8" ?>
<!--  Generated by the iBSE 2004-08-03T23:11:00Z
  -->
<xs:schema
  xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:eb="http://www.ebxml.org/namespaces/messageF
  elementFormDefault="qualified"
  attributeFormDefault="unqualified">
- <xs:element name="MSM Q">
  - <xs:complexType>
    - <xs:sequence>
        <xs:any minOccurs="0"
          maxOccurs="unbounded" />
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

Creating a Web Service

You can generate a business service (also known as a Web service) for MSMQ operations.

Ensure you properly configure the servlet iBSE. For more information on installing and deploying iWay components, see the *iWay Installation and Configuration* manual.

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* guide.

Procedure: How to Generate a Web Service

To generate a Web service:

1. If you have not already connected, connect to your MSMQ system.

2. Expand a the *MSMQ* node.

3. Continue expanding nodes until you reach the Service node.

The following image shows the left pane with the Service node selected.
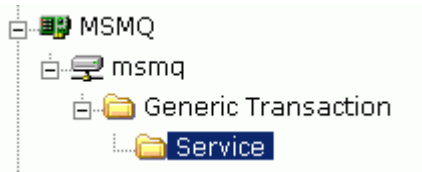
4. In the right pane, move the pointer over *Operations* and select *Create iWay Business Service.*

If there are existing Web services, you are prompted to choose an existing service or create a new service.

If you select **Use an existing service**, a drop-down list appears from which you must select the service.

If you select **Create a new service**, the Create Web Service pane opens on the right, as shown in the following image.

a. In the Service Name field, type a name to identify the Web service (under the Service node in the left pane of the iWay 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. After you select an existing service or you create a new service, click *Next*.

Another Web Service pane opens on the right which prompts you for information about the method of the service as shown in the following image.

     a. In the Method Name field, type a name to specify the name of the method 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 iWay Business Services tab, and the new business service appears in the left pane.

Testing a Web Service

After you create a Web service, test it to ensure it functions properly. Application Explorer includes a test tool for testing a Web service.

Procedure: How to Test a Web Service for a Business Object

To test a Web service:

1. If you are not on the iWay Business Services tab of Application Explorer, click the tab to access business services.

2. If it is not expanded, expand the *iWay Business Services* node.

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, as shown in the following image.
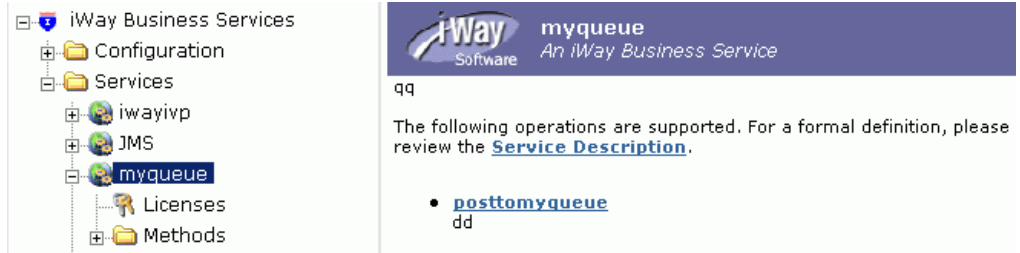
a. In the right pane, click the named business services link, for example, *posttomyqueue*.

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.

b. Provide the appropriate XML input.

5. Click *Invoke*.

Application Explorer displays the results in a results pane on the right.

CHAPTER 3

Listening for Events

Topics:

- Understanding iWay Event Functionality
- Creating an Event Port
- Creating a Channel

iWay Servlet Application Explorer deployed to a Sun Java System Application Server enables you to listen for messages arriving at an Microsoft Message Queuing (MSMQ) system queue.

Although this section describes the Java™ servlet implementation of Application Explorer, other implementations provide the same functionality by means of similar graphical user interfaces.

Understanding iWay Event Functionality

Events are generated as a result of a message arriving at a particular queue. You can use messages arriving at a queue to trigger an action in your application. For example, information in a message arriving at a queue can be used to update customer information in a database. If your application must perform an action when this happens, your application is a consumer of this event.

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

The following is a description of how ports and channels work:

- Port

  A port associates a particular business object exposed by an adapter with a particular disposition. A disposition defines the protocol and location of the event data. The port defines the end point of the event consumption. For more information, see *Creating an Event Port on page 3-2*.

- 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 a Channel* on page 3-14.

Important: When using the adapter in conjunction with the iWay Connector for JCA 1.5, there is no need to create event ports to dispose of event data. However, you must create a channel to enable event listening capabilities.

Creating an Event Port

The following procedures describe how to create an event port from the iWay Event Adapters tab for various dispositions using Application Explorer.

The following dispositions are available when using the servlet Application Explorer in conjunction with an iBSE implementation. You can switch between an iBSE and a JCA implementation by choosing one or the other from the drop-down menu in the upper right of the Application Explorer.

- File

- iBSE

- MSMQ

- JMS queue

- SOAP

- HTTP

- MQ Series

- MAIL

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 implementation.

- File

- HTTP

- JMS queue

- MQ Series

Important: When using the adapter in conjunction with the iWay connector for JCA 1.5, there is no need to create event ports to dispose of event data. However, you must create a channel to enable event listening capabilities.

Procedure: How to Create an Event Port for the File Disposition

To create a specific event port for the File disposition:

1. Click the *iWay Events* tab.

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

3. Select the *ports* node.

4. Move the pointer over *Operations* and select *Add a new port*.

The Create New Port pane appears on the right, as shown in the following image.


```
Create New Port

Choose parameters of the port that you wish to create.

Port Name:              File
Description:            fileport
Disposition Protocol:   FILE
Disposition:            ifile://[location];errorTo=[pre-define

   Help                        OK            Cancel
```

a.   In the Port Name field, type a name for the new port.

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

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

d.   In the Disposition field, provide a destination where the event data is written.

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

ifile://*location*[;errorTo=*errorDest*]

For example:

ifile://D:\in\x.txt;errorTo=ifile://D:\error

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

Important: When using the adapter in conjunction with the iWay Connector for JCA 1.5, there is no need to create event ports to dispose of event data. However, you must create a channel to enable event listening capabilities.

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

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

5. Click *OK*.

The event 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 as shown in the following image.

```
Operations ▶
Port Name    FilePort
Description  File
Disposition  ifile://D:\in\x.txt;errorTo=D:\error
Target       MSMQ
```

You are ready to associate the event port with a channel. For more information, see *Creating a Channel* on page 3-14.

Procedure: How to Create an Event Port for iBSE

You can call a Web Service created through iWay Business Services Engine (iBSE).

To create an event port for iBSE:

1. Click the *iWay Events* tab.

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

3. Select the *ports* node.

4. Move the pointer over *Operations* and select *Add a new port*.

The Create Event Port pane opens on the right.

a. In the Port Name field, type a name for the port.

The name is used to build a repository entry as well as to identify the port.

b. In the Description field, type a brief description for the port name you just created.

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

d. In the Disposition field, enter an iBSE destination in the form of:

`ibse:/svcName.mthName[;responseTo=respDest][;errorTo=errorDest]`

The following table defines the parameters for the disposition.

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

5. Click *OK*.

The event 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 a Channel* on page 3-14.

Procedure: How to Create an Event Port for a JMS Queue

To create an event port for Sun Java System Message Queue:

1. Click the *iWay Events* tab.

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

3. Select the *ports* node.

4. Move the pointer over *Operations* and select *Add a new port*.

The Create Event Port pane opens on the right.

a. In the Port Name field, type a name for the new port.

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

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

d. In the Disposition field, enter a JMS destination.

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

```
jmsq:queue@conn_factory;jndiurl=myUrl;jndifactory=myFactory;user=u
serID;password=pswd[;errorTo=errorDest]
```

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

```
jms:queue@conn_factory;jndiurl=;jndifactory=;
```

Important: When using the adapter in conjunction with the iWay Connector for JCA 1.5, there is no need to create event ports to dispose of event data. However, you must create a channel to enable event listening capabilities.

The following table defines the parameters for the disposition.

Parameter	Description
queue	JNDI name of a queue to which events are emitted.
conn_factory	Connection factory, a resource that contains information about the JMS Server.
	You must create the connection factory, for example:
	sampleQCF
myUrl	The URL to use to contact the JNDI provider. The syntax of this URL depends on which JNDI provider is used. This value corresponds to the standard JNDI property,
	java.naming.provider.url
	The URL of the Sun Java System Application Server is
	iiop://localhost:3700
	where:
	3700
	Is a default port.
myFactory	Is JNDI context.INITIAL_CONTEXT_FACTORY and is provided by the JNDI service provider.
	For Sun Java System Application Server, this is
	com.sun.jndi.cosnaming.CNCtxFactory
userID	Valid user name required to access a JMS server.
pswd	Valid password required to access a JMS server.

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

5. Click *OK*.

The event 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 as shown in the following image.

```
Operations ▶
Port Name  JMS
Description jmsq
Disposition jmsq:myQueueName@sampleQCF;jndiurl=iiop://localhost
Target     MSMQ
```

You are now ready to associate the event port with a channel. For more information, see *Creating a Channel* on page 3-14.

Procedure: How to Create an Event Port for MSMQ

To create an event port for MSMQ:

1. Click the *iWay Events* tab.

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

3. Select the *ports* node.

4. Move the pointer over *Operations* and select *Add a new port*.

The Create Event Port pane opens on the right.

a. In the Port Name field, type a name for the port.

The name is used to build a repository entry as well as to identify the connection.

b. In the Description field, type a description for the port name you just created.

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

d. In the Disposition field, enter a MSMQ destination in the form of:

```
msmq:/host/queueType/queueName[;errorTo=errorDest]
```

The following table defines the parameters for the disposition.

Parameter	Description
host	Machine name where the Microsoft Queuing system is running.
queueType	Type of queue. For private queues, enter *Private$*.
	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.
queueName	Name of the private queue in which messages are placed.
errorDest	Location to which error logs are sent. Optional.
	Predefined port name or another disposition URL. The URL must be complete, including the protocol.

5. Click *OK*.

   The event 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 as shown in the following image.

   You are ready to associate the event port with a channel. For more information, see *Creating a Channel* on page 3-14.

Procedure: How to Create a Port for the SOAP Disposition

To create a port for a SOAP disposition:

1. Click the *iWay Events* tab.

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

3. Select the *ports* node.

4. Move the pointer over *Operations* and select *Add a new port*.

The Create Event Port window opens in the right pane.

a. In the Port Name field, type a name for the new port.

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

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

d. In the Disposition field, enter an SOAP destination, using the following format:

```
soap:wsdl-url;soapaction=myAction[;responseTo=responseDest][;error
To=ErrorDest]
```

The following table defines the parameters for the disposition.

Parameter	Description
wsdl-url	The URL to the WSDL file that is required to create the SOAP message.
myAction	Method that is called by the disposition.
responseDest	Location to which the response documents are sent. Optional.
	Predefined port name or another disposition URL. The URL must be complete, including the protocol.
errorDest	Location to which error logs are sent. Optional.
	Predefined port name or another disposition URL. The URL must be complete, including the protocol.

5. Click *OK*.

The event 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.

Procedure: How to Create an Event Port for an HTTP Disposition

To create an event port for an HTTP disposition:

1. Click the *iWay Events* tab.

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

3. Select the *ports* node.

4. Move the pointer over *Operations* and select *Add a new port*.

The Create iWay Event Port pane opens on the right.

a. In the Port Name field, type a name for the new port.

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

c. From the disposition protocol drop-down list, select *HTTP*.

d. From the Disposition field, enter an HTTP destination.

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

`ihttp://url[;responseTo=respDest]`

where:

`url`

   Is the URL target for the post operation, for example,
   http://myhost:1234/docroot

`responseDest`

   Is the location to which responses are posted (optional).

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

`http://host:port/uri`

where:

`host:port`

   Is the 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`

   Is the universal resource identifier that completes the url specification.

Important: When using the adapter in conjunction with the iWay Connector for JCA 1.5, there is no need to create event ports to dispose of event data. However, you must create a channel to enable event listening capabilities.

The event 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 as shown in the following image.

```
Operations ▶
Port Name      HTTP
Description    HTTPport
Disposition    ihttp://myhost:1234/docroot
Target         MSMQ
```

5. Click *OK*.

Procedure: How to Create an Event Port for MQSeries Disposition

To create an event port for HTTP disposition using Application Explorer:

1. Click the *iWay Events* tab.

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

3. Select the *ports* node.

4. Move the pointer over *Operations* and select *Add a new port*.

   The Create iWay Event Port pane opens on the right.

   a. In the Port Name field, type a name for the new port.

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

   c. From the disposition protocol drop-down list, select *MQSeries*.

   d. In the Disposition field, enter an MQSeries destination.

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

   ```
   mqseries:/qManager/qName;host=hostName;port=portNum;
   channel=channelName[;errorTo=errorDest]
   ```

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

   ```
   mq:qManager@respQueue;host=;port=;channel=
   ```

   Important: When using the adapter in conjunction with the iWay Connector for JCA 1.5, there is no need to create event ports to dispose of event data. However, you must create a channel to enable event listening capabilities.

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

Parameter	Description
qManager	Name of the queue manager to which the server must connect.
qName or *respQueue*	Name of the queue in which messages are placed.
hostname	Name of the host on which the MQ Server is located. MQ Client only.

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

5. Click *OK*.

The newly created event port appears under the port section of the event adapter in the left pane.

Editing or Deleting an Event Port

The following procedures provide information on how to modify or delete an event port.

Procedure: How to Edit an Event Port

To edit an existing 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 pane opens on the right as shown in the following image.

Edit Port

Choose parameters of the port that you wish to edit.

Port Name:	File
Description:	Fileport
Disposition Protocol:	FILE
Disposition:	ifile://D:\in*.txt

Help   OK   Cancel

3. Make the required changes to the Description, Disposition Protocol, or Disposition fields and click *OK*.

Note: The Edit Port pane does not allow you to change the name of the port, only the parameters.

Procedure: How to Delete an Event Port

To delete an existing event port:

1. 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 a Channel

The following procedure describes how to create an MSMQ channel for your iWay event. You must associate a port to a channel before you can make the channel active.

Procedure: How to Create an MSMQ Channel

To create a channel using iWay Application Explorer:

1. Click the *iWay Events* tab.

The adapters that appear in the left pane support events.

2. Expand the *MSMQ* node.

    The ports and channels nodes appear in the left pane.

3. Click the *channels* node.

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

    The Add a new channel window opens.

    a. Type a name for the channel, for example, NewChannel.

    b. Type a brief description.

    c. From the drop-down list, select *MSMQ Listener*.

5. Click *Next*.

    The Edit Channels pane opens on the right.

6. Provide the values described in the following table which lists and describes the parameters for creating a channel.

Parameter	Description
Inbound Queue	Name of the Microsoft Message queue that the adapter polls for events.
Filter by Correlation ID	To filter messages by correlation ID, specify the Correlation ID of the message to be received.
Filter by Message ID	Filters messages so that only messages with a specified ID are pulled from the queue.

7. Click *Next*.

The Select Ports pane opens, as shown in the following image. A list of available ports appear on the left. The ports that are currently associated appear in the Current field on the right.
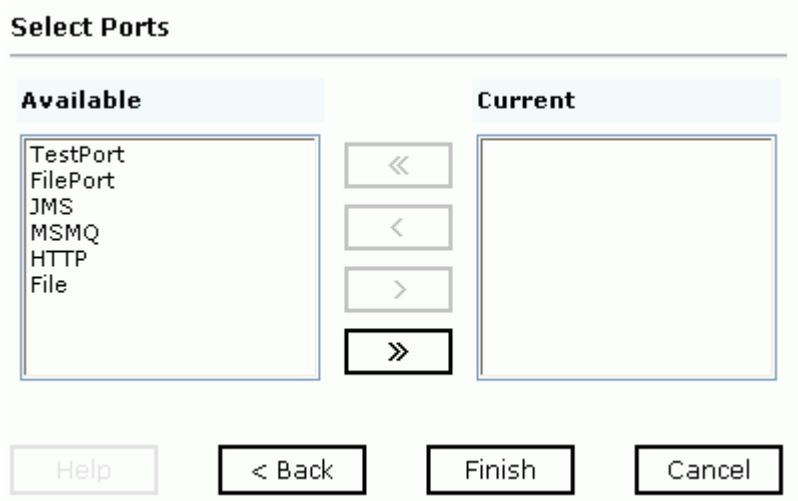
a. Select an event port from the list of available ports.

b. Click the single right arrow button to transfer the port to the list of current ports. To associate all the event ports, click the double right arrow button.

8. Click *Finish*.

The channel appears under the channels node in the left pane. The summary pane opens with a channel description and information about channel status and the current port(s) as shown in the following image. All the information in the summary is associated with the channel you created.
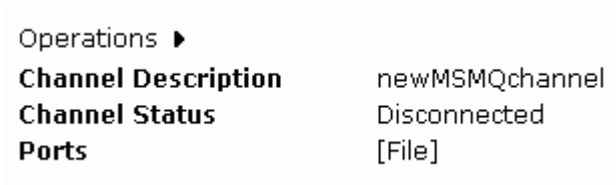
The following image shows a sample channel. The X over the icon indicates that the channel is currently disconnected.

You must start the channel to activate your event configuration.

9. In the right pane, move the pointer over *Operations* and select *Start the channel*.

   The channel you created becomes active.

   The X over the icon disappears.

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

Procedure: How to Edit a Channel

To edit an existing channel:

1. In the left pane, select the channel you want to edit.

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

   The Edit channels pane opens.

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

Procedure: How to Delete a Channel

To delete an existing channel:

1. In the left pane, select the channel 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 channel you selected, click *OK*.

   The channel disappears from the list in the left pane.

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.

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 4-11.

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.
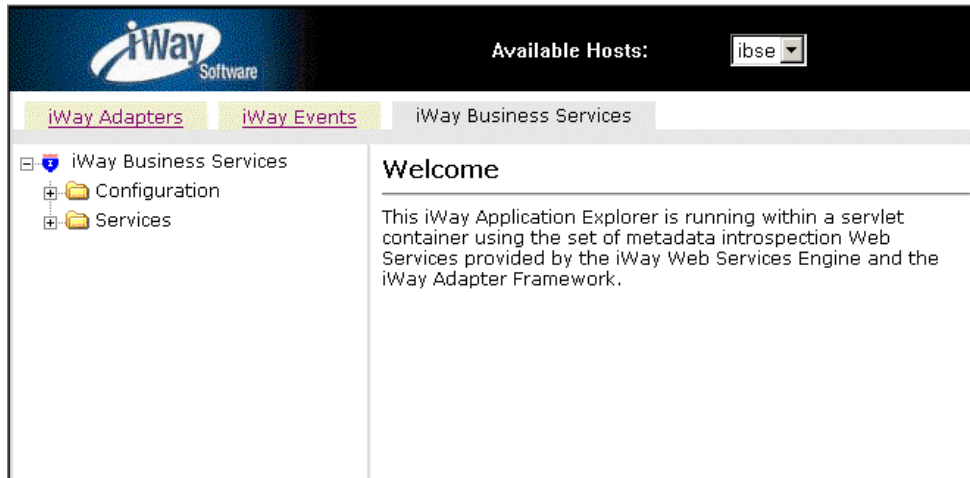
a. Click the *iWay Business Services* tab.

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.

Add a new user

Name:

Password:

Description:

Help   OK   Cancel

    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.

Operations ▶

Groups

A group is an object that can be granted or denied permissions to run iWay Business Services. A group is used as a container for one or more users. Policies that specify particular rights can be associated with a group.

Group name	Description
☐ newgroup	

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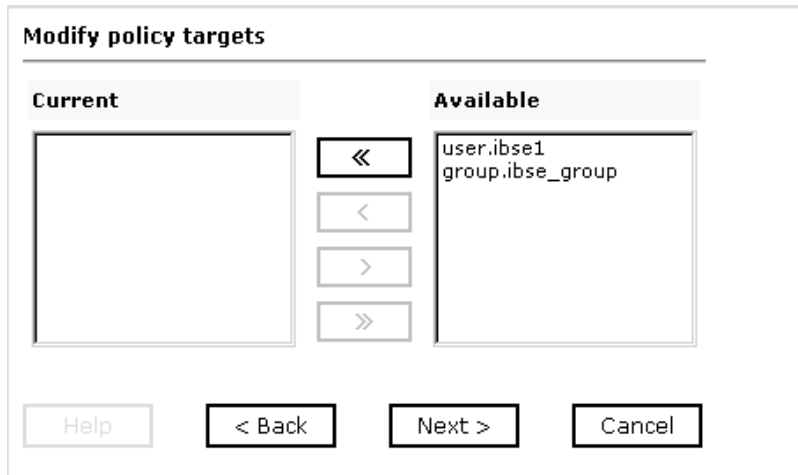
4. Select a minimum of one user or group from the Available pane.

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).

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

- 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 iWay 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

iWay 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 application 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.

iBSE Settings:		Save
Property Name	**Property Value**	
System		
Language	English ▾	
Adapter Lib Directory	C:\Program Files\iWay55\lib	
Encoding	UTF-8 ▾	
Debug Level	NONE ▾	
Number of Async. Processors	0 ▾	
Security		
Admin User	iway	
Admin Password	****	
Policy	☐	
Repository		
Repository Type	File System ▾	
Repository Url	file://C:\Program Files\iWay55\bea\ibs	
Repository Driver		
Repository User		
Repository Password		
Repository Pooling	☐	
More configuration...		Save

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.

iBSE Monitoring Settings:

Property Name	Property Value
Monitoring	
Repository Type	File System ▼
Repository Url	file://C:\Program Files\iWay55\bea
Repository Driver	
Repository User	
Repository Password	
Repository Pooling	☐
Auditing	
Store Message	○ yes ⊙ no
Max Message Stored	10,000 ▼

Save Configuration	Save History	View Events	View Services

Start Monitoring

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 application 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).

Service Statistics

Web Service Methods

Service	Method
B0100033 ▾	GetEffectiveAddress ▾

Statistics

Total Time	1 hrs
Total Request Count	1
Total Success Count	1
Total Error Count	0
Average Request Size	409.0 bytes
Average Response Size	665.0 bytes
Average Execution Time	656 ms
Last Execution Time	656 ms
Average Back End Time	530 ms
Last Back End Time	530 ms
Successful Invocations	select a correlation id ▾
Failed Invocations	select a correlation id ▾

Suspend Service

< home

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.

Invocation Statistics

Message Information

Received	2004-09-14 12:04:16.312
Sent to adapter	2004-09-14 12:04:16.406
Received from adapter	2004-09-14 12:04:16.936
Responded	2004-09-14 12:04:16.968
Status	SUCCESS

Client Information

Client IP	127.0.0.1
Client Host Name	127.0.0.1
User Name	

Detail

Message	Size
Request Message	409 bytes
Response Message	665 bytes

< home

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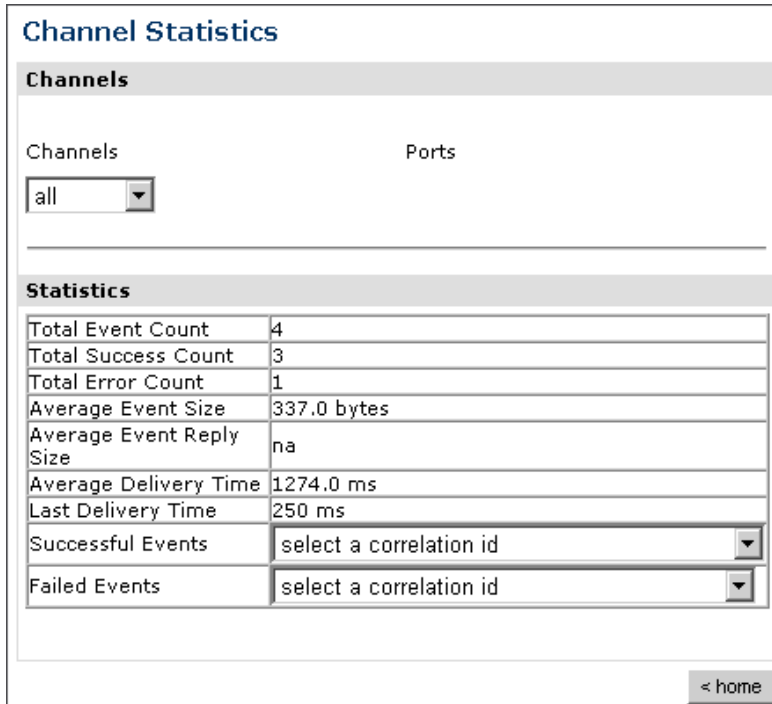
The system level summary provides event statistics at a system level.

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.

Statistic	Description
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.

Channel Statistics

Channels

Channels	Ports
TestChan	TestPort

Statistics

Total Event Count	2
Total Success Count	2
Total Error Count	0
Average Event Size	446.0 bytes
Average Event Reply Size	na
Average Delivery Time	2189.0 ms
Last Delivery Time	na
Successful Events	select a correlation id
Failed Events	select a correlation id

[Suspend Channel] [Start Channel]

[< home]

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.

    ## Message Statistics

    Message Information

    | Received At | 2004-09-14 12:18:20.842 |
    | Disposed At | ● TestPort |
    | Delivered At | 2004-09-14 12:18:23.562 |

    Messages

Detail	size
Event Message	446 bytes
Reply Message	na

    < home

    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 HTTP port for the application server, 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.

   This JSP application is used to test the functionality of the J2EE-CA connector.
   There are several types of adapters available thru this J2EE-CA connector.

   Configuration

   - Running in MANAGED mode.
   - iway.jndi :eis/IWAFConnectionFactory:
   - Refresh Connection Factory after redeployment - Destroy Connection Factory for redeployment

   Adapters

   - Service adapters
   - 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.

     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.

Service Adapters
Select an adapter from the following list to review its available targets (configurations)

- CICS
- Clarify(CBO)
- EMAIL
- IMS
- JMS
- Lotus
- MQ
- MSMQ
- Oracle Applications
- RDBMS
- Telnet
- Tibco
- Tuxedo

Targets for MSMQ
No targets configured for this adapter.

                                                                 `<< Back`

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.

```
TotalRequestCount      : 0
TotalSuccessCount      : 0
TotalErrorCount        : 0
AverageExcecutionTime  : 0 msec.
LastExcecutionTime     : 0 msec.
```

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 HTTP port for the application server, 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.

   This JSP application is used to test the functionality of the J2EE-CA connector.
   There are several types of adapters available thru this J2EE-CA connector.

   Configuration

   - Running in MANAGED mode.
   - iway.jndi :eis/IWAFConnectionFactory:
   - Refresh Connection Factory after redeployment - Destroy Connection Factory for redeployment

   Adapters

   - Service adapters
   - 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.

   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.

```
Current channel Statistics
Commands: start refresh
Active: false
TotalRequestCount       : 0
TotalSuccessCount       : 0
TotalErrorCount         : 0
AverageExcecutionTime : 0 msec.
LastExcecutionTime      : 0 msec.

Statistics for port 'fileIN'
TotalRequestCount       : 0
TotalSuccessCount       : 0
TotalErrorCount         : 0
AverageExcecutionTime : 0 msec.
LastExcecutionTime      : 0 msec.
```

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 5.5 Installation and Configuration* 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 HTTP port for the application server, 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*.

Tracing information is written to the ibselogs directory where your application server accesses or has expanded Servlet iBSE.

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.

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 5.5 Installation and Configuration* 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.

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\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\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 5.5 Installation and Configuration* 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 5-26.

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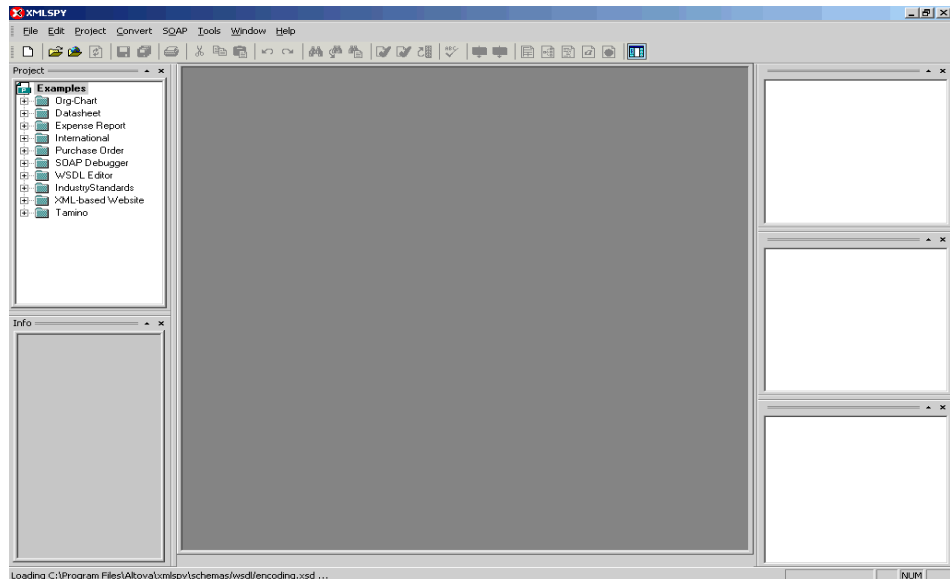
3. From the SOAP menu, select *Create new SOAP request*.

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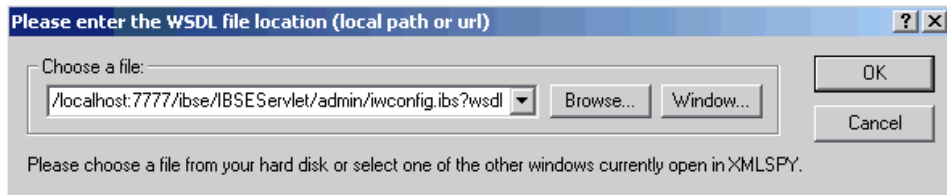
**4.** In the Choose a file field, paste the iBSE configuration service URL.

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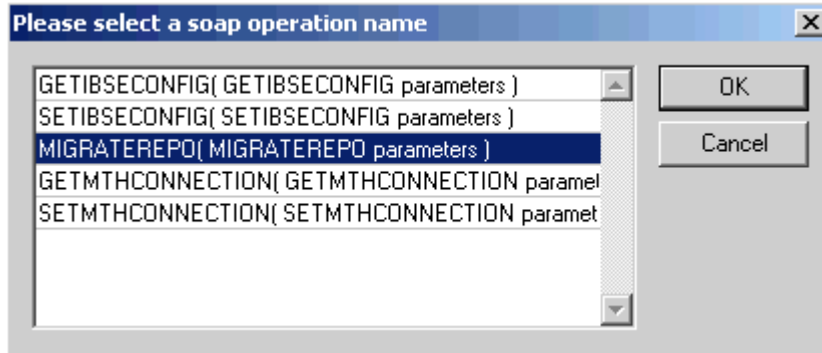
6. Select the *MIGRATEREPO(MIGRATEREPO parameters)* control method and click *OK*.

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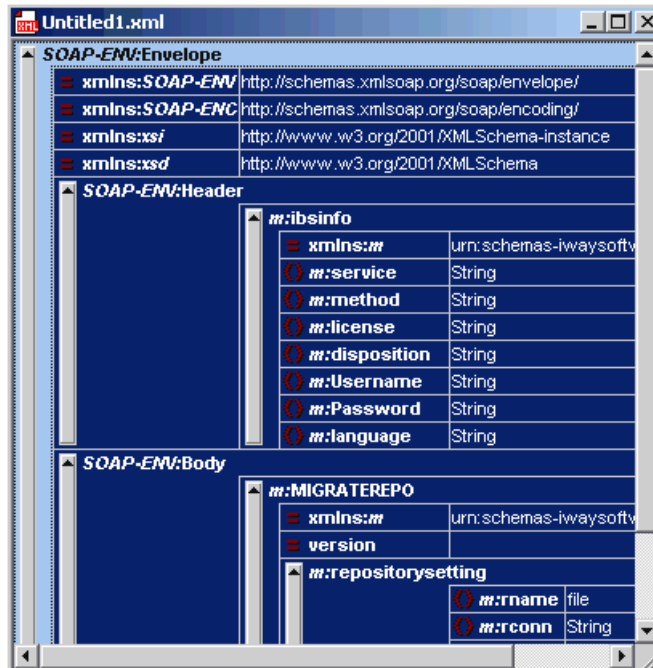
7. Locate the *Text view* icon in the tool bar.

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 i*Way 5.5 Installation and Configuration* 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
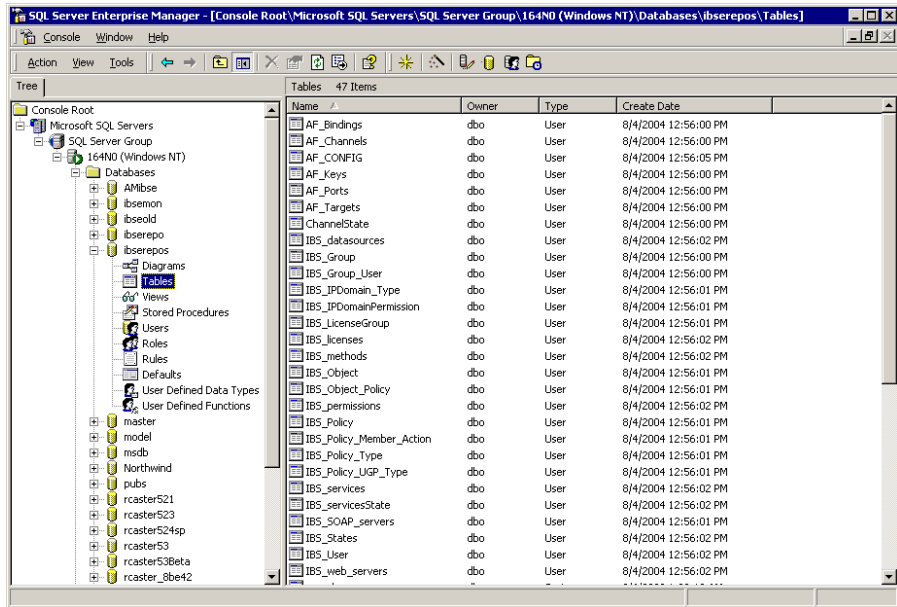
To migrate a Microsoft SQL Server 2000 repository:

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

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

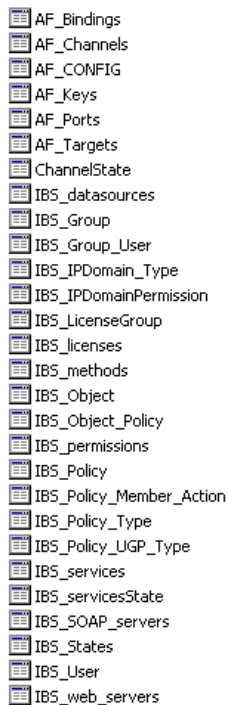This directory contains SQL to create the repository tables in the following file:

`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 5.5 Installation and Configuration* 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.

   AF_Bindings
   AF_Channels
   AF_CONFIG
   AF_Keys
   AF_Ports
   AF_Targets
   ChannelState
   IBS_datasources
   IBS_Group
   IBS_Group_User
   IBS_IPDomain_Type
   IBS_IPDomainPermission
   IBS_LicenseGroup
   IBS_licenses
   IBS_methods
   IBS_Object
   IBS_Object_Policy
   IBS_permissions
   IBS_Policy
   IBS_Policy_Member_Action
   IBS_Policy_Type
   IBS_Policy_UGP_Type
   IBS_services
   IBS_servicesState
   IBS_SOAP_servers
   IBS_States
   IBS_User
   IBS_web_servers

   For more information on configuring the Oracle repository, see the *iWay 5.5 Installation and Configuration* 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
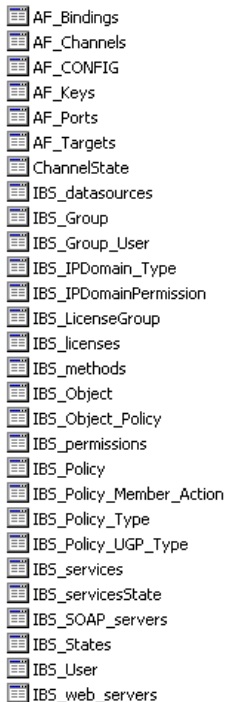
To migrate a Sybase repository:

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.

   AF_Bindings
   AF_Channels
   AF_CONFIG
   AF_Keys
   AF_Ports
   AF_Targets
   ChannelState
   IBS_datasources
   IBS_Group
   IBS_Group_User
   IBS_IPDomain_Type
   IBS_IPDomainPermission
   IBS_LicenseGroup
   IBS_licenses
   IBS_methods
   IBS_Object
   IBS_Object_Policy
   IBS_permissions
   IBS_Policy
   IBS_Policy_Member_Action
   IBS_Policy_Type
   IBS_Policy_UGP_Type
   IBS_services
   IBS_servicesState
   IBS_SOAP_servers
   IBS_States
   IBS_User
   IBS_web_servers

   For more information on configuring the Sybase repository, see the *iWay 5.5 Installation and Configuration* 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.

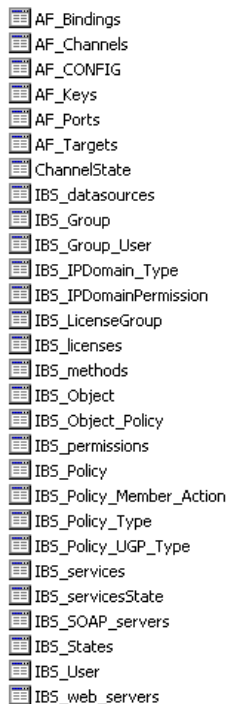**Procedure: How to Migrate a DB2 Repository**

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.

   AF_Bindings
   AF_Channels
   AF_CONFIG
   AF_Keys
   AF_Ports
   AF_Targets
   ChannelState
   IBS_datasources
   IBS_Group
   IBS_Group_User
   IBS_IPDomain_Type
   IBS_IPDomainPermission
   IBS_LicenseGroup
   IBS_licenses
   IBS_methods
   IBS_Object
   IBS_Object_Policy
   IBS_permissions
   IBS_Policy
   IBS_Policy_Member_Action
   IBS_Policy_Type
   IBS_Policy_UGP_Type
   IBS_services
   IBS_servicesState
   IBS_SOAP_servers
   IBS_States
   IBS_User
   IBS_web_servers

   For more information on configuring the DB2 repository, see the *iWay 5.5 Installation and Configuration* 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.
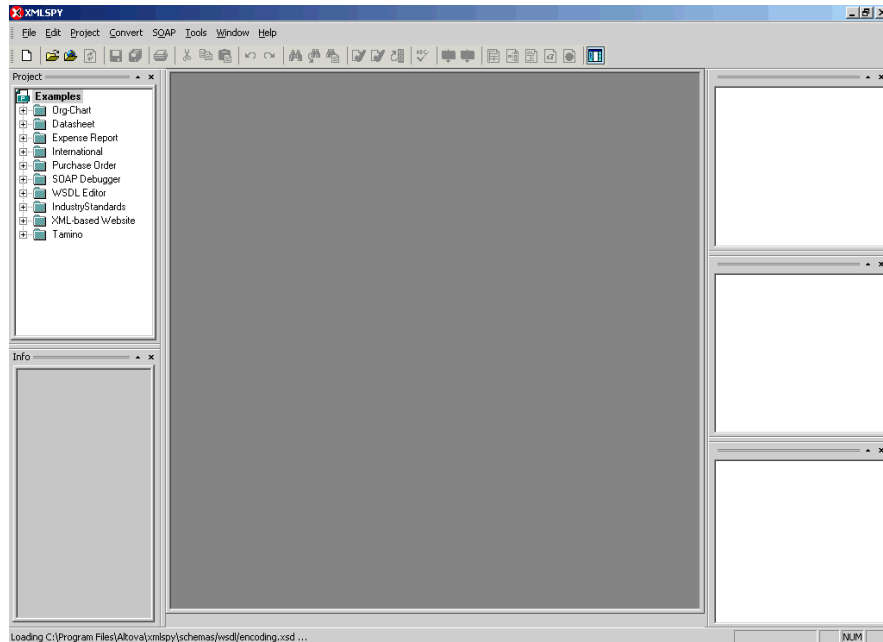
3. From the SOAP menu, select *Create new SOAP request*.

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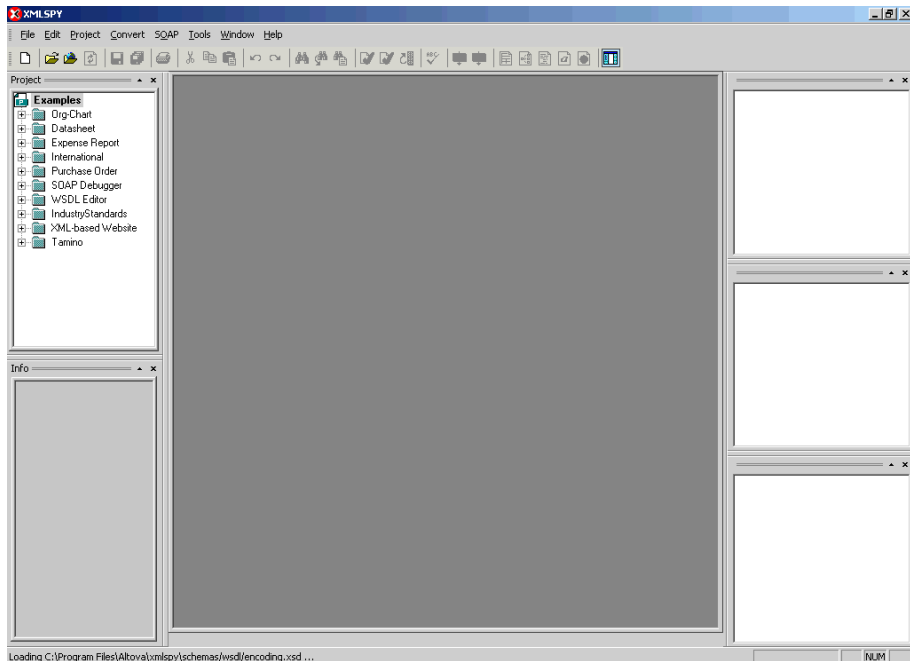
3. From the SOAP menu, select *Create new SOAP request*.

    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.

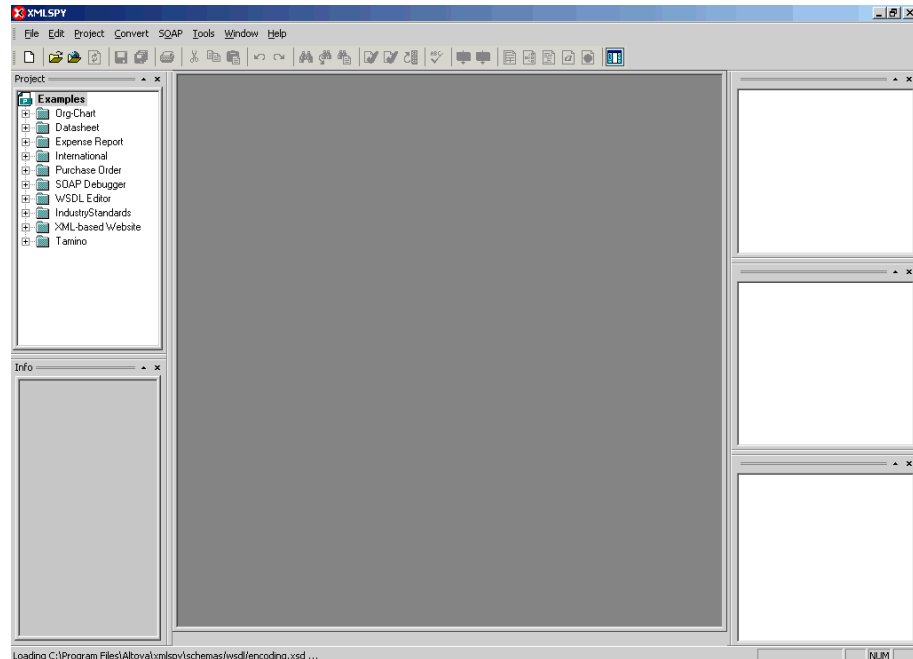**Procedure: How to Retrieve Web Service Method Connection Information**

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.

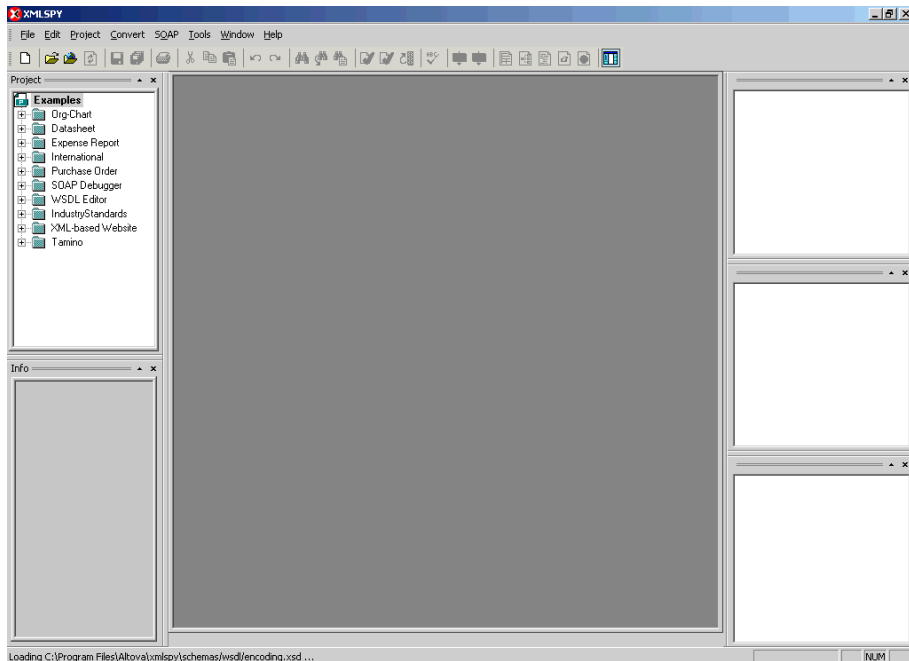**Procedure: How to Update Web Service Method Connection Information**

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.

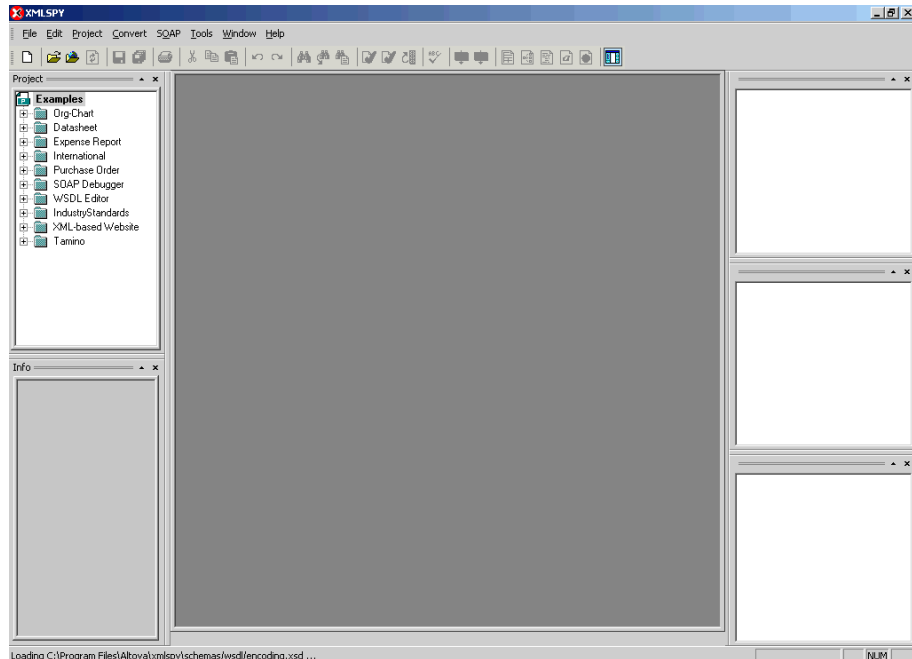**Procedure: How to Start a Channel Programmatically**

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.
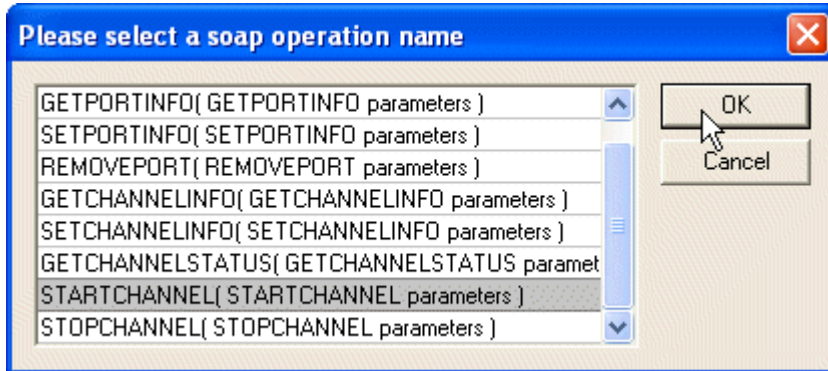

3. From the SOAP menu, select *Create new SOAP request*.

    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*.
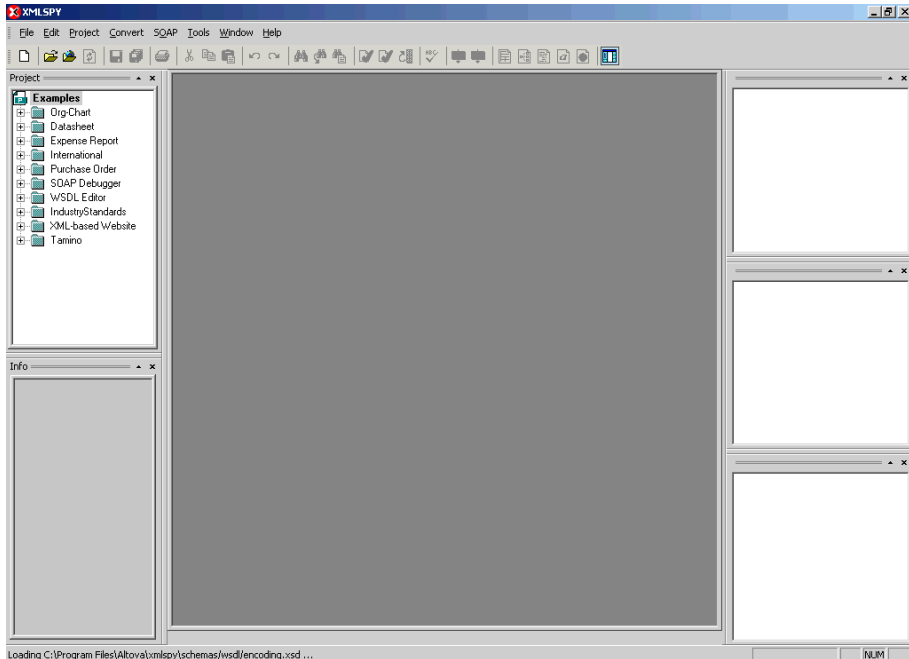
Procedure: How to Stop a Channel Programmatically

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.
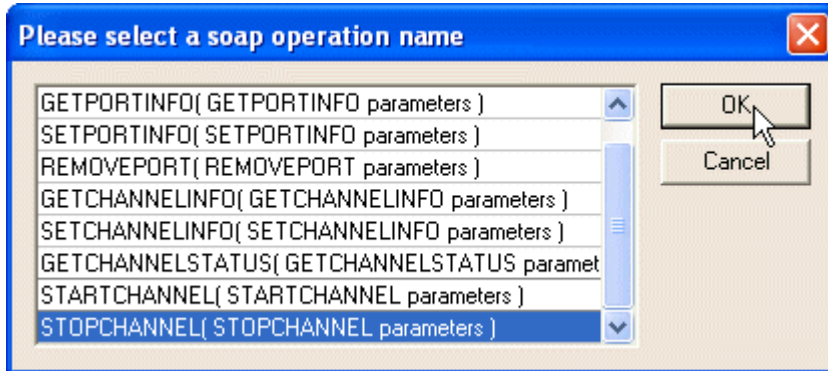

3. From the SOAP menu, select *Create new SOAP request*.

   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*.

Reader Comments

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