

iWay

iWay Adapter for ISO15022 for BEA WebLogic
User's Guide
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Preface

This documentation describes how to use the iWay Adapter for ISO15022 for BEA WebLogic. It is intended for developers to help them migrate ISO15022 formats from or to ISO7775 formats.

How This Manual Is Organized

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

Chapter/Appendix		Contents
1	Introducing the iWay Adapter for ISO15022 for BEA WebLogic	Describes how the components of the iWay Adapter for ISO15022 for BEA WebLogic streamline the flow of information.
2	Creating XML Schemas or Web Services for the iWay Adapter for ISO15022 for BEA WebLogic	Describes how to use Servlet Application Explorer to create XML schemas or Web services for the iWay Adapter for ISO15022 for BEA WebLogic.
3	Listening for ISO15022 Events	Describes how to use Servlet Application Explorer to listen for events for the iWay Adapter for ISO15022 for BEA WebLogic.
4	Using Web Services Policy-Based Security	Describes how to configure Web services policy-based security.
5	Management and Monitoring	Describes how to use managing and monitoring tools provided by iBSE and JCA to gauge the performance of your run-time environment.
A	Using Application Explorer in BEA WebLogic Workshop to Create XML Schemas and Web Services	Describes how to use Java Swing Application Explorer running in BEA WebLogic Workshop to create XML schemas for ISO15022.

B	Using Application Explorer in BEA WebLogic WorkShop for Event Handling	Describes how to use Application Explorer running in BEA WebLogic Workshop.
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Documentation Conventions

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

Convention	Description
THIS TYPEFACE or <i>this typeface</i>	Denotes syntax that you must enter exactly as shown.
<i>this typeface</i>	Represents a placeholder (or variable) in syntax for a value that you or the system must supply.
<u>underscore</u>	Indicates a default setting.
<i>this typeface</i>	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.
<i>this typeface</i>	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.

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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 ISO15022 for BEA WebLogic questions. Information Builders consultants can also give you general guidance regarding product capabilities and documentation. Please be ready to provide your six-digit site code (xxxx.xx) when you call.

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Help Us to Serve You Better

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

The following tables list the specifications our consultants require.

Platform	
Operating System	
OS Version	
Product List	
Adapters	

Platform	
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?	

Request/Question	Error/Problem Details or Information
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 <i>not</i> occur?	
Describe the steps to reproduce the problem.	
Describe the problem .	
Specify the error message(s).	

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

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

User Feedback

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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CHAPTER 1

Introducing the iWay Adapter for ISO15022 for BEA WebLogic

Topics:

- iWay Adapter for ISO15022 for BEA WebLogic Overview
- Using the Application Explorer With the iWay Adapter for ISO15022 for BEA WebLogic
- Deployment Information for the iWay Adapter for ISO15022 for BEA WebLogic

SWIFT networks carry messages between financial institutions and must originate or arrive at financial institutions in a format described by a SWIFT message standard. In 2002, the SWIFT standards body moved from ISO Standard 7775 to ISO Standard 15022 and SWIFT documents began conforming to this standard.

The iWay Adapter for ISO15022 transforms documents into XML format and converts between message formats in 7775 format into 15022 format. The adapter provides bi-directional transformation to ensure integration to and from 15022 compliant networks and applications.

iWay Adapter for ISO15022 for BEA WebLogic Overview

The iWay Adapter for ISO15022 for BEA WebLogic provides transport protocol, transformation, and document validation support. It can receive and emit SWIFT formatted documents over any supported protocol, transform the documents into XML standard format, and validate the document against a suite of SWIFT rules.

When the iWay Adapter for ISO15022 for BEA WebLogic receives a document, it processes the document in a number of ways. The adapter supports bi-directional transformation using XML as the intermediate format across a number of transport protocols. The adapter is supplied with templates to convert SWIFT message types to XML. Schemas are supplied to SWIFT format.

The SWIFT documents are described using data dictionaries supplied with the adapter. The data dictionaries conform to the SWIFT standards and are updated with each year's amendments, and the format for describing data elements conform to the standards in the books. These dictionaries are in XML format and can be edited to tailor messages to individual bank and/or market standards.

Receipt of SWIFT messages has been implemented as an event adapter within WebLogic Integration. Emission of SWIFT messages has been implemented as a service adapter. These adapters provide a number of processing options that you can configure with the design-time WebLogic Integration Application View.

- **Transformation services.** The iWay Adapter for SWIFT for BEA WebLogic automatically recognizes the SWIFT message types and converts them into the XML equivalent. The adapter provides the full suite of message formats and their associated XML Schema Definitions (.xsd files).
- **Document validation rules.** During the analysis of an incoming SWIFT message, the system validates the message against the associated SWIFT rule. Validation rule specifications are stored in XML files that are freely accessible in the directory structure. Keeping each rule in an external file facilitates the maintenance of existing rules and provides an easy way to add new ones. You can also create new rules by writing custom Java code.
- **Message acknowledgment.** Message receipt and message validation may be configured to generate message validation. A validation response may be emitted on any of the supported transports.
- **Protocol emitting.** The service adapter supports emitting SWIFT messages to any of the supported transport protocols.

Validation

The SWIFT messages are validated in two ways. The first way is by using the dictionaries. The dictionaries are used to parse the document and validate the structure of the message type and tag structure. The second way is by the rules engine, which provides content (domain and network) validation.

The SWIFT document is validated by use of a rule file in XML format. This file is an XML document that applies pre-built rules based on the XML tag. These are customizable, and users can write their own rules to apply extra business logic.

Depending on the direction (XML to SWIFT or SWIFT to XML), the content validation occurs before or after structural validation. The following section explains how transformation and validation works for both inbound (receiving a SWIFT message) and outbound (creating a SWIFT message) processes.

Inbound Messaging

A configured listener picks up an inbound SWIFT message. The first step is the pre-parse stage. Because the iXTE maps input and output using XML format, the document must be converted to XML. This is where the transformation templates are called to convert SWIFT format to XML.

After the content is in XML format, the content of the SWIFT document can be validated based on supplied rules files. Pre-built rules are supplied that apply validation rules to tags or groups of tags in the XML document, specific to the SWIFT green books.

Outbound Messaging

In the outbound process used by the iWay Adapter for ISO15022, an XML document can be transformed to XML or to SWIFT ISO15022 standard. This can be from a custom XML or from a 7775 standard document. The transformations from 7775 to 15022 and back are supplied.

A document can be received, in XML format, and have business logic applied. The rules engine then validates the document and transforms it into a SWIFT document at the pre-emit stage in the process.

Using the Application Explorer With the iWay Adapter for ISO15022 for BEA WebLogic

Application Explorer uses an explorer metaphor for browsing the system. The explorer enables you to create XML schemas and Web services for the associated object. External applications that access ISO15022 through the iWay Adapter for ISO15022 for BEA WebLogic use either XML schemas or Web services to pass data between the external application and the adapter.

The two versions of Application Explorer that are supported for ISO15022 are Servlet Application Explorer, a Java Web application running within a servlet container that is accessible through a Web browser, and Application Explorer running in BEA WebLogic Workshop. Application Explorer uses interfaces provided by ISO15022 and in-depth knowledge of the ISO15022 application systems to access and browse business object metadata. After an object is selected, Application Explorer can generate an XML schema or Web service to define the object for use in conjunction with the iWay Adapter for ISO15022 for BEA WebLogic.

External applications accessing ISO15022 via the iWay Adapter for ISO15022 for BEA WebLogic use either the XML schema or Web service 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 for the iWay Adapter for ISO15022 for BEA WebLogic*.

Key Features of Application Explorer

Key features of 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 Application Explorer

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). If you are using Application Explorer in BEA WebLogic Workshop, you must also have the BEA WebLogic Workshop installed.

Note: To use Application Explorer within the BEA WebLogic Workshop, iBSE must be deployed to the BEA WebLogic server.

In addition, the ISO15022 Enterprise Information System (EIS) must be installed, configured, and available for client access. Application Explorer need not reside on the same system as ISO15022, but network access is required.

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

Deployment Information for the iWay Adapter for ISO15022 for BEA WebLogic

The iWay Adapter for ISO15022 for BEA WebLogic works in conjunction with the following components:

- Application Explorer

with either

- Integration Business Services Engine (iBSE)

or

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

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

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

Deployment Roadmap

The following table lists the location of deployment information for the iWay Adapter for ISO15022 for BEA WebLogic in the three operating environments. A description of each environment follows the table.

Deployment Option	Chapter
Application Explorer	<ul style="list-style-type: none">• Chapters 2 and 3 and Appendices A and B of this guide• <i>iWay Installation and Configuration for BEA WebLogic</i>
Integration Business Services Engine (iBSE)	<ul style="list-style-type: none">• <i>iWay Installation and Configuration for BEA WebLogic</i>

Deployment Option	Chapter
iWay Enterprise Connector for J2EE Connector Architecture (JCA)	<ul style="list-style-type: none">• <i>iWay Connector for JCA for BEA WebLogic User's Guide</i>• <i>iWay Installation and Configuration for BEA WebLogic</i>

Application Explorer

Application Explorer uses an explorer metaphor to browse the ISO15022 system for metadata. The explorer enables you to create XML schemas and Web services for the associated object. In addition, you can create ports and channels to listen for events in ISO15022. External applications that access ISO15022 through the iWay Adapter for ISO15022 for BEA WebLogic use either XML schemas or Web services to pass data between the external application and the adapter.

The Integration Business Services Engine (iBSE)

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

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 BEA WebLogic 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.

CHAPTER 2

Creating XML Schemas or Web Services for the iWay Adapter for ISO15022 for BEA WebLogic

Topics:

- Overview
- Starting Servlet Application Explorer
- Establishing a Target for ISO15022
- Creating a Schema
- Creating a Web Service

This section describes how to use Servlet Application Explorer to create XML schemas or Web services for the iWay Adapter for ISO15022 for BEA WebLogic.

Overview

External applications that access ISO15022 through the adapter use either XML schemas or Web services to pass data between the external application and the adapter. You can use Servlet Application Explorer to create the required XML schemas and Web services.

Application Explorer is a Web application running within a servlet container that is accessible through a Web browser. For more information on installing and configuring the Servlet Application Explorer, see the *iWay 5.5 Installation and Configuration for BEA WebLogic* documentation.

Starting Servlet Application Explorer

Before you can use Servlet Application Explorer, you must start BEA WebLogic Server. Then, you can open Application Explorer.

Procedure How to Start BEA WebLogic Server on Windows or on UNIX

1. To start the BEA WebLogic Server on Windows:
 - a. Click the Windows *Start* menu.
 - b. Select *Programs, BEA WebLogic Platform 8.1, User Projects, your domain*, and then, click *Start WLS Server*.
2. To start BEA WebLogic Server on UNIX or from a command line, type the following at the prompt

`BEA_HOME\user_projects\domains\DOMAIN_NAME\startWebLogic.cmd`

where:

`BEA_HOME`

Is the directory where BEA WebLogic is installed.

`DOMAIN_NAME`

Is the domain you are using.

Procedure How to Open Servlet Application Explorer

To open Application Explorer:

1. Enter the following URL in your browser window

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

where:

`hostname`

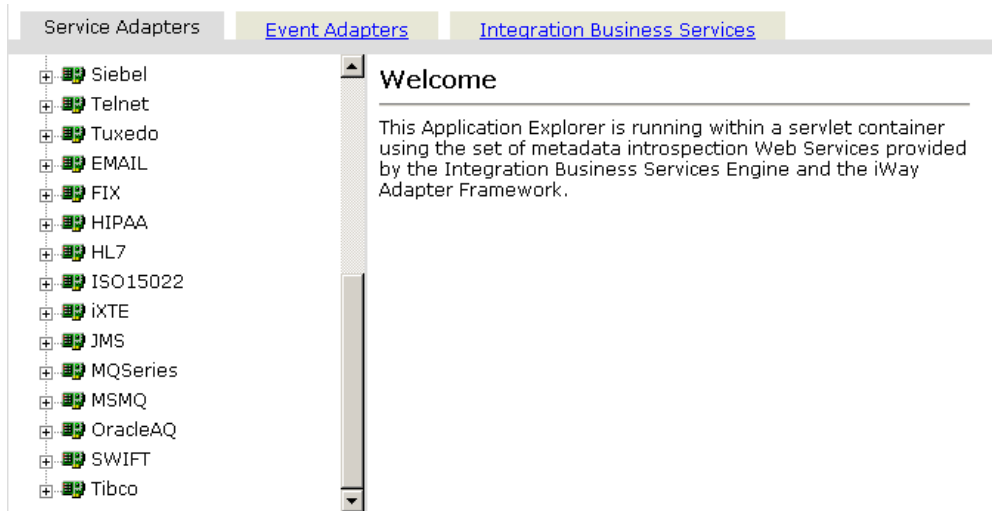
Is the name of the machine where your application server is running.

port

Is the port where the application server is listening.

After you start Application Explorer, the Welcome window opens, showing the Service Adapters, Event Adapters, and Integration Business Services tabs. The Service Adapters node is highlighted in the left pane.

Expand the node to display the available Service Adapters.



The Available Hosts drop-down menu in the upper right lists the iWay Connector for JCA or Servlet iBSE instance you can access.

For more information on adding instances, see the *iWay 5.5 Installation and Configuration for BEA WebLogic* documentation.

You are now ready to create new targets for ISO15022.

Establishing a Target for ISO15022

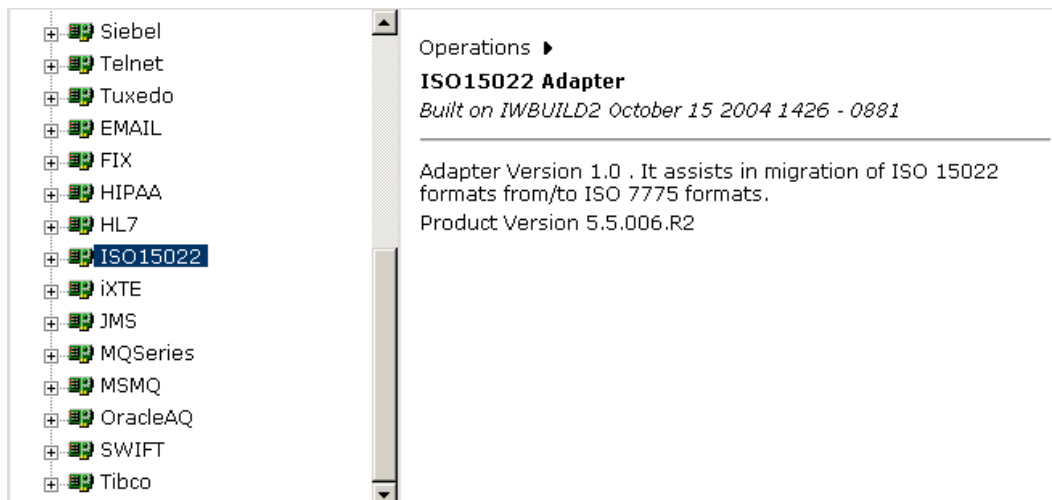
A target serves as your connection point and is automatically saved after you create it. You must establish a connection to ISO15022 every time you start Application Explorer or after you disconnect from the system.

Creating a New Target

To connect to ISO15022 for the first time, you must create a new target.

Procedure How to Create a New Target

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



To create a new target:

1. In the left pane, click the *ISO15022* node.

Descriptive information (for example, title and product version) regarding the iWay Adapter for ISO15022 for BEA WebLogic appears in the right pane.

Operations ▶

ISO15022 Adapter

Built on IWBUILD2 October 15 2004 1426 - 0881

Adapter Version 1.0 . It assists in migration of ISO 15022 formats from/to ISO 7775 formats.

Product Version 5.5.006.R2

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

The Add a new ISO15022 target pane opens on the right. The following illustration shows the fields in the right pane where you enter connection information for the target.

Add a new ISO15022 target

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:

Description:

Target Type:

3. Specify the following information for the ISO15022 target you are defining.
 - a. Type a descriptive name and a brief description for the new target.
 - b. From the Target Type drop-down list, select one of the following transports:
 - File System Write
 - File Transfer Protocol (FTP)
 - IBM MQSeries (MQ)

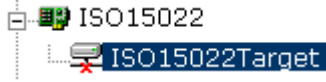
4. Click Next.

The Set connection info pane appears on the right and includes fields that are specific to the type of transport you selected.

5. Provide the appropriate information that is specific to the transport you selected.
 - For more information on File System Write, see *File System Write Properties* on page 2-6.
 - For more information on File Transfer Protocol (FTP), see *File Transfer Protocol Properties* on page 2-6.
 - For more information on IBM MQSeries (MQ), see *MQSeries Properties* on page 2-7.

6. Click *Finish*.

The following graphic shows the ISO15022 target (ISO15022Target) that appears below the ISO15022 node in the left pane.



You are now ready to connect to your ISO15022 target.

Reference File System Write Properties

The following table provides definitions for the properties required for the File System Write target type.

Property	Definition
Directory	The directory to which output messages are emitted.
Filename Mask	<p>The output file name (can contain an asterisk), which gets expanded to a timestamp.</p> <p>A pound sign can be used as a mask for a sequence count. Each pound symbol represents a whole number integer value. For example, File## counts up to 99 before restarting at 0, File### counts up to 999 before restarting at 0, and so on.</p>

Reference File Transfer Protocol Properties

The following table provides definitions for the properties required for the File Transfer Protocol target type.

Settings tab

Property	Definition
Host	FTP target system.
Port	FTP target system port.
User	User ID to use when connecting to the FTP host.
Password	Password associated with the user ID.
Directory	The directory to which output messages are emitted.

Property	Definition
Filename Mask	<p>The output file name (can contain an asterisk), which gets expanded to a timestamp.</p> <p>A pound sign can be used as a mask for a sequence count. Each pound symbol represents a whole number integer value. For example, File## counts up to 99 before restarting at 0, File### counts up to 999 before restarting at 0, and so on.</p>

Advanced tab

Property	Definition
Retry Interval	The maximum wait interval between retries when a connection fails. Retry interval duration in xxH:xxM:xxS format. For example, 1H:2M:3S is 1 hour 2 minutes and 3 seconds.
Maxtries	Maximum number of retry attempts if a write failure occurs.

Reference MQSeries Properties

The following table provides definitions for the properties required for the MQSeries target type.

Settings tab

Property	Definition
Queue Manager	Name of the MQSeries queue manager to be used.
Queue Name	Queue on which request documents are received.
Correlation ID	The correlation ID to set in the MQSeries message header.

MQ Client tab

Property	Definition
Host	Name of the MQSeries queue manager to be used.
Port	Queue on which request documents are received.
Channel	The correlation ID to set in the MQSeries message header.

Connecting to a Target

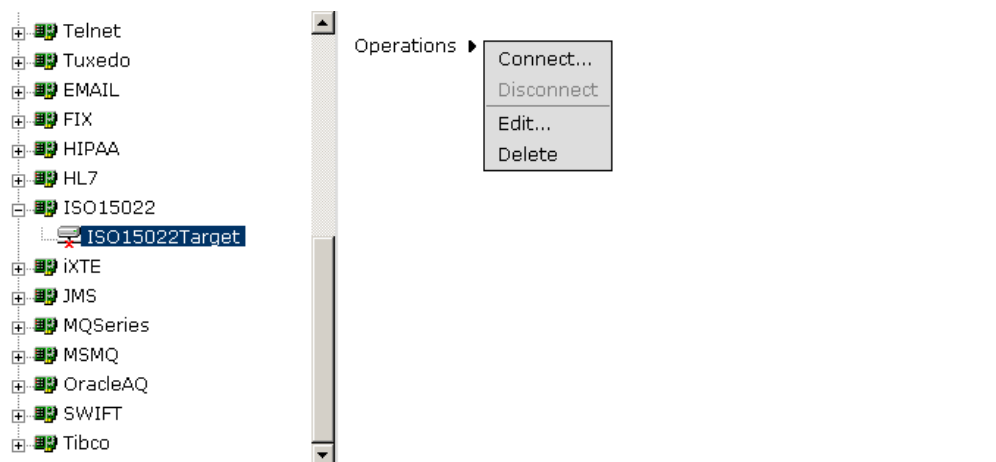
You must use the target you defined to connect to ISO15022.

Procedure How to Connect to a Target

To connect to a target:

1. In the left pane, expand the *ISO15022* node and select the target you defined, for example, *ISO15022Target*.

The following graphic shows the *ISO15022Target* node selected in the left pane and the Operations menu expanded in the right pane.



2. Move the pointer over *Operations* and select *Connect*.

The following graphic shows that the Connect to *ISO15022Target* pane opens on the right.

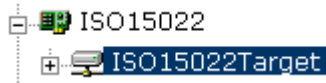
Connect to ISO15022Target

Directory:

Filename Mask:

3. Click *OK*.

The following graphic shows that the x icon that appeared previously to the left of the ISO15022Target node has disappeared, indicating that the node is now connected.



The following graphic shows the expanded ISO15022Target node.



Disconnecting From a Target

Although you can maintain multiple open connections to different application systems, it is a good practice to close connections when you are not using them.

Procedure How to Disconnect From a Target

To disconnect from a target:

1. From the left pane, click the target, for example, ISO15022Target, to which you are connected.
2. Move the pointer over *Operations* and select *Disconnect*.

Disconnecting from the application system drops the connection, but the node remains.

Modifying a Target

After you create a target for ISO15022 using Servlet Application Explorer, you can edit any of the information that you provided previously.

Procedure How to Edit a Target

To edit a target:

1. In the left pane, click the target, for example, ISO15022Target.
2. Move the pointer over *Operations* and select *Edit*.
3. Modify the connection information.

4. Click *Next* to continue editing additional fields.
5. When you have completed your edits, click *Finish*.

Deleting a Target

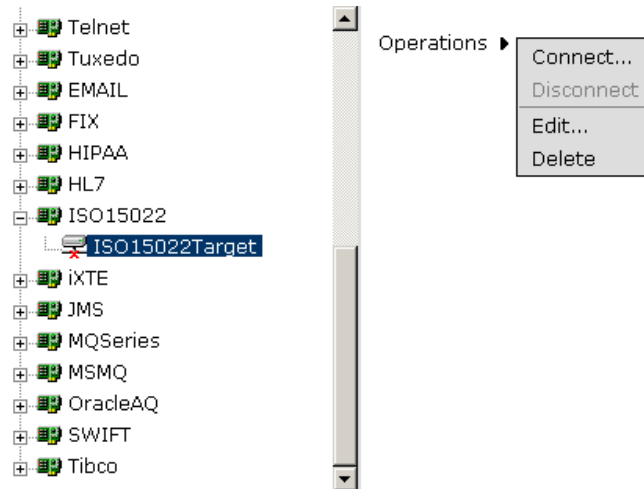
In addition to closing a target, you can delete a target that is no longer required. You can delete it whether or not it is closed. If open, the target automatically closes before it is deleted.

Procedure How to Delete a Target

To delete a target:

1. In the left pane, click the target, for example, ISO15022Target.

The following graphic shows the target selected in the left pane, and the Operations menu expanded in the right pane.



2. Move the pointer over *Operations* and select *Delete*.
3. To delete the target you selected, click *OK*.

The ISO15022Target node disappears from the left pane.

Creating a Schema

You can create service schemas for Business Services and Business Components using Application Explorer.

The following topic, *Creating an XML Schema*, describes how to create schemas for the adapter when you deploy the iWay Adapter for ISO15022 for BEA WebLogic for use either in a JCA (iWay Enterprise Connector for J2EE Connector Architecture) environment or a Web services environment.

If you plan to deploy the iWay Adapter for ISO15022 for BEA WebLogic in a Web services environment, see also *Creating a Web Service* on page 2-13.

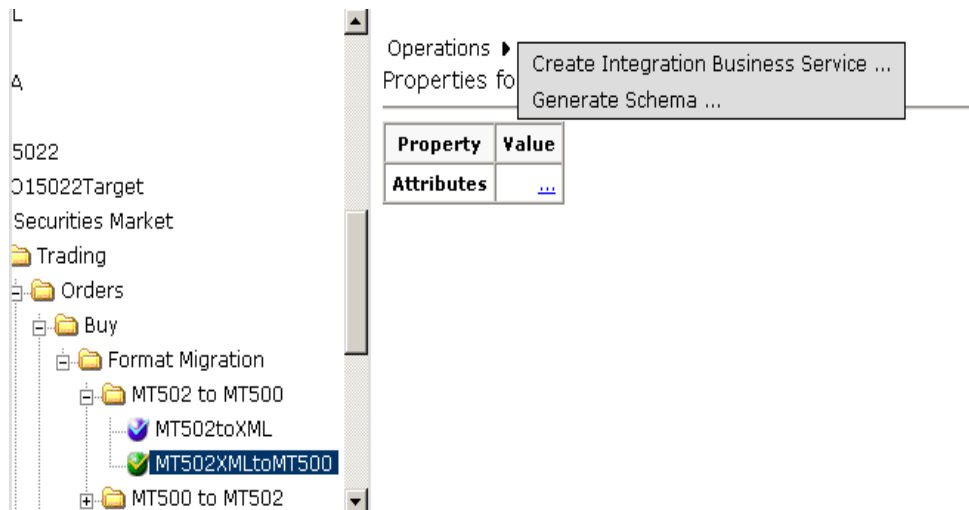
Creating an XML Schema

You create schemas for ISO15022 using Application Explorer.

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 ISO15022 system.
2. In the left pane, expand the ISO15022Target node.
3. Continue expanding nodes to get to the MT502XMLtoMT500 level.



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

Application Explorer builds schemas. A schemas table similar to the following 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	SWIFTMT502	...
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 is an example of a partial request schema:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!-- Generated by the iBSE 2004-10-25T21:24:52Z -->
- <xsd:schema
  xmlns:xsd="http://www.w3.org/2001/XMLSchema">
- <xsd:element name="SWIFTMT502">
- <xsd:complexType>
- <xsd:sequence>
- <xsd:element maxOccurs="1"
  minOccurs="1" name="BASIC">
- <xsd:complexType>
- <xsd:sequence>
  <xsd:element minOccurs="1"
    name="APPLICATION_ID__"
    type="xsd:string" />
  <xsd:element minOccurs="1"
```

For more information on where the schemas are stored, see the following topic, *Schema Location*.

Reference Schema Location

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

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

```
C:\Program
Files\iWay55\bea\ibse\wsdl\schemas\service\ISO15022\ISO15022Target
```

where:

ISO15022Target

Is the name of the connection to ISO15022 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\ISO15022\ISO15022Target
```

where:

ISO15022Target

Is the name of the connection to ISO15022 as defined in Application Explorer. Application Explorer stores the schemas in this directory.

Creating a Web Service

You can generate a business service (also known as a Web service) for ISO15022 operations.

Ensure you properly configure the servlet iBSE. For more information on installing and deploying iWay components, see the *iWay Installation and Configuration for BEA WebLogic* 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 for BEA WebLogic* manual and the *iWay Connector for JCA for BEA WebLogic Server User's Guide*.

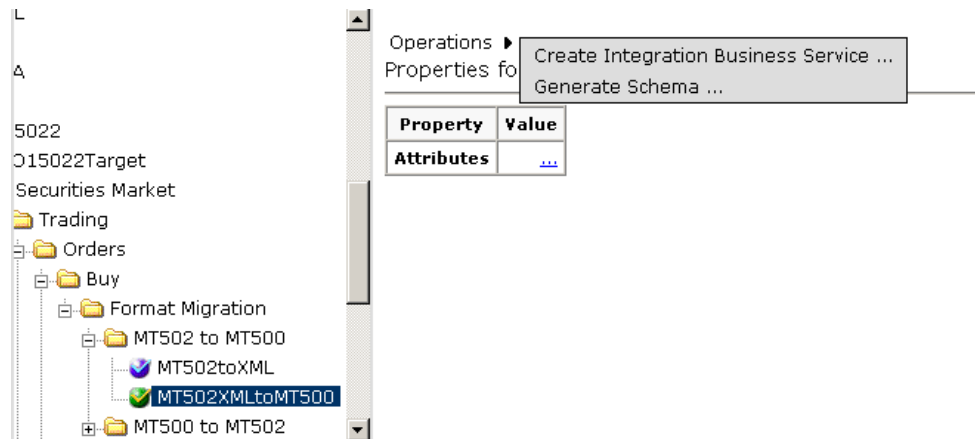
Procedure How to Generate a Web Service

To generate a Web service:

1. If you have not already connected, connect to ISO15022.

2. Expand the *ISO15022* node.
3. Continue expanding nodes down to the *MT502XMLtoMT500* level.

The following graphic shows the left pane with the *MT502XMLtoMT500* node selected.



4. In the right pane, move the pointer over *Operations* and select *Create Integration Business Service*.
- If this is not the first Web service you want to create and use, choose whether to create a new service or use an existing service.

Create Web Service for MT502XMLtoMT500

☒ Create a new service

☐ Use an existing service

- a. To use a previously created service, select the option to use an existing service and click *Next*.
A drop-down list appears.
- b. Select the business service to which you want to add the new service and click *Next*.

- If this is the first Web service you are creating or if you choose to create a new service, the Create Web Service pane appears. This pane provides three fields followed by a help button and three action buttons.

Create Web Service for MT502XMLtoMT500

Service Name:

Description:

License:

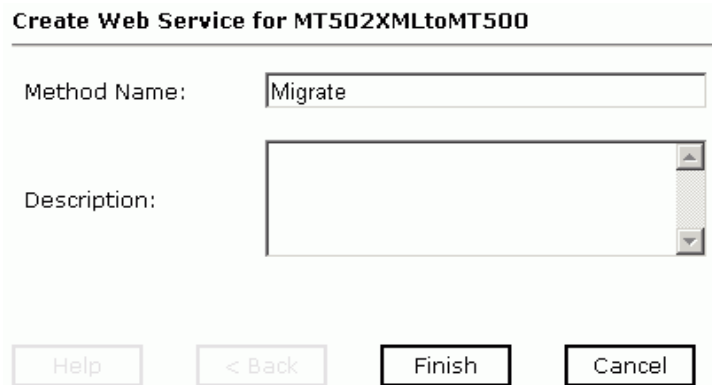
production

test

- a. In the Service Name field, type a name to identify the Web service (under the Services node in the left pane of the Integration Business Services tab).
- b. In the Description field, type a brief description of the Web service.
- c. In the License field, select the license(s) with which you want to associate this business service. To select more than one, hold down the *Ctrl* key and click the licenses.

5. Click *Next*.

The right pane displays the next Create Web Service pane, which prompts you for information about the method. It includes two fields, a help button, and three action buttons.

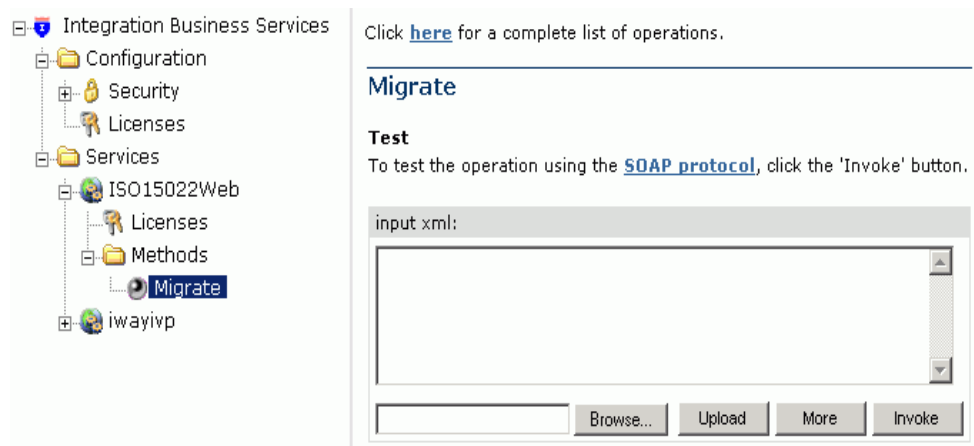


The dialog box is titled "Create Web Service for MT502XMLtoMT500". It contains two input fields: "Method Name:" with the text "Migrate" entered, and "Description:" which is empty. Below the fields are four buttons: "Help", "< Back", "Finish", and "Cancel".

- 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 Integration Business Services tab, and the new business service appears in the left pane.



The screenshot shows the Application Explorer on the left with the tree structure expanded to "Integration Business Services" > "Services" > "ISO15022Web" > "Methods", where "Migrate" is selected. The right pane displays the details for the "Migrate" operation. It includes a link "Click [here](#) for a complete list of operations.", a "Test" section with the instruction "To test the operation using the [SOAP protocol](#), click the 'Invoke' button.", an "input xml:" text area, and a row of buttons: "Browse...", "Upload", "More", and "Invoke".

Testing a Web Service for a Business Object

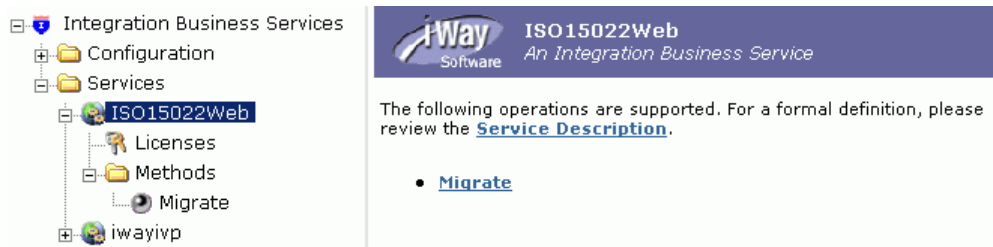
After you create a Web service, test it to ensure it functions properly. Application Explorer includes a test tool for testing a Web service.

Procedure How to Test a Web Service for a Business Object

To test a Web service:

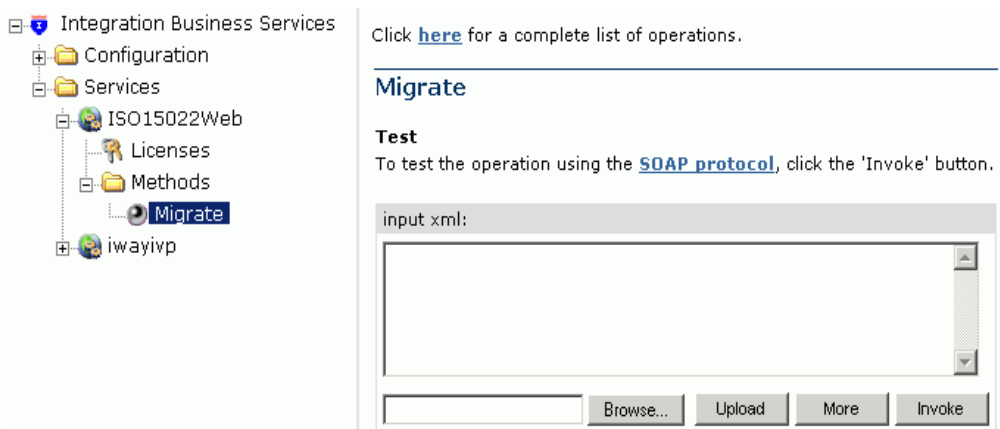
1. If you are not on the Integration Business Services tab of Application Explorer, click the tab to access business services.
2. If it is not expanded, expand the *Integration Business Services* node.
3. Expand the *Services* node.
4. Select the name of the business service you want to test.

The business service name appears as a link in the right pane, as shown in the following graphic.



5. In the right pane, click the named business services link, for example, *Migrate*.

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.



Creating a Web Service

- 6.** Provide the appropriate XML input.
- 7.** Click *Invoke*.

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

CHAPTER 3

Listening for ISO15022 Events

Topics:

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

Servlet Application Explorer deployed to a BEA WebLogic Server enables you to listen for events.

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 Event Functionality

Events are generated as a result of an ISO15022 document arriving at a particular queue. You can use documents 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 Servlet Application Explorer. To create an event, you must create a port and a channel.

- Port

A port associates a particular business object exposed by an adapter with a particular disposition. A disposition defines the protocol and 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.

Creating an Event Port

The following procedures describe how to create an event port from the 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

Procedure How to Create an Event Port for the File Disposition

To create a specific event port for the File disposition:

1. Click the *Event Adapters* tab.
The Event Adapters window opens.
2. In the left pane, expand the Event Adapters node.
3. Expand the *ISO15022* node.
4. Select the *ports* node.
5. Move the pointer over *Operations* and select *Add a new port*.

The Create New Port fields appear on the right, as shown in the following graphic. This pane provides four fields to define the new port, a help button, and two action buttons.

Create New Port

Choose parameters of the port that you wish to create.

Port Name:

Description:

Disposition Protocol:

Disposition:

- a. Type a name for the event port and provide a brief description.
- b. From the Disposition Protocol drop-down list, select *FILE*.

- c. 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=[pre-defined port name or another disposition url]
```

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.

The following table defines the parameters for the File disposition.

Parameter	Description
location	The destination and filename of the document where event data is written. For example, C:\in\x.txt.
errorTo	Predefined port name or another disposition URL to which error logs are sent. Optional.

6. 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. The summary is shown in the following graphic.

```
Operations ►
Port Name   SampleFilePort
Description Writes event data to a file location
Disposition ifile://C:\in\x.txt;errorTo=C:\error
Target      ISO15022
```

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 Integration Business Services Engine (iBSE).

To create an event port for iBSE:

1. Click the *Event Adapters* tab.

The Event Adapters window opens.

2. In the left pane, expand the *ISO15022* node.
3. Select the *ports* node.
4. Move the pointer over *Operations* and select *Add a new port*.

The Create New Port pane opens on the right.

- a. In the Port Name field, type a name for the connection.

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 target 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=[pre-defined port name or another
disposition url];errorTo=[pre-defined port name or another
disposition url]
```

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.
responseTo	Location where responses to the Web service are posted. A predefined port name or another full URL. Optional.
errorTo	Location where error documents are sent. A predefined port name or another full URL. Optional.

5. Click *OK*.

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

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 a JMS queue:

1. Click the *Event Adapters* tab.

The Event Adapters window opens.

Creating an Event Port

2. In the left pane, expand the *ISO15022* node.
3. Select the *ports* node.
4. Move the pointer over *Operations* and select *Add a new port*.

The Create New Port pane opens on the right.

- a. Type a name for the event port and provide a brief description.
- b. From the Disposition Protocol drop-down list, select *JMSQ*.
- c. In the Disposition field, enter a JMS destination.

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

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

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

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

The following table defines the parameters for the disposition.

Parameter	Description
queue	JNDI name of a queue to which events are emitted.
Connection Factory	A resource that contains information about the JMS Server. The WebLogic connection factory is: <code>javax.jms.QueueConnectionFactory</code>

Parameter	Description
jndiurl	<p>The URL to use to contact the JNDI provider. The syntax of this URL depends on which JNDI provider is being used. This value corresponds to the standard JNDI property, <code>java.naming.provider.url</code></p> <p>For BEA WebLogic Server this is <code>t3://host:port</code> where:</p> <p><code>host</code> Is the machine name where WebLogic Server is installed.</p> <p><code>port</code> Is the port on which WebLogic server is listening. The default port if not changed at installation is 7001.</p>
jndifactory	<p>Is JNDI context.INITIAL_CONTEXT_FACTORY and is provided by the JNDI service provider.</p> <p>For WebLogic Server, the WebLogic factory is <code>weblogic.jndi.WLInitialContextFactory</code></p>
user	A valid user name required to access a JMS server.
password	A valid password required to access a JMS server.
errorTo	Location where error documents are sent. A predefined port name or another full URL. Optional.

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 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 *Event Adapters* tab.
The Event Adapters window opens.
2. In the left pane, expand the *ISO15022* node.

3. Select the *ports* node.
4. Move the pointer over *Operations* and select *Add a new port*.

The Create New Port pane opens on the right.

- a. In the Port Name field, type a name for the connection, for example, Queue1_on_NTK.

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

The following table defines the parameters for the disposition.

Parameter	Description
host	Machine name where the Microsoft Queuing system is running.
Queue Type	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. For private queues, enter <i>Private\$</i> .
qName	Name of the private queue where messages are placed.
errorTo	Location where error documents are sent. A predefined port name or another full URL. Optional.

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 a Port for the SOAP Disposition

To create a port for a SOAP disposition:

1. Click the *Event Adapters* tab.

The Event Adapters window opens.

2. In the left pane, expand the *ISO15022* node.
3. Select the *ports* node.
4. Move the pointer over *Operations* and select *Add a new port*.

The Create New Port window opens in the right pane.

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

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

The following table defines the parameters for the disposition.

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

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

5. Click **OK**.

The 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 *Event Adapters* tab.
The Event Adapters window opens.
2. In the left pane, expand the *ISO15022* node.
3. Select the *ports* node.
4. Move the pointer over *Operations* and select *Add a new port*.
The Create New Port pane opens on the right.
 - a. Type an event port name and a brief description.
 - b. From the disposition protocol drop-down list, select *HTTP*.
 - c. From the Disposition field, enter an HTTP destination.

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

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

where:

url

Is the URL target for the post operation, for example,

```
http://myhost:1234/docroot
```

responseTo

Is the location where 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.

5. Click OK.

The port appears under the ports node in the left pane.

Procedure How to Create an Event Port for MQ Series Disposition

To create an event port for MQ Series using Application Explorer:

1. Click the *Event Adapters* tab.

The Event Adapters window opens.

2. In the left pane, expand the *ISO15022* node.

3. Select the *ports* node.

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

The Create New Port pane opens on the right.

a. Type an event port name and a brief description.

b. From the disposition protocol drop-down list, select *MQ Series*.

c. In the Disposition field, enter an MQ Series destination.

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

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

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

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

The following table defines the parameters for the disposition.

Parameter	Description
qManager	Is the name of the queue manager to which the server must connect.
qName or respqueue	Name of the queue where messages are placed.
host	The host on which the MQ Server is located (for the MQ Client only).
port	The number to connect to an MQ Server queue manager (for the MQ client only).
channel	The case-sensitive name of the channel that connects with the remote MQ Server queue manager (for the MQ client only). The default channel name for MQSeries is SYSTEM.DEF.SVRCONN.
errorTo	Location where error documents are sent. This can be a predefined port name or another full URL. Optional.

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 and 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 window opens. This pane provides four fields, a help button, and two action buttons.

Edit Port

Choose parameters of the port that you wish to edit.

Port Name:	<input type="text" value="SampleFilePort"/>
Description:	<input type="text" value="Writes event data to a file location"/>
Disposition Protocol:	<input type="text" value="FILE"/>
Disposition:	<input type="text" value="ifile://C:\in\tx.txt;errorTo=C:\error"/>

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 ISO15022 channel for your event. You must associate a port to a channel before you can make the channel active.

Procedure How to Create a ISO15022 Channel

To create a channel using Application Explorer:

1. Click the *Event Adapters* tab.

The iWay Event Adapters window opens. The adapters that appear in the left pane support events.

2. Expand the *ISO15022* node.
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.

Add a new ISO15022 channel

Choose a name and description for the new channel that you wish to create.

Channel Name:

Description:

Channel Type:

- a. Type a name for the channel, for example, ISO15022Channel.
 - b. Type a brief description.
 - c. From the drop-down list, select a type of listener:
 - File System Listener (FILE)
 - IBM MQ Series (MQ)
 - File Transfer Protocol (FTP)
5. Click *Next*.

The Edit Channels window opens in the right pane and includes fields that are specific to the type of listener you selected.

Edit channels

Location:	<input type="text"/>
File Suffix:	<input type="text"/>
Encoding:	<input type="text" value="ISO-8859-1"/>
Polling Interval:	<input type="text" value="5"/>
Sort:	<input type="checkbox"/>
Scan Sub-directories:	<input type="checkbox"/>
File Read Limit (per scan):	<input type="text" value="1"/>

- 6.** Provide the appropriate information that is specific to the listener you selected:

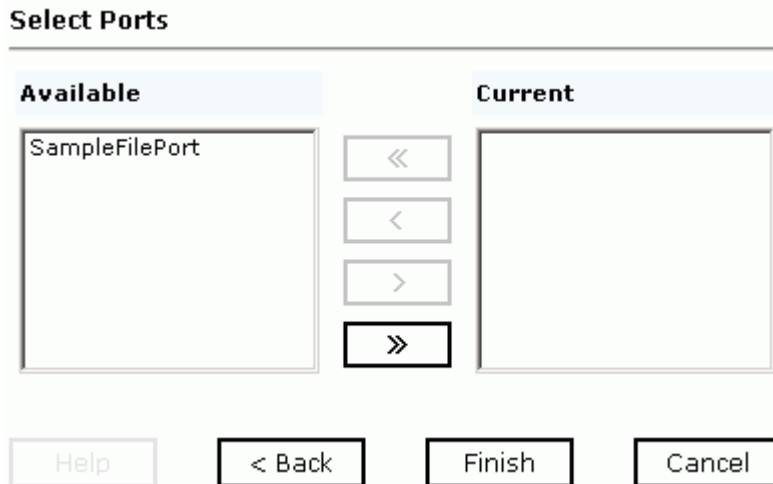
For information on the parameters for a File System Listener (FILE) listener, see *File System Listener (FILE) Configuration Parameters* on page 3-17.

For information on the parameters for an IBM MQ Series (MQ) listener, see *IBM MQ Series (MQ) Listener Configuration Parameters* on page 3-18.

For information on the parameters for a File Transfer Protocol (FTP) listener, see *File Transfer Protocol (FTP) Listener Configuration Parameters* on page 3-18.

- 7.** Click *Next*.

The Select Ports pane opens, as shown in the following graphic. A list of available ports appear in Available field on the left, and the ports that are currently associated appear in the Current field on the right. This pane also contains a help button and three action buttons.



- a. Select an event port from the list of current ports.
 - b. Click the single right (>) arrow button to transfer the port to the list of available ports. To associate all the event ports, click the double right (>>) arrow button.
8. Click *Finish*.

A summary window opens in the right pane, showing the channel description, channel status, and available ports.

All the information in the summary is associated with the channel you created.

The channel also appears under the channels node in the left pane. The following graphic shows a sample listing of a channel. An X over the icon, also shown in this graphic, 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 that was over the icon disappears.

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

Reference File System Listener (FILE) Configuration Parameters

Parameter	Description
Location	The directory where messages are received. DOS-style file patterns are valid for this parameter. You can specify a file pattern as well as a directory. For example, c:\xyz\ab*cd (without a file suffix) takes the file suffix from that parameter. If you use a pattern, files are selected based on the suffix and then the pattern. AB?CD selects ABxCD. AB*CD selects ABxxxCD.
File Suffix	File extension for the file event. This limits input files to those with the specified extensions. The "." is not required. The minus sign ("-") indicated that there is no extension. If the file extension is zip, the unzipped files must conform to the event schema, or they will fail. This function also works with transform configured.
Encoding	The host on which the MQ Server is located (for the MQ Client only).
Polling Interval	This is a time, expressed as xxH:xxM:xxS For example 1 hour, 2 minutes, and 3 seconds is: 1H:2M:3S The maximum interval between checks for new documents. The higher this value, the longer the interval, and the fewer system resources that are used. The side-effect of a high value is that a worker thread cannot respond to a stop command. If this value is set to 0, the listener runs once and terminates. The default value is 2 seconds.
Sort	The case-sensitive name of the channel that connects with the remote MQ Server queue manager (for the MQ client only). The default channel name for MQSeries is SYSTEM.DEF.SVRCONN.
Scan Sub-directories	Location where error documents are sent. This can be a predefined port name or another full URL. Optional.
File Read Limit (per scan)	Number of files read by the File listener per scan. The default value is 1.

Reference IBM MQ Series (MQ) Listener Configuration Parameters

On the Settings tab:

Parameter	Description
Queue Manager	The name of the MQ queue manager to be used.
Queue Name	The name of the MQ Series or WebSphere MQ queue that the ISO15022 system polls.
Polling Interval	The maximum wait interval (in the format <i>nnH:nnM:nnS</i>) between checks for new documents. The higher this value, the longer the interval, and the fewer system resources that are used. However, with a high value, the worker thread cannot respond to a stop command. If timeout is set to 0, the listener runs once and terminates. The default is 2 seconds.

On the MQ Client tab:

Parameter	Description
Port	The port number used to connect to an MQ Server.
Channel	The channel between an MQ Client and an MQ Server.

Reference File Transfer Protocol (FTP) Listener Configuration Parameters

Parameter	Description
Host	The name of the FTP host.
Port	The port where the adapter listens on the FTP transfer.
User	The user name to log onto the FTP Server.
Password	The password for the FTP user.
Location	<p>The directory where messages are received. DOS-style file patterns are available for this parameter. You can specify a file pattern as well as a directory. For example, c:\xyz\ab*cd (without a file suffix) takes the file suffix from that parameter.</p> <p>If you use a pattern, files are selected based on the suffix and then the pattern. AB?CD selects ABxCD. AB*CD selects ABxxxCD.</p>

Parameter	Description
Encoding	The character set encoding for inbound documents. For example, UTF-8. The default is ISO-8859-1 US and Western Europe.
Polling Interval	The maximum wait interval (in the format <i>nnH:nnM:nnS</i>) between checks for new documents. The higher this value, the longer the interval, and the fewer system resources that are used. However, with a high value, the worker thread cannot respond to a stop command. If timeout is set to 0, the listener runs once and terminates. The default is 2 seconds.

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 window 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.

CHAPTER 4

Using Web Services Policy-Based Security

Topics:

- Integration Business Services Policy-Based Security
- Configuring Integration Business Services Policy-Based Security

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

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

Integration Business Services Policy-Based Security

Integration 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 Integration 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 Integration Business Services. Instead, you can use one policy for many Integration 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 Integration Business Services Policy-Based Security

Before you create instances of policies, you must have a minimum of one user or one group to associate to an instance. You can create users and groups using Servlet Application Explorer. For more information, see *How to Create a User to Associate With a Policy* on page 4-3 or *How to Create a Group to Associate With a Policy* on page 4-5.

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

You configure the IP and Domain Restriction policy type slightly differently from other policy types. The IP and Domain Restriction policy type controls connection access to iBSE and therefore, need not be applied to an individual business service. You need not create a policy, however, you must enable the Security Policy option in Servlet Application Explorer. For more information, see *How to Configure IP and Domain Restrictions* on page 4-10.

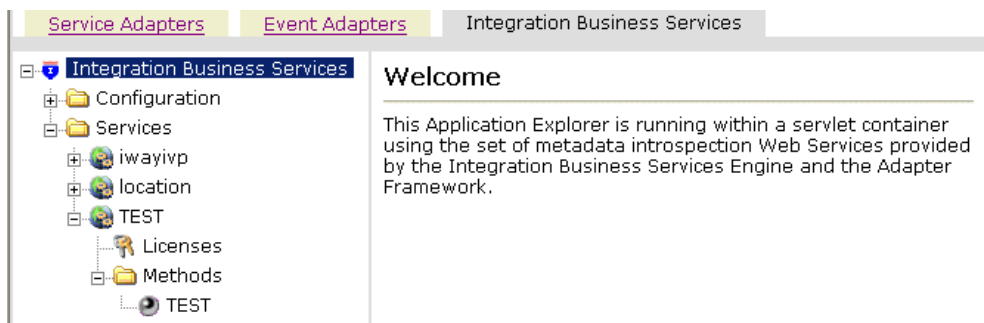
Note: For the iWay 5.5 RG2 Release, it is recommended that policy-based security not be enabled.

Procedure How to Create a User to Associate With a Policy

To create a user to associate with a policy:

1. Open *Servlet Application Explorer*.

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



- a. Click the *Integration 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:

- 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.

Operations ►



Users

A user is an object that can be granted or denied permissions to run Integration Business Services. A user can belong to one or more groups. Policies that specify particular rights can be associated with user.

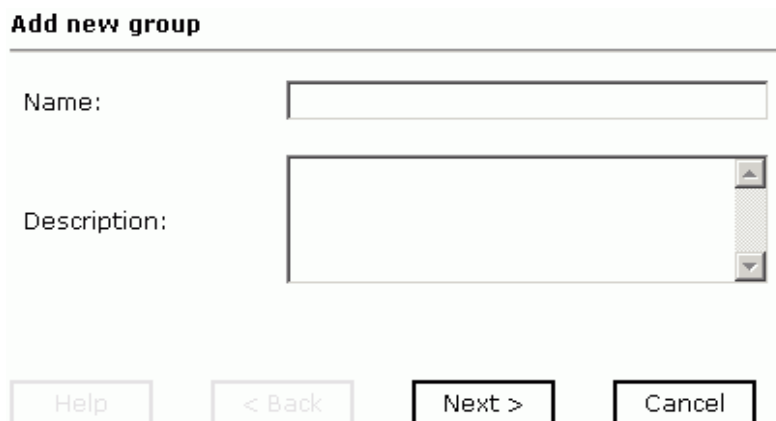
User Id	Description
<input type="checkbox"/> bse1	

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 *Integration 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*.

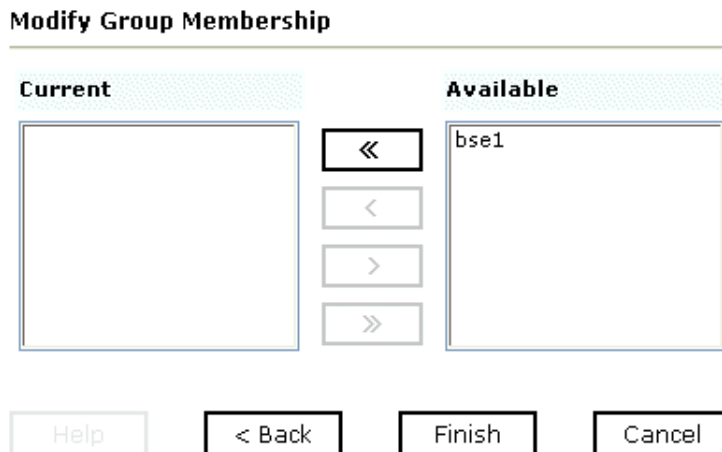
The following image shows the Add new group pane that opens with fields where you enter a name and a description for the group. To continue after typing inputs, click the *Next* button. The pane also includes a *Help* button, a *Back* button to return to the previous screen, and a *Cancel* button to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



The image shows a window titled "Add new group". It contains two input fields: "Name:" with a single-line text box, and "Description:" with a multi-line text box. At the bottom, there are four buttons: "Help", "< Back", "Next >", and "Cancel".

- a. In the Name field, type 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.



The image shows a window titled "Modify Group Membership". It features two list boxes: "Current" on the left and "Available" on the right. The "Available" list box contains the text "bse1". Between the two list boxes are five arrow buttons: a double left arrow (<<), a single left arrow (<), a single right arrow (>), and a double right arrow (>>). At the bottom, there are four buttons: "Help", "< Back", "Finish", and "Cancel".

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 Integration 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
<input type="checkbox"/> newgroup	

Procedure How to Create an Execution Policy

To create an execution policy:

1. Open *Servlet Application Explorer*.
 - a. Click the *Integration 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.

Add a new policy

Name:

Type:

Description:

- 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.

Modify policy targets

Current		Available
	«	user.ibse1
	<	group.ibse_group
	>	
	»	

Help < Back Next > Cancel

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.

Member Id	Permission
user.ibse1	Deny
group.ibse_group	Deny

Buttons: Help, < Back, Finish, Cancel

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.

Operations ▶

Policies

You can configure policies for the Integration Business Services Engine to manage resource execution, service routing, data restrictions and failover/recovery actions.

Name	Type	Description
<input type="checkbox"/> ibse_policy	Execution	

Procedure How to Configure IP and Domain Restrictions

To configure IP and domain restrictions:

1. Open *Servlet Application Explorer*.

- a. Select the *Integration 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.

Add a new IP/Domain

IP(Mask)/Domain:

Type:

Access Control:

Description:

- 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).

Operations ►



IP and Domain

You can configure the Integration Business Services Engine to use policies that control access from a single IP address, a group of IP addresses, or all addresses within a particular domain.

IP(Mask) / Domain	Access	Description
<input type="checkbox"/> test	Deny	

CHAPTER 5

Management and Monitoring

Topics:

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

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

Managing and Monitoring Services and Events Using iBSE

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

The following monitoring levels are available for services:

- System
- Service
- Method

The following monitoring levels are available for events:

- System
- Channel
- Port

Procedure: How to Configure Monitoring Settings

To configure monitoring settings:

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

<http://localhost:port/ibse/IBSEConfig>

where:

[localhost](#)

Is the machine where the application server is running.

[port](#)

Is the HTTP port for the application server.

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

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

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

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	<input type="checkbox"/>	
Repository		
Repository Type	File System ▾	
Repository Url	file://C:\Program Files\iWay55\bea\ibse	
Repository Driver		
Repository User		
Repository Password		
Repository Pooling	<input type="checkbox"/>	
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:

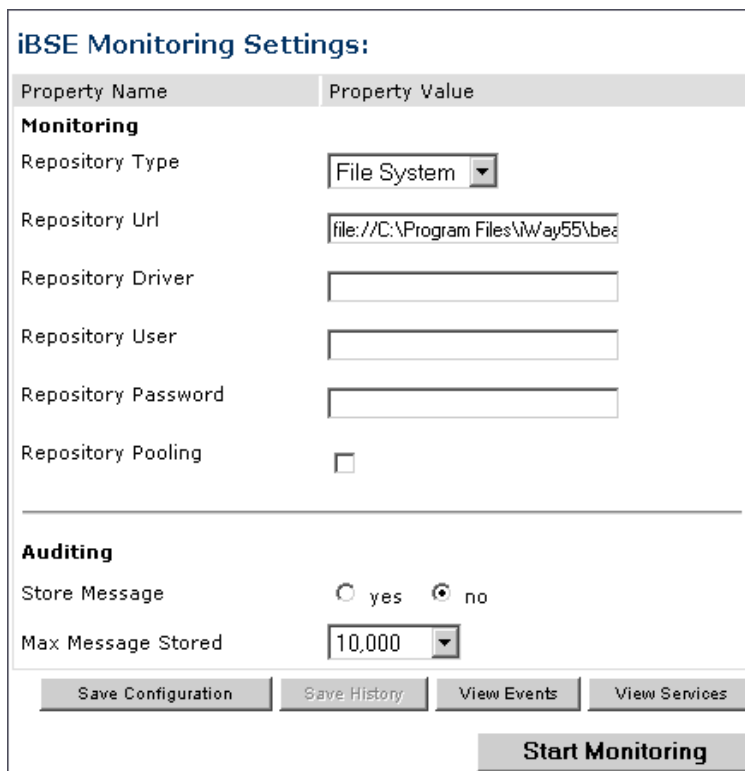
localhost

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.



The image shows a window titled "iBSE Monitoring Settings:". It is divided into two main sections: "Monitoring" and "Auditing".

Monitoring Section:

- Property Name:** Repository Type
- Property Value:** File System (selected in a dropdown)
- Property Name:** Repository Url
- Property Value:** file:///C:/Program Files/iWay55/bes
- Property Name:** Repository Driver
- Property Value:** (empty text field)
- Property Name:** Repository User
- Property Value:** (empty text field)
- Property Name:** Repository Password
- Property Value:** (empty text field)
- Property Name:** Repository Pooling
- Property Value:** ☐

Auditing Section:

- Property Name:** Store Message
- Property Value:** ☐ yes ☒ no
- Property Name:** Max Message Stored
- Property Value:** 10,000 (selected in a dropdown)

Buttons:

- Save Configuration
- Save History (disabled)
- 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 BEA WebLogic Server is started.
2. From the iBSE Monitoring Settings window, click *Start Monitoring*.
3. Click *View Services*.

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

The screenshot shows a window titled "Service Statistics". It has two main panes. The "Web Service Methods" pane contains a "Service" label and a drop-down menu currently showing "all". To the right of this is a "Method" label. The "Statistics" pane contains a table with the following data:

Total Time	55 min
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	828 ms
Average Back End Time	530 ms
Last Back End Time	765 ms
Successful Invocations	select a correlation id
Failed Invocations	select a correlation id

At the bottom right of the window is a button labeled "< home".

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).

Service Statistics

Web Service Methods

Service

Method

B0100033

all methods

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

- 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

- 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.

The screenshot shows a web application window titled "Invocation Statistics". It contains three main sections: "Message Information", "Client Information", and "Detail".

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

In the bottom right corner, there is a button labeled "< 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 BEA WebLogic Server is started.
2. In the iBSE Monitoring Settings window, click *Start Monitoring*.
3. Click *View Events*.

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

Channel Statistics

Channels

Ports

all

Statistics

Total Event Count	4
Total Success Count	3
Total Error Count	1
Average Event Size	337.0 bytes
Average Event Reply Size	na
Average Delivery Time	1274.0 ms
Last Delivery Time	250 ms
Successful Events	select a correlation id
Failed Events	select a correlation id

< home

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

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

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

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

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

Channel Statistics

Channels

Channels: TestChan ▾ Ports: all ▾

Statistics

Total Event Count	3
Total Success Count	2
Total Error Count	1
Average Event Size	401.0 bytes
Average Event Reply Size	na
Average Delivery Time	1542.0 ms
Last Delivery Time	250 ms
Successful Events	select a correlation id ▾
Failed Events	select a correlation id ▾

Suspend Channel Start Channel

< home

- 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: TestChan Ports: 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](#)

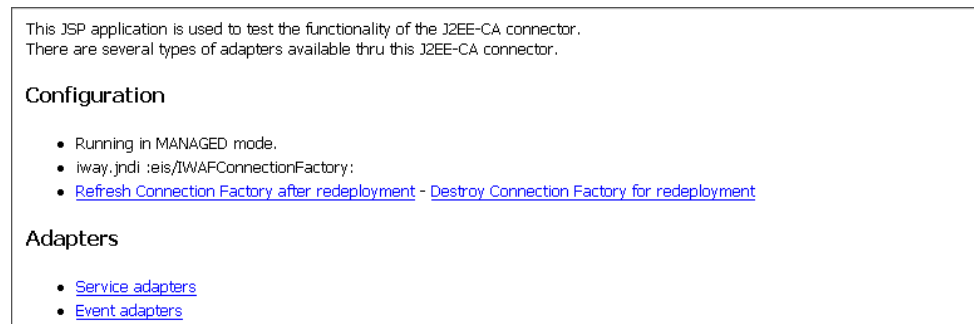
Is the name of the machine where your application server is running.

[port](#)

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

<http://localhost:7001/iwjcaivp>

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



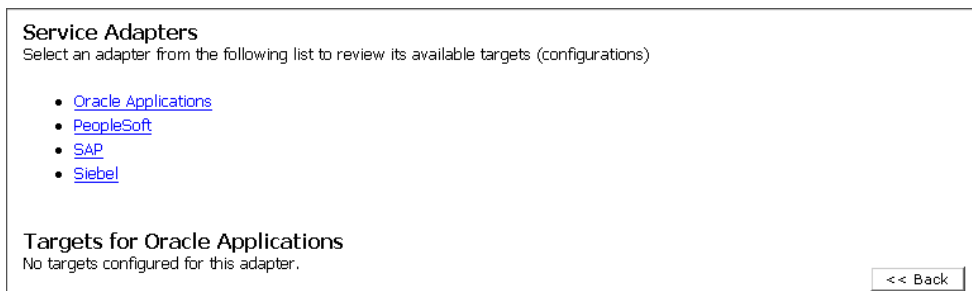
The JCA Test Tool runs in managed mode by default.

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

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

- a. Click *Destroy Connection Factory* for redeployment.
 - b. Redeploy the JCA connector module using the BEA WebLogic Server console.
 - c. In the JCA Test Tool, click *Refresh Connection Factory after redeployment*.
3. Click *Service adapters*.

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



4. Select a service adapter to monitor.

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

The screenshot displays the JCA Test Tool interface with the following sections:

- Service Adapters**
Select an adapter from the following list to review its available targets (configurations)
 - [Oracle Applications](#)
 - [PeopleSoft](#)
 - [SAP](#)
 - [Siebel](#)
- Targets for Siebel**
 - [TestService](#)
- Statistics for Siebel target TestService**

TotalRequestCount	: 0
TotalSuccessCount	: 0
TotalErrorCount	: 0
AverageExecutionTime	: 0 msec.
LastExecutionTime	: 0 msec.
- Request for Siebel target TestService**

Enter the data for this interaction. The configured user/password will be used if the User name is not provided.

User:

Password:

Input Doc:

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

<http://localhost:7001/iwjcaivp>

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

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 module using the BEA WebLogic Server console.
 - c. In the JCA Test Tool, click *Refresh Connection Factory after redeployment*.
3. Click *Event adapters*.

The Event Adapters page opens.

4. Select the event adapter to monitor.
5. Click the desired channel for your event adapter.
6. Click *start*.

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

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 Installation and Configuration for BEA WebLogic* documentation.

Procedure: How to Enable Tracing for Servlet iBSE

To enable tracing for Servlet iBSE:

1. Open the Servlet iBSE configuration page at:

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

where:

`localhost`

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

`port`

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

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

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

The default location for the trace information on Windows is:

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

Procedure: How to Enable Tracing for JCA

To enable tracing for JCA:

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

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

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

For example:

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

A directory in the configuration directory contains the logs.

- a. Review the logs generated by your application server.
 - b. Leave the remainder of the previous file unchanged.
3. Save the file and exit the editor.
4. Redeploy the connector.

Configuring Connection Pool Sizes

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

Procedure: How to Configure Connection Pool Sizes

To configure connection pool sizes:

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

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

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

3. Save the file and exit the editor.
4. Redeploy the connector.

Migrating Repositories

During design time, a repository is used to store metadata created when using Application Explorer to configure adapter connections, browse EIS objects, configure services, and configure listeners to listen for EIS events. For more information on configuring repositories, see the *iWay Installation and Configuration for BEA WebLogic* documentation.

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

File Repositories

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

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

where:

```
drive
```

Is the location of your iWay 5.5 installation.

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

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

iBSE Repositories

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

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

Procedure: How to Migrate an iBSE Repository Configured for Oracle

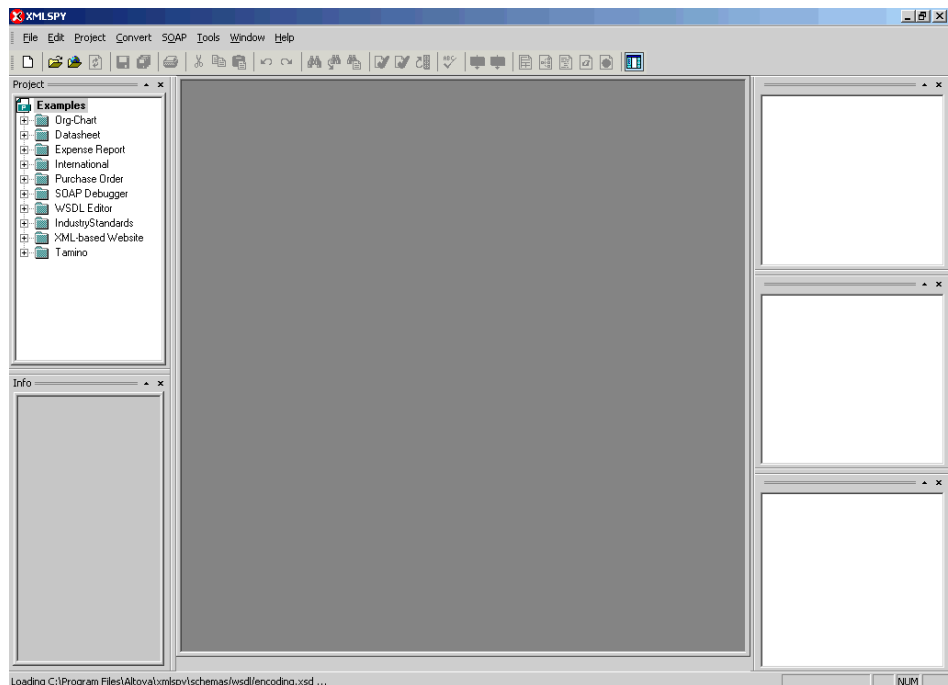
To migrate an iBSE repository that is configured for Oracle:

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

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

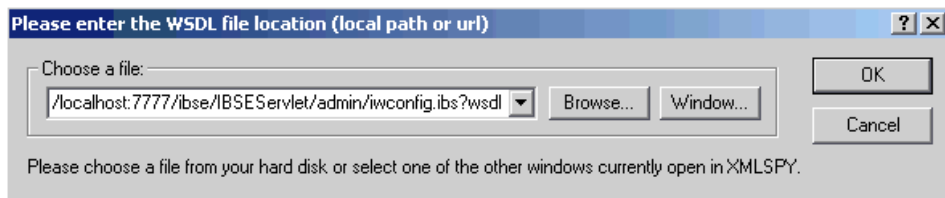
2. Open a third party XML editor, for example, XMLSPY.

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



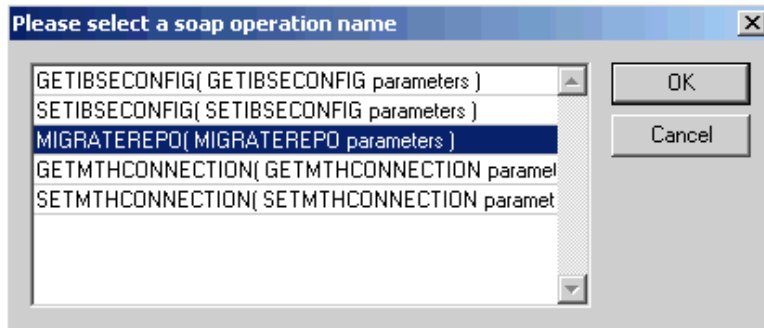
3. From the SOAP menu, select *Create new SOAP request*.

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



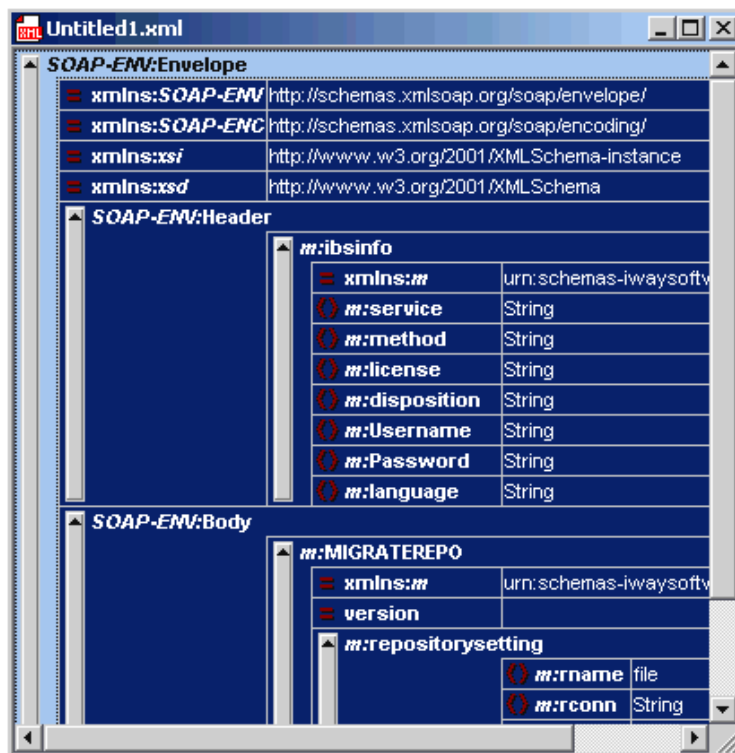
4. In the Choose a file field, paste the iBSE configuration service URL.
5. Click OK.

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



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

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



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

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



8. To display the structure of the SOAP envelope as text, click the *Text view* icon.
The `<SOAP-ENV:Header>` tag is not required and can be deleted from the SOAP envelope.

9. Locate the following section:

```
<m:MIGRATEREPO
xmlns:m="urn:schemas-iwaysoftware-com:jul2003:ibse:config" version="">
<m:repositorysetting>
<m:rname>oracle</m:rname>
<m:rconn>String</m:rconn>
<m:rdriver>String</m:rdriver>
<m:ruser>String</m:ruser>
<m:rpwd>String</m:rpwd>
</m:repositorysetting>
<m:servicename>String</m:servicename>
</m:MIGRATEREPO>
```

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

For example, the Oracle repository URL has the following format:

```
jdbc:oracle:thin:@[host]:[port]:[sid]
```

- b. For the <m:rdriver> tag, replace the String placeholder with the location of your Oracle driver.

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

- c. For the <m:ruser> tag, replace the String placeholder with a valid user name to access the Oracle repository.
- d. For the <m:rpwd> tag, replace the String placeholder with a valid password to access the Oracle repository.

10. Perform one of the following migration options.

If you want to migrate a **single** Web service from the current iBSE repository, enter the Web service name in the <m:servicename> tag, for example:

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

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

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

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

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

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

JCA Repositories

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

Procedure: How to Migrate a JCA Repository

To migrate a JCA repository:

1. Navigate to the location of your JCA configuration directory where the repository schemas and other information is stored, for example:
`C:\Program Files\iWay55\config\base`
2. Locate and copy the *repository.xml* file.
3. Place this file in a new JCA configuration directory to migrate the existing repository.

Your JCA repository migrates to the new JCA configuration directory.

Migrating Event Handling Configurations

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

Procedure How to Migrate a Microsoft SQL Server 2000 Repository

To migrate a Microsoft SQL Server 2000 repository:

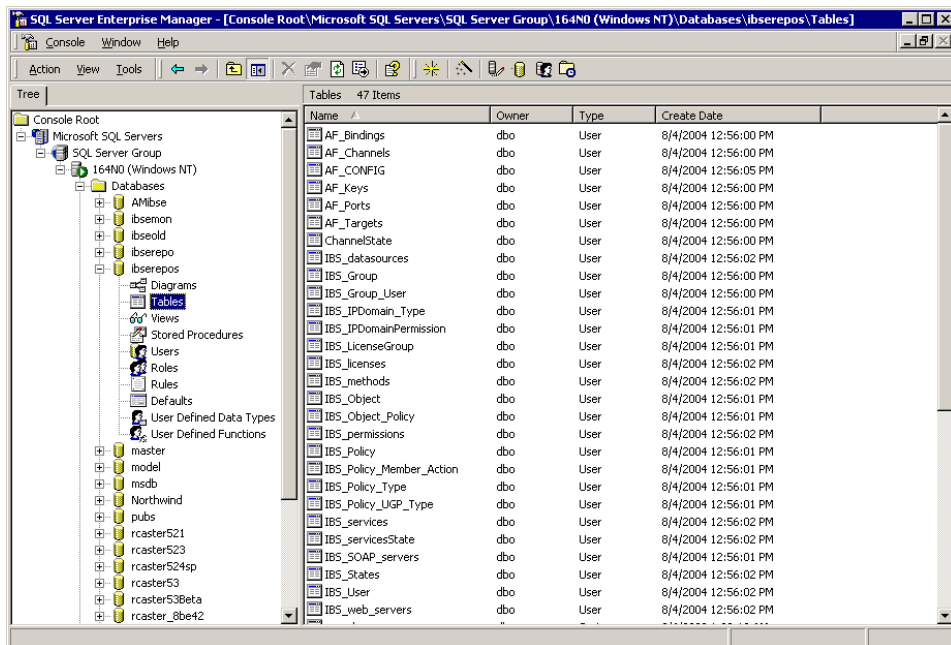
1. Open a command prompt and navigate to the iWay setup directory. The default location on Windows is:

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

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

`iwse.sql`

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



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

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

Procedure How to Migrate an Oracle Repository

To migrate an Oracle repository:

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

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

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

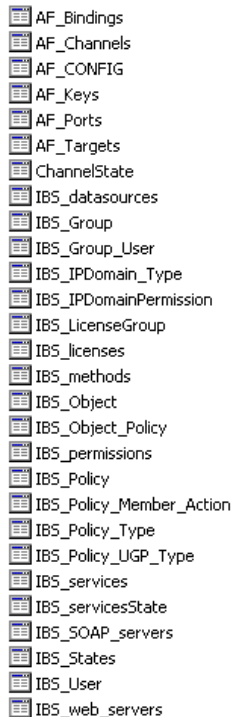
For Oracle 8:

```
iwse.ora
```

For Oracle 9:

[iwse.ora9](#)

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



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 Installation and Configuration for BEA WebLogic* documentation.

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

Procedure How to Migrate a Sybase Repository

To migrate a Sybase repository:

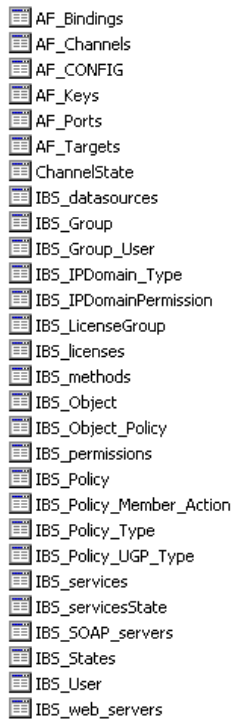
1. Open a command prompt and navigate to the iWay setup directory. The default location on Windows is:

[C:\Program Files\iWay55\etc\setup](#)

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

[sybase-iwse.sql](#)

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



A screenshot of a database table list showing various tables for AF and IBS components. The tables are listed in a column, each with a small icon to its left. The tables are:

- 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 Installation and Configuration for BEA WebLogic* documentation.

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

Procedure How to Migrate a DB2 Repository

To migrate a DB2 repository:

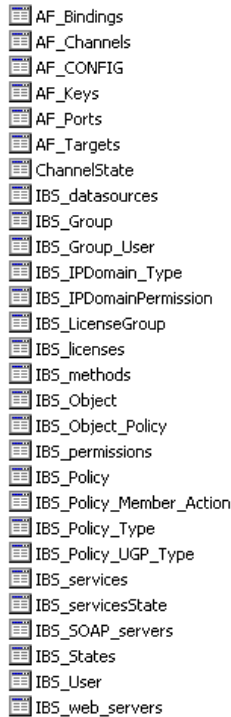
1. Open a command prompt and navigate to the iWay setup directory. The default location on Windows is:

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

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

`db2-iwse.sql`

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



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 Installation and Configuration for BEA WebLogic* documentation.

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

Exporting or Importing Targets

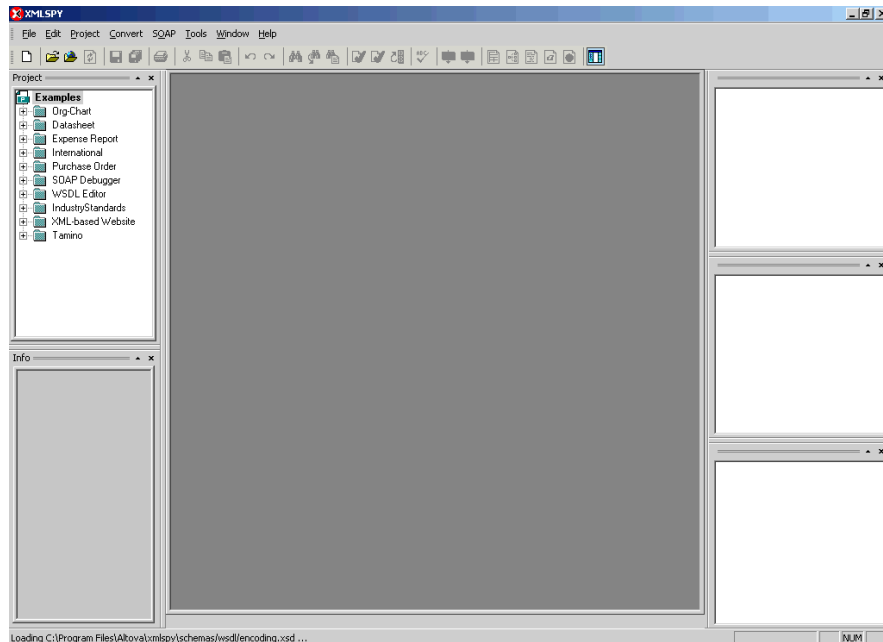
After you migrate your repository, you can export or import targets with their connection information and persistent data between repositories.

Procedure: How to Export a Target

To export a target:

1. Copy the iBSE administrative services for Application Explorer URL, for example:
<http://localhost:7777/ibse/IBSEServlet/admin/iwae.ibs?wsdl>
2. Open a third party XML editor, for example, XMLSPY.

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



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

The WSDL file location dialog box opens.

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

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

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

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

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

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



8. To display the structure of the SOAP envelope as text, click the *Text view* icon.

The <SOAP-ENV:Header> tag is not required and can be deleted from the SOAP envelope.

9. Locate the following section:

```
<m:EXPORTTARGET  
xmlns:m="urn:schemas-iwaysoftware-com:dec2002:iwse:af">  
<m:target>String</m:target>  
<m:name>String</m:name>  
</m:EXPORTTARGET>
```

- a. For the <m:target> tag, replace the String placeholder with the EIS target system name as it appears in Application Explorer and verify whether this value is case sensitive.
 - b. For the <m:name> tag, replace the String placeholder with the name of the target you want to export.
10. From the SOAP menu, select *Send request to server*.

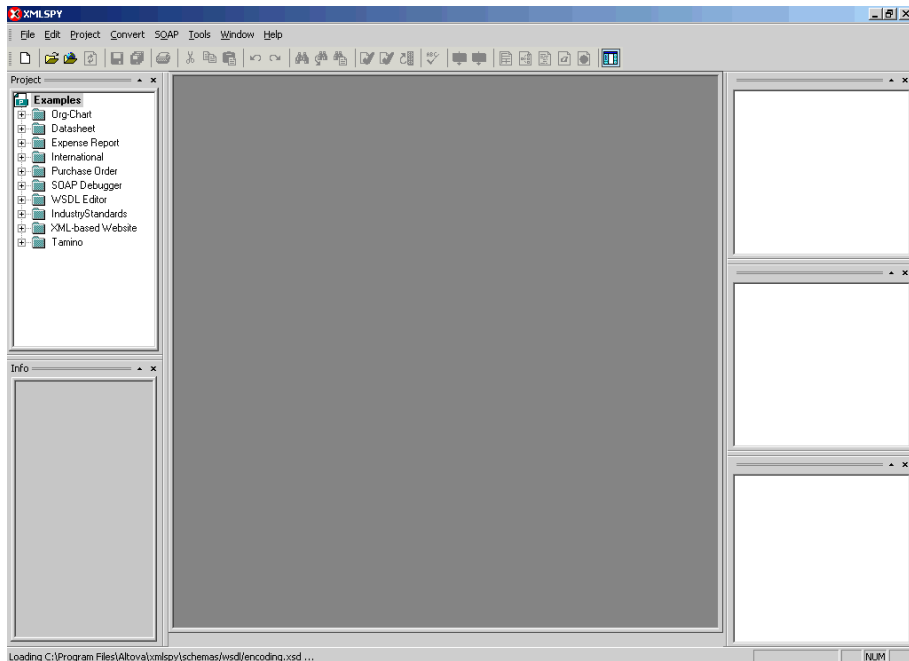
A response is returned that contains the <m: exporttime> and <m: contents> elements. You must use these elements when importing your target.

Procedure: How to Import a Target

To import a target:

1. Copy the iBSE administrative services for Application Explorer URL, for example:
<http://localhost:7777/ibse/IBSEServlet/admin/iwae.ibs?wsdl>
2. Open a third party XML editor, for example, XMLSPY.

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



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

The WSDL file location dialog box opens.

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

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

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

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

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

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



7. To display the structure of the SOAP envelope as text, click the *Text view* icon.

The <SOAP-ENV:Header> tag is not required and can be deleted from the SOAP envelope.

8. Locate the following section:

```
<m:IMPORTTARGET
xmlns:m="urn:schemas-iwaysoftware-com:dec2002:iwse:af">
<m:targetinstance>
<m:target>String</m:target>
<m:name>String</m:name>
<m:description>String</m:description>
<m:repositoryid>String</m:repositoryid>
<m:exporttime>2001-12-17T09:30:47-05:00</m:exporttime>
<m:contents>R01GODlhcgGSALMAAAQCAEMmCZtuMFQxDS8b</m:contents>
</m:targetinstance>
</m:IMPORTTARGET>
```

- a. For the <m:target> tag, replace the String placeholder with the EIS target system name.
 - b. For the <m:name> tag, replace the String placeholder with the new name of the target you want to import.
 - c. For the <m:description> tag, replace the String placeholder with a description of the target.
 - d. For the <m:repositoryid> tag, copy and paste the contents of the <m:repositoryid> tag that was returned when you exported your target.
 - e. For the <m: exporttime> tag, copy and paste the contents of the <m: exporttime> tag that was returned when you exported your target.
 - f. For the <m: contents> tag, copy and paste the contents of the <m: contents> tag that was returned when you exported your target.
- 9.** From the SOAP menu, select *Send request to server*.

Retrieving or Updating Web Service Method Connection Information

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

Procedure: How to Retrieve Web Service Method Connection Information

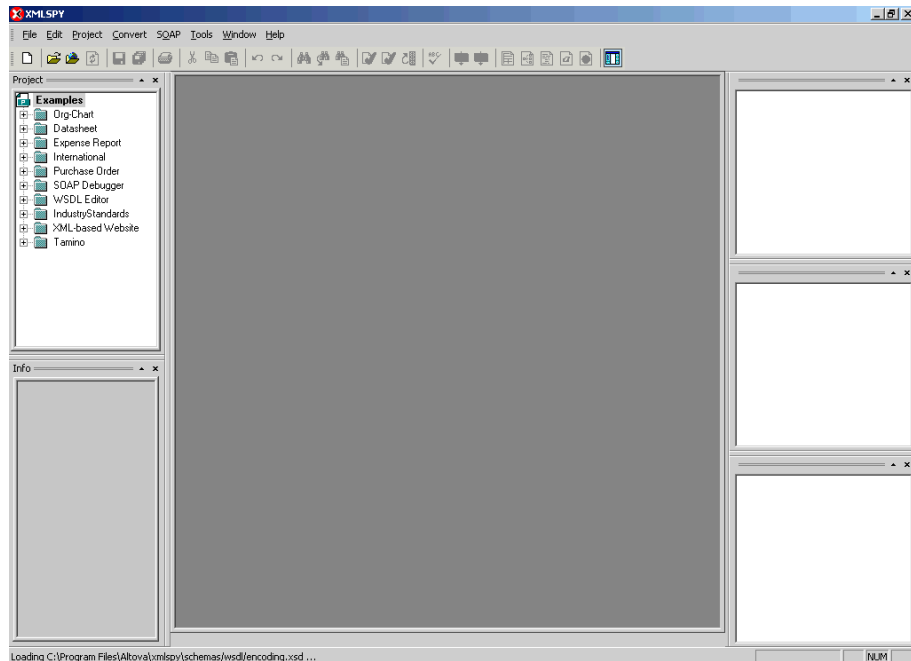
To retrieve Web service method connection information:

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

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

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

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



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

The WSDL file location dialog box opens.

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

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

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

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

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

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



7. To display the structure of the SOAP envelope as text, click the *Text view* icon.

The <SOAP-ENV:Header> tag is not required and can be deleted from the SOAP envelope.

8. Locate the following section:

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

- a. For the <m:serviceName> tag, replace the String placeholder with the name of the Web service.
 - b. For the <m:methodName> tag, replace the String placeholder with name of the Web service method.
9. From the SOAP menu, select *Send request to server*.

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

Procedure: How to Update Web Service Method Connection Information

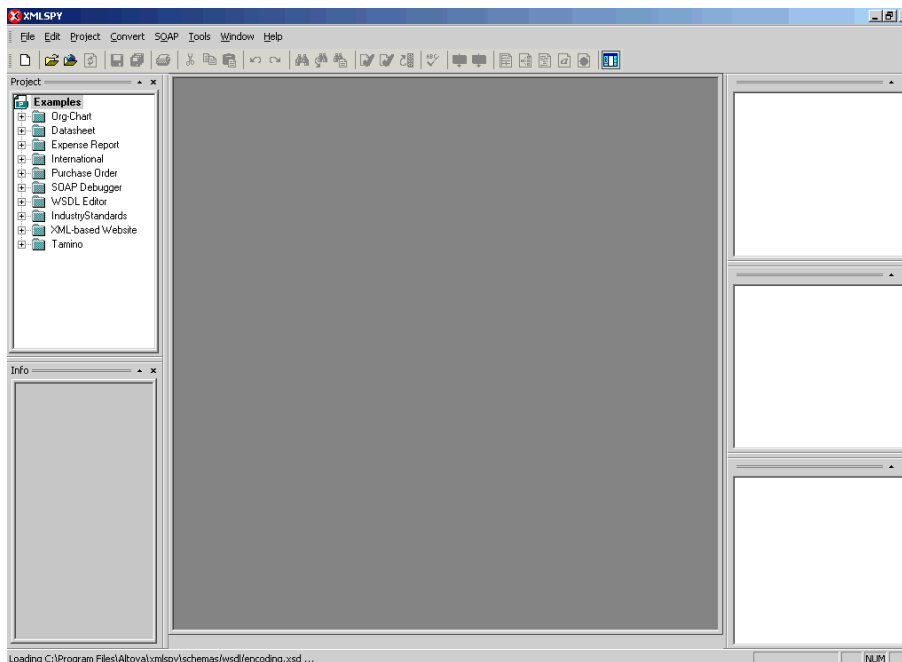
To update Web service method connection information:

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

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

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

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



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

The WSDL file location dialog box opens.

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

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

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

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

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

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



7. To display the structure of the SOAP envelope as text, click the *Text view* icon.

The <SOAP-ENV:Header> tag is not required and can be deleted from the SOAP envelope.

8. Locate the following section:

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

- a. For the <m:servicename> tag, replace the String placeholder with the name of the Web service.
 - b. For the <m:methodname> tag, replace the String placeholder with the name of the Web service method.
 - c. For the <m: descriptor> tag, copy and paste the contents of the <m: descriptor> tag that was returned when you retrieved Web Service method connection information.
- 9.** Modify the contents of the <m: descriptor> tag to change the existing Web Service method connection information.
- 10.** From the SOAP menu, select *Send request to server*.

Starting or Stopping a Channel Programmatically

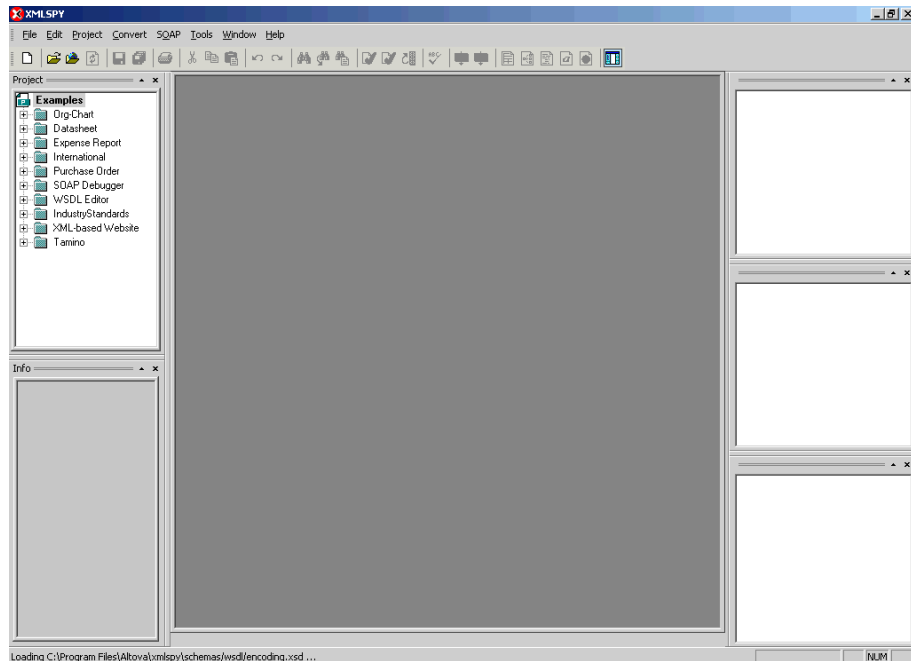
The following topic describes how to start or stop a channel programmatically.

Procedure: How to Start a Channel Programmatically

To start a channel programmatically:

1. Copy the iBSE control event URL, for example:
<http://localhost:7777/ibse/IBSEServlet/admin/iwevent.ibs?wsdl>
2. Open a third party XML editor, for example, XMLSPY.

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

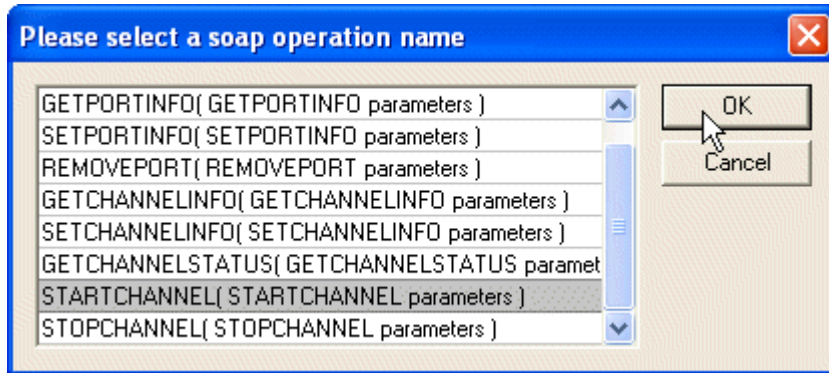


3. From the SOAP menu, select *Create new SOAP request*.

The WSDL file location dialog box opens.

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

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



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

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

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

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



7. To display the structure of the SOAP envelope as text, click the *Text view* icon.

The `<SOAP-ENV:Header>` tag is not required and can be deleted from the SOAP envelope.

8. Locate the following section:

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

9. For the `<m:channel>` tag, replace the *String* placeholder with the name of the Channel you want to start.
10. From the SOAP menu, select *Send request to server*.

Procedure: How to Stop a Channel Programmatically

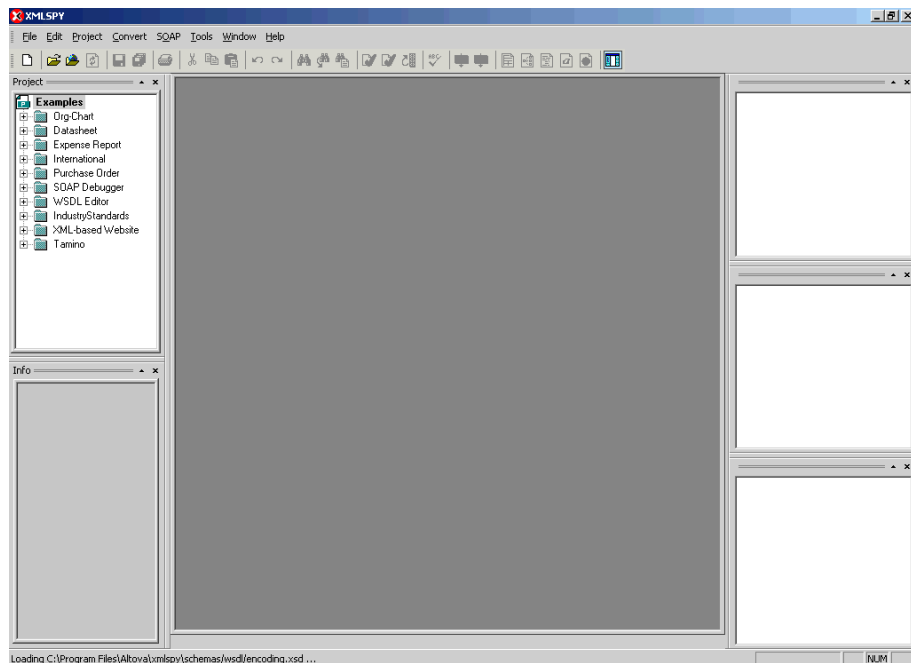
To stop a channel programmatically:

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

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

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

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

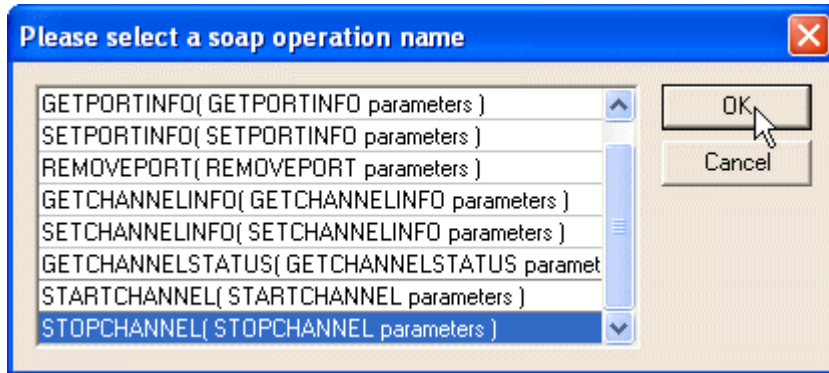


3. From the SOAP menu, select *Create new SOAP request*.

The WSDL file location dialog box opens.

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

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



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

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

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

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



7. To display the structure of the SOAP envelope as text, click the *Text view* icon.

The `<SOAP-ENV:Header>` tag is not required and can be deleted from the SOAP envelope.

8. Locate the following section:

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

9. For the `<m:channel>` tag, replace the String placeholder with the name of the Channel you want to stop.
10. From the SOAP menu, select *Send request to server*.

APPENDIX A

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

Topics:

- Starting Application Explorer in BEA WebLogic Workshop
- Creating a New Configuration
- Connecting to ISO15022
- Creating an XML Schema
- Creating an Integration Business Service
- Adding a Control for an iWay Resource in BEA WebLogic Workshop
- Adding an iWay Extensible CCI Control to a BEA WebLogic Workshop Application

This section describes how to use iWay Java Swing Application Explorer running in BEA WebLogic Workshop to create XML schemas for ISO15022. In addition, this section provides information on creating Web services that are published by the Integration Business Services Engine (iBSE).

Starting Application Explorer in BEA WebLogic Workshop

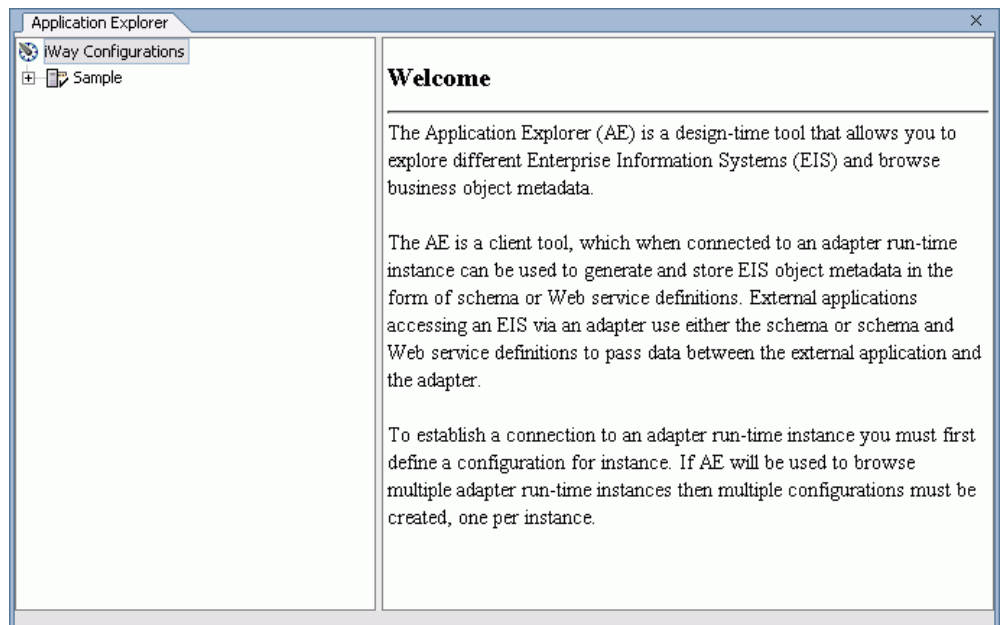
The server must be started where Application Explorer is running. Before you can use Application Explorer, you must start BEA WebLogic server.

Procedure How to Start Application Explorer in BEA WebLogic Workshop

To start Application Explorer running in BEA WebLogic Workshop:

1. Before starting Application Explorer, ensure that BEA WebLogic Server is running.
2. Start BEA WebLogic Workshop.
3. From the BEA WebLogic Workshop View menu, select *Windows* and then, *Application Explorer*.

Application Explorer opens in BEA WebLogic Workshop.



You can resize and drag-and-drop the Application Explorer window within BEA WebLogic Workshop. For example, you can drag it to the upper part of BEA WebLogic Workshop.

Creating a New Configuration

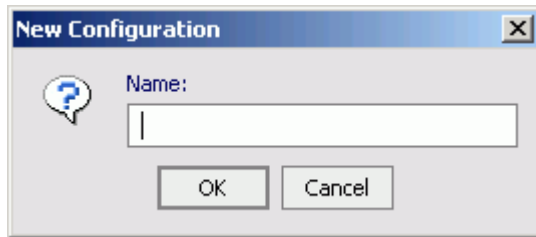
Before you can start using Application Explorer, you must define a new configuration for iBSE or JCA.

Procedure How to Create a New Configuration for iBSE or JCA

To create a new configuration:

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

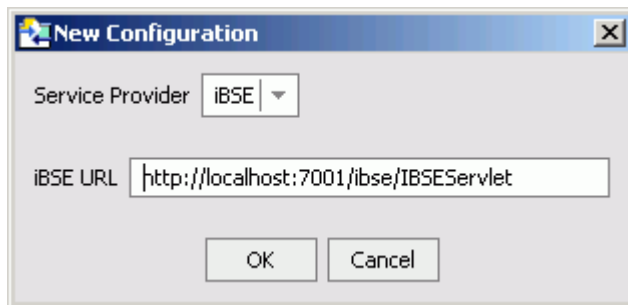
The New Configuration dialog box opens.



2. Type the name of the new configuration and click *OK*.

Note: If you are creating a new JCA configuration, type *base* in the name field. You must use this value if you are pointing to the default iWay configuration.

The following dialog box opens.



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

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

<http://localhost:7001/ibse/IBSEServlet>

where:

[localhost](#)

Is where your application server is running.

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

`C:\Program Files\iWay55`

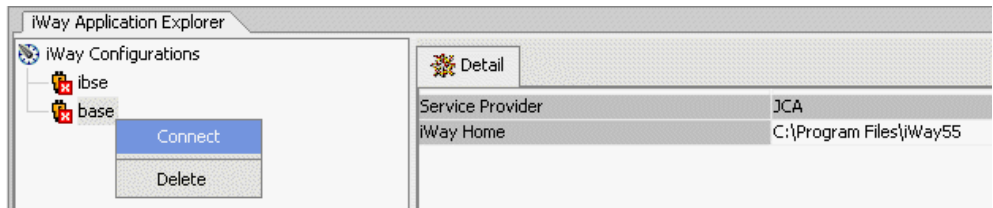
where:

`iWay55`

Is the full path to your iWay installation.

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

After you add your configuration, you must connect to it.

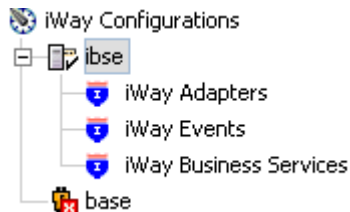


4. Right-click the configuration to which you want to connect, for example, base, and select *Connect*.

The iWay Adapters and iWay Events nodes appear.



When you connect to iBSE, the iWay Adapters, iWay Events, and Integration Business Services nodes appear.



5. To display the service and event adapters that are installed, expand each node.

The iWay Adapters list includes an ISO15022 node that enables you to connect to ISO15022 metadata and create XML request and response schemas to use to listen for events or create Web Services. For more information, see *Creating an Integration Business Service* on page A-13.

The iWay Events list includes an ISO15022 node that enables you to create ports and channels for ISO15022 event handling. For more information, see Appendix B, *Using Application Explorer in BEA WebLogic Workshop for Event Handling*.

Connecting to ISO15022

To browse ISO15022, you must create an ISO15022 target and connect to it. The target serves as your connection point. You must establish a connection to ISO15022 every time you start Application Explorer or after you disconnect from ISO15022.

The left pane displays the application systems supported by Application Explorer. These are based on the iWay adapters you installed and are licensed to use.

Creating and Connecting to a Target

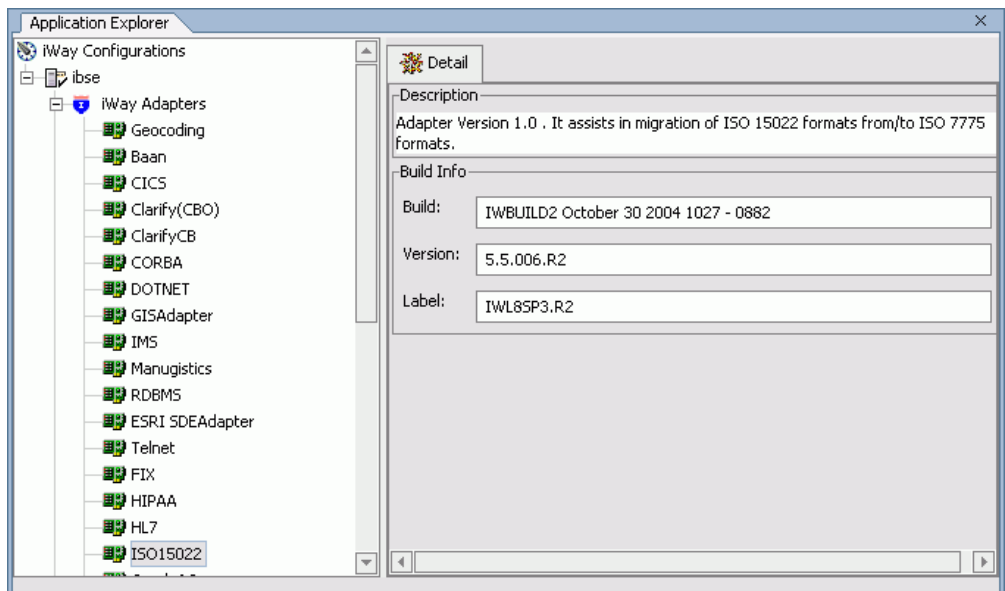
To connect to ISO15022 for the first time, you must create a new target. The target is automatically saved after it is created.

Procedure How to Create a New Target

To create a target:

1. In the left pane, expand *iWay Adapters* and click the ISO15022 node.

Descriptive information (for example, title and product version) for the iWay Adapter for ISO15022 appears in the right pane.

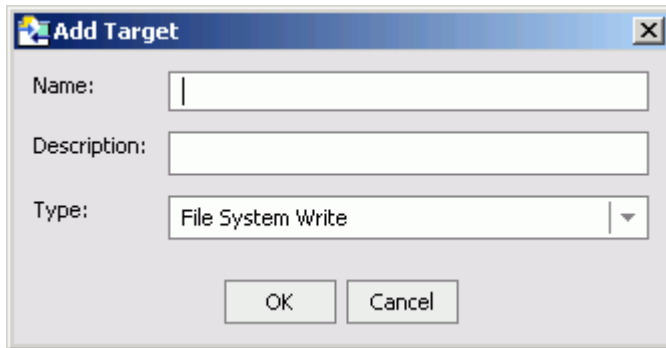


2. To view the options, right-click the *ISO15022* node.



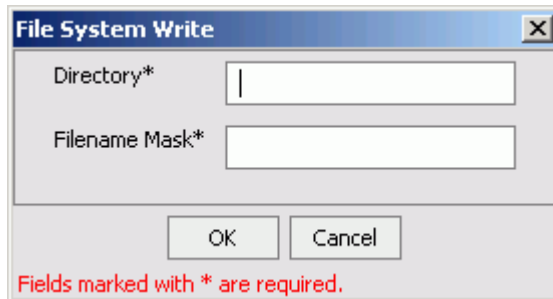
3. Select *Add Target*.

The Add target dialog box opens.



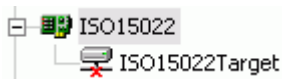
- a. In the Name field, type a descriptive name for the target, for example, *ISO15022Target*.
- b. In the Description field, type a brief description of the target.
- c. From the Target Type drop-down list, select one of the following transports from the drop-down list:
 - File System Write. For more information on the properties required, see *File System Write Properties* on page A-7.
 - File Transfer Protocol (FTP). For more information on the properties required, see *File Transfer Protocol Properties* on page A-8.
 - IBM MQSeries (MQ). For more information on the properties required, see *MQSeries Properties* on page A-8.
4. Click *OK*.

The File System Write dialog box opens.



- a. In the Directory field, type the location where the output of the service is placed.
 - b. In the Filename Mask field, type a file pattern, which can contain an asterisk which gets expanded to a fine timestamp.
5. Click OK.

In the left pane, the new target (ISO15022Target) appears below the ISO15022 node.



You can now connect to the target you defined.

Reference File System Write Properties

The following table provides definitions for the properties required for the File System Write target type.

Property	Definition
Directory	The directory to which output messages are emitted.
Filename Mask	<p>The output file name (can contain an asterisk), which gets expanded to a timestamp.</p> <p>A pound sign can be used as a mask for a sequence count. Each pound symbol represents a whole number integer value. For example, File## counts up to 99 before restarting at 0, File### counts up to 999 before restarting at 0, and so on.</p>

Reference File Transfer Protocol Properties

The following table provides definitions for the properties required for the File Transfer Protocol target type.

Settings tab

Property	Definition
Host	FTP target system.
Port	FTP target system port.
User	User ID to use when connecting to the FTP host.
Password	Password associated with the user ID.
Directory	The directory to which output messages are emitted.
Filename Mask	The output file name (can contain an asterisk), which gets expanded to a timestamp. A pound sign can be used as a mask for a sequence count. Each pound symbol represents a whole number integer value. For example, File## counts up to 99 before restarting at 0, File### counts up to 999 before restarting at 0, and so on.

Advanced tab

Property	Definition
Retry Interval	The maximum wait interval between retries when a connection fails. Retry interval duration in xxH:xxM:xxS format. For example, 1H:2M:3S is 1 hour 2 minutes and 3 seconds.
Maxtries	Maximum number of retry attempts if a write failure occurs.

Reference MQSeries Properties

The following table provides definitions for the properties required for the MQSeries target type.

Settings tab

Property	Definition
Queue Manager	Name of the MQSeries queue manager to be used.
Queue Name	Queue on which request documents are received.
Correlation ID	The correlation ID to set in the MQSeries message header.

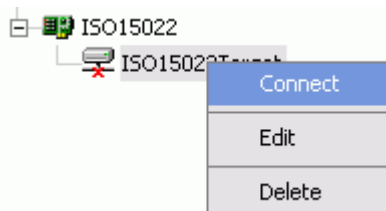
MQ Client tab

Property	Definition
Port	Queue on which request documents are received.
Channel	The correlation ID to set in the MQSeries message header.

Procedure How to Connect to a Target

To connect to an ISO15022 target:

1. In the left pane, expand the *ISO15022* node and select the target to which you want to connect, for example, *ISO15022Target*.



2. In the left pane, right-click the target and select *Connect*.

The *ISO15022Target* node in the left pane changes to reflect that a connection was made.

3. Expand the target node to reveal the list of ISO15022 interfaces.



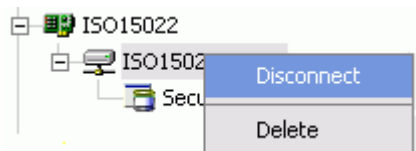
Managing a Target

Although you can maintain multiple open connections to different application systems, iWay Software recommends that you close connections when they are not in use. After you disconnect, you can modify an existing target.

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

Procedure How to Disconnect From a Target

To disconnect from a target:



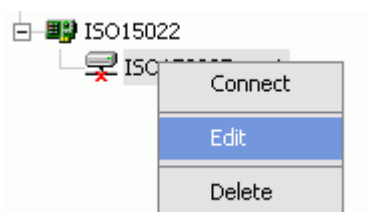
1. Right-click the ISO15022 target from which you want to disconnect.
2. Select *Disconnect*.

Disconnecting from the application system drops the connection, but the node remains. The ISO15022Target node in the left pane changes to reflect that you disconnected from the target.

Procedure How to Edit a Target

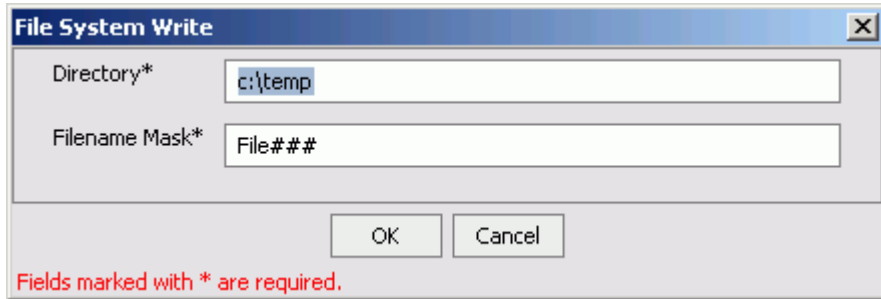
To edit a target:

1. Ensure that the target you want to edit is disconnected.



2. In the left pane, right-click the target and select *Edit*.

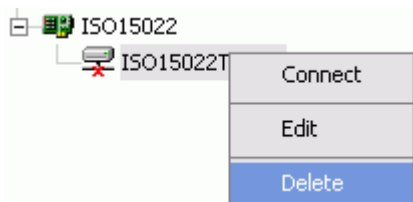
The following dialog box opens.



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

Procedure How to Delete a Target

To delete a target:



1. In the left pane, right-click the target.
2. Select *Delete*.

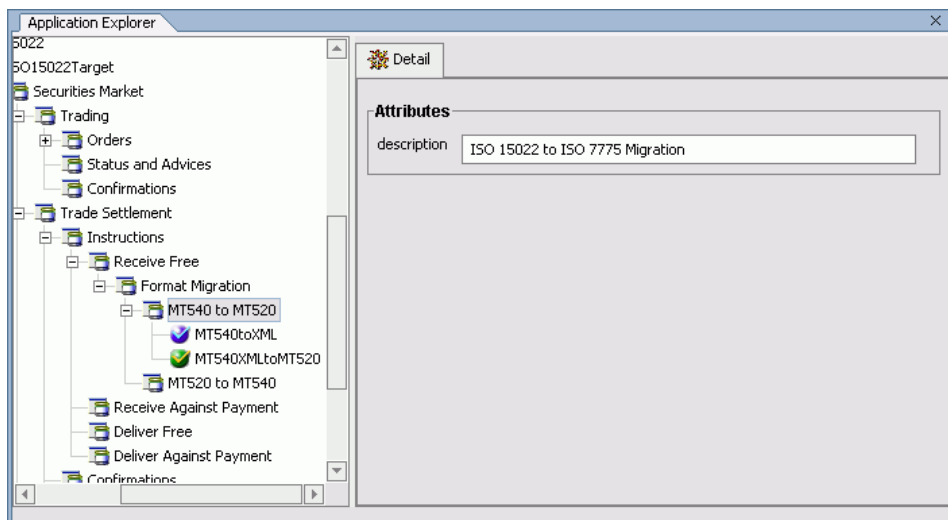
The ISO15022Target node disappears from the left pane.

Creating an XML Schema

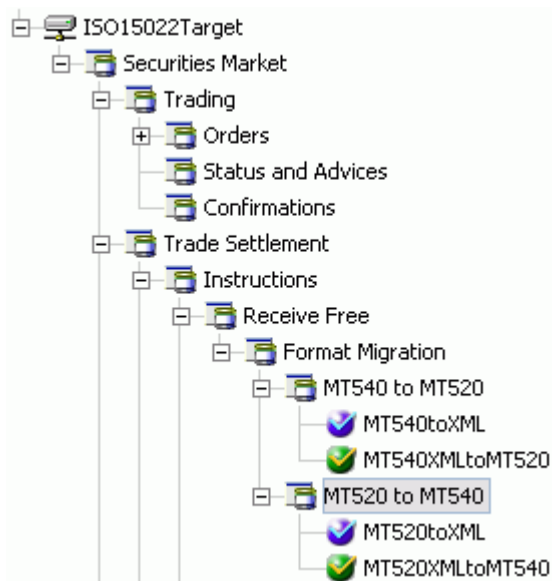
After you create a new configuration and connect to ISO15022, Application Explorer enables you to create a request or response schema.

Procedure How to Create a Request and Response Schema

To create a request and response schema:



1. Expand the ISO15022 node and select the node for which you want to create the schema.



The following XML schemas appear for the interface:

- Request (in this example MT540 to MT520)
 - Response (in this example MT520 to MT540)
2. To view the appropriate schema in the right pane, click the *Request Schema* or the *Response Schema* tab.

Reference Schema Location

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

```
drive:\Program Files\iWay55\bea\ibse\wsdl\schemas\service\ISO15022  
\ISO15022Target\SA45280C
```

where:

ISO15022Target

Is the name of the ISO15022 target.

SA45280C

Is a randomly generated folder name indicating where the schemas are stored.

Creating an Integration Business Service

You can create an Integration business service (also known as a Web service) for objects you want to use with your adapter. To generate a business service, you must deploy the iWay Adapter for ISO15022 using the Integration Business Services Engine (iBSE). iBSE exposes functionality as Web services and serves as a gateway to heterogeneous back-end applications and databases.

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

You can make a Web service available to other services within a host server by generating WSDL (Web Services Description Language) from the Web service.

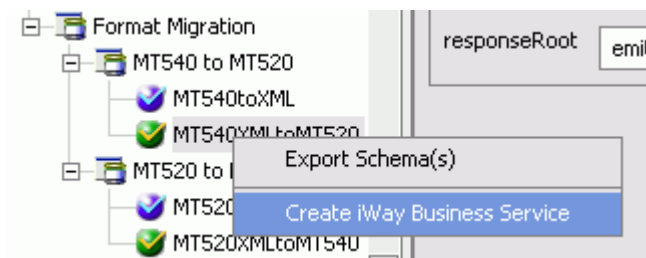
Because Application Explorer runs within BEA WebLogic Workshop, you can easily incorporate iWay Web services into BEA WebLogic Workflows. To enable BEA WebLogic Workshop to use iWay Web services, you export the WSDL to a directory accessible to BEA WebLogic Workshop.

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

Procedure How to Create an Integration Business Service

To create an Integration Business service:

1. Expand the ISO15022 node and select the interface for which you want to create a business service.



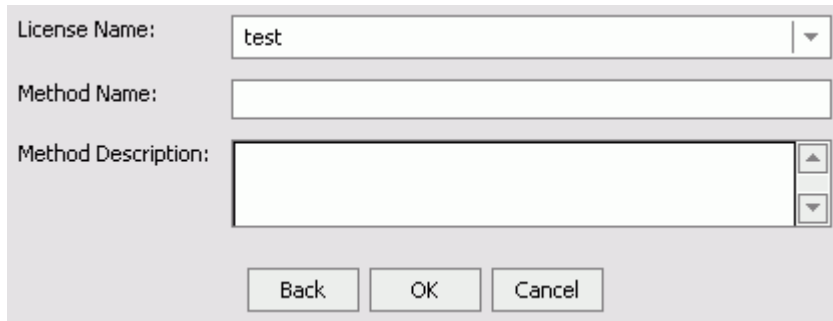
2. Right-click and select *Create Integration Business Service*.

The Create Integration Business Service dialog box opens.

A screenshot of the 'Create Integration Business Service' dialog box. It has a light gray background. At the top, 'Existing Service Names:' is followed by a blue drop-down menu showing '<new service>'. Below that, 'Service Name:' is followed by an empty text field. Then, 'Service Description:' is followed by a large empty text area with vertical scroll bars. At the bottom, there are two buttons: 'Next' and 'Cancel'.

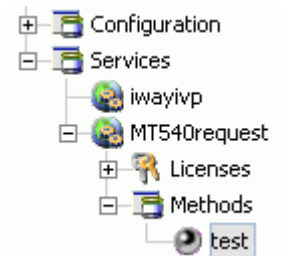
- a. From the Existing Service Names drop-down list, select whether you want to create a new service name or use an existing service name.
 - b. In the Service Name field, type a name for the business service, for example, MT540request.
 - c. In the Service Description field, type a brief description of the business service.
3. Click *Next*.

The Create Integration Business Service dialog box displays additional fields.

A dialog box titled "Create Integration Business Service" with a light gray background. It contains three input fields: "License Name:" with a dropdown menu showing "test", "Method Name:" with an empty text box, and "Method Description:" with a larger empty text box and vertical scrollbars. At the bottom are three buttons: "Back", "OK", and "Cancel".

- a. From the License Name drop-down list, select a license.
 - b. In the Method Name field, type a name for the method.
 - c. In the Method Description field, type a brief description for the method.
4. Click OK.

The business service and method appear below the Integration Business Services node.



In the left pane, all the available business services that were created appear.

5. Click the node for which you created the business service in the right pane.

MT540request - Business Service



The test pane opens in a new browser window.

The screenshot shows a web browser window with a purple header bar. The header contains the iWay Software logo on the left and the text "MT540request" and "An Integration Business Service" on the right. Below the header, there is a link "Click [here](#) for a complete list of operations." followed by a horizontal line. Below the line, the word "test" is displayed in a large, bold, blue font. Underneath "test", the word "Test" is in a smaller, bold, black font. A paragraph of text follows: "To test the operation using the [SOAP protocol](#), click the 'Invoke' button." Below this text is a form area. At the top of the form is a label "input xml:". Below the label is a large, empty text input field with a vertical scrollbar on the right. At the bottom of the form are four buttons: "Browse...", "Upload", "More", and "Invoke".

6. To invoke the service, enter a sample XML document in the input xml field.
7. Click *Invoke*.

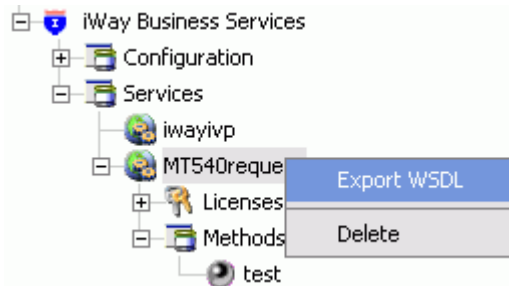
The result appears in the right pane.

Exporting iWay WSDL for Use in BEA WebLogic Workshop Workflows

Because Application Explorer runs within BEA WebLogic Workshop, you can easily incorporate iWay Web services into BEA WebLogic Workflows. To enable BEA WebLogic Workshop to use iWay Web services, you simply export the WSDL to a directory accessible to BEA WebLogic Workshop.

Procedure How to Export iWay WSDL for Use in BEA WebLogic Workshop Workflows

To export WSDL to a directory accessible to BEA WebLogic Workshop:

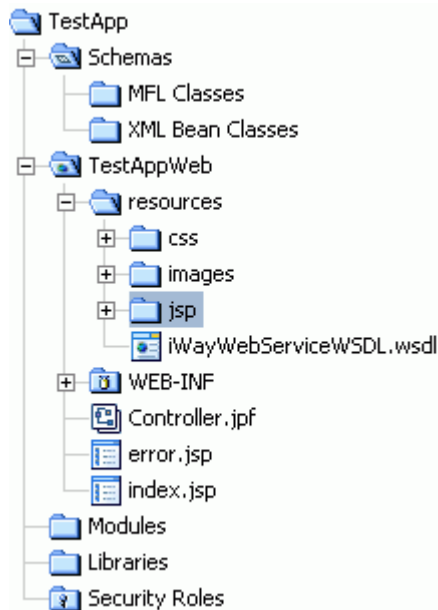


1. After you create a Web service, right-click the Web service name and select *Export WSDL*.

The Save dialog box appears.

2. Save the WSDL to a directory accessible to BEA WebLogic Workshop, for example, the \resources directory in your BEA WebLogic Workshop Web application directory structure.

The WSDL file appears under the resources folder of your Web application:



Adding a Control for an iWay Resource in BEA WebLogic Workshop

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

Adding a Web Service Control to a BEA WebLogic Workshop Application

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

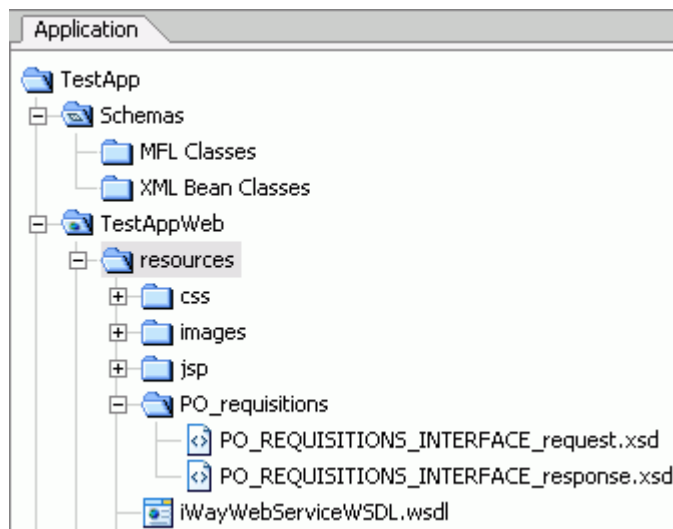
For more information on exporting a WSDL file, see *How to Export iWay WSDL for Use in BEA WebLogic Workshop Workflows* on page A-17.

Procedure How to Add a Web Service Control

To add a Web service control:

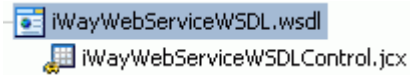
1. After exporting the WSDL file from Application Explorer, locate the file in the Application tab of your BEA WebLogic Workshop application.

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



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

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



Adding an iWay Extensible CCI Control to a BEA WebLogic Workshop Application

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

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

Overview

The extensible iWay CCI control provides:

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

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

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

where:

ResponseDataType

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

MethodName

Is the method name used by the extensible CCI control.

RequestDataType

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

VariableName

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

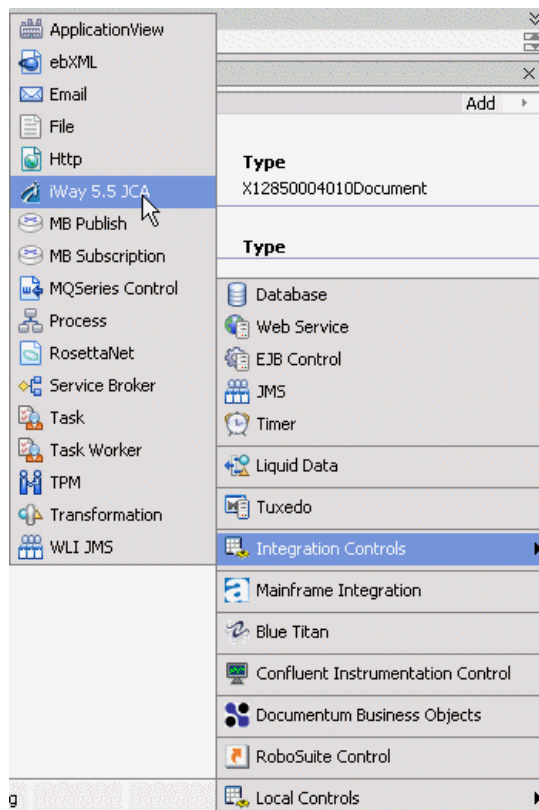
In addition, the extensible CCI control now generates a JCX file to which you can add your own methods. For more information, see *Defining a Control Using the Extensible CCI Control* on page A-20.

You can also use dynamic class casting to specify schema-based input or output XmlObjects to be casted into a pure XmlObject as a service method, which is expected by the CCI control. For more information, see *Using Dynamic Class Casting* on page A-26.

Example Defining a Control Using the Extensible CCI Control

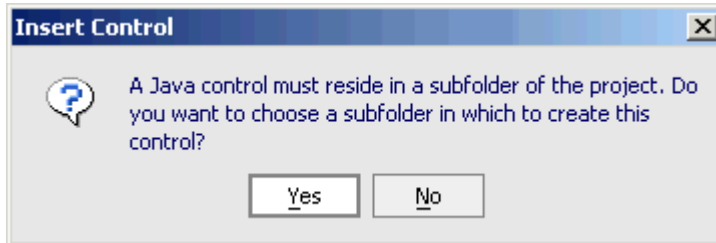
The following sample JCX demonstrates how to define a control for ISO15022 using the extensible CCI control in BEA WebLogic Workshop

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



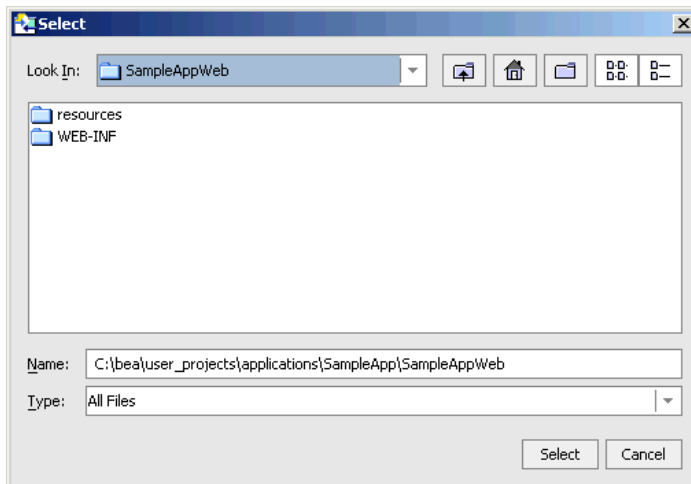
2. Click **Add** from the Controls section in the Data Palette tab, select *Integration Controls*, and click *iWay 5.5 JCA*.

The Insert Control message box opens.



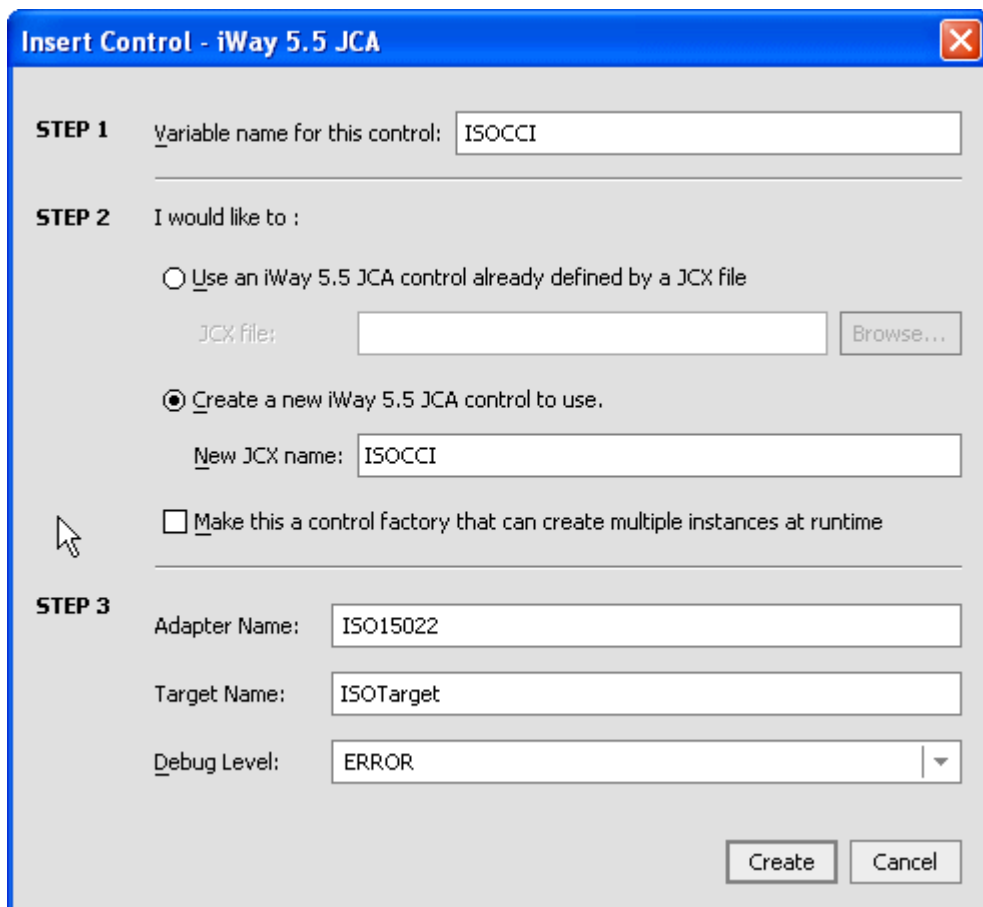
3. Click Yes.

The Select dialog box opens.



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

The Insert Control - iWay 5.5 JCA dialog box opens.



The dialog box is titled "Insert Control - iWay 5.5 JCA" and contains three steps for configuring a new JCA control.

STEP 1 Variable name for this control:

STEP 2 I would like to :

☐ Use an iWay 5.5 JCA control already defined by a JCX file

JCX file:

☒ Create a new iWay 5.5 JCA control to use.

New JCX name:

☐ Make this a control factory that can create multiple instances at runtime

STEP 3

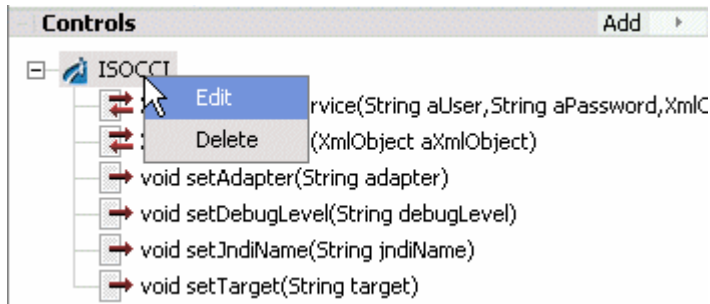
Adapter Name:

Target Name:

Debug Level:

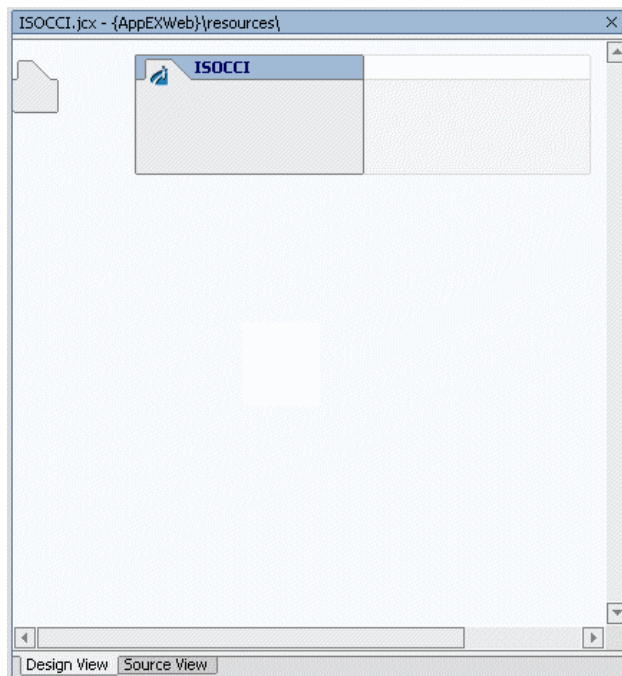
- a. Provide a variable name for the control.
 - b. Click *Create a new iWay 5.5 JCA control to use* and provide a new JCX name.
 - c. Enter the adapter name, target name, and select a debug level from the drop-down list.
5. Click *Create*.

A new JCX file is created.



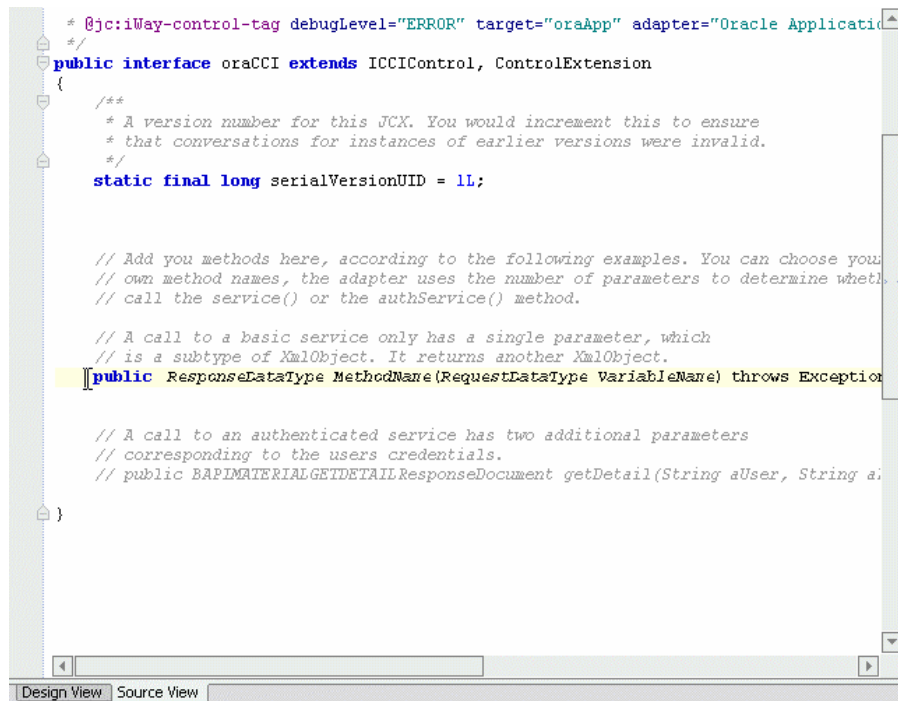
6. Right-click the control, for example, ISOCCI, and select *Edit*.

The Design View for the control opens.



7. Click the *Source View* tab.

The Source View for the control opens.



```
* @jwc:control-tag debugLevel="ERROR" target="oraApp" adapter="Oracle Application
*/
public interface oraCCI extends ICCIControl, ControlExtension
{
    /**
     * A version number for this JCK. You would increment this to ensure
     * that conversations for instances of earlier versions were invalid.
     */
    static final long serialVersionUID = 1L;

    // Add your methods here, according to the following examples. You can choose your
    // own method names, the adapter uses the number of parameters to determine whether
    // call the service() or the authService() method.

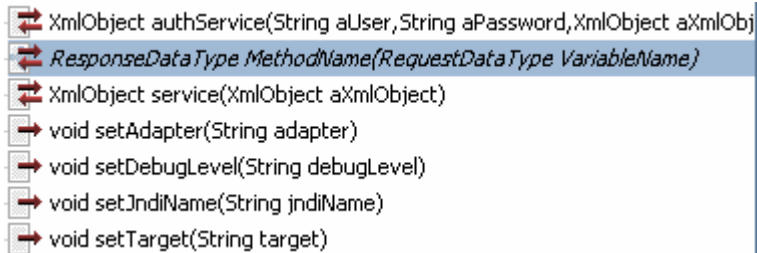
    // A call to a basic service only has a single parameter, which
    // is a subtype of XmlObject. It returns another XmlObject.
    public ResponseDataType MethodName(RequestDataType VariableName) throws Exception;

    // A call to an authenticated service has two additional parameters
    // corresponding to the users credentials.
    // public BAPIMATERIALGETDETAILResponseDocument getDetail(String aUser, String aP
```

Perform the following steps:

- Uncomment the public class definition.
- Change the existing response data type to match your response data type that is generated from your ISO15022 response schema.
- Change the existing method name to match your method.
- Change the existing request data type to match your request data type that is generated from your ISO15022 request schema.

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



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

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

Using the Extensible CCI Control

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

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

For example, instead of the generic `XmlObject`:

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

you call:

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

where:

ResponseDataType

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

MethodName

Is the method name used by the extensible CCI control.

RequestDataType

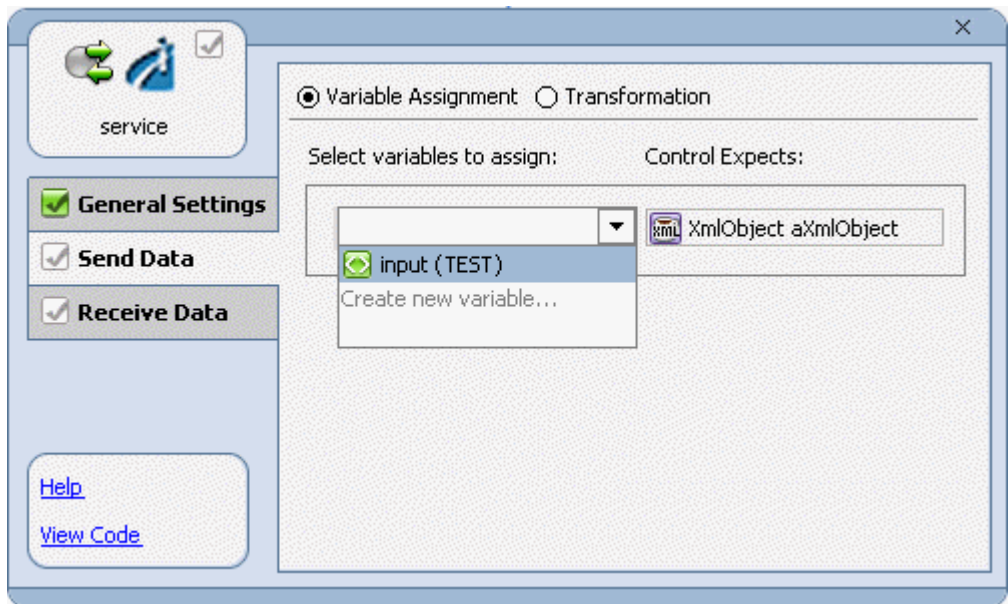
Is the XML Bean Class value that is generated from the request schema.

VariableName

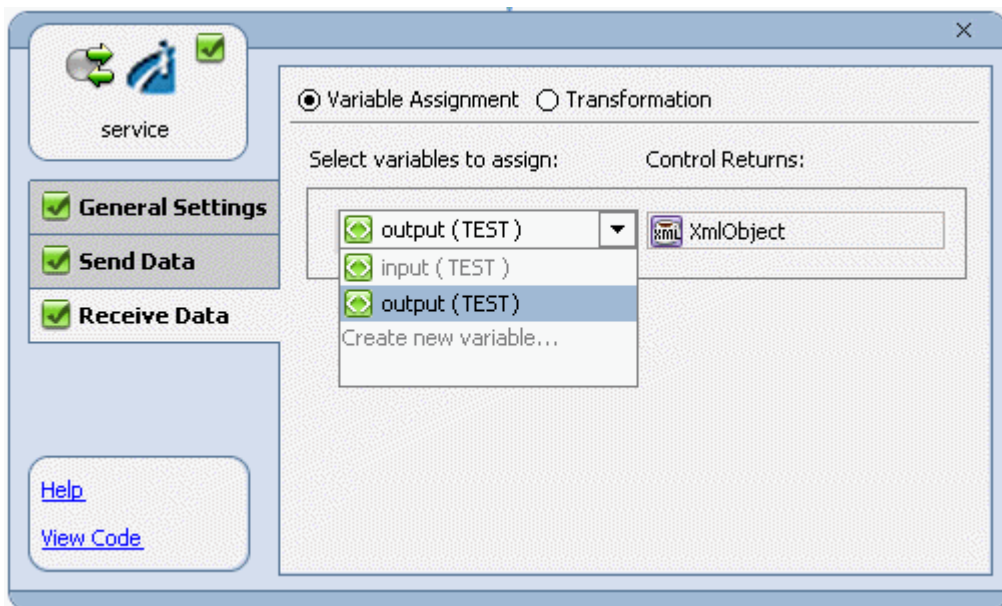
Is the request variable that stores the request document, which is used as input by the extensible CCI control.

Example Using Dynamic Class Casting

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



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



APPENDIX B

Using Application Explorer in BEA WebLogic WorkShop for Event Handling

Topics:

- Starting Application Explorer in BEA WebLogic Workshop
- Understanding Event Functionality
- Creating an Event Port
- Modifying an Event Port
- Creating a Channel
- Modifying a Channel
- Deploying Components in a Clustered BEA WebLogic Environment

This section describes how to use iWay Java Swing Application Explorer running in BEA WebLogic Workshop to create events for ISO15022. In addition, this section provides information on using events in a clustered BEA WebLogic environment.

Starting Application Explorer in BEA WebLogic Workshop

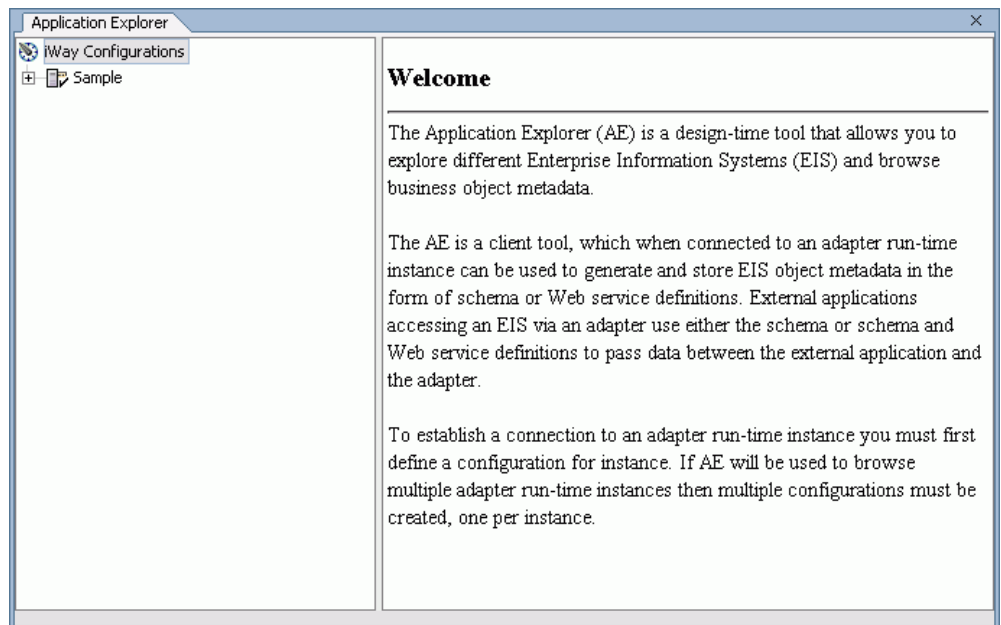
The server must be started where Application Explorer is running. Before you can use Application Explorer, you must start BEA WebLogic server.

Procedure How to Start Application Explorer in BEA WebLogic Workshop

To start Application Explorer running in BEA WebLogic Workshop:

1. Before starting Application Explorer, ensure that BEA WebLogic Server is running.
2. Start BEA WebLogic Workshop.
3. From the BEA WebLogic Workshop View menu, select *Windows* and then, *Application Explorer*.

Application Explorer opens in BEA WebLogic Workshop.



You can resize and drag-and-drop the Application Explorer window within BEA WebLogic Workshop. For example, you can drag it to the upper part of BEA WebLogic Workshop.

Understanding Event Functionality

Events are generated as a result of activity in an application system. You can use events to trigger an action in your application. For example, ISO15022 may generate an event when customer information is updated. If your application must perform in response to activity, your application is a consumer of this event.

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

- Port

A port associates a particular business object exposed by the 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 B-3.

- Channel

A channel represents configured connections to particular instances of back-end systems. A channel binds one or more event ports to a particular listener managed by the adapter. For more information, see *Creating a Channel* on page B-19.

Creating an Event Port

The following procedures describe how to create an event port using Application Explorer. The following port dispositions are available when using iBSE:

- File
- iBSE
- MSMQ
- JMSQ
- SOAP
- HTTP
- MQ Series
- Mail

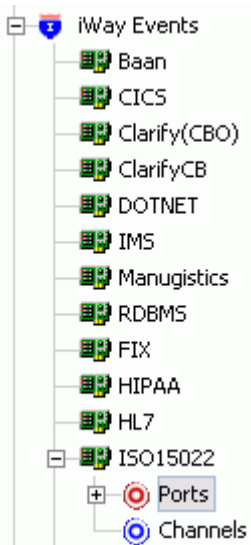
Note: The MAIL disposition option will be supported in a future release.

With a JCA implementation, the following port dispositions are available:

- File
- JMSQ
- MQ Series
- HTTP

Procedure How to Create an Event Port for File

To create an event port for File:



1. In the left pane of Application Explorer, expand the ISO15022 node under iWay Events, and then select *Ports*.



2. Right-click and select *Add Port*.

The Add Port dialog box opens.

The screenshot shows a standard Windows-style dialog box titled "Add Port". It contains four main input areas: a "Name:" text box, a "Description:" text box with vertical scrollbars, a "Protocol:" drop-down menu currently showing "FILE", and a "URL:" text box with vertical scrollbars containing the text "file:///location];errorTo=[pre-defined port name or another disposition url]". At the bottom are "OK" and "Cancel" buttons.

- a. In the Name field, type a name for the event port, for example, ISO15022File.
- b. In the Description field, type a brief description.
- c. From the Protocol drop-down list, select *FILE*.
- d. In the URL field, type a destination file to which the event data is written, using the following format:

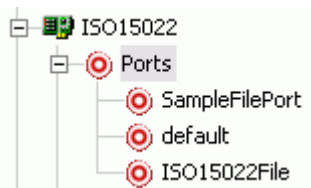
`file:///location[;errorTo=errorDest]`

The following table describes the URL parameters.

Parameter	Description
location	The full directory path and file name to which the data is written.
errorTo	Location where error logs are sent. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.

3. Click *OK*.

In the left pane, the event port appears below the Ports node.



4. To review the port settings, select the port name.

In the right pane, a table appears that summarizes the information associated with the event port you created.

Detail	
Name	Value
Name	ISO15022File
Description	
Disposition	ifile:///c:/temp/x.txt;errorTo=c:/error
Content	all messages accepted

You are ready to associate the event port with a channel. For more information, see *Creating a Channel* on page B-19.

Procedure How to Create an Event Port for iBSE

To create an event port for iBSE:

1. In the left pane of Application Explorer, expand the ISO15022 node under iWay Events, and then select *Ports*.
2. Right-click and select *Add Port*.

The Add Port dialog box opens.

Add Port

Name:

Description:

Protocol: **IBSE** ▼

URL:

OK Cancel

- a. In the Name field, type a name for the event port, for example, ISO15022iBSE.
- b. In the Description field, type a brief description.
- c. From the Protocol drop-down list, select *iBSE*.
- d. In the URL field, enter an iBSE destination using the following format:

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

The following table describes the disposition parameters.

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

3. Click *OK*.

In the left pane, the event port appears below the Ports node.

4. To review the port settings, select the port name.

In the right pane, a table appears that summarizes the information associated with the event port you created.

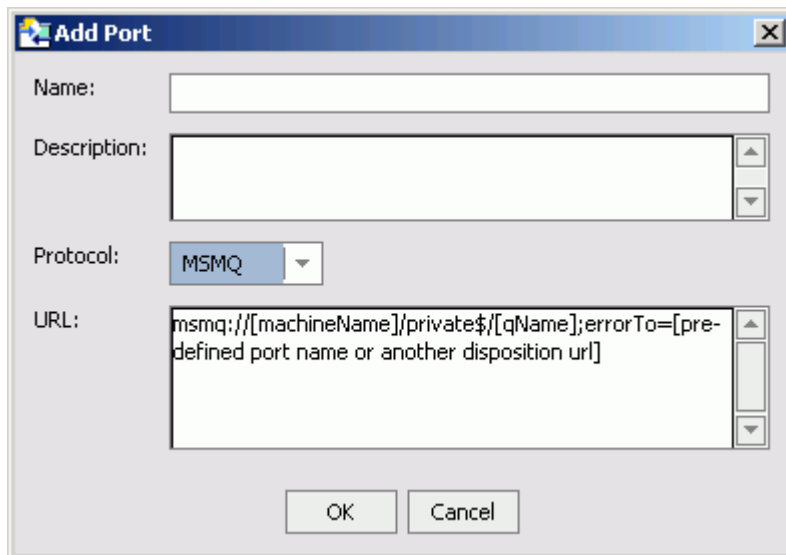
You are ready to associate the event port with a channel. For more information, see *Creating a Channel* on page B-19.

Procedure How to Create an Event Port for MSMQ

To create an event port for a Microsoft Message Queuing (MSMQ) queue:

1. In the left pane of Application Explorer, expand the ISO15022 node under iWay Events, and then select *Ports*.
2. Right-click and select *Add Port*.

The Add Port dialog box opens.

The image shows a Windows-style dialog box titled "Add Port". It has a standard title bar with a close button. The dialog contains four fields: "Name:" with a text input box; "Description:" with a larger text area and vertical scrollbars; "Protocol:" with a dropdown menu currently showing "MSMQ"; and "URL:" with a text area containing the text "msmq://[machineName]/private\$/[qName];errorTo=[pre-defined port name or another disposition url]" and vertical scrollbars. At the bottom of the dialog are two buttons: "OK" and "Cancel".

- a. In the Name field, type a name for the connection, for example, ISO15022MSMQ.
- b. In the Description field, type a description for the target name you just created.
- c. From the Protocol drop-down list, select *MSMQ*.
- d. In the URL field, enter an MSMQ destination in the following format:

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

The following table defines the disposition parameters.

Parameter	Description
host	Name of the host on which the Microsoft Queuing system runs.
queueType	The type of queue. For private queues, enter <i>Private\$</i> . 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 queue where messages are placed.
errorDest	Location where error logs are sent. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.

3. Click *OK*.

In the left pane, the event port appears below the Ports node.

4. To review the port settings, select the port name.

In the right pane, a table appears that summarizes the information associated with the port you created. You are ready to associate the event port with a channel. For more information, see *Creating a Channel* on page B-19.

Procedure How to Create a Port for JMS

To create a port for a JMS queue:

1. In the left pane of Application Explorer, expand the ISO15022 node under iWay Events, and then select *Ports*.
2. Right-click and select *Add Port*.

The Add Port dialog box opens.

The 'Add Port' dialog box contains the following fields and controls:

- Name:** A text input field.
- Description:** A text area with up and down arrow buttons on the right.
- Protocol:** A drop-down menu currently showing 'JMSQ'.
- URL:** A text area with up and down arrow buttons on the right, containing the sample URL: `jmsq:[myQueueName]@[myQueueFac];jndiurl=[myurl];jndifactory=[myfactory];user=[user];password=[xxx];errorTo=[pre-defined port name or another disposition url]`.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom.

- a. In the Name field, type a name for the event port, for example, ISO15022JMSQ.
- b. In the Description field, type a brief description.
- c. From the Protocol drop-down list, select *JMSQ*.
- d. In the URL field, enter a JMSQ destination using the following format:

```
jmsq:queue@conn_factory;jndiurl=jndi_url;jndifactory=jndi_factory;
user=userID;password=pass[;errorTo=errorDest]
```

The following table describes the URL parameters.

Parameter	Description
queue	Name of a queue to which events are emitted.
conn_factory	The connection factory, a resource that contains information about the JMS Server. The WebLogic connection factory is: <code>javax.jms.QueueConnectionFactory</code>

Parameter	Description
jndi_url	<p>The URL of the application server. For BEA WebLogic Server, the URL is</p> <p><i>t3://host:port</i></p> <p>where:</p> <p><i>host</i></p> <p>Is the machine name where BEA WebLogic Server resides.</p> <p><i>port</i></p> <p>Is the port on which BEA WebLogic Server is listening. The default port if not changed at installation, is 7001.</p>
jndi_factory	Is JNDI context.INITIAL_CONTEXT_FACTORY and is provided by the JNDI service provider. For BEA WebLogic Server, the WebLogic factory is weblogic.jndi.WLInitialContextFactory.
userID	User ID associated with this queue.
pass	Password associated with this user ID.
errorDest	<p>Location where error logs are sent. Optional.</p> <p>A predefined port name or another disposition URL. The URL must be complete, including the protocol.</p>

3. Click OK.

The event port appears below the Ports node in the left pane.

4. To review the port settings, select the port name.

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 B-19.

Procedure How to Create a Port for the SOAP Disposition

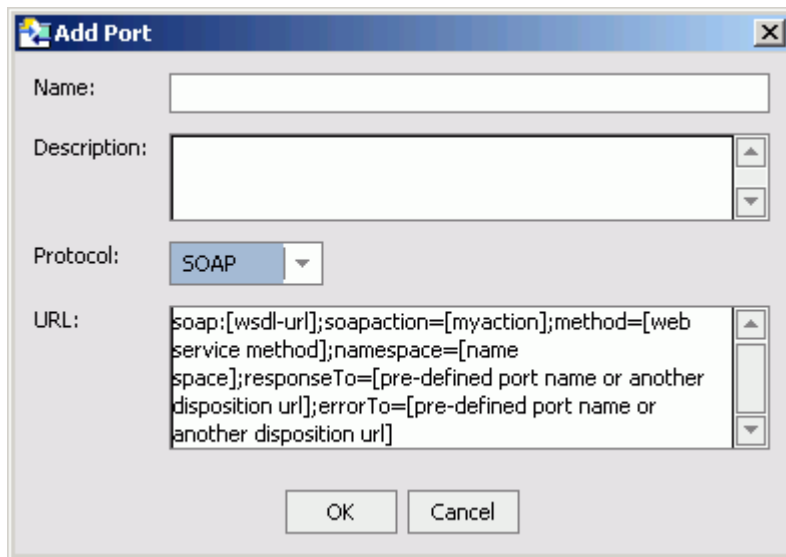
This topic describes how to configure the SOAP disposition for synchronous event processing.

The SOAP disposition allows an event response to launch a Web service specified by a WSDL file. A soapaction is optional, the default is "".

To create a port for a SOAP disposition using Application Explorer:

1. In the left pane of Application Explorer, expand the ISO15022 node under iWay Events, and then select *Ports*.
2. Right-click and select *Add Port*.

The Add Port dialog box opens.



- a. In the Name field, type a name for the event port, for example, ISO15022SOAP.
- b. In the Description field, type a brief description.
- c. From the Protocol drop-down list, select *SOAP*.
- d. In the URL field, enter a SOAP destination using the following format:

```
soap:wsdl-url;soapaction=action[;responseTo=respDest]  
[;errorTo=errorDest]
```

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

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

3. Click *OK*.

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

You are ready to associate the event port with a channel. For more information, see *Creating a Channel* on page B-19.

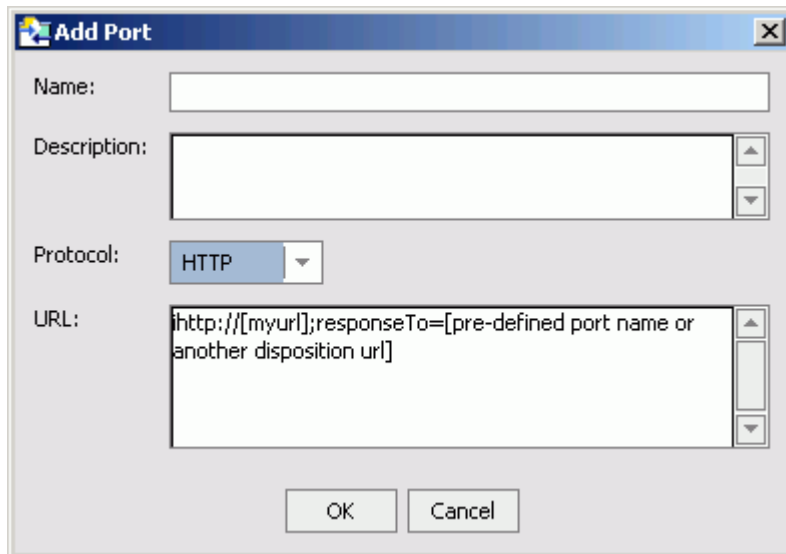
Procedure **How to Create an Event Port for HTTP**

The HTTP disposition uses an HTTP URL to specify an HTTP end point to which the event document is posted.

To create an event port for HTTP disposition:

1. In the left pane of Application Explorer, expand the ISO15022 node under iWay Events, and then select *Ports*.
2. Right-click and select *Add Port*.

The Add Port dialog box opens.

The image shows a Windows-style dialog box titled "Add Port". It has a standard title bar with a close button (X). The dialog contains four main input areas: "Name:" with a single-line text box; "Description:" with a multi-line text box and vertical scrollbars; "Protocol:" with a drop-down menu currently showing "HTTP"; and "URL:" with a multi-line text box containing the text "http://[myurl];responseTo=[pre-defined port name or another disposition url]". At the bottom of the dialog are two buttons: "OK" and "Cancel".

- a. In the Name field, type a name for the event port, for example, ISO15022HTTP.
- b. In the Description field, type a brief description.
- c. From the Protocol drop-down list, select *HTTP*.
- d. In the URL field, enter an HTTP destination using the following format:

http://url;responseTo=respDest

The following table describes the URL parameters.

Parameter	Description
url	The URL target for the post operation.
respDest	Location where responses are posted. Optional. A predefined port name or another disposition URL. The URL must be complete, including the protocol.
host	Name of the host on which the Web server resides.
port	Port number on which the Web server is listening.

3. Click **OK**.

The event port appears below the Ports node in the left pane.

4. To review the port settings, select the port name.

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 B-19.

Procedure How to Create an Event Port for MQ Series

The MQ Series disposition allows an event to be enqueued to an MQ Series queue. Both queue manager and queue name may be specified.

To create a port for an MQ Series queue:

1. In the left pane of Application Explorer, expand the ISO15022 node under iWay Events, and then select *Ports*.
2. Right-click and select *Add Port*.

The Add Port dialog box opens.

The screenshot shows a standard Windows-style dialog box titled "Add Port". It contains four main input areas: a "Name:" text box, a "Description:" text box with vertical scrollbars, a "Protocol:" dropdown menu currently showing "MQ Series", and a "URL:" text box with vertical scrollbars containing a complex template string. At the bottom are "OK" and "Cancel" buttons.

- a. In the Name field, type a name for the event port, for example, ISO15022MQSeries.
- b. In the Description field, type a brief description.
- c. From the Protocol drop-down list, select *MQ Series*.
- d. In the URL field, enter an MQ Series destination using the following format:

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

The following table describes the URL parameters.

Parameter	Description
qManager	Name of queue manager to which the server must connect.
qName	Name of the queue where messages are placed.
hostName	Name of the host on which MQ Series resides (MQ client only).
portNum	Port number for connecting to an MQ Server queue manager (MQ client only).
chanName	Case-sensitive name of the channel that connects with the remote MQ Server queue manager (MQ client only). The default MQ Series channel name is SYSTEM.DEF.SVRCONN.

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

3. Click *OK*.

The event port appears below the Ports node in the left pane.

4. To review the port settings, select the port name.

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 B-19.

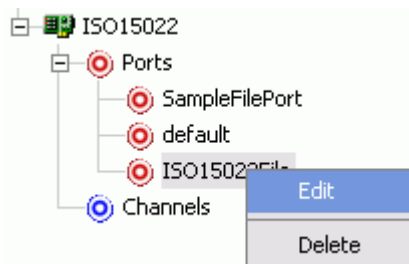
Modifying an Event Port

The following procedures describe how to edit and delete an event port using Application Explorer. To review the port settings, select the port name. In the right pane, a table appears that summarizes the information associated with the event port you created.

Procedure How to Edit an Event Port

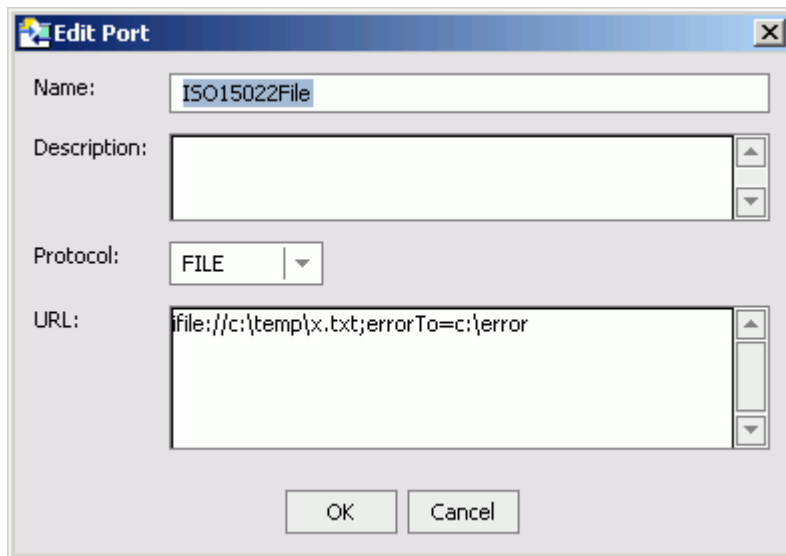
To edit an event port:

1. To view the available ports, click the *Ports* node in the left pane.



2. Right-click the port you want to edit, and select *Edit*.

The Edit Port dialog box opens.

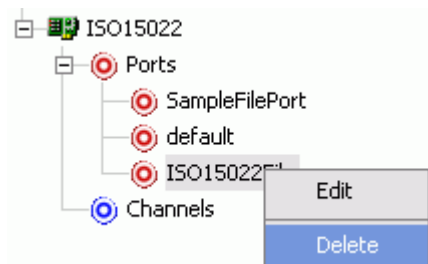


3. Make the required changes and click *OK*.

Procedure How to Delete an Event Port

To delete an existing event port:

1. To view the available ports, click the *Ports* node in the left pane.



2. Right-click the port you want to remove, and select *Delete*.
The event port node disappears from the ports list in the left pane.

Creating a Channel

The following procedure describes how to create a channel for an ISO15022 event. All defined event ports must be associated with a channel.

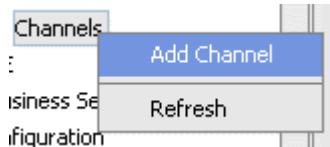
You can create the following types of channels using Application Explorer:

- File System Listener (File)
- IBM MQSeries (MQ)
- File Transfer Protocol (FTP)

Procedure How to Create a Channel for a File System Listener

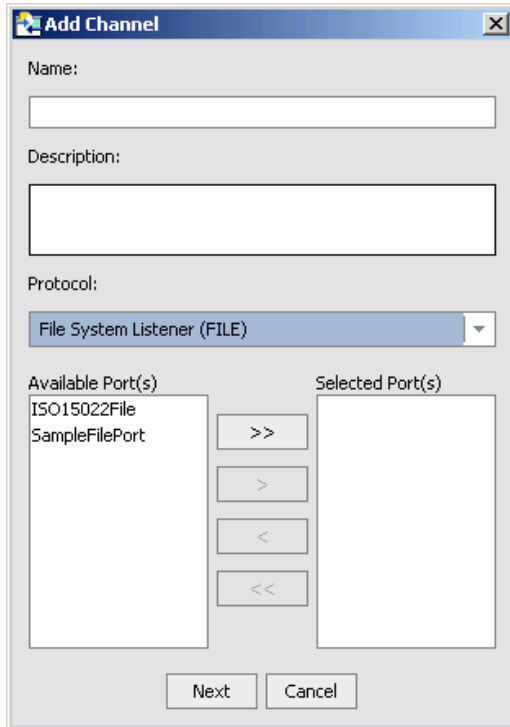
To create a channel for a File System Listener (FILE):

1. In the left pane, below the configuration you created, expand the *iWay Events* node.
The list of adapters appears.
2. Click the adapter node, for example, ISO15022.
The node expands and displays the Ports and Channels nodes.



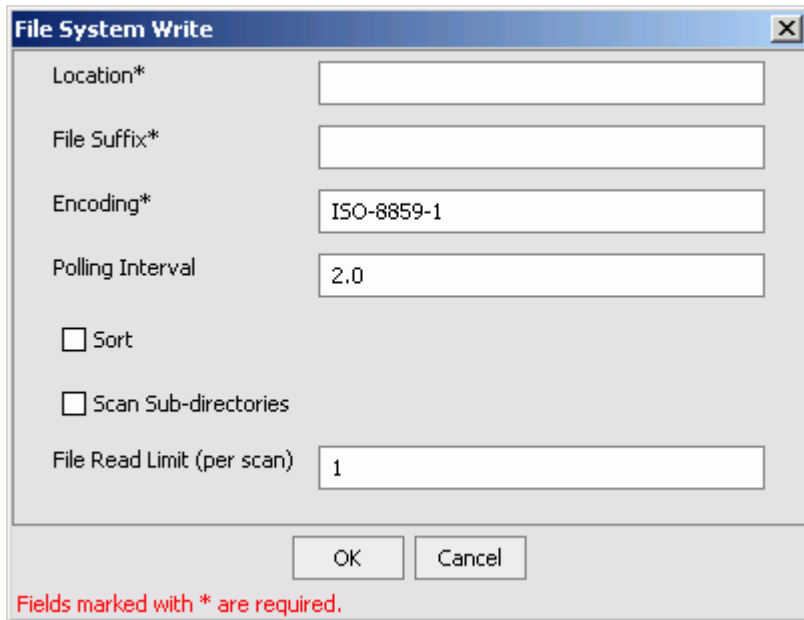
3. Right-click the *Channels* node and select *Add Channel*.

The Add Channel dialog box opens.

The image shows a Windows-style dialog box titled "Add Channel". It has a standard title bar with a close button. The dialog contains several fields: a "Name:" text box, a "Description:" text box, and a "Protocol:" drop-down menu currently set to "File System Listener (FILE)". Below these are two list boxes: "Available Port(s)" on the left and "Selected Port(s)" on the right. The "Available Port(s)" list contains "ISO15022File" and "SampleFilePort". Between the two lists are four buttons: ">>", ">", "<", and "<<". At the bottom of the dialog are "Next" and "Cancel" buttons.

- a. In the Name field, type a name for the channel, for example, ISO15022Channel.
 - b. In the Description field, type a brief description.
 - c. From the Protocol drop-down list, select a type of listener:
 - File System Listener (FILE)
 - IBM MQ Series (MQ)
 - FileTransfer Protocol (FTP)
 - d. To associate one or more available ports with this channel, select the port in the Available box and click the double right arrow (>>) button to move it to the Selected box.
4. Click Next.

A dialog box opens that is specific to the protocol you selected.



The dialog box is titled "File System Write" and contains the following fields and controls:

- Location*: Text input field
- File Suffix*: Text input field
- Encoding*: Text input field with "ISO-8859-1" selected
- Polling Interval: Text input field with "2.0" selected
- ☐ Sort
- ☐ Scan Sub-directories
- File Read Limit (per scan): Text input field with "1" selected
- OK button
- Cancel button
- Red text at the bottom: "Fields marked with * are required."

5. Enter values for the parameters that are listed.

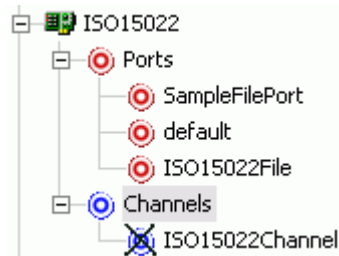
For information on the parameters for a File System Listener (FILE) listener, see *File System Listener (FILE) listener Configuration Parameters* on page B-23.

For information on the parameters for an IBM MQ Series (MQ) listener, see *IBM MQ Series (MQ) Listener Configuration Parameters* on page B-24.

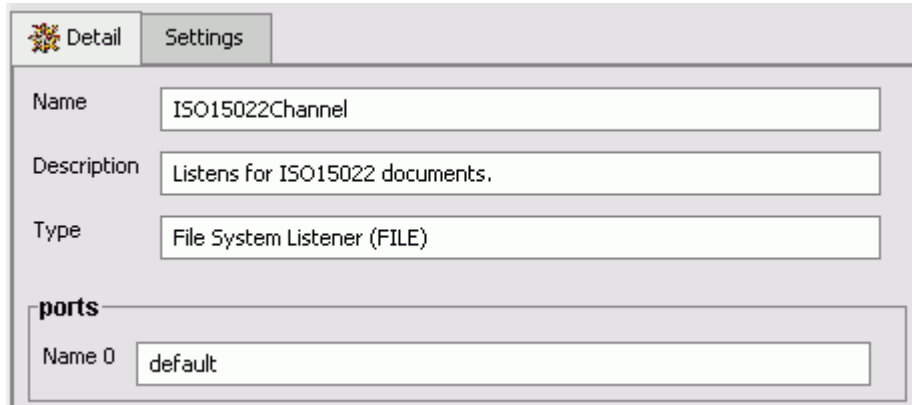
For information on the parameters for a File Transfer Protocol (FTP) listener, see *File Transfer Protocol (FTP) Listener Configuration Parameters* on page B-24.

6. Click OK.

The channel appears below the Channels node in the left pane.



When you select the event port, the channel information appears in the right pane.



The screenshot shows a software interface with two tabs: 'Detail' (selected) and 'Settings'. The 'Detail' tab contains the following fields:

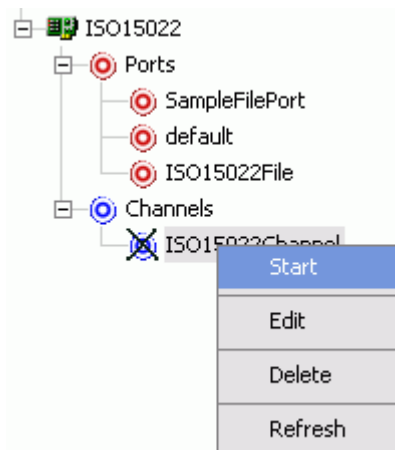
- Name:** ISO15022Channel
- Description:** Listens for ISO15022 documents.
- Type:** File System Listener (FILE)

Below these fields is a section titled **ports** containing a single entry:

- Name 0:** default

A Ports area appears on the Details tab that displays the name of the event port you assigned to this channel.

You are ready to start your channel to listen for events.



7. To activate your event configuration, right-click the channel node, for example, ISO15022Channel.
 - a. Select *Start*.
 - b. To stop the channel at any time, right-click the channel and select *Stop*.

Reference File System Listener (FILE) listener Configuration Parameters

On the Settings tab:

Parameter	Description
Location	The directory where messages are received. DOS-style file patterns are valid for this parameter. You can specify a file pattern as well as a directory. For example, c:\xyz\ab*cd (without a file suffix) takes the file suffix from that parameter. If you use a pattern, files are selected based on the suffix and then the pattern. AB?CD selects ABxCD. AB*CD selects ABxxxCD.
File Suffix	File extension for the file event. This limits input files to those with the specified extensions. The "." is not required. The minus sign ("-") indicated that there is no extension. If the file extension is zip, the unzipped files must conform to the event schema, or they will fail. This function also works with transform configured.
Encoding	The host on which the MQ Server is located (for the MQ Client only).
Polling Interval	This is a time, expressed as xxH:xxM:xxS For example 1 hour, 2 minutes, and 3 seconds is: 1H:2M:3S The maximum interval between checks for new documents. The higher this value, the longer the interval, and the fewer system resources that are used. The side-effect of a high value is that a worker thread cannot respond to a stop command. If this value is set to 0, the listener runs once and terminates. The default value is 2 seconds.
Sort	The case-sensitive name of the channel that connects with the remote MQ Server queue manager (for the MQ client only). The default channel name for MQSeries is SYSTEM.DEF.SVRCONN.
Scan Sub-directories	Location where error documents are sent. This can be a predefined port name or another full URL. Optional.
File Read Limit (per scan)	Number of files read by the File listener per scan. The default value is 1.

Reference IBM MQ Series (MQ) Listener Configuration Parameters

On the Settings tab:

Parameter	Description
Queue Manager	The name of the MQ queue manager to be used.
Queue Name	The name of the MQ Series or WebSphere MQ queue that the ISO15022 system polls.
Polling Interval	The maximum wait interval (in the format <i>nnH:nnM:nnS</i>) between checks for new documents. The higher this value, the longer the interval, and the fewer system resources that are used. However, with a high value, the worker thread cannot respond to a stop command. If timeout is set to 0, the listener runs once and terminates. The default is 2 seconds.

On the MQ Client tab:

Parameter	Description
Port	The port number used to connect to an MQ Server.
Channel	The channel between an MQ Client and an MQ Server.

Reference File Transfer Protocol (FTP) Listener Configuration Parameters

On the Settings tab:

Parameter	Description
Host	The name of the FTP host.
Port	The port where the adapter listens on the FTP transfer.
User	The user name to log onto the FTP Server.
Password	The password for the FTP user.
Location	<p>The directory where messages are received. DOS-style file patterns are available for this parameter. You can specify a file pattern as well as a directory. For example, c:\xyz\ab*cd (without a file suffix) takes the file suffix from that parameter.</p> <p>If you use a pattern, files are selected based on the suffix and then the pattern. AB?CD selects ABxCD. AB*CD selects ABxxxCD.</p>

Parameter	Description
Encoding	The character set encoding for inbound documents. For example, UTF-8. The default is ISO-8859-1 US and Western Europe.
Polling Interval	The maximum wait interval (in the format <i>nnH:nnM:nnS</i>) between checks for new documents. The higher this value, the longer the interval, and the fewer system resources that are used. However, with a high value, the worker thread cannot respond to a stop command. If timeout is set to 0, the listener runs once and terminates. The default is 2 seconds.

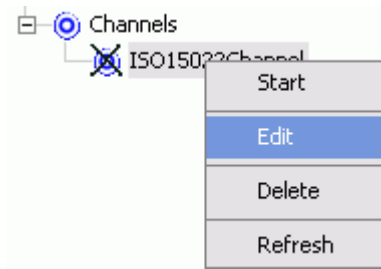
Modifying a Channel

The following procedures describe how to edit and delete a channel using Application Explorer. To review the channel settings, you select the channel name. In the right pane, a table appears that summarizes the information associated with the channel you created.

Procedure How to Edit a Channel

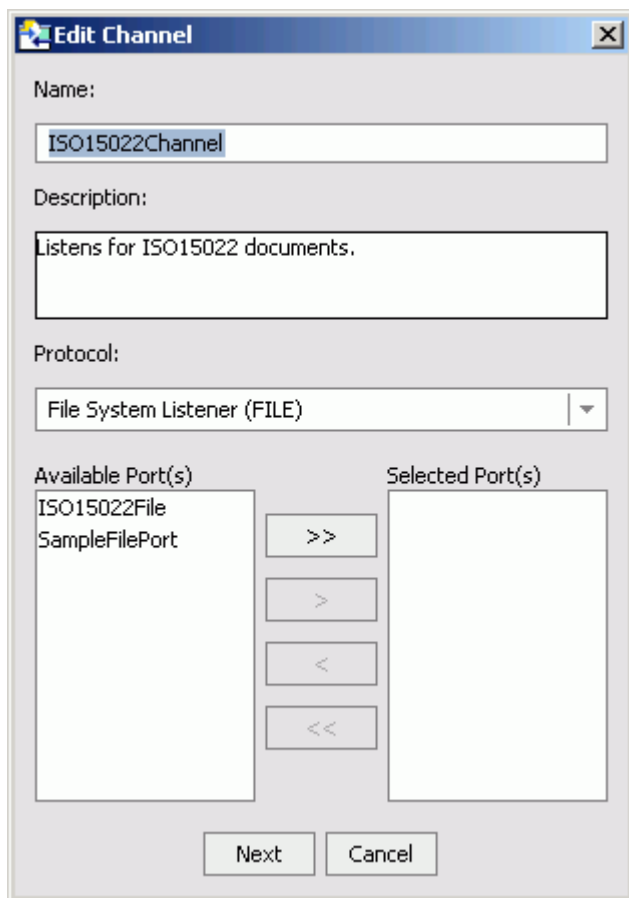
To edit a channel:

1. To view the available channels, click the *Channels* node in the left pane.



2. Right-click the channel you want to edit, for example, ISO15022Channel, and select *Edit*.

The Edit Channel dialog box opens.

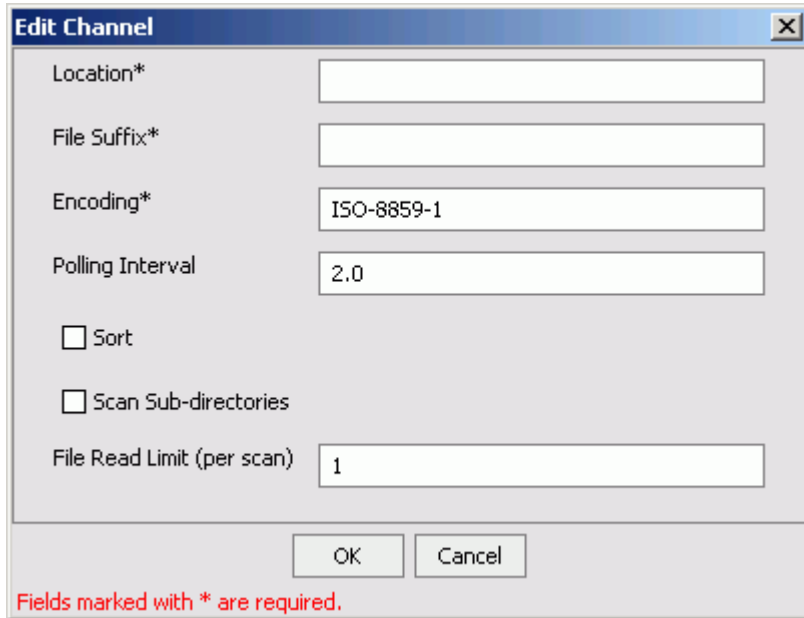


The image shows a Windows-style dialog box titled "Edit Channel". It contains the following fields and controls:

- Name:** A text box containing "ISO15022Channel".
- Description:** A text box containing "Listens for ISO15022 documents."
- Protocol:** A dropdown menu currently showing "File System Listener (FILE)".
- Available Port(s):** A list box containing "ISO15022File" and "SampleFilePort".
- Selected Port(s):** An empty list box.
- Navigation Buttons:** Four buttons between the port lists: ">>", ">", "<", and "<<".
- Action Buttons:** "Next" and "Cancel" buttons at the bottom.

- 3.** Make the required changes to the channel configuration.
- 4.** Click *Next*.

The following dialog box opens.



The 'Edit Channel' dialog box contains the following fields and controls:

- Location*: Text input field
- File Suffix*: Text input field
- Encoding*: Text input field with 'ISO-8859-1' selected
- Polling Interval: Text input field with '2.0' selected
- ☐ Sort
- ☐ Scan Sub-directories
- File Read Limit (per scan): Text input field with '1' selected
- OK button
- Cancel button
- Red text at the bottom: 'Fields marked with * are required.'

5. Make the required changes and click *OK*.

Procedure How to Delete a Channel

To delete an existing channel:

1. In the left pane, right-click the channel, for example, ISO15022Channel.



2. Select *Delete*.

The channel disappears from the Channels list.

Deploying Components in a Clustered BEA WebLogic Environment

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

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

Clustering provides the following benefits:

- Load balancing
- High availability

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

Events are server-specific and are not processed through the HTTP router. You must configure each server separately.

Procedure How to Deploy iWay Components in a Clustered Environment

To deploy iWay components in a clustered environment:

1. Using the BEA Configuration Wizard:
 - a. Configure an administrative server to manage the managed servers.
 - b. Add and configure as many managed servers as required.
 - c. Add and configure an HTTP router. This does not have to be a part of WebLogic and can be an outside component.
 - d. If you configure the HTTP router within WebLogic, start it by entering the following command:

```
StartManagedWebLogic HTTPROUTER http://localhost:7001
```

where:

```
HTTPROUTER
```

Is the name of the server on which the HTTP router is running.

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

Is the location of the admin console.

- e. Add the managed servers to your cluster/clusters.

For more information on configuring WebLogic Integration for deployment in a clustered environment, see *Deploying WebLogic Integration Solutions*.

2. Start the WebLogic Server and open WebLogic Server Console.
3. Deploy iBSE to the cluster by selecting *Web Application Modules* from the Domain Configurations section, and clicking *Deploy a new Web Application Module*.

A page appears for you to specify where the Web application is located.

4. To deploy iBSE, select the option button next to the *ibse* directory and then click *Target Module*.

Deploy a Web Application Module

Select the archive for this Web application module

Select the file path that represents your archive or exploded archive directory.

Note: Only valid file paths are shown below. If you do not find what you are looking for, [your file\(s\)](#) and/or confirm your Web application module contains valid descriptors.

Location: [localhost](#) \ [C:](#) \ [iWay55](#) \ bea

<input checked="" type="radio"/>	ibse
<input type="radio"/>	iwaie
<input type="radio"/>	iwjcaivp

5. To deploy servlet Application Explorer, select the option button next to the *iwaie* directory and then click *Target Module*.

If you are using servlet Application Explorer, deploy it only on the admin server or one of the managed servers.

Deploy a Web Application Module

Select the archive for this Web application module

Select the file path that represents your archive or exploded archive directory.

Note: Only valid file paths are shown below. If you do not find what you are looking for, you should [upload your file\(s\)](#) and/or confirm your Web application module contains valid descriptors.

Location: [localhost](#) \ [C:](#) \ [Program Files](#) \ [iWay55](#) \ bea

<input type="radio"/>	ibse
<input checked="" type="radio"/>	iwaee
<input type="radio"/>	iwaycaivp

Target Module

The following window opens.

Select targets for this Web application module

Select the servers and/or clusters on which you want to deploy your new Web Application module

Independent Servers

<input type="checkbox"/>	AdminServer
<input checked="" type="checkbox"/>	HTTPROUTER

Clusters

<input checked="" type="checkbox"/>	MYCluster
<input checked="" type="radio"/>	All servers in the cluster
<input type="radio"/>	Part of the cluster
<input type="checkbox"/>	MS1
<input type="checkbox"/>	MS2

6. Select the servers and/or clusters on which you want to deploy the application and click *Continue*.

The following window opens.

Source Accessibility

During runtime, a targeted server must be able to access this Web Application module's files. This access can be accomplished by either copying the Web Application module onto every server, or by defining a single location where the files exist.

How should the source files be made accessible?

- ☐ **Copy this Web Application module onto every target for me.**

During deployment, the files in this Web Application module will be copied automatically to each of the targeted locations.

- ☒ **I will make the Web Application module accessible from the following location:**

C:\iWay55\bea\ibse

Provide the location from where all targets will access this Web Application module's files. You must ensure the Web Application module's files exist in this location and that each target can reach the location.

7. Select the *I will make the Web Application module accessible from the following location* option button and provide the location from which all targets will access iBSE.

iWay Software recommends that you use a single instance of iBSE, rather than copying iBSE onto every target.

Note: iBSE must use a database repository (SQL or Oracle). Do not use a file repository. You can select this in the Repository Type drop-down list in the iBSE monitoring page. After configuring a database repository, you must restart all of the managed servers.

<http://hostname:port/ibse/IBSEConfig/>

where:

[hostname](#)

Is where your application server is running. Use the IP address or machine name in the URL; do not use localhost.

[port](#)

Is the port specific to each server, since you deploy iBSE to an entire cluster. For example, 8001, 8002, or any other port that is specified for each managed node.

8. Click *Deploy*.

Procedure Configuring Ports and Channels in a Clustered Environment

You can use Swing Application Explorer deployed in BEA WebLogic WorkShop or Servlet Application Explorer to configure ports and channels in a clustered environment.

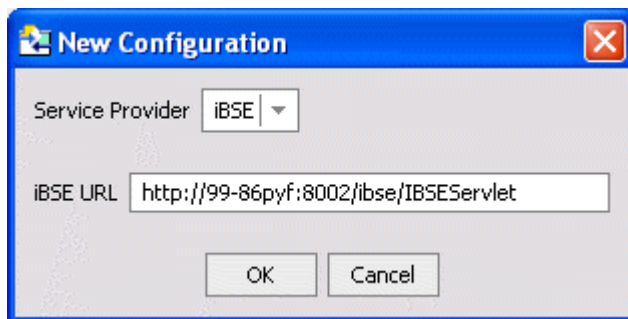
Note: Before using Servlet Application Explorer in a clustered environment, you must edit the web.xml file and specify the correct URL to your iBSE deployment. The default location on Windows is:

`C:\Program Files\iWay55\bea\iwae\WEB-INF\web.xml`

For more information on configuring the web.xml file for Servlet Application Explorer, see the *iWay Installation and Configuration for BEA WebLogic* documentation.

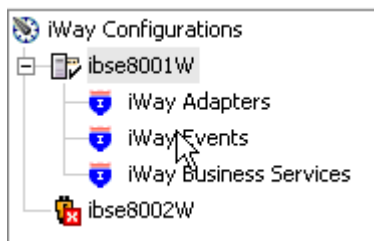
To configure ports and channels in a clustered environment:

1. Open Swing Application Explorer in BEA WebLogic Workshop.
2. Create a new connection to the iBSE instance. For information on creating a new configuration, see *Appendix A, Using Application Explorer in BEA WebLogic Workshop to Create XML Schemas and Web Services*.



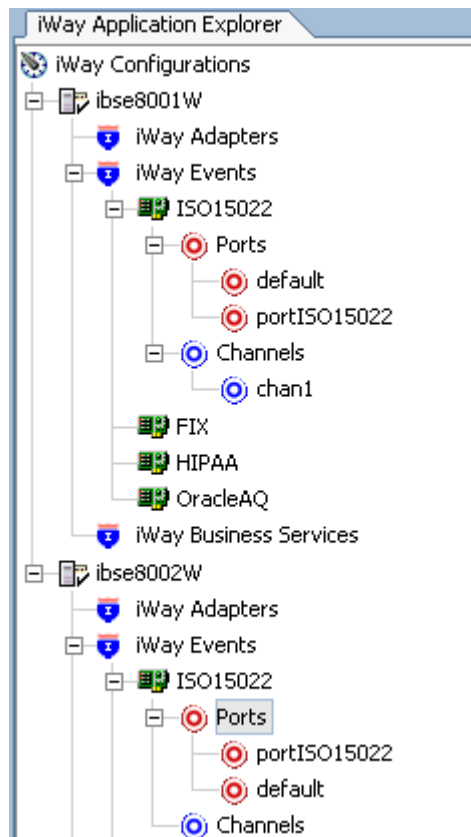
Note: Use the IP address or machine name in the URL; do not use localhost.

3. Connect to the new configuration and select the iWay Events node in the left pane of Application Explorer.



4. Add a new port for the ISO15022 adapter. For more information, see *Creating an Event Port* on page B-3
5. Create a channel and add the port you created. For more information, see *Creating a Channel* on page B-19.
6. Click *Next* and enter the application server parameters.
7. Start the channel.
8. Create a new configuration and connect to the second iBSE instance.

The connection to iBSE must be configured to each instance of the managed server.
The following graphic shows two configurations.



The following operations performed on one managed server will be replicated on all other managed servers:

- Create port and channel. Creates the channel and port under all available servers.

- Delete port and channel. Deletes the port and channel under all available servers.

The following operations must be performed on each server:

- Start channel. Starts the channel for the specific server.
- Stop channel. Stops the channel for the specific server.

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