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iWay

iWay Adapter for Lotus Notes User's Guide
Version 5 Release 5

Updated for J2EE CA 1.5

Preface

This document is written for system integrators who develop client interfaces between Lotus Notes and other applications. It describes how to use the iWay Adapter for Lotus Notes to integrate the Domino database with the Sun Java System Application Server. It is assumed that readers understand Web technologies and have a general understanding of Microsoft Windows and UNIX systems.

How This Manual Is Organized

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

Chapter		Contents
1	Introducing the iWay Adapter for Lotus Notes	Provides an overview of the iWay Adapter for Lotus Notes. Discusses key features and functionality of the adapter.
2	Creating XML Schemas for Lotus Notes	Describes how to create XML schemas for Lotus Notes business objects using iWay Servlet Application Explorer (iAE).
3	Configuring the Event Adapter for Lotus Notes	Describes how to configure and test your Lotus Notes system for event processing.
4	Using Web Services Policy-Based Security	Describes how to use iWay Servlet Application Explorer (iAE) to connect to Lotus Notes and listen for events.
5	Creating and Publishing iWay Business Services	Describes how to create and publish an iWay Business Service using iWay Servlet Application Explorer (iAE)

Documentation Conventions

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

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

Related Publications

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Do you have questions about the iWay Adapter for Lotus Notes?

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 Lotus Notes questions. iWay Software consultants can also give you general guidance regarding product capabilities and documentation. Please be ready to provide your six-digit site code number (*xxxx.xx*) when you call.

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

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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.

The following tables list the specifications our consultants require.

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

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

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

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

Application Explorer Type	Version	Platform
Swing		
Servlet		
ASP		

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

Version	Vendor

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

Request/Question	Error/Problem Details or Information
Provide usage scenarios or summarize the application that produces the problem.	
Did this happen previously?	
Can you reproduce this problem consistently?	
Any **change in the application environment**: software configuration, EIS/database configuration, application, and so forth?	
Under what circumstance does the problem *not* occur?	
Describe the **steps** to reproduce the problem.	
Describe the **problem**.	
Specify the **error** message(s).	

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

XML schema
XML instances
Other input documents (transformation)
Error screen shots
Error output files

XML schema
Trace and log files
Log transaction

User Feedback

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

Thank you, in advance, for your comments.

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

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Introducing the iWay Adapter for Lotus Notes

Topics:

- Features of the iWay Adapter for Lotus Notes

- Integrating With Lotus Notes

- Deployment Information for the iWay Adapter for Lotus Notes

The iWay Adapter for Lotus Notes provides connectivity to the Domino Database. The following topics provide an overview of the iWay Adapter for Lotus Notes. This section discusses key features and functionality of the adapte.

Features of the iWay Adapter for Lotus Notes

The iWay Adapter for Lotus Notes provides a means to exchange real-time business data between Lotus Notes and other application, database, or external business partner systems. The adapter enables external applications for inbound and outbound processing with Lotus Notes.

The adapter uses XML messages to enable applications to communicate and exchange transactions with Lotus Notes system using one of the following two methods.

- **Event Adapter.** Applications use this capability if they require access to Lotus Notes data only when an event occurs in the Lotus Notes system.

- **Request/response.** Applications use this capability when they must initiate a Lotus Notesevent.

  If the request is for retrieving data from Lotus Notes, then the adapter sends the application a response message in the form of an XML document with the data embedded.

The iWay Adapter for Lotus Notes provides:

- Support for bidirectional message interactions.

- The iWay Servlet Application Explorer, a GUI tool which uses Lotus Notes object repository metadata to build XML schemas and Web services to handle adapter requests or event data.

Integrating With Lotus Notes

You can use the iWay Adapter for Lotus Notes to invoke a business process, such as add/update account, or you can use the adapter as part of an integration effort to connect Lotus Notes and non-Lotus Notes systems.

Deployment Information for the iWay Adapter for Lotus Notes

The iWay Adapter for Lotus Notes works with iWay Application Explorer in conjunction with the following components:

- iWay Business Services Engine (iBSE)

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

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

Both iBSE and the iWay Connector for JCA are deployed to your application server with iWay Servlet Application Explorer and the adapters.

Deployment Information Roadmap

The following table lists the location of deployment information for the iWay Adapter for Lotus Notes. A description of iWay Application Explorer, the iWay Business Services Engine (iBSE), and the iWay Enterprise Connector for J2EE Connector Architecture (JCA) follows the table.

Deployed Component	For more information, see
iWay Application Explorer	Chapters 2, 3, and 5 of this guide *iWay Installation and Configuration*
iWay Business Services Engine (iBSE)	*iWay Installation and Configuration*
iWay Enterprise Connector for J2EE Connector Architecture (JCA)	*iWay Connector for JCA User's Guide* *iWay Installation and Configuration*

iWay Application Explorer

iWay Application Explorer (iAE) uses an explorer metaphor to browse a Lotus Notes system. 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 Lotus Notes. External applications that access Lotus Notes through the iWay Adapter for Lotus Notes use either XML schemas or Web services to pass data between the external application and the adapter.

The iWay Business Services Engine (iBSE)

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

iBSE simplifies the creation and execution of Web services when running:

- Custom and legacy applications

- Database queries and stored procedures

- Packaged applications

- Terminal emulation and screen-based systems

- Transactional systems

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

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

The iWay Enterprise Connector for J2EE Connector Architecture (JCA)

The iWay Enterprise Connector for J2EE Connector Architecture (JCA) enables developers of JCA-compliant applications to deploy iWay adapters as JCA resources.

The 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.

Creating XML Schemas for Lotus Notes

Topics:

- Overview
- Starting iWay Servlet Application Explorer
- Establishing a Target for Lotus Notes
- Viewing Metadata
- Creating an XML Schema

This section describes how to use iWay Servlet Application Explorer as deployed to a Sun Java System Application Server.

Overview

External applications that access Lotus Notes through the adapter use either XML schemas or Web services to pass data between the external application and the adapter. You can use iWay 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 iWay Servlet Application Explorer, see the *iWay 5.5 Installation and Configuration* documentation.

Lotus Notes must be installed, configured, and available for client access. Application Explorer need not reside on the same system as the application system being accessed, but network access is required.

Starting iWay Servlet Application Explorer

Before you can use iWay Servlet Application Explorer, you must start the SAP J2EE Engine 6.40. Then, you can open Application Explorer.

Procedure: How to Open iWay Servlet Application Explorer

To open Application Explorer:

1. Ensure that your application server is running.

2. 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 for the domain you are using for iWay. The port for the default domain is 80.

After you start Application Explorer, the following image shows the Welcome window displaying the iWay Adapters, iWay Events, and iWay Business Services tabs. The iWay Adapter node is highlighted in the left pane and the welcome information appears in the right pane.
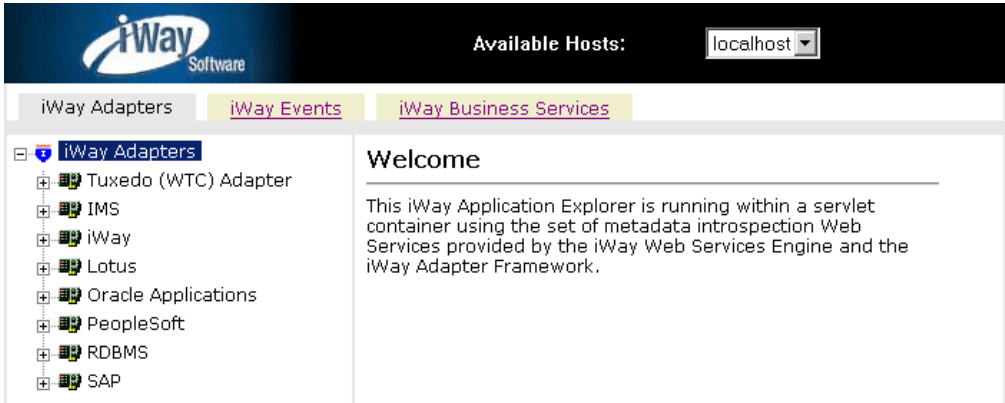
The Available Hosts drop-down menu in the upper right lists the iWay Connector for JCA or Servlet iBSE instance you can access.

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

You are now ready to create new targets for Lotus Notes.

Establishing a Target for Lotus Notes

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

A list of supported application systems appears in the left pane of Application Explorer. The list is based on the iWay Adapters that you installed and have licenses to use.

Creating a New Target

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

Procedure: How to Create a New Target

To create a new target:

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

The following image shows in the left pane a list of supported adapters, and in the right pane descriptive information (for example, title and product version) about the selected adapter, in this case, the iWay Adapter for Lotus Notes.
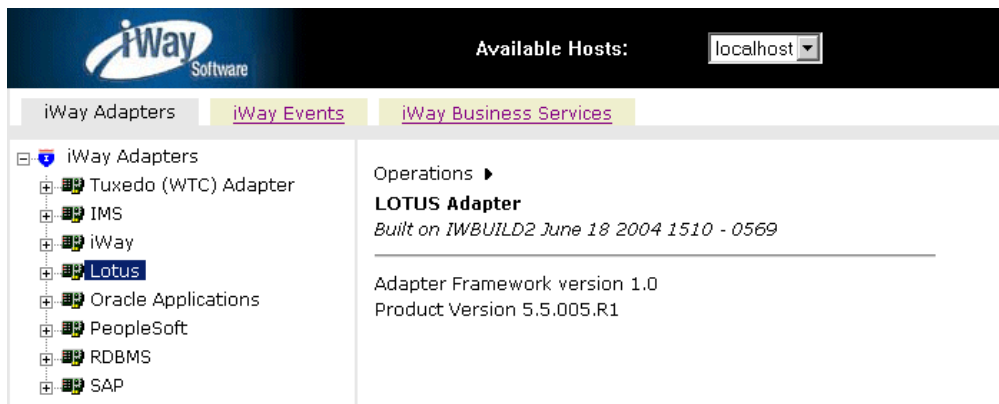
2. In the right pane, move the pointer over *Operations* and select *Define a new target*.

The Add a new LOTUS target opens in the right pane. The following image shows three fields for adding target information.

3. Specify the following information for the Lotus Notes 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 *Domino* to specify that you are connecting to a Domino Database.

4. Click *Next*.

The following image shows that the Set connection info pane appears on the right, with fields that prompt you to enter the information required for connecting.

Set connection info

File Name:	JdbcDemo.nsf
Server Name:	GERBER-2k
User Name:	inessa gerber
Password:	********

Help	< Back	Finish	Cancel

5. Enter the following authentication information for the Domino database:

   a. In the File Name field, type the name of the Domino database that you want to access.

   For the Domino Database, the file name ends with the .nsf extension. One of the sample databases provided is *JdbcDemo.nsf*.

   b. In the Server Name field, type the name of the server where the Domino database is installed.

   If the database is installed on your local machine, use a local format to specify the server name.

   If the database is running remotely, enter the full domain when specifying the server name.

   c. In the User Name field, type a valid user name to access the Domino database that you specified.

   Note: The user name for the Domino database can contain white spaces.

   d. In the Password field, type a valid password to access the Domino database.

6. Click *Finish*.

The following image shows the DominoDB target that appears below the Lotus node in the left pane. The Operations menu appears in the right pane.
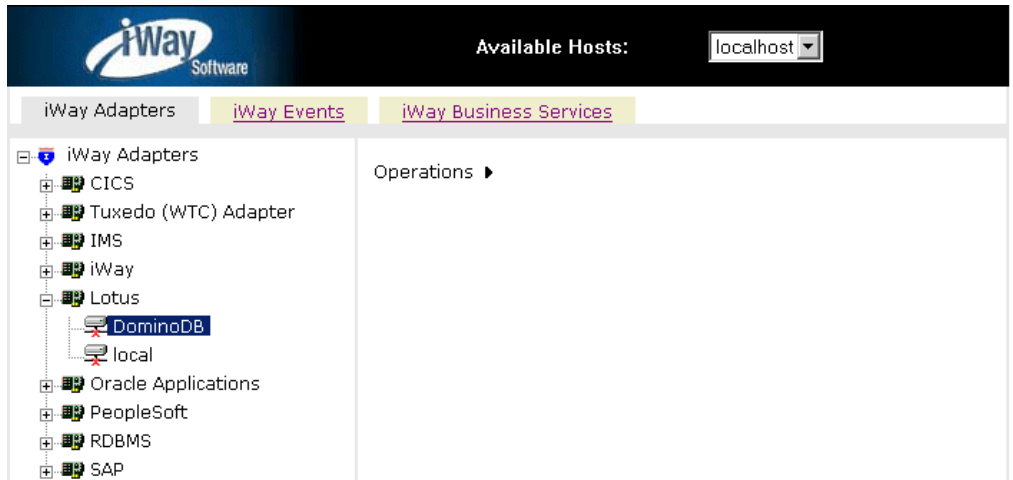
You are now ready to connect to your Domino database target.

Connecting to a Target
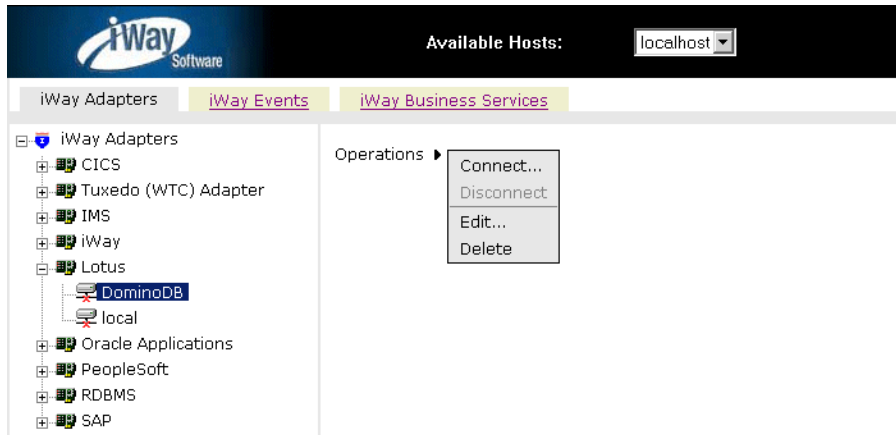
You must use the target you defined to connect to the Domino database.

### Procedure: How to Connect to a Target

To connect to a target:

1. In the left pane, expand the Lotus node and select the target you defined, for example, DominoDB.

The following image shows the DominoDB 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 image shows that the Connect to DominoDB pane opens on the right.
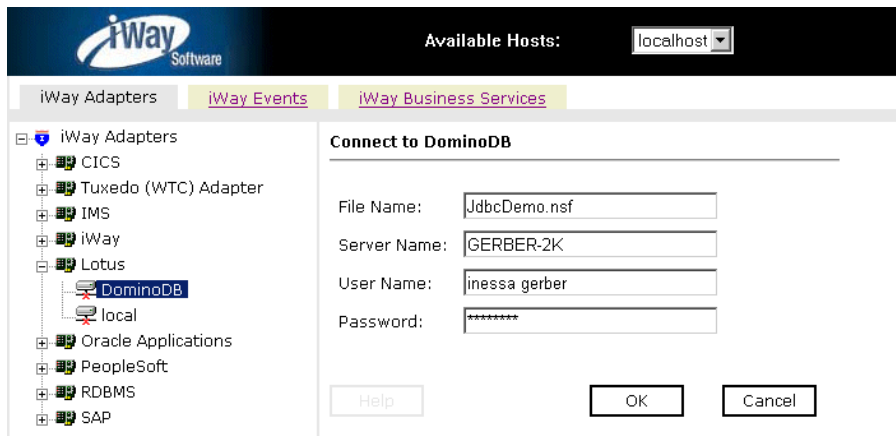
3. Enter a valid password and click *OK*.

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

4. Expand the *DominoDB* node.

The Schemas folder contains Domino table-based metadata.

The following image shows the expanded DominoDB node with the Schemas folder and metadata appearing below the node.
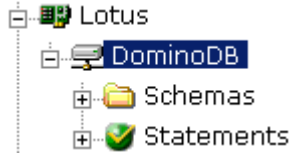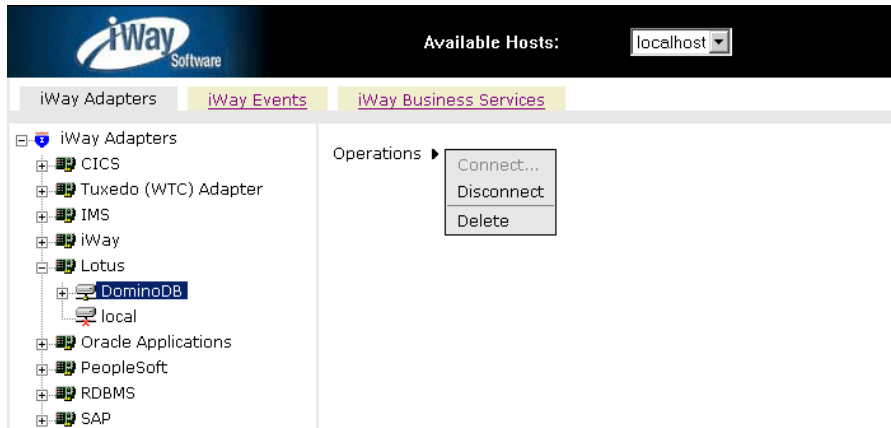

Disconnecting From a Target

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, DominoDB, to which you are connected.

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

2. Move the pointer over *Operation* and select *Disconnect*.

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

The following image shows in the left pane that the DominoDB node with an X, indicating it is disconnected.

Modifying a Target

After you create a target for Lotus Notes using iWay 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, DominoDB.

   The following image shows the DominoDB selected in the left pane, and the operations menu expanded in the right pane.
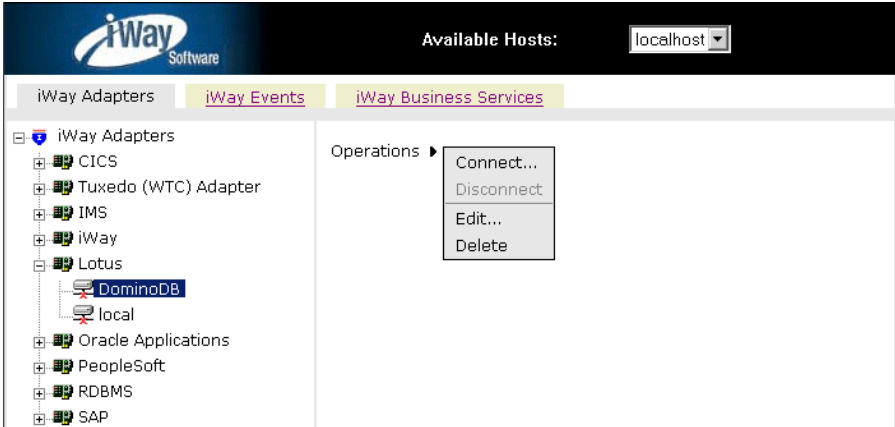
2. Move the pointer over *Operations* and select *Edit*.

The following image shows that the Edit LOTUS target DominoDB pane opens on the right with the fields containing current information that can be modified.

Edit LOTUS target DominoDB

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: | DominoDB

Description: | Created on 6/28/04.

Target Type: | Domino ▼

| Help | < Back | Next > | Cancel |

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
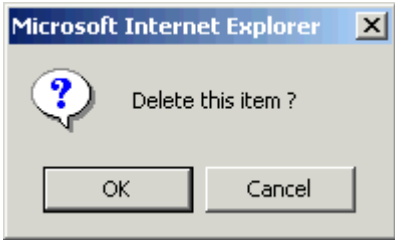
To delete a target:

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

   The following image shows the DominoDB target selected in the left pane, and the operations menu expanded in the right pane.
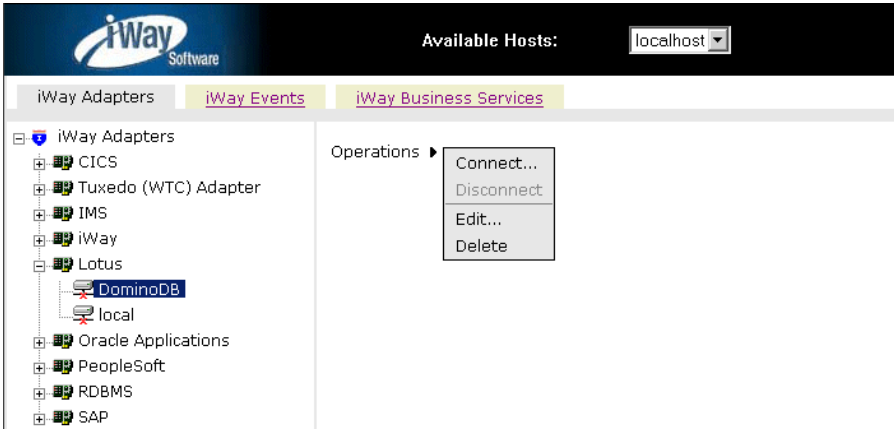
2. Move the pointer over *Operations* and select *Delete*.

   The following image shows the confirmation dialog box that opens.

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

   The DominoDB node disappears from the left pane.

Viewing Metadata

Viewing metadata is useful to see what tables or views are available in a given database. The iWay Application Explorer enables you to view the tables/views available in the Domino Database.

Procedure: How to View Metadata

To view metadata:

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

The following image shows how clicking expands the DominoDB target to expose the available system objects under the target name.
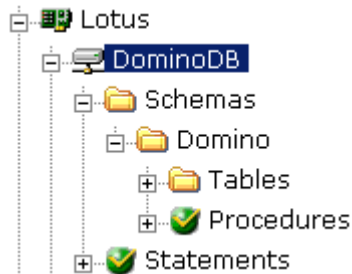
a. Click the icon to the left of the Schemas folder and then the icon to the left of the Domino folder.

b. Click the icon to the left of the Tables folder.

The following image shows that a list of tables in the Domino database appears in the left pane. In the right pane, a table appears.
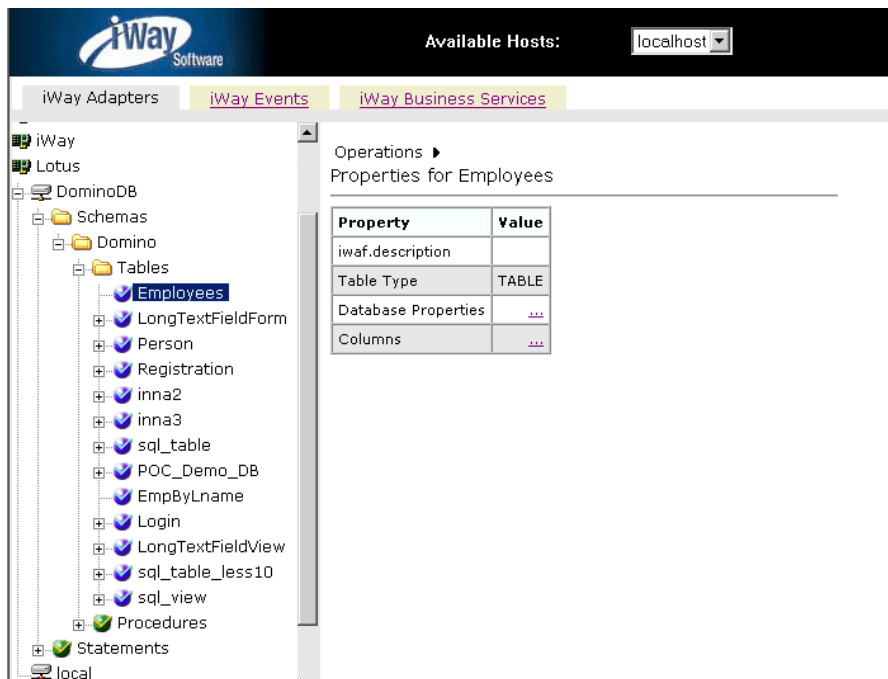
2. Click the icon to the left of the Employees node.

The following image shows the properties table for the Employees node listing the properties and their values.

Properties for Employees

Property	Value
iwaf.description	
Table Type	TABLE
Database Properties	...
Columns	...

You can view the Domino database properties or the column details for the Employees table. For example, the following image shows the detail properties for Columns which has eight columns: column name, data type, type name, column size, buffer length, decimal digits, radix, and nullable.

Details for collection property Columns

column name	data type	type name	column size	buffer length	decimal digits	num prec radix	nullable
EmpID	6	FLOAT	15	8	0	10	1
Fname	12	VARCHAR	254	254			1
Lname	12	VARCHAR	254	254			1
Hday	91	DATE	15	10	0	10	1
Bday	91	DATE	15	10	0	10	1
Salary	3	DECIMAL	15	15	2	10	1

Close

3. Click *Close* to return to the previous window.

4. Move the pointer over *Operations* to view the context menu, which offers the following options:

- Create iWay Event Port.

- Generate Schema.

The following image shows the Employees table selected in the left pane, and the operations menu expanded in the right pane to show these options.
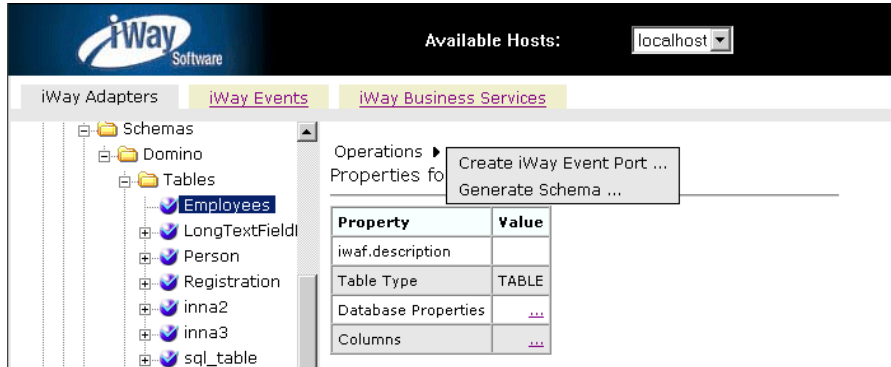
Creating an XML Schema

After you browse the available Domino tables, you can generate event schemas for the Domino tables you wish to use with your adapter.

Procedure: How to Create an XML Schema

To create XML request and response schemas for the Employees Domino table:

1. In the left pane, select the *Employees* table.

The following image shows the Employees tabe selected in the left pane, and the operations menu expanded in the right pane to show the option to create schemas.
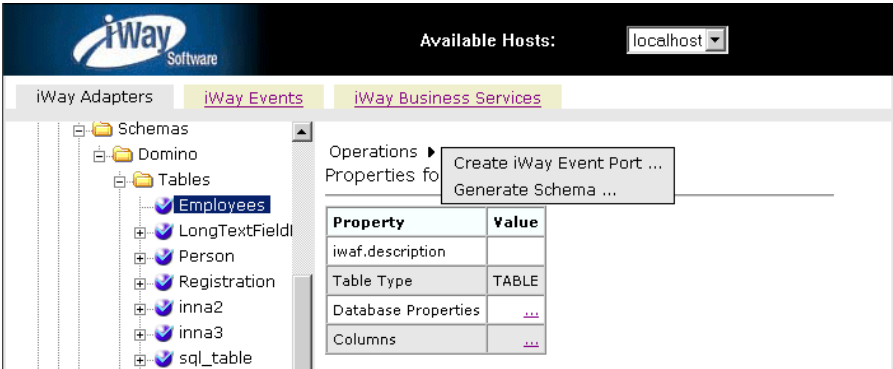
2. In the right pane, move the pointer over *Operations* and select *Generate Schema*.

The following image shows that the Schemas pane opens on the right displaying a table with columns for the part, the root tag, and the schema. An event schema is created for your Domino table.
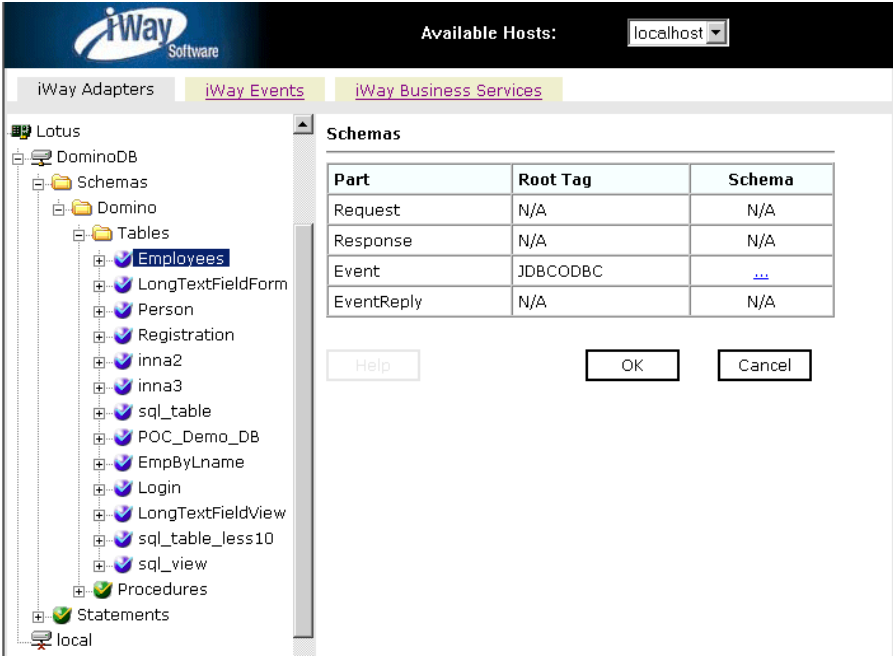
The table defines the root tag for each schema and provides a hyperlink to the schema.

3. Click the hyperlink associated with the type of schema you want to view.

For example, the following image shows that if you click the Request schema, the schema appears in the right pane.
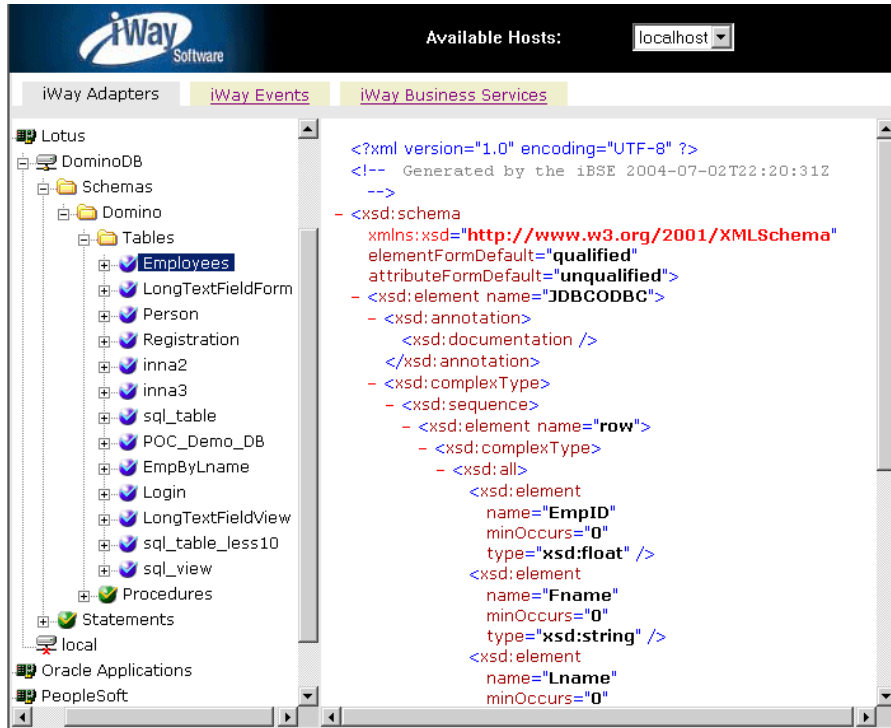
4. Click the *Back* button on your Web browser to return to the previous window.

After the schemas are created, you can create iWay Business Services. For more information, see Chapter 5, *Creating and Publishing iWay Business Services*.

You also can create events after the schemas are created. For more information, see Chapter 3, *Configuring the Event Adapter for Lotus Notes*.

Configuring the Event Adapter for Lotus Notes

Topics:

- Understanding iWay Event Functionality

- Creating an Event Port

- Creating a Channel

iWay Servlet Application Explorer deployed to a Sun Java System Application Server enables you to listen for events in Lotus Notes tables. Several listening techniques are available, enabling you to choose the technique that best suits your requirements.

Understanding iWay Event Functionality

Events are generated as a result of activity on an application system. You can use events to trigger an action in your application. For example, an event when customer information is updated in the Domino database. If your application performs an action when this happens, your application is a consumer of this event.

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

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

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

- **Port**

    A port associates a particular business object exposed by an adapter with a particular disposition. A disposition defines the protocol and location of the event data. The port defines the end point of the event consumption.

    For example, you can use a JMS protocol to route the result of polling a Domino database table to a JMS queue hosted by a Sun Java System Application Server. 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 3-17.

Creating an Event Port

The following procedures describe how to create an event port using iWay Servlet Application Explorer. You can create a port for a table in the Domino database from the iWay Adapters tab or from the iWay Events tab.

Creating an Event Port From the iWay Adapters Tab

You can bypass the iWay Events tab and create an event port directly from the iWay Adapters tab.

Procedure: How to Create an Event Port From the iWay Adapters Tab

To create an event port from the iWay Adapters tab:

1. Select the Domino database table for which you want to create an event port.

2. Move the pointer over *Operations* and select *Create iWay Event Port*.

   The Create iWay Event Port pane opens on the right.

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

   b. From the drop-down list, select the required disposition, for example, File.

3. Click *Next*.

   The Specify Disposition pane opens on the right.

4. Type the disposition url and click *Finish*.

For information about the disposition definitions, see the specific procedure for the disposition you require in the following topic, *Creating an Event Port From the iWay Events Tab on page 3-3*.

Creating an Event Port From the iWay Events Tab

When you use Application Explorer with an iWay Business Services Engine (iBSE) implementation, the following port dispositions are available:

- File
- HTTP
- iBSE
- JMS
- MQSeries
- MSMQ
- SOAP

When you use Application Explorer with a JCA implementation, the following port dispositions are available:
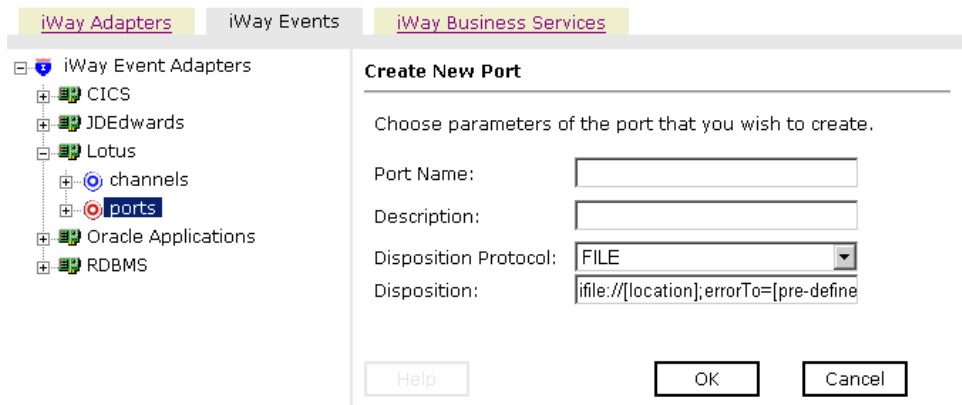
- File
- HTTP
- JMS
- MQSeries
- MAIL

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

Procedure: How to Create an Event Port for File

To create a specific event port for File using Application Explorer:

1. Click the *iWay Events* tab.

The iWay Event Adapters window opens.

2. Expand the tree in the left pane and expand the *Lotus* node.

3. Select the *ports* node.

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

The following image shows the iWay Events tab window which contains two panes. On the left is the navigation pane for the iWay Event Adapters showing the ports node selected. On the right is the Create New Port pane with fields to enter a name, description, a disposition and a disposition protocol.

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, specify a destination file to which the event data is written.

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

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

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

```
location
```

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

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

Parameter	Description
location	The full directory path and file name to which the data is written.
errorDest	The location to which error logs are sent. This is optional. This can be a pre-defined port name or another disposition URL. The URL must be complete, including the protocol.

For example:

```
ifile://c:\temp\OraEvent.txt;errorTo=ifile://c:\temp\error
```

5. Click *OK*.

The following image shows the iWay Events tab window which contains two panes. On the left is the navigation pane for the iWay Event Adapters showing the LotusNotes_Event port selected. On the right is the Operations pane which summarizes the information associated with the event port you created.
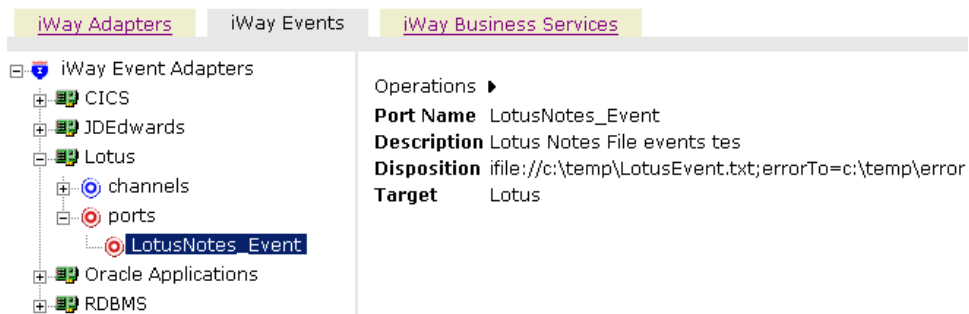
You are ready to associate the event port with a channel. For more information, see *Creating a Channel* on page 3-17.

Procedure: How to Create an Event Port for iBSE

To create an event port for iWay Business Services Engine (iBSE) using Application Explorer:

1. Click the *iWay Events* tab.

   The iWay Event Adapters window opens.

2. Expand the tree in the left pane and expand the *Lotus* node.

3. Select the *ports* node.

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

   The Create New Port pane opens on the right.

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

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

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

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

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

Parameter	Description
svcName	The name of the service created with iBSE.
methName	The name of the method created for the Web service.
respDest	The location to which responses to the Web service are posted. Optional. This can be a pre-defined port name or another disposition URL. The URL must be complete, including the protocol.
errorDest	The location to which error logs are sent. Optional. This can be a pre-defined port name or another disposition URL. The URL must be complete, including the protocol.

5. Click *OK*.

   The following image shows the iWay Events tab window which contains two panes. On the left is the navigation pane for the iWay Event Adapters showing the LotusiBSE port selected. On the right is the Operations pane which summarizes the information associated with the event port you created.
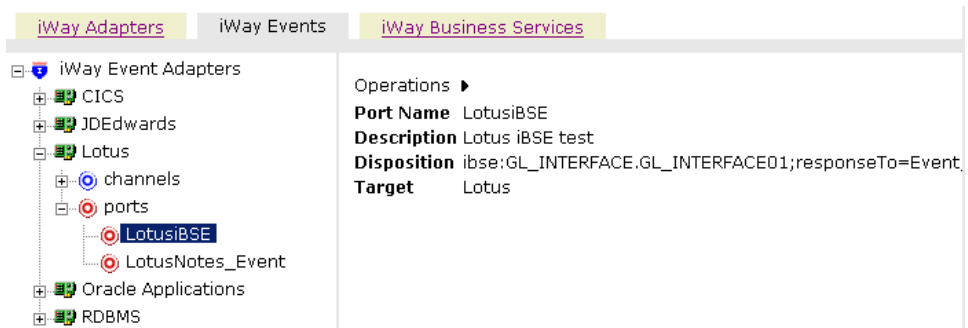
You are now ready to associate the event port with a channel. For more information, see *Creating a Channel* on page 3-17.

Procedure: How to Create an Event Port for MSMQ

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

1. Click the *iWay Events* tab.

    The iWay Event Adapters window opens.

2. Expand the tree in the left pane and expand the *Lotus* node.

3. Select the *ports* node.

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

    The Create New Port 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 an MSMQ destination in the format:

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

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

Parameter	Description
host	The name of the host on which the Microsoft Queuing system runs.

Parameter	Description
queueType	The type of queue. For private queues, enter *Private$*.
	Private queues are queues that are not published in Active Directory. They appear only on the local computer that contains them. Private queues are accessible only by Message Queuing applications that recognize the full path name or format name of the queue.
queueName	The name of the queue in which messages are placed.
errorDest	The location to which error logs are sent. Optional.
	This can be a pre-defined port name or another disposition URL. The URL must be complete, including the protocol.

5. Click *OK*.

The following image shows the iWay Events tab window which contains two panes. On the left is the navigation pane for the iWay Event Adapters showing the LotusMSMQevent port selected. On the right is the Operations pane which summarizes the information associated with the event port you created.
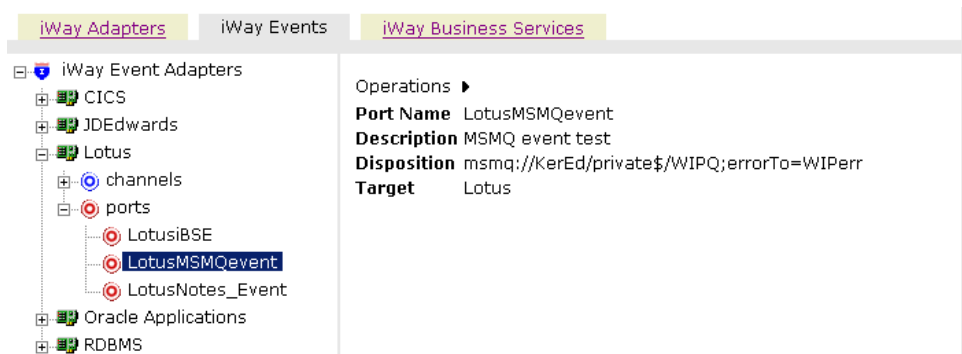
You are ready to associate the event port with a channel. For more information, see *Creating a Channel* on page 3-17.

Procedure: How to Create an Event Port for JMS

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

1. Click the *iWay Events* tab.

The iWay Event Adapters window opens.

2. Expand the tree in the left pane and expand the *Lotus* node.

3. Select the *ports* node.

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

The Create New Port pane opens on the right.

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

b. In 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, specify the destination file using the following format:

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

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

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

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

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

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. You must create the connection factory, for example: `sampleQCF`

Parameter	Description
jndi_url	The URL to use to contact the JNDI provider. The syntax of this URL depends on which JNDI provider is used. This value corresponds to the standard JNDI property, `java.naming.provider.url` The URL of the Sun Java System Application Server is `iiop://localhost:3700` where: 3700 Is a default port.
jndi_factory	Is JNDI context.INITIAL_CONTEXT_FACTORY and is provided by the JNDI service provider. For Sun Java System Application Server, this is `com.sun.jndi.cosnaming.CNCtxFactory`
userID	User ID associated with this queue.
pass	Password associated with the user ID.
errorDest	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 following image shows the iWay Events tab window which contains two panes. On the left is the navigation pane for the iWay Event Adapters showing the LotusJMSQ port selected. On the right is the Operations pane which summarizes the information associated with the event port you created.
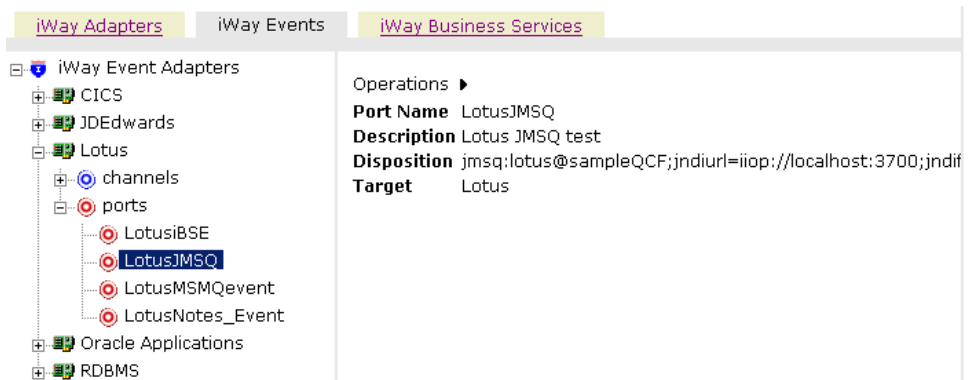
You are now ready to associate the event port with a channel. For more information, see *Creating a Channel* on page 3-17.

Procedure: How to Create an Event Port for SOAP

To create an event port for SOAP using Application Explorer:

1. Click the *iWay Events* tab.

The iWay Event Adapters window opens.

2. Expand the tree in the left pane and expand the *Lotus* node.

3. Select the *ports* node.

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

The Create New Port pane opens on the right.

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

b. In 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=action[;responseTo=respDest]
    [;errorTo=errorDest]
```

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

Parameter	Description
wsdl-url	The URL to the WSDL file that is required to create the SOAP message.
action	The method that is called by the disposition.
respDest	The location to which responses are posted. This can be a pre-defined port name or another full URL. Optional. This can be a pre-defined port name or another disposition URL. The URL must be complete, including the protocol.
errorDest	The location to which error logs are sent. Optional. This can be a pre-defined 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, it 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 3-17.

Procedure: How to Create an Event Port for HTTP Disposition

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

1. Click the *iWay Events* tab.

The iWay Event Adapters window opens.

2. Expand the tree in the left pane and expand the *Lotus* node.

3. Select the *ports* node.

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

The Create New Port 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 *HTTP*.

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

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

`ihttp://url;responseTo=respDest`

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

`http://host:port/uri`

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

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

Parameter	Description
url	The URL target for the post operation.
respDest	Location where responses are posted. A predefined port name or another full URL. 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.
uri	Universal resource identifier that completes the url specification.

5. Click *OK*.

The following image shows the iWay Events tab window which contains two panes. On the left is the navigation pane for the iWay Event Adapters showing the LotusHTTP port selected. On the right is the Operations pane which summarizes the information associated with the event port you created.
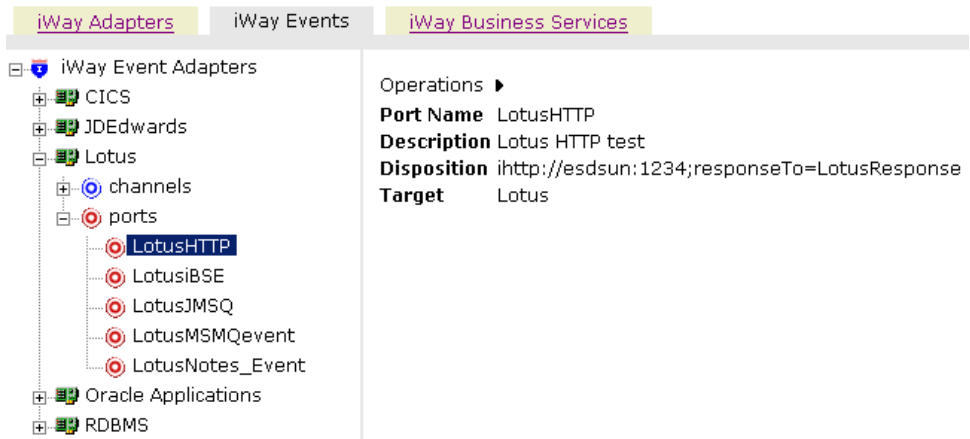
Procedure: How to Create an Event Port for MQSeries

To create an event port for an MQSeries queue using Application Explorer:

1. Click the *iWay Events* tab.

   The iWay Event Adapters window opens.

2. Expand the tree in the left pane and expand the *Lotus* node.

3. Select the *ports* node.

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

   The Create New Port pane opens on the right.

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

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

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

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

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

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

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

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

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

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 event port appears under the ports node in the left pane. In the right pane, it 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 3-17.

Editing or Deleting an Event Port

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

Procedure: How to Edit an Event Port

To edit an existing event port using Application Explorer:

1. Click the *iWay Events* tab.

    The iWay Event Adapters window opens.

2. In the left pane, expand the tree, the *Lotus* node, and the *ports* node.

3. Select the event port you want to edit.

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

    The following image shows the Edit Port pane that opens on the right with fields to modify the name, description, disposition protocol, and disposition.

Edit Port

Choose parameters of the port that you wish to edit.

Port Name:	TestPort
Description:	Created on 6/28/04.
Disposition Protocol:	File
Disposition:	file://c:\temp

Help   OK   Cancel

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

Procedure: How to Delete an Event Port

To delete an event port using Application Explorer:

1. Click the *iWay Events* tab.

    The iWay Event Adapters window opens.

2. In the left pane, expand the tree, the *Lotus* node, and the *ports* node.

3. Select the event port you want to delete.

4. In the right pane, move the pointer over *Operations* and select *Delete*.

   A confirmation dialog box opens.

5. To delete the 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 a channel for an Lotus Notes event. All defined event ports must be associated with a channel.

**Procedure: How to Create a Channel**

To create a channel using Application Explorer:

1. Click the *iWay Events* tab.

   The iWay Event Adapters pane opens.

   The list of iWay adapters that support events appears in the left pane.

2. Expand the iWay Adapter node, for example, Lotus.

   The following image shows the iWay Events tab window and in the left pane is the expanded Lotus node displaying its channels and ports nodes.
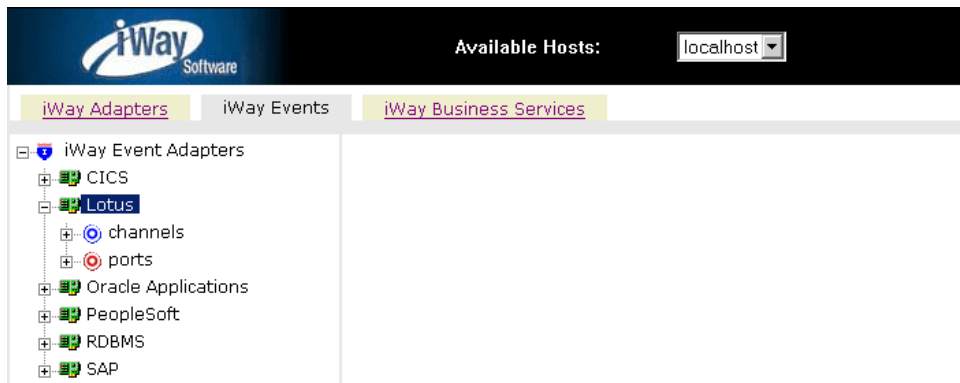
3. Click the *channels* node.

The following image shows the channels selected in the left pane and the Operations menu expanded in the right pane.
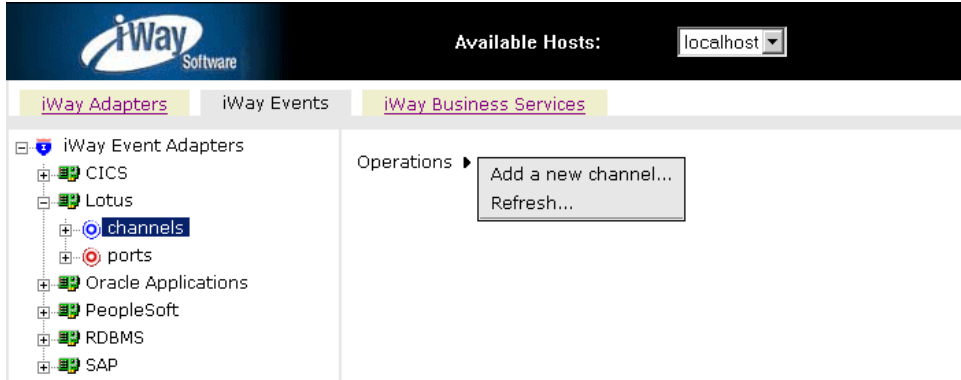
4. In the right pane, move the pointer over *Operations* and select *Add a new channel*.

The Add a new LOTUS channel pane opens on the right. The following image shows three fields for adding channel information.

a. In the Channel Name field, type a name, for example, TestChannel.

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

c. From the drop-down list, select a channel type. Table Listener is the default value.

5. Click *Next*.

The Edit channels pane opens on the right, as shown in the following image. It has four tabs in which the JDBC-ODBC Bridge Parameters tab window is the default display with seven fields for adding channel parameters on Data Source, User, Password, Polling Interval, SQL Query, Post Query, and Delete Keys.

Edit channels

JDBC-ODBC Bridge Parameters	Oracle Parameters	SQL Server Parameters	EDA Server Parameters

Data Source: [ ]

User: [ ]

Password: [ ]

Polling Interval: [ ]

SQL Query: [ ]

Post Query: [ ]

Delete Keys: [ ]

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

6. On the JDBC-ODBC Bridge Parameters tab, enter the information that is specific to your Domino database.

7. Specify any additional information or criteria for the channel you are creating.

8. Click *Next*.

   The Select Ports pane, shown in the following image, opens on the right. This pane provides lists of available and current ports and buttons to enable you to move ports from one list to the other.
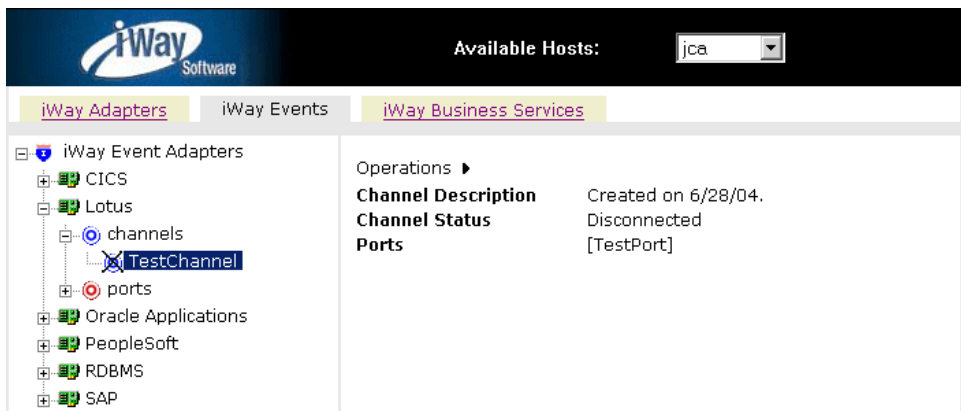
Select Ports

Available		Current
TestPort test	« ‹ > »	

Help	< Back	Finish	Cancel
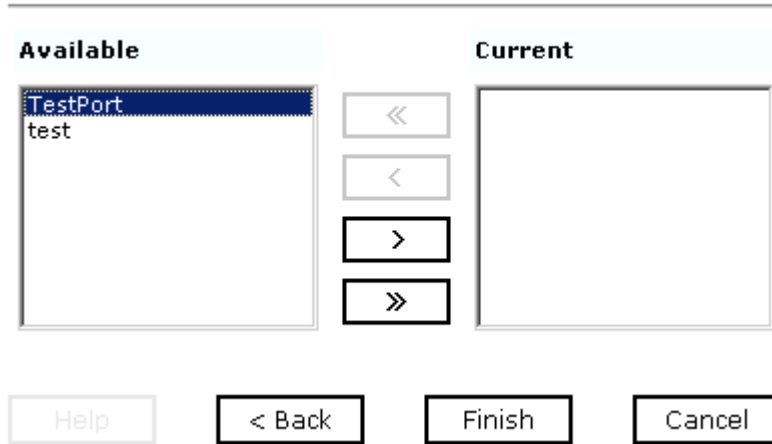
   a. Select a port from the list of current ports

   b. To transfer the port to the list of available ports, click the single right arrow button or to associate all ports, click the double right arrow button.

   The port appears in the list of available ports.

9. Click *Finish*.

   The summary pane opens on the right, as shown in the following image. A summary provides the channel description, channel status, and available ports. All the information is associated with the channel you created.

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

iWay Software

Available Hosts: jca

iWay Adapters   iWay Events   iWay Business Services

- iWay Event Adapters
  - CICS
  - Lotus
    - channels
      - TestChannel
    - ports
  - Oracle Applications
  - PeopleSoft
  - RDBMS
  - SAP

Operations ▶
Channel Description   Created on 6/28/04.
Channel Status   Disconnected
Ports   [TestPort]

You must start the channel to activate your event configuration.

Procedure: **How to Start a Channel**

To start a channel:

1. Click the *iWay Events* tab.

2. In the left pane, expand the *iWay Events* node, the *Lotus* node, and the *channels* node.

3. Select the channel you want to start.

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

   The following image shows in the left pane the expanded Lotus channel node with TestChannel selected, and in the right pane, an expanded Operations menu with Start the channel as one of the menu options.
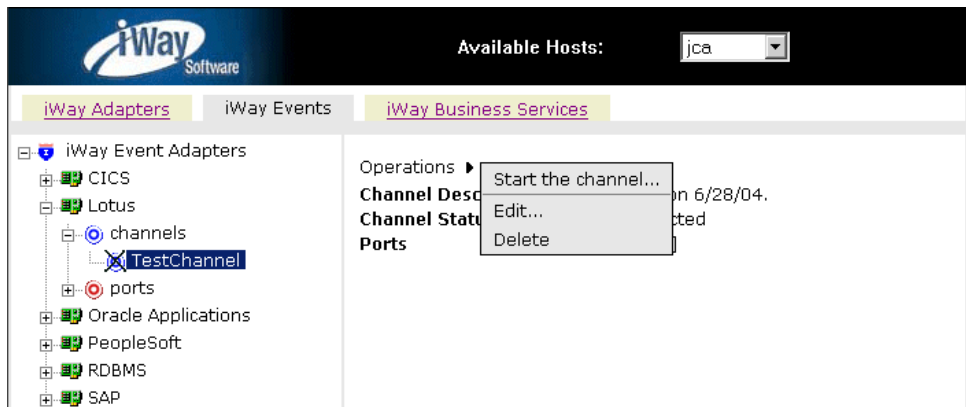
The channel you created is now active, and the X through the icon in the left pane disappears.

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

Procedure: **How to Edit a Channel**

To edit an existing channel using Application Explorer:

1. Click the *iWay Events* tab.

   The iWay Event Adapters window opens

2. In the left pane, expand the tree, the *Lotus* node, and the *channels* node.

3. Select the channel you want to edit.

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

The Edit channels pane opens.

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

Procedure: How to Delete a Channel

To delete an existing channel using Application Explorer:

1. Click the *iWay Events* tab.

   The iWay Event Adapters window opens.

2. In the left pane, expand the tree, the *Lotus* node, and the *channels* node.

3. Select the channel you want to delete.

4. In the right pane, move the pointer over *Operations* and select *Delete*.

   A confirmation dialog box opens.

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

   The channel disappears from the list in the left pane.

Using Web Services Policy-Based Security

Topics:

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

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

iWay Business Services Policy-Based Security

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

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

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

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

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

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

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

Configuring iWay Business Services Policy-Based Security

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

An execution policy governs who can execute the business service to which the policy is applied. For more information, see *How to Create an Execution Policy* on page 4-8.

You configure the IP and Domain Restriction policy type slightly differently from other policy types. The IP and Domain Restriction policy type controls connection access to iBSE and therefore, need not be applied to an individual business service. You need not create a policy, however, you must enable the Security Policy option in Servlet Application Explorer. For more information, see *How to Configure IP and Domain Restrictions* on page 4-11.

Procedure: How to Create a User to Associate With a Policy

To create a user to associate with a policy:

1. Open *Servlet Application Explorer*.

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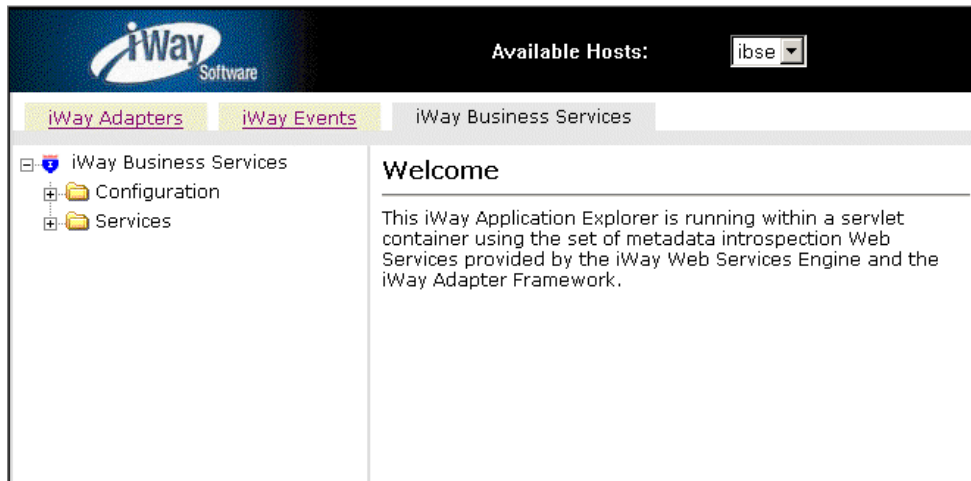
a. Click the *iWay Business Services* tab.

b. Expand the *Configuration* node.

c. Expand the *Security* node.

d. Expand the *Users and Groups* node.

e. Select *Users*.

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

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

Add a new user

Name:

Password:

Description:

Help   OK   Cancel

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

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

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

3. Click *OK*.

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

Procedure: How to Create a Group to Associate With a Policy

To create a group to associate with a policy:

1. Open *Servlet Application Explorer*.

   a. Click the *iWay Business Services* tab.

   b. Expand the *Configuration* node.

   c. Expand the *Security* node.

   d. Expand the *Users and Groups* node.

   e. Select *Groups*.

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

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

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

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

3. Click *Next*.

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

Modify Group Membership

Current		Available
	«	bse1
	‹	
	›	
	»	

Help   < Back   Finish   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 iWay Business Services. A group is used as a container for one or more users. Policies that specify particular rights can be associated with a group.

Group name	Description
☐ newgroup	

Procedure: How to Create an Execution Policy

To create an execution policy:

1. Open *Servlet Application Explorer.*

    a. Click the *iWay Business Services* tab.

    b. Expand the *Configuration* node.

    c. Select *Policies.*

    The following image shows the Policies pane on the right where you apply a policy. The Operations menu displays 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: Execution

Description:

| Help | < Back | Next > | Cancel |

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.

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

7. Click *Finish*.

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

Procedure: **How to Configure IP and Domain Restrictions**

To configure IP and domain restrictions:

1. Open *Servlet Application Explorer*.

    a. Select the *iWay Business Services* tab.

    b. Expand the *Configuration* node.

    c. Expand the *Security* node.

    d. Select *IP and Domain*.

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

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

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

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

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

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

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

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

4. Click *OK*.

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

Operations ▶

IP and Domain

You can configure the iWay 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
☐ test	Deny	

Creating and Publishing iWay Business Services

Topics:

- Understanding iWay Business Services
- Creating iWay Business Services
- Testing a JCA Connection Using the Test Tool
- Sample Request Documents

This section describes how to create and publish an iWay Business Service using the iWay Servlet Application Explorer.

Understanding iWay Business Services

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

A Web service is a self-contained, modularized function that you can publish and access 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.

Creating iWay Business Services

The following topics describe how to create an iWay Business Service for a simple SQL statement and a parameterized SQL statement.

Creating Business Services With Application Explorer

To create a Web Service for the iWay Adapter for Lotus Notes, you must first create an SQL statement.

Procedure: How to Create an iWay Business Service for a Simple SQL Statement

The following image shows the adapter directory structure in the left pane and the Operations menu in the right pane.
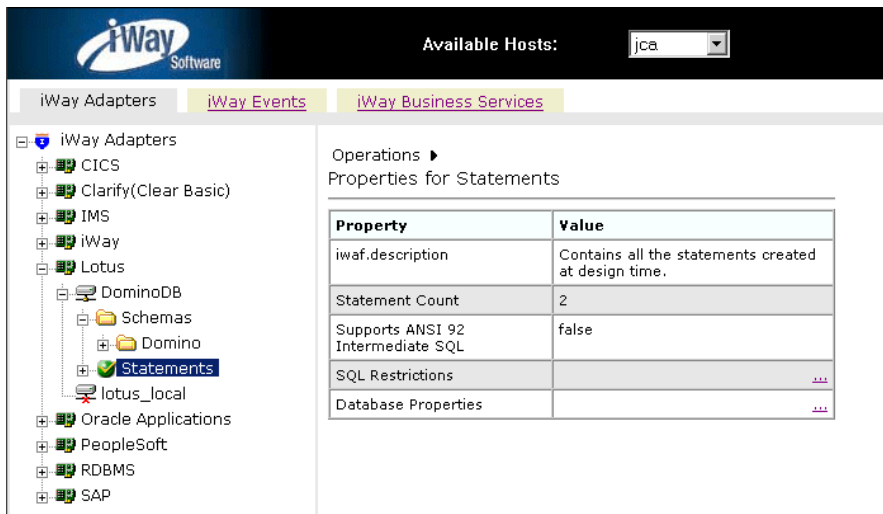
To create an iWay Business Service for a simple SQL statement:

1. Select the *Statements* node from the left pane.

   The following image shows the Statements node selected in the left pane and the expanded Operations menu in the right pane.
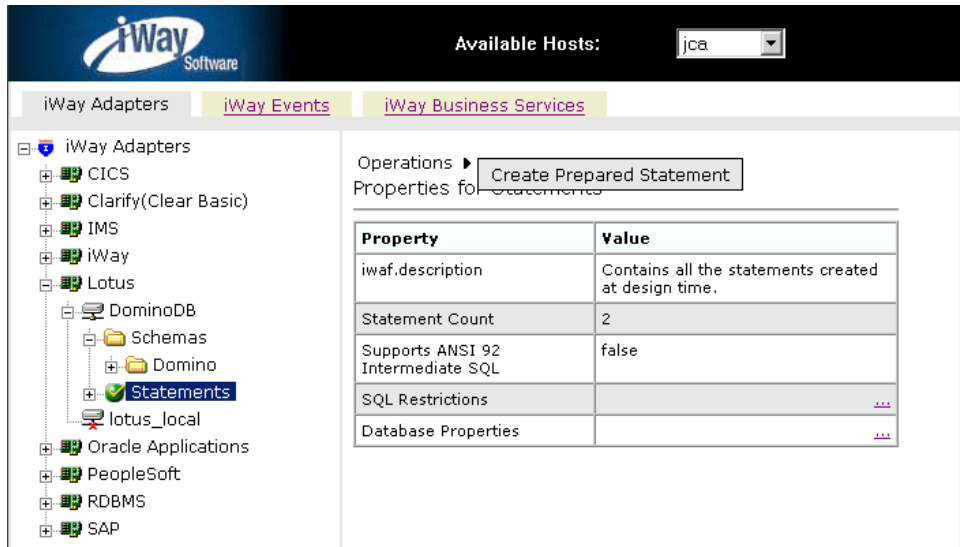
2. Move the pointer over *Operations* and select *Create Prepared Statement*.

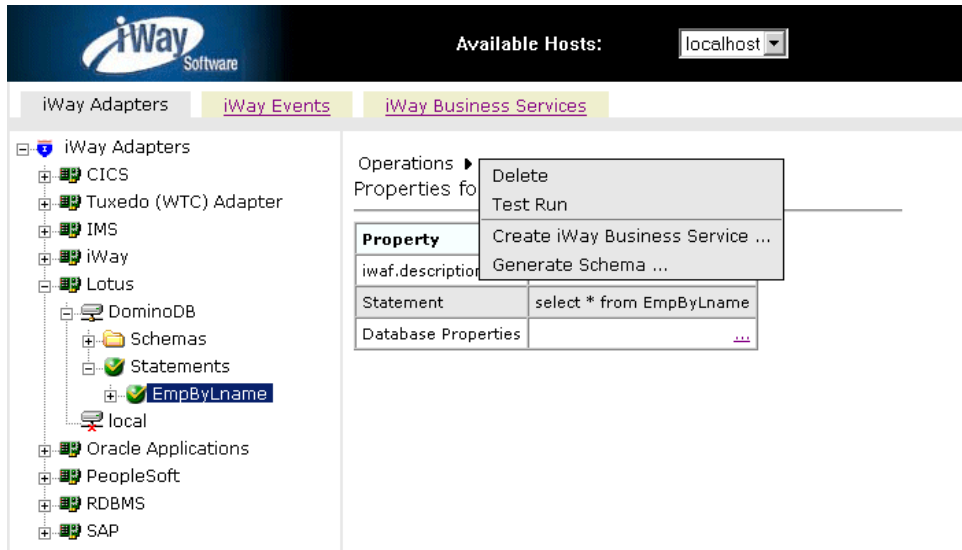The following image shows that the Create Prepared Statement pane opens on the right where you can enter the information for the statement and click the Create button.
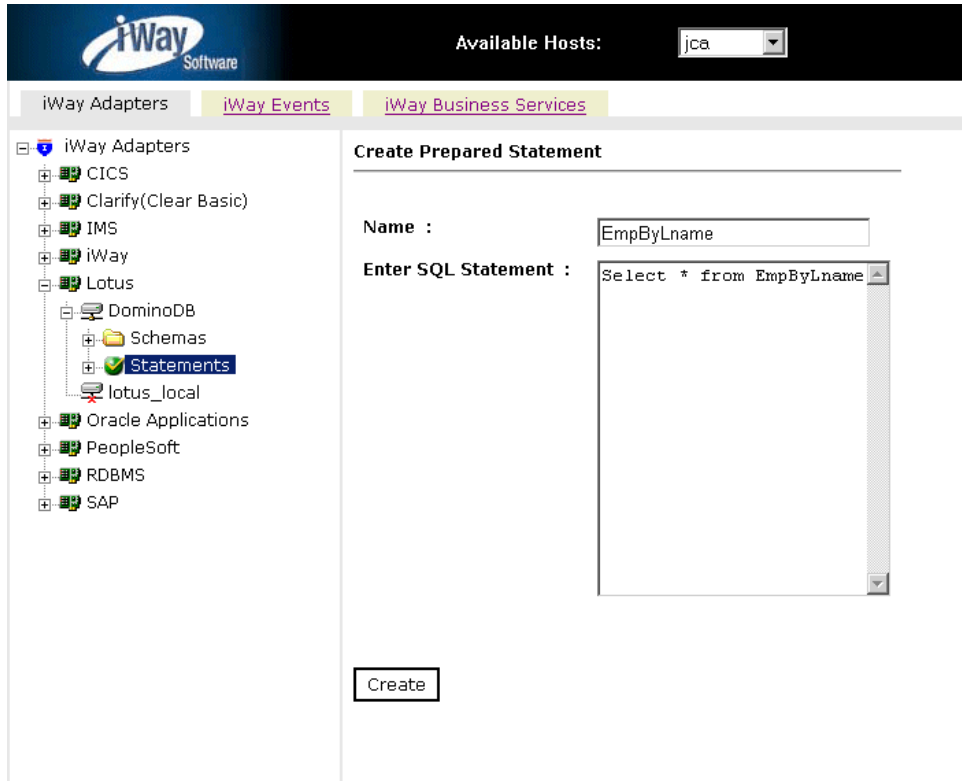
a. Type a name for the prepared statement.

b. Type an SQL statement you want to execute.

3. Click *Create*.

The following image shows that the prepared statement, EmpByLname, appears under the Statements as a node in the left pane.
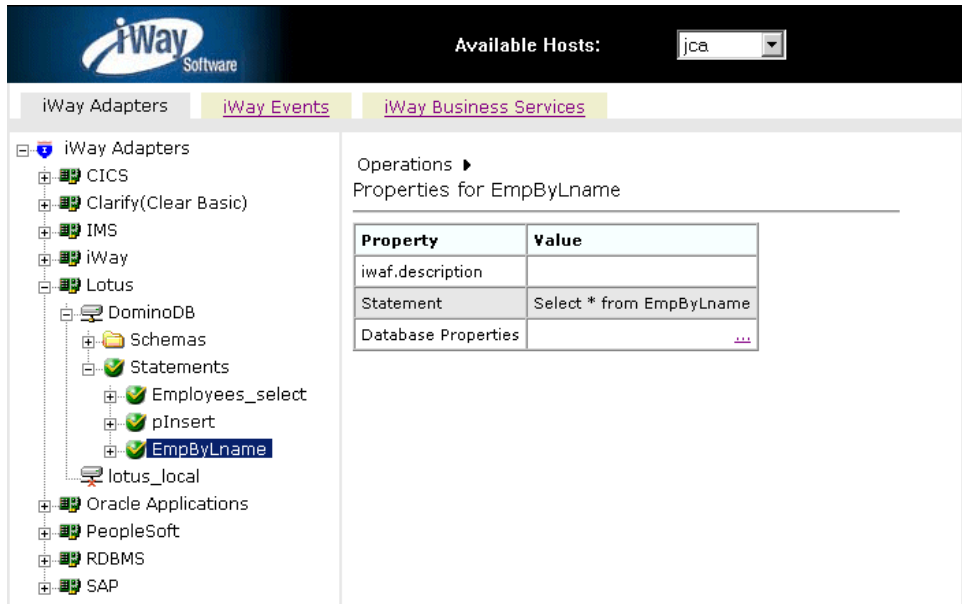
4. Select the prepared statement node you created.

The following image shows the Operations menu in the right pane where you can select the option to Create an iWay Business Service.

5. Move the pointer over *Operations* and select *Create iWay Business Service.*

The following image shows that the Create Web Service pane opens on the right with the options to create a new service or use an existing service.

6. Select *Create a new service* and click *Next.*

The following image shows the fields that become available on the right where you provide the specific information for the iWay Business Service you are defining.
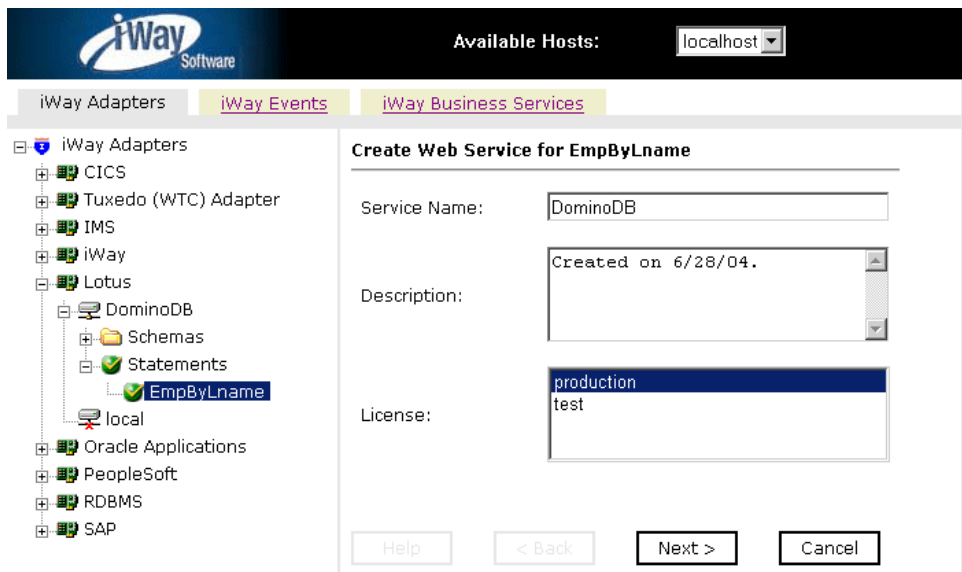
a. In the Service Name field, type a descriptive name for the iWay Business Service.

Note: Multiple methods can be created under a single service.

b. In the Description field, type a brief description for the iWay Business Service.

c. In the License field, select the license definition you want to use.

7. Click *Next*.

The following image shows another pane that opens on the right where you continue to enter information for the service.
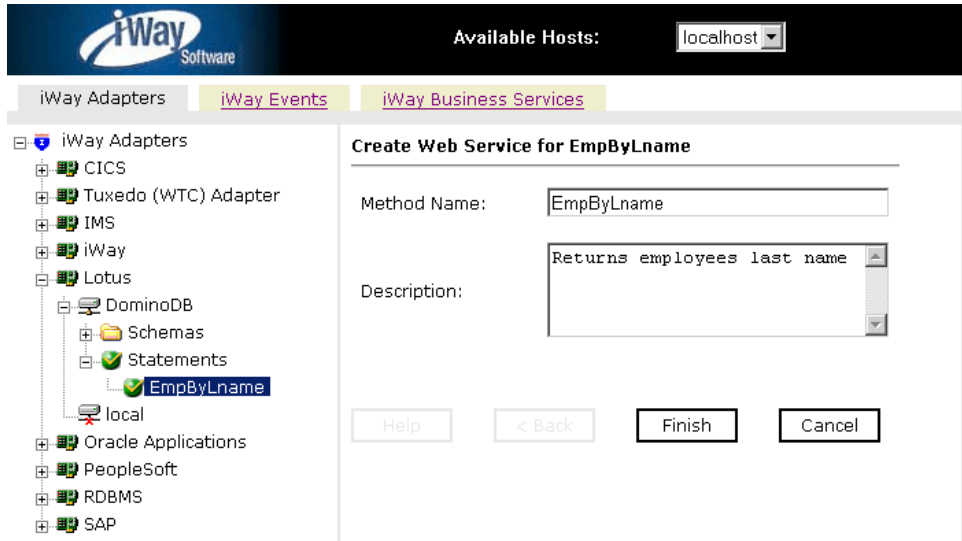
a. In the Method Name field, type a descriptive name for the method.

Note: It is recommended that the Method name match the name of the SQL statement that you created.

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

8. Click *Finish*.

The iWay Business Services tab opens.

All of the available services that were created appear in the left pane. The DominoDB service node is expanded, and the EmpByLname method is automatically selected.

The following image shows that the test window for the EmpByLname method opens in the right pane.
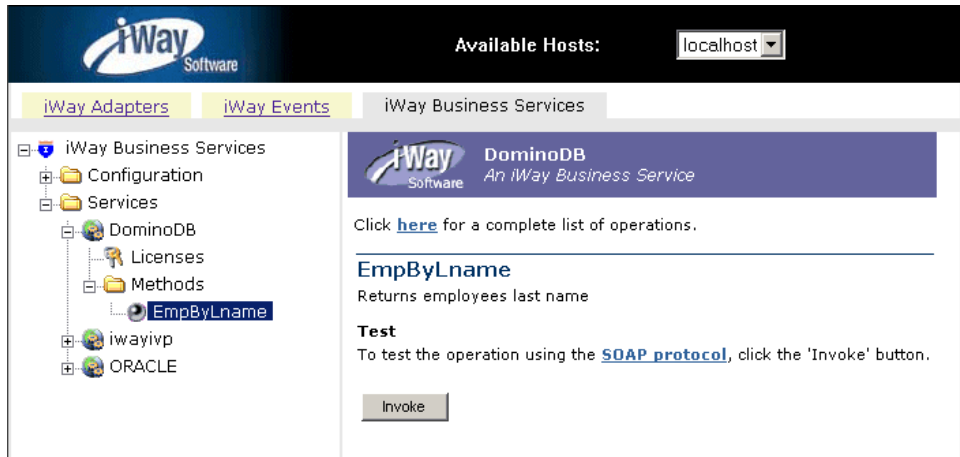
Since a simple select statement does not require any parameters, a request document is not required by the test tool.

Note: If you are testing the business service from another application, such as XML Spy, you must provide a request document.

9. Click *Invoke*.

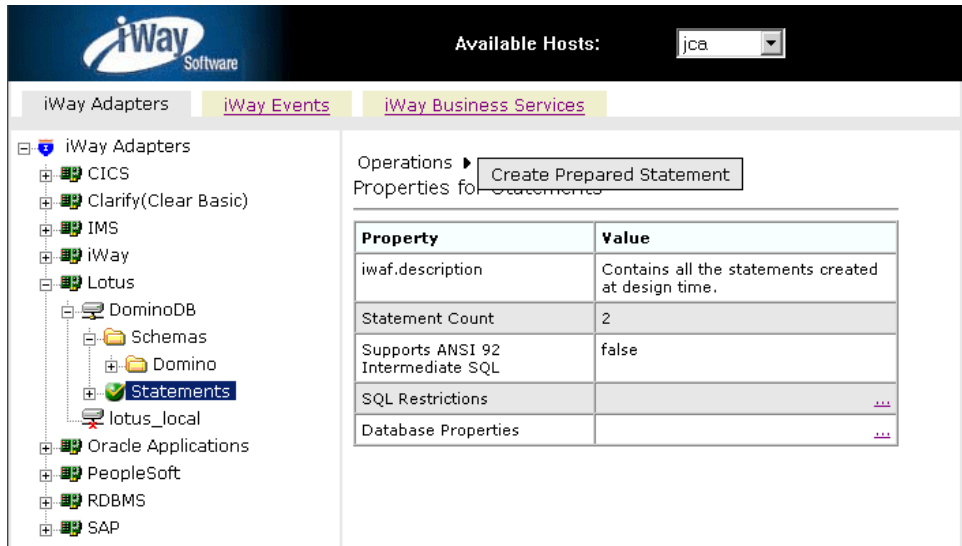The following image shows the results in the right pane.
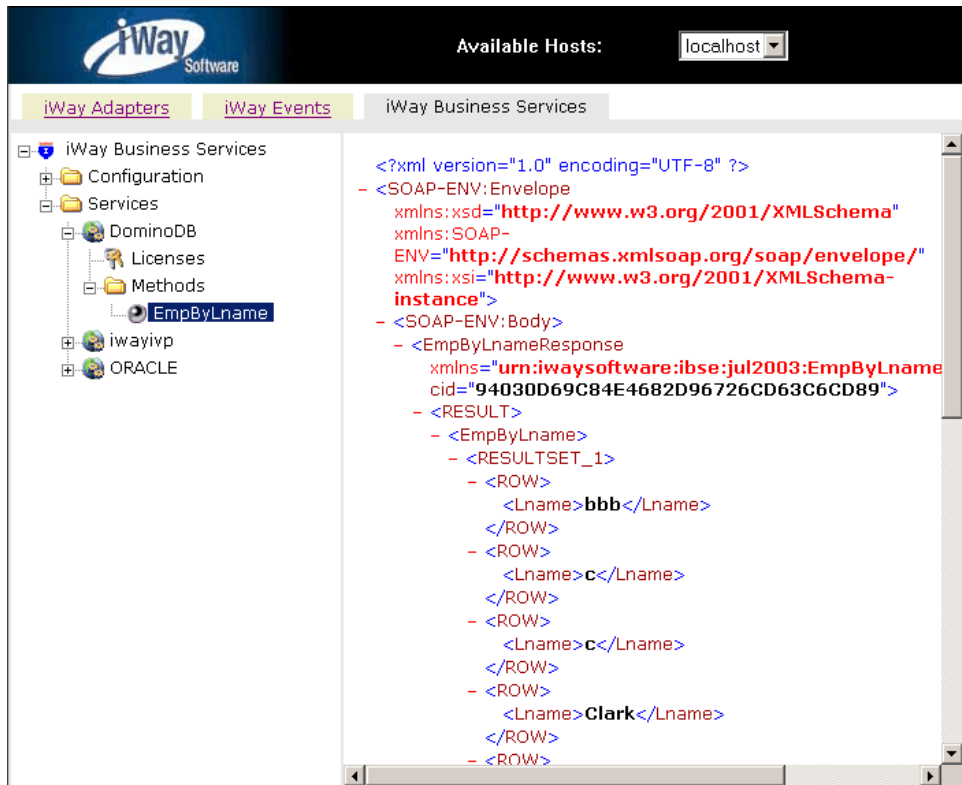
Procedure: How to Create an iWay Business Service for a Parameterized SQL Statement

To create an iWay Business Service for a parameterized SQL statement:

1. Ensure you have selected the *ibse configuration* or *localhost* from the Available Hosts drop-down list.

2. Connect to the *Lotus Notes* target.

3. Select the *Statements* node from the left pane.

The following image shows the Statements node selected in the left pane and the Operations menu open in the right pane.
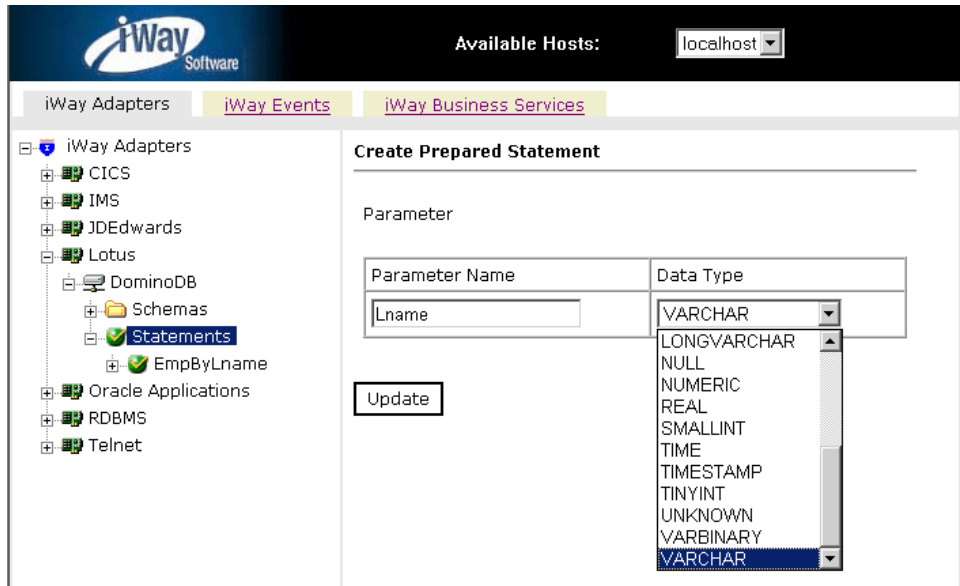

4. Move the pointer over *Operations* and select *Create Prepared Statement*.

The following image shows that the Create Prepared Statement pane opens on the right where you can enter the information for the statement and click the Create button.
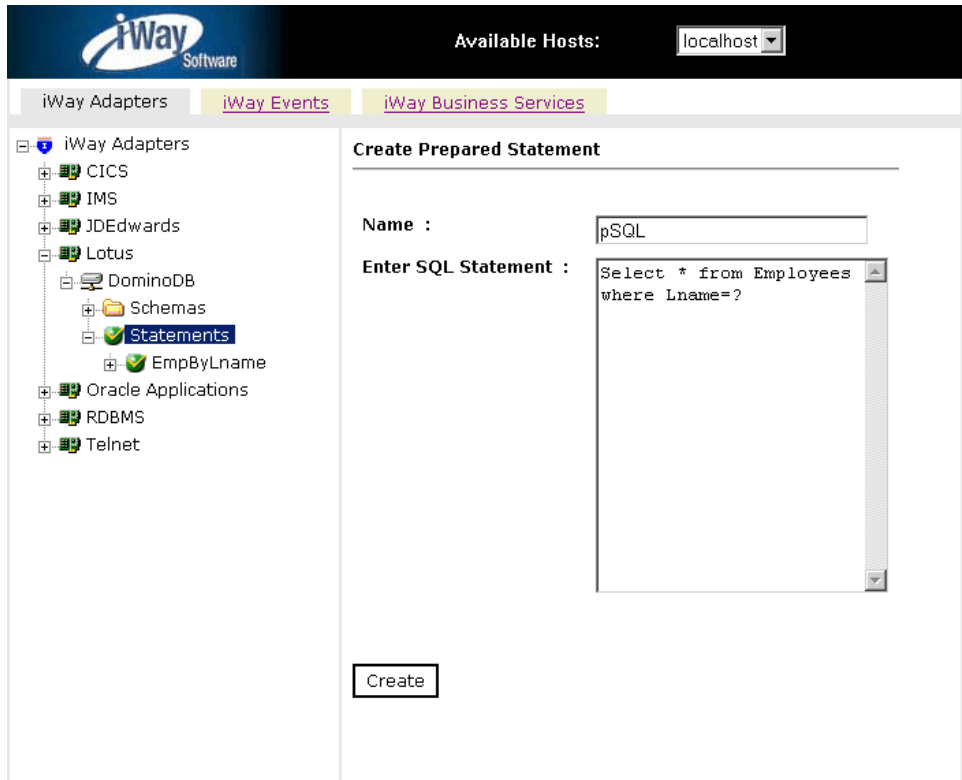
a. Type a name for the prepared statement.

b. Type an SQL statement you want to execute.

5. Click *Create.*

The following image shows that the Parameter section opens in the right pane.

a. In the Parameter Name field, type a name for the input parameter you are calling.

b. From the Data Type drop-down list, select the data type for your input parameter.

6. Click *Update.*

The following image shows that the prepared statement appears as a node in the left pane and the properties for the pSQL appear in the right pane.
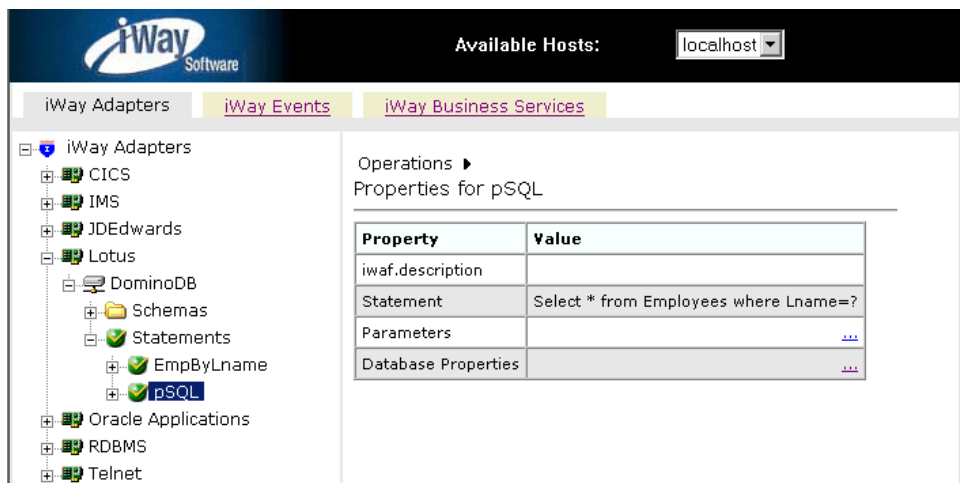
7. Select the prepared statement node you created in the left pane.

8. In the right pane, move the pointer over *Operations* and select *Create iWay Business Service.*

The following image shows that the Create Web Service pane opens on the right with the options to create a new service or use an existing service.
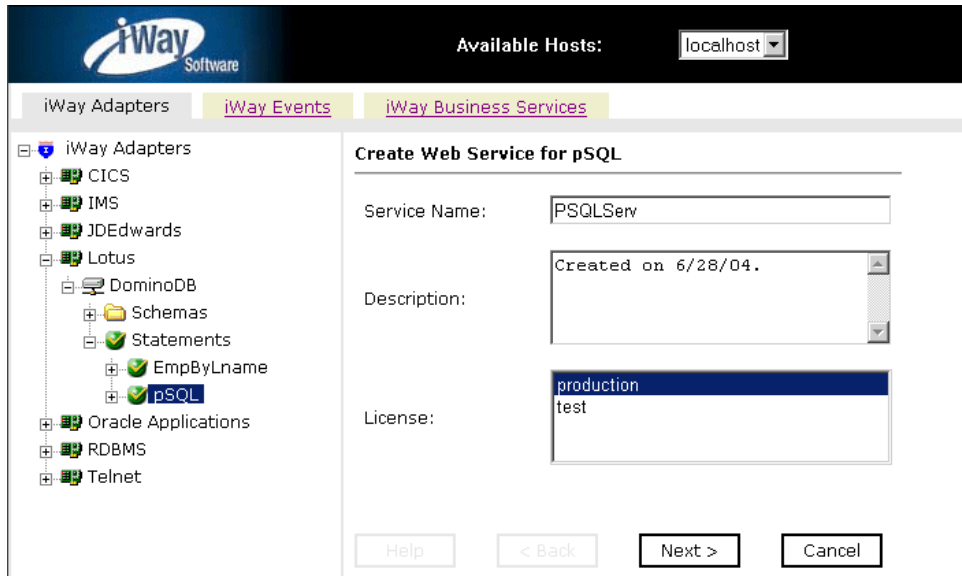

9. Select *Create a new service* and click *Next*.

The following image shows that the fields become available where you provide the specific information for the iWay Business Service you are defining.

      a. In the Service Name field, type a descriptive name for the iWay Business Service.

      Note: Multiple methods can be created under a single service.

      b. In the Description field, type a brief description for the iWay Business Service.

      c. In the License field, select the license definition you want to use.

10. Click *Next*.

The following image shows that a pane opens on the right where you continue to enter information for the service.
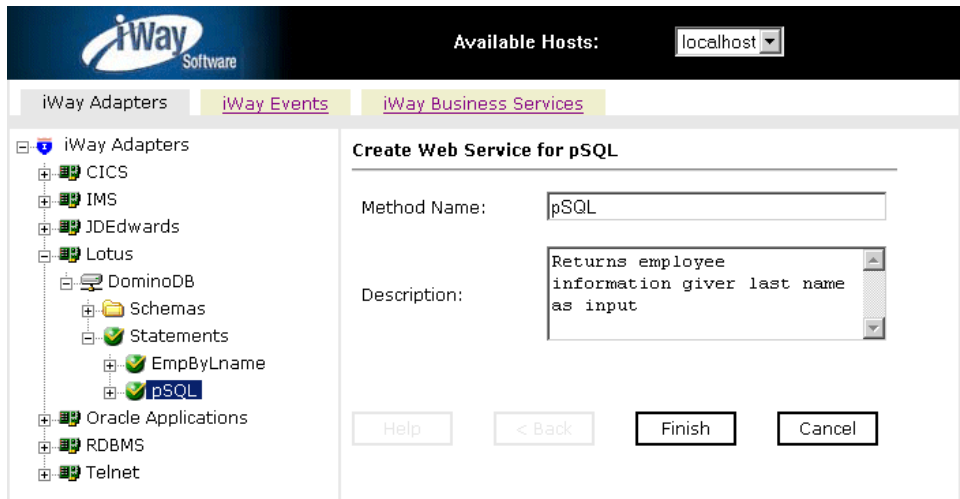

      a. In the Method Name field, type a descriptive name for the method.

      Note: It is recommended that the Method name match the name of the SQL statement that you created.

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

11. Click *Finish*.

The iWay Business Services tab opens.

All of the available services that were created appear in the left pane. The DominoDB service node is expanded, and the pSQL method is automatically selected.

The following image shows that the test window for the pSQL method opens in the right pane with a parameter and a field in which to enter a value.
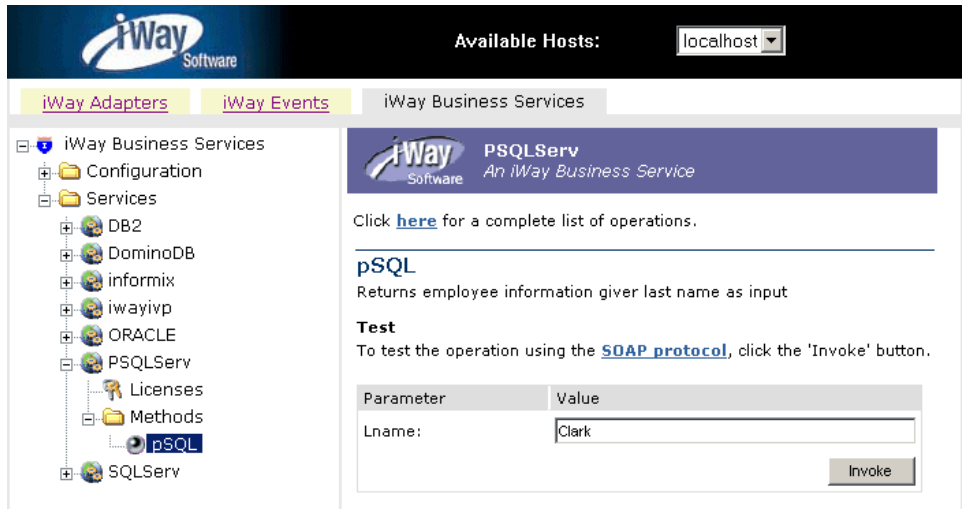
12. Type a value (for example, Clark) and click *Invoke*.

The following image shows the results in the right pane.
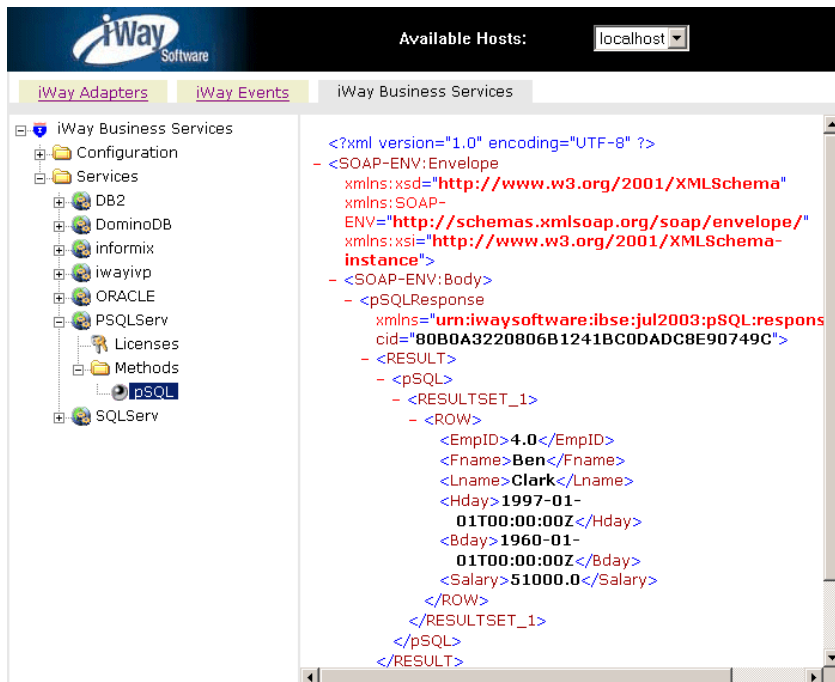
Testing a JCA Connection Using the Test Tool

You can use *iwjcaivp* test tool to verify your JCA connection.

Procedure: How to Test a JCA Connection

To test a JCA connection:

1. Start the SAP J2EE Engine 6.40.

2. Once the server is running, access the following URL

http://*localhost:port*/iwjcaivp

where:

localhost

Is the machine where the SAP J2EE Engine 6.40 is running.

port

Is the port number where the SAP J2EE Engine 6.40 is listening.

The iWay JCA Test Tool opens, as shown in the following image, which displays your current configuration and URLs for your service and event adapters.


3. Click *Service Adapters*.

As shown in the following image, a list of your configured Service Adapters appear as URLs.
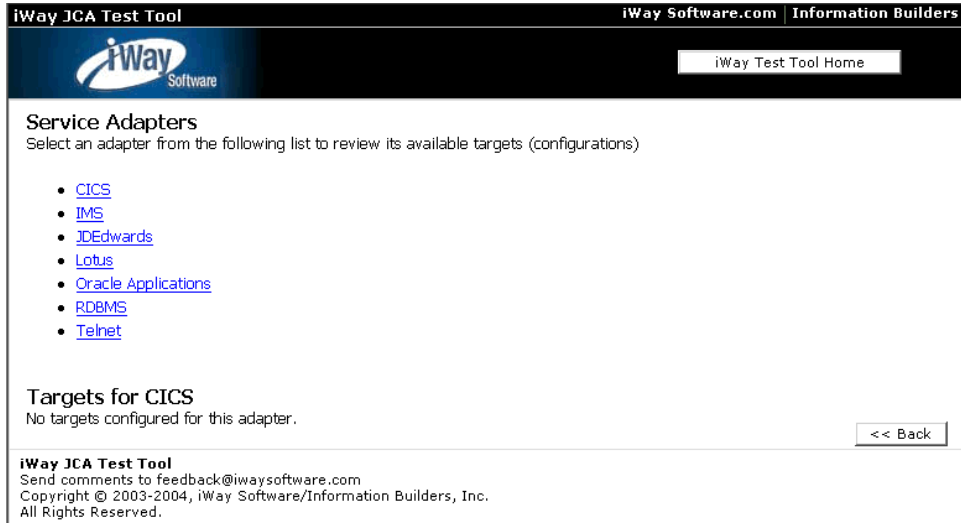
4. Click *Lotus*.

As shown in the following image, a list of available targets for the iWay Adapter for Lotus Notes appear beneath the list of Service Adapters and to the right of the list are three fields for entering User name, Password and statement location parameter.
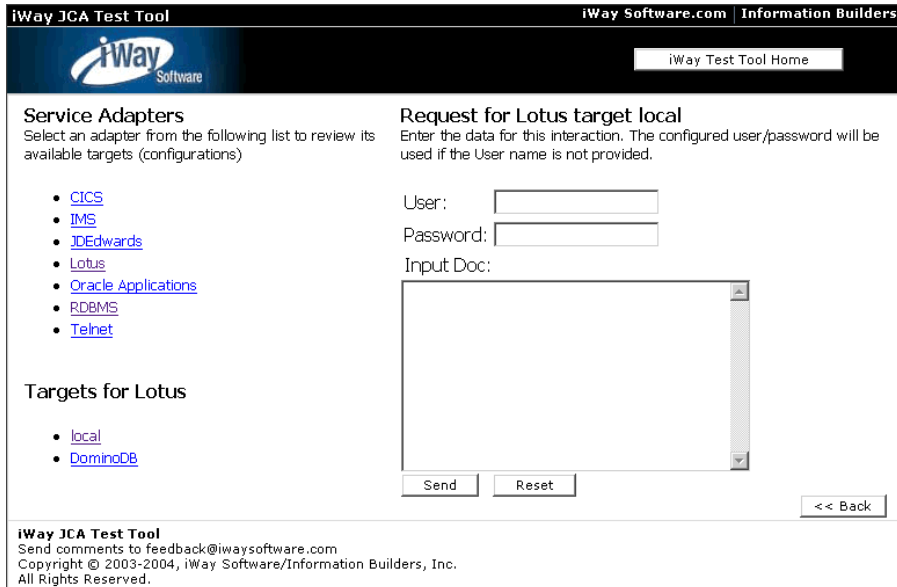
5. Click your target (for example, DominoDB) that represents the connection you want to test.

A test window is provided for you to enter you request document. The request document must have the following structure

`<AdapterParams location="Lotus/Statements/statementName"/>`
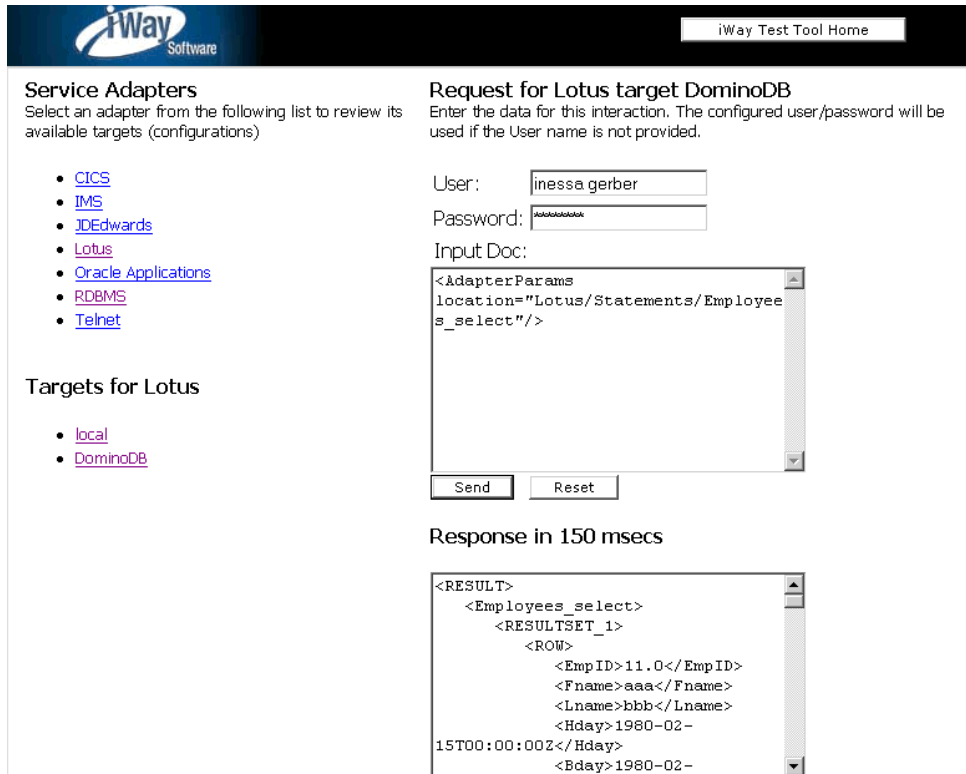
where:

statementName

Is the name of the statement that you created.

The location parameter specifies where the SQL statement is located. The following image shows a sample of the location parameter in the Input Doc field.

6. In the Input Doc field, enter your request document and click *Send*.

As shown in the following image, a response displays under the Input Doc field.

A valid response document indicates a successful JCA connection.

Sample Request Documents

The following section contains sample request documents you can use to test the iWay Adapter for Lotus Notes.

A request document for SQL has the following structure

```
<AdapterParams location="Lotus/Statements/statementName"/>
```

where:

statementName

Is the name of the statement that you created.

The location parameter specifies where the SQL statement is located.

A request document for Parameterized SQL has the following structure:

```
<AdapterParams location="Lotus/Statements/statementName">
              <param0>value</param0>
              <param1>value</param1>

              …..
              <paramN>value</paramN>
</AdapterParams >
```

The *param0...paramN* tags represent a set of parameters for the Parameterized SQL statement. If the names for the parameters were changed at design time, the tags for the parameters must be changed in the request document as well.

Reference: SELECT Statement

Statement Name: select1

Statement: select * from Employees

Request document:

```
<AdapterParams location="Lotus/Statements/select1"/>
```

Reference: Parameterized SELECT Statement

Statement Name: select1

Statement:g select * from Employees where Lname=?

Request document:

```
<AdapterParams location="Lotus/Statements/select1">
<param0>Clark</param0>
</AdapterParams>
```

Reference: Parameterized INSERT Statement

Statement Name: pInsert

Statement: insert into Registration values (?,?,",",",",",",",",",",")

Request document:

```
<AdapterParams location="Lotus/Statements/pInsert">
<param0>LogIn</param0>
<param1>myPassword</param1>
</AdapterParams>
```

Reader Comments

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