

iWay

iWay Application Adapter for
Salesforce User's Guide

Version 7.0.x and Higher

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Preface

This document is written for system integrators who develop client interfaces between Salesforce and other applications. It describes how to use the iWay Application Adapter for Salesforce to integrate business objects with your application server. It is assumed that readers understand web technologies and have a general understanding of Microsoft Windows and UNIX systems.

Note: This Release 7.0.x content is currently being updated to support iWay Release 8.0.x software. In the meantime, it can serve as a reference for your use of iWay Release 8. If you have any questions, please contact Customer_Success@ibi.com.

How This Manual Is Organized

This manual includes the following chapters:

Chapter/Appendix	Contents
1 Introducing the iWay Application Adapter for Salesforce	Provides an overview of the iWay Application Adapter for Salesforce. Describes key features and functionality of the adapter.
2 Installing the iWay Application Adapter for Salesforce	Provides installation prerequisites and describes how to install the iWay Application Adapter for Salesforce.
3 Configuring and Managing Connections to Salesforce	Describes how to configure and manage connections to Salesforce using iWay Explorer.
4 Creating XML Schemas for Salesforce	Describes how to create XML schemas for Salesforce business objects using iWay Explorer.
5 Creating and Publishing iWay Business Services	Describes how to create and publish iWay Business Services using iWay Explorer.
6 Configuring Outbound Messaging and Workflow Rules in Salesforce	Describes how to configure outbound messaging and workflow rules in Salesforce for event handling purposes.
7 Configuring Events for Salesforce	Describes how to create ports and channels to listen for Salesforce events using iWay Explorer.
A Salesforce Certificate Management	Describes how to configure key stores and trust stores for the iWay Application Adapter for Salesforce.

Chapter/Appendix		Contents
B	Salesforce Batch API	Provides usage guidelines for the Salesforce Batch API, which can be used to generate requests.
C	Configuring the Application Adapter for Salesforce in an iWay Environment	Describes how the adapter can be assigned to an iWay Service Manager channel.

Documentation Conventions

The following table describes the documentation conventions that are used in this manual.

Convention	Description
THIS TYPEFACE or this typeface	Denotes syntax that you must enter exactly as shown.
<i>this typeface</i>	Represents a placeholder (or variable), a cross-reference, or an important term. It may also indicate a button, menu item, or dialog box option that you can click or select.
<u>underscore</u>	Indicates a default setting.
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 (...).
. . .	Indicates that there are (or could be) intervening or additional commands.

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Help Us to Serve You Better

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

The following tables list the environment information our consultants require.

Platform	
Operating System	
OS Version	

JVM Vendor	
JVM Version	

The following table lists the deployment information our consultants require.

Adapter Deployment	For example, JCA, Business Services Provider, iWay Service Manager
Container	For example, WebSphere
Version	
Enterprise Information System (EIS) - if any	
EIS Release Level	
EIS Service Pack	
EIS Platform	

The following table lists iWay-related information needed by our consultants.

iWay Adapter	
iWay Release Level	
iWay Patch	

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

Request/Question	Error/Problem Details or Information
Did the problem arise through a service or event?	
Provide usage scenarios or summarize the application that produces the problem.	

Request/Question	Error/Problem Details or Information
When did the problem start?	
Can you reproduce this problem consistently?	
Describe the problem.	
Describe the steps to reproduce the problem.	
Specify the error message(s).	
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?	

The following is a list of error/problem files that might be applicable.

- Input documents (XML instance, XML schema, non-XML documents)
- Transformation files
- Error screen shots
- Error output files
- Trace files
- Service Manager package to reproduce problem
- Custom functions and agents in use
- Diagnostic Zip
- Transaction log

For information on tracing, see the *iWay Service Manager User's Guide*.

User Feedback

In an effort to produce effective documentation, the Technical Content Management staff welcomes your opinions regarding this document. Please use the Reader Comments form at the end of this document to communicate your feedback to us or to suggest changes that will support improvements to our documentation. You can also contact us through our website, <http://documentation.informationbuilders.com/connections.asp>.

Thank you, in advance, for your comments.

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Introducing the iWay Application Adapter for Salesforce

The following section provides an overview of the iWay Application Adapter for Salesforce.

In this chapter:

- ❑ [Features of the iWay Application Adapter for Salesforce](#)
 - ❑ [Component Information for the iWay Application Adapter for Salesforce](#)
-

Features of the iWay Application Adapter for Salesforce

The iWay Application Adapter for Salesforce is an adapter that provides a means to exchange real-time business data between Salesforce systems and third-party application, database, or external business partner systems. The adapter enables external applications for inbound and outbound processing with Salesforce. In addition, the iWay Application Adapter for Salesforce provides interfaces and integration touchpoints for the Salesforce SaaS service.

The adapter uses XML messages to enable non-Salesforce applications to communicate and exchange transactions with Salesforce using one of the following two methods:

- ❑ **Service Adapter.** Applications use this capability to initiate a Salesforce business event.
- ❑ **Event Adapter.** Applications use this capability if they require access to Salesforce data only when a Salesforce business event occurs.

The iWay Application Adapter for Salesforce provides:

- ❑ Support for bidirectional message interactions.
- ❑ Salesforce object repository metadata browser support to build XML schemas and web services to handle adapter requests or event data.
- ❑ Secure communications over the Internet using HTTPS.

Component Information for the iWay Application Adapter for Salesforce

The iWay Application Adapter for Salesforce works in conjunction with one of the following components:

- ❑ iWay Service Manager
- ❑ iWay Business Services Provider (iBSP)

When hosted in an iWay environment, the adapter is configured through iWay Service Manager and iWay Explorer. iWay Explorer is used to configure Salesforce connections, create web services, and configure event capabilities.

When the adapter is hosted in a third-party application server environment, iWay Explorer can be configured to work in a web services environment in conjunction with iBSP.

Component Information Roadmap

The following table lists the deployment component and the location of component information for the iWay Application Adapter for Salesforce.

Deployed Component	For more information, see
iWay Service Manager	Appendix B of this guide <i>iWay Service Manager User's Guide</i>
iWay Explorer	Chapters 3, 4, 5, and 6 of this guide <i>iWay Service Manager User's Guide</i>
iWay Business Services Provider (iBSP)	<i>iWay Installation and Configuration</i>

iWay Service Manager

iWay Service Manager is the heart of the Universal Adapter Framework and is an open transport service bus. Service Manager uses graphical tools to create sophisticated integration services without writing custom integration code by:

- Creating metadata from target applications.
- Transforming and mapping interfaces.
- Managing stateless processes.

Its capability to manage complex adapter interactions makes it ideally suited to be the foundation of a service-oriented architecture.

iWay Explorer

iWay Explorer uses a tree metaphor to introspect the Salesforce system 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 Salesforce. External applications that access Salesforce through the iWay Application Adapter for Salesforce use either XML schemas or web services to pass data between the external application and the adapter.

iWay Explorer also exposes the Upsert function. For more information, see [Using the Upsert Function](#) on page 48.

iWay Business Services Provider

iWay Business Services Provider (iBSP) exposes (as web services) enterprise assets that are accessible from adapters regardless of the programming language or the particular operating system.

iBSP 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.

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.

Chapter 2

Installing the iWay Application Adapter for Salesforce

The following section provides installation prerequisites and describes how to install the iWay Application Adapter for Salesforce.

In this chapter:

- [Application Adapter for Salesforce Installation Prerequisites](#)
- [Installing the Application Adapter for Salesforce](#)

Application Adapter for Salesforce Installation Prerequisites

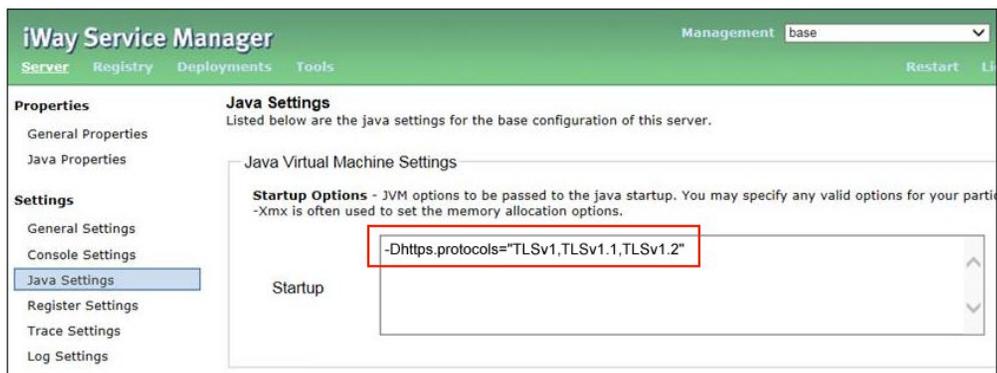
The following components must be installed and configured before installing the iWay Application Adapter for Salesforce:

- iWay Service Manager (ISM) Version 7.0.5. For more information, see the *iWay Installation and Configuration Guide* and the *iWay Service Manager User's Guide*.
- Java Version 1.7.0_75 or higher.
- This version of the iWay Application Adapter for Salesforce supports Transport Layer Security (TLS) Version 1.1 or higher.

If you are using Java Version 1.7.0_75, then you must also set the following startup option in the iSM Administration Console (under Java Settings):

```
-Dhttps.protocols="TLSv1,TLSv1.1,TLSv1.2"
```

For example:



Note: If you are using Java Version 1.8, then this startup option is not required.

- Salesforce SaaS service. To purchase the Salesforce SaaS service, go to the following website:

<http://www.salesforce.com>

Note: You must also have a Salesforce Enterprise, Unlimited, or Developer Edition account for connection purposes. Group and Professional editions do not support the Salesforce API.

- Public IP address for your system that is recognized as a *trusted IP address* by Salesforce.
- Configured Salesforce user account that is *API Enabled* and has a password that does not expire.
- Third-party application (Optional).

iWay Application Adapter for Salesforce Installation Files

Ensure that the *iwsforce.jar* file is available. This Java archive contains the core adapter classes.

Installing the Application Adapter for Salesforce

This section describes how to install the iWay Application Adapter for Salesforce.

Note: Currently, installing the iWay Application Adapter for Salesforce is a manual process. In the next release of iWay Service Manager (iSM), installing the Salesforce adapter will be automated.

Procedure: How to Install the iWay Application Adapter for Salesforce

To install the adapter:

1. Copy the installation files for the iWay Application Adapter for Salesforce to the following directory:

`ipay_home\lib`

where:

iway_home

Is the root installation directory for iWay Service Manager (for example, iWay7).

For more information, see [iWay Application Adapter for Salesforce Installation Files](#) on page 18.

2. Ensure that you have added the public IP address of each server that is used to run iWay Service Manager to the Salesforce trusted IP addresses group.

For more information, see [How to Add a Public IP Address to the Salesforce Trusted IP Addresses Group](#) on page 19.

Note: You can view your current IP address by executing the *ipconfig* command from a command console. However, this may not be the address that your service provider exposes to the Internet. To verify your address, access the following URL:

<http://whatismyipaddress.com/>

3. Ensure that your Salesforce user account is *API Enabled* and has a password that does not expire.

For more information, see [How to Configure Your Salesforce User Account](#) on page 21.

4. If required, obtain your Salesforce security token from the Salesforce setup.

For more information, see [How to Obtain a Salesforce Security Token](#) on page 23.

This is only required if you are going to connect to Salesforce from an IP address that is not included in the Salesforce trusted IP addresses group.

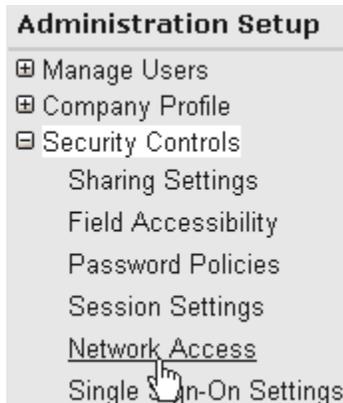
Note: It is strongly recommend that you do not use the Salesforce security token when defining a target using iWay Explorer.

Procedure: How to Add a Public IP Address to the Salesforce Trusted IP Addresses Group

To add a public IP address to the Salesforce trusted IP addresses group:

1. Log on to the Salesforce web console.
2. Click *Setup*.

The Personal Setup page opens.



3. In the left pane, expand *Security Controls* and click *Network Access*.

The Network Access page opens.

The screenshot shows the 'Network Access' page header with a 'Help for this Page' link. Below the header is a descriptive paragraph: 'The list below contains IP address ranges from sources that your organization trusts. Users logging in to Salesforce with a browser from trusted networks are allowed to access Salesforce without having to activate their computers.'

The main content is a table titled 'Trusted IP Ranges' with a 'New' button. The table has the following columns: Action, Start IP Address, End IP Address, ISP, Organization, and Geography.

Action	Start IP Address	End IP Address	ISP	Organization	Geography
Edit Del	10.51.13.24	10.51.23.16			
Edit Del	38.117.185.132	38.117.185.132	Performance Systems International	Performance Systems International	New York, NY, United States
Edit Del	38.117.185.138	38.117.185.138	Performance Systems International	Performance Systems International	Brooklyn, NY, United States
Edit Del	38.117.185.150	38.117.185.150	Performance Systems International	Performance Systems International	New York, NY, United States
Edit Del	61.12.5.6	61.12.5.6	DIRECT INTERNET	Amtex Infotech Private Limited	New Delhi, 07, India
Edit Del	61.12.5.7	61.12.5.7	DIRECT INTERNET	Amtex Infotech Private Limited	New Delhi, 07, India
Edit Del	61.12.5.8	61.12.5.8	DIRECT INTERNET	Amtex Infotech Private Limited	New Delhi, 07, India
Edit Del	71.30.189.173	71.30.189.173	WINDSTREAM COMMUNICATIONS	ALLTEL Corporation	Sugar Land, TX, United States
Edit Del	172.30.166.1	172.30.166.255			
Edit Del	208.175.209.36	208.175.209.36	SAVIS Communications Corporation	SAVIS Communications Corporation	Cary, NC, United States
Edit Del	210.13.98.1	210.13.98.9	CNCGROUP old Jitong IP network	CNC Group ShangHai province network	Shanghai, 23, China

At the bottom of the table, there is a link: 'Show me [fewer](#) records per list page'.

4. Click **New**.

The Network Access - Trusted IP Range Edit page opens.

5. Enter a range of valid IP addresses that you want to add to the Salesforce trusted IP addresses group.
6. Click Save.

Procedure: How to Configure Your Salesforce User Account

To configure your Salesforce user account:

1. Log on to the Salesforce web console.
2. Click *Setup*.

The Personal Setup page opens.



3. In the left pane, expand *Manage Users* and click *Profiles*.

The User Profiles page opens.

User Profiles [Help for this Page](#) ?

Below is a list of the profiles for your organization. You can view more detailed information by clicking on the profile link.

Profile New			
Action	Profile Name	User License	Custom
Edit	Contract Manager	Salesforce	<input type="checkbox"/>
Edit Del	Custom: Marketing Profile	Salesforce	<input checked="" type="checkbox"/>
Edit Del	Custom: Sales Profile	Salesforce	<input checked="" type="checkbox"/>
Edit Del	Custom: Support Profile	Salesforce	<input checked="" type="checkbox"/>
Edit Del	WYUSER	Salesforce	<input checked="" type="checkbox"/>
Edit	Marketing User	Salesforce	<input type="checkbox"/>
Edit	Read Only	Salesforce	<input type="checkbox"/>
Edit	Solution Manager	Salesforce	<input type="checkbox"/>
Edit	Standard User	Salesforce	<input type="checkbox"/>
Edit	System Administrator	Salesforce	<input type="checkbox"/>
Edit Del	user	Salesforce	<input checked="" type="checkbox"/>

4. Click *Edit* to the left of the existing profile name.

The Profile Edit page opens.

Administrative Permissions			
API Enabled	<input checked="" type="checkbox"/>		
Author Apex	<input type="checkbox"/>		
Customize Application	<input type="checkbox"/>		
Disable Outbound Messages	<input type="checkbox"/>		
Edit HTML Templates	<input type="checkbox"/>		
Edit Read Only Fields	<input type="checkbox"/>		
Manage Analytic Snapshots	<input type="checkbox"/>		
Manage Billing	<input type="checkbox"/>		
Manage Business Hours Holidays	<input type="checkbox"/>		
Manage Call Centers	<input type="checkbox"/>		
Manage Categories	<input type="checkbox"/>		
Manage Custom Report Types	<input type="checkbox"/>		
Manage Dashboards	<input type="checkbox"/>		
Manage Letterheads	<input type="checkbox"/>		
Manage Mobile Configurations	<input type="checkbox"/>		
Manage Package Licenses	<input type="checkbox"/>		
Manage Public Documents	<input type="checkbox"/>		
Manage Public List Views	<input type="checkbox"/>		
Manage Public Reports	<input type="checkbox"/>		
Manage Public Templates	<input type="checkbox"/>		
Manage Users	<input type="checkbox"/>		
Modify All Data	<input type="checkbox"/>		
Password Never Expires	<input checked="" type="checkbox"/>		
Schedule Reports	<input type="checkbox"/>		
Transfer Record	<input type="checkbox"/>		
Use Team Reassignment Wizards	<input type="checkbox"/>		
View All Data	<input type="checkbox"/>		
View Setup and Configuration	<input checked="" type="checkbox"/>		

5. Scroll down to the Administrative Permissions section and ensure that the *API Enabled* and *Password Never Expires* options are activated.
Note: API access may incur increased usage of your salesforce.com account.
6. Click Save.

Procedure: How to Obtain a Salesforce Security Token

To obtain a Salesforce security token:

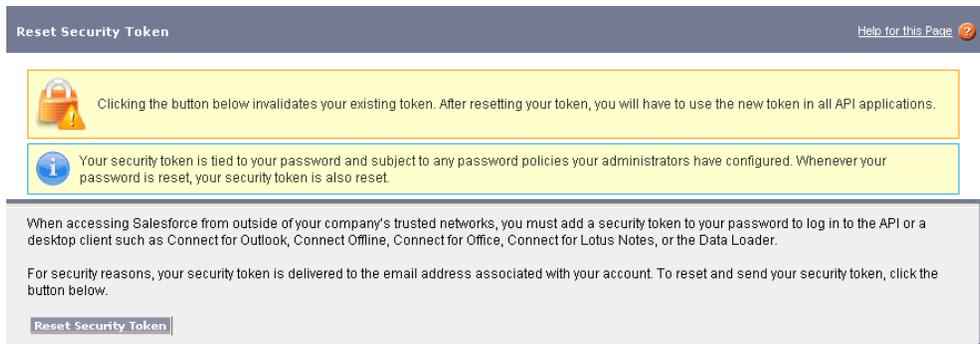
1. Log on to the Salesforce web console.
2. Click *Setup*.

The Personal Setup page opens.



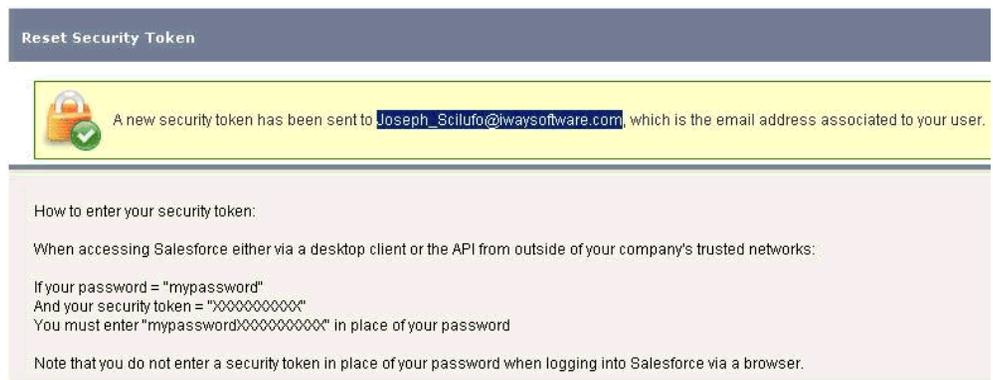
3. In the left pane, expand *My Personal Information* and click *Reset My Security Token*.

The Reset Security Token page opens.

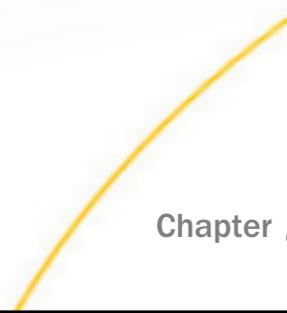


4. Click *Reset Security Token*.

The following page opens.



Your new security token is sent to the email address that is associated with your Salesforce user account. Note that after you reset your security token, your existing security token is no longer valid.



Chapter 3

Configuring and Managing Connections to Salesforce

The following section describes how to configure and manage connections to Salesforce using iWay Explorer.

In this chapter:

- [Starting iWay Explorer \(Java Swing\)](#)
 - [Creating a New Configuration](#)
 - [Connecting to a New Configuration](#)
 - [Connecting to Salesforce](#)
-

Starting iWay Explorer (Java Swing)

This topic describes how to start iWay Explorer.

Procedure: How to Start iWay Explorer

To start iWay Explorer:

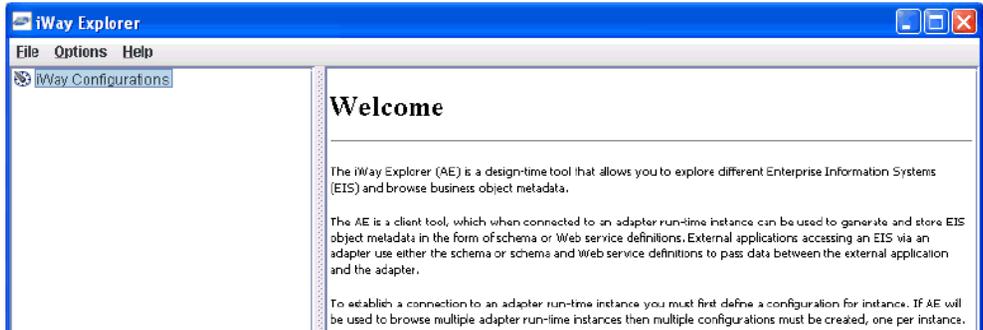
1. Ensure iWay Explorer is installed.

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

2. From the Windows Start menu, select *Programs, iWay 7.0 Service Manager, tools*, and click *iWay Explorer - SWING*.

A status window indicates the loading progress of iWay Explorer. The iWay Explorer window then opens.

The following image shows the iWay Explorer window that opens after iWay Explorer loads. A navigation pane is on the left. The navigation pane contains the root node, iWay Configurations.



Creating a New Configuration

Before you can use iWay Explorer with iWay adapters, you must create a repository where your XML schemas, web services, and event data are stored. Since you can deploy iWay Explorer using the iWay Business Services Provider (iBSP), each implementation requires you to configure a specific repository before you can explore Enterprise Information System (EIS) metadata.

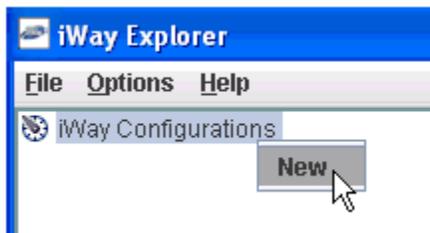
The iBSP exposes, as web services, enterprise assets that are accessible from adapters regardless of the programming language or the particular operating system. In addition, you can use iBSP as a stand-alone Java application running in iWay Service Manager.

Procedure: How to Create a Repository for iBSP

To create a repository for iBSP using iWay Explorer:

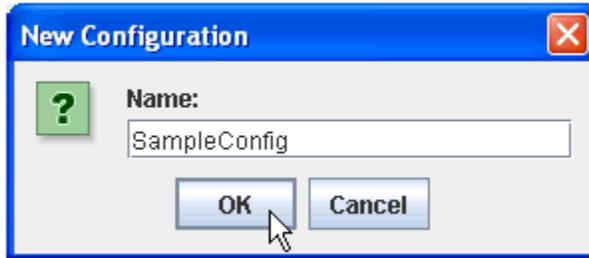
1. Start iWay Explorer.

The following image shows the New option that is available in the left pane of the iWay Explorer window when you right-click the iWay Configurations node.



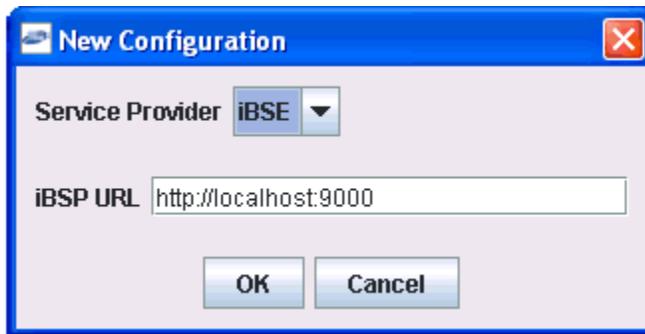
2. Right-click *iWay Configurations* and select *New*.

The following image shows the New Configuration dialog box that opens, where you supply a name for the configuration.



3. Type a name for the configuration, for example, *SampleConfig*, and click *OK*.

The following image shows additional fields on the New Configuration dialog box, where you select the service provider and supply the iBSP URL.



4. From the Service Provider drop-down list, select *iBSE*.

You are prompted for the iBSP URL. Use one of the following two options:

To access the stand-alone iBSP that is installed as part of iWay Service Manager, provide the following URL

`http://hostname:9000`

where:

`hostname`

Is the host name where iWay is installed.

If you changed the default SOAP port, substitute accordingly.

To access Servlet iBSP, provide the following URL

`http://hostname:port/ibse/IBSEServlet`

where:

`hostname`

Is the host name of your application server.

`port`

Is the port number used by your application server.

5. Click OK.

The following image shows the node representing the new configuration that appears beneath the root iWay Configurations node. In this image, the node is named SampleConfig.



Connecting to a New Configuration

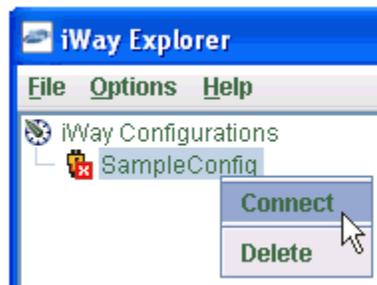
Once you have created a new configuration using iWay Explorer, you must connect to it before you can use your iWay Application Adapter for Salesforce.

Procedure: How to Connect to a New Configuration

To connect to a new configuration:

1. Right-click the configuration to which you want to connect, for example, SampleConfig.

The following image shows the options (Connect and Delete) that are available in the left pane of the iWay Explorer window when you right-click the SampleConfig node.



2. Select *Connect*.

The following image shows the left pane, where nodes appear for iWay Adapters, iWay Events, and iWay Business Services (also known as web services).



Use the iWay Adapters node to create inbound interaction with an EIS. For example, you use the Salesforce node in the iWay Adapters node to configure a service that updates the Salesforce system.

Use the iWay Events node to configure listeners that listen for events in Salesforce.

Use the iWay Business Services node to test business services created in the iWay Adapters node. You can also control security settings for the business services that are available.

Connecting to Salesforce

To browse and work with Salesforce metadata, you must create a target for Salesforce. This target serves as your connection point. You must establish a connection to Salesforce every time you start iWay Explorer or after you disconnect from the system.

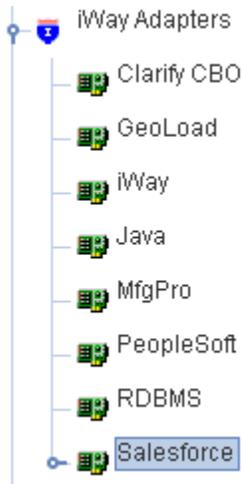
Creating a New Target

A target serves as the connection point to your Enterprise Information System (EIS) and is automatically saved after you create it. To connect to Salesforce for the first time, you must create a new target.

Procedure: How to Create a New Target

To create a new target:

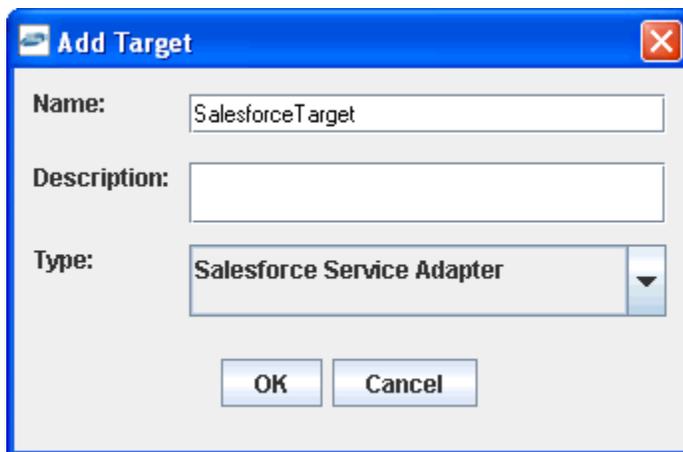
1. In the left pane, expand the iWay Adapters node and select the *Salesforce* node.



2. Right-click the Salesforce adapter node and select *Add Target*.



The Add Target dialog box opens.



3. In the Name field, type a descriptive name for the target, for example, *SalesforceTarget*.

4. In the Description field, type a brief description for the connection (optional).
5. Select *Salesforce Service Adapter* from the Type drop-down list.
6. Click *OK*.

The Salesforce Service Adapter dialog box opens, as shown in the following image.



The following table lists and describes the Salesforce connection parameters.

Parameter	Description
UserName	User name that is associated with your Salesforce account.
Password	Password that is associated with your Salesforce account. You must ensure that this password does not expire. For more information, see Installing the iWay Application Adapter for Salesforce on page 17.
Security Token	A security token is required only if the trusted IP ranges of the machine where the Salesforce adapter is running are not recognized by the Salesforce system that you are accessing. However, it is strongly recommended that you do not use the Salesforce security token when defining a target using iWay Explorer. For more information, see Installing the iWay Application Adapter for Salesforce on page 17.

7. Enter a valid user name and password that is configured to connect to an available Salesforce system.
8. Click *OK*.

The new target, for example, SalesforceTarget, appears in the left pane beneath the Salesforce node.



Connecting to a Target

You must use a defined target to connect to an instance of Salesforce.

Procedure: How to Connect to a Target

To connect to an existing target:

1. In the left pane, expand the Salesforce node and select the target you defined, for example, SalesforceTarget.
2. In the right pane, enter the password for Salesforce.
3. Right-click the target.
4. Select *Connect*.

In the left pane, the SalesforceTarget node changes to reflect that a connection was made.

5. Expand the target node to reveal the business objects for Salesforce.

Modifying, Closing, or Removing a Target

After you create a target for Salesforce using iWay Explorer, you can edit the information that you provided when you created the target.

Although you can maintain multiple open connections to different application systems, it is recommended that you close connections when they are not in use. You can also delete any targets that are not required.

Procedure: How to Edit a Target

To edit a target:

1. In the left pane, right-click the target, for example, SalesforceTarget.
2. Select *Edit*.

The Salesforce Service Adapter dialog box opens.

3. Modify the connection information and click *OK*.

Procedure: How to Disconnect From a Target

To disconnect from a target:

1. In the left pane, right-click the target to which you are connected, for example, SalesforceTarget.
2. Select *Disconnect*.

The SalesforceTarget node changes to reflect that the connection was terminated.

Procedure: How to Delete a Target

To delete a target:

1. In the left pane, right-click the target to which you are connected, for example, SalesforceTarget.
2. Select *Delete*.

The SalesforceTarget node is removed from the left pane.

Creating XML Schemas for Salesforce

The following section describes how to create XML schemas for Salesforce business objects using iWay Explorer.

In this chapter:

- [XML Schemas for Salesforce Overview](#)
 - [Browsing Salesforce Business Objects](#)
 - [Generating XML Schemas for Salesforce Business Objects](#)
 - [Using the Upsert Function](#)
-

XML Schemas for Salesforce Overview

The iWay Application Adapter for Salesforce enables the processing of Salesforce business objects.

External applications that access Salesforce through the adapter use either XML schemas or web services to pass data between the external application and the adapter. You can use iWay Explorer to create the required XML schemas and web services.

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

Browsing Salesforce Business Objects

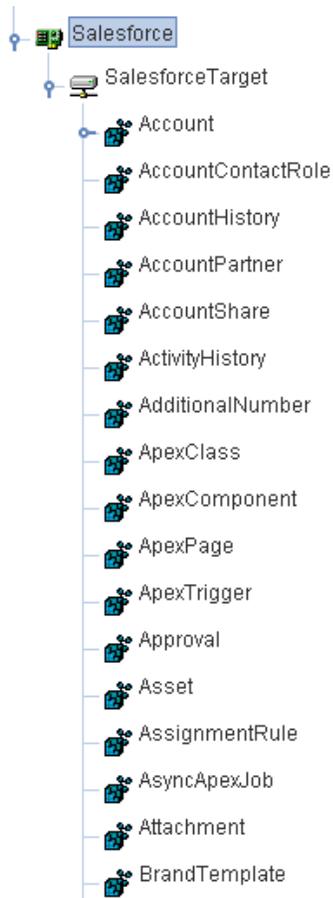
After you are connected to Salesforce, iWay Explorer enables you to explore and browse business object metadata.

***Procedure:* How to Browse Salesforce Business Objects**

To browse Salesforce business objects:

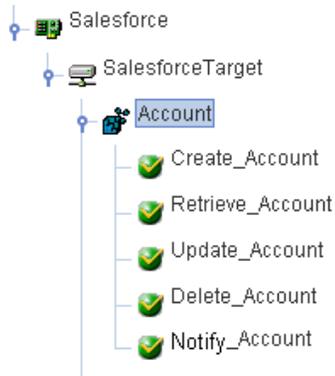
1. Connect to a Salesforce target, as described in [Configuring and Managing Connections to Salesforce](#) on page 27.
2. In the left pane, expand the target node.

Salesforce business objects are located under the target node, as shown in the following image.



The associated methods are located under each business object node.

- Expand the *Account* node to browse the available methods.



Note: *Notify_Account* creates a schema for an event port. It is an XSD that represents a Salesforce workflow that is sent back to the event listener.

Generating XML Schemas for Salesforce Business Objects

After you browse the Salesforce business object repository, you can generate XML request and response schemas for the object you wish to use with your adapter.

Schema Location

By default, iWay Explorer stores the schemas it creates in subdirectories under the iWay home directory of the machine on which it is installed. However, using iWay Explorer, you can also export these schemas to any location that you specify on your file system.

The exact location of the schemas differs, depending on whether you deploy iWay Explorer with an iBSP.

When the adapter is used with an iBSP configuration, iWay Explorer stores the schemas in a subdirectory of the iWay installation directory, for example,

iWayHome\config\base\wsdl\schemas\service\Salesforce\Salesforce_Target

where:

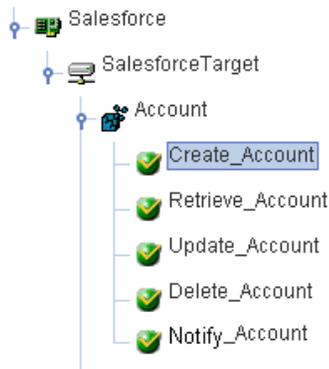
Salesforce_Target

Is the name of the connection (target) to the Salesforce system that you defined using iWay Explorer. Under this directory, iWay Explorer creates subdirectories containing schemas.

Procedure: How to Generate a Schema for a Salesforce Business Object

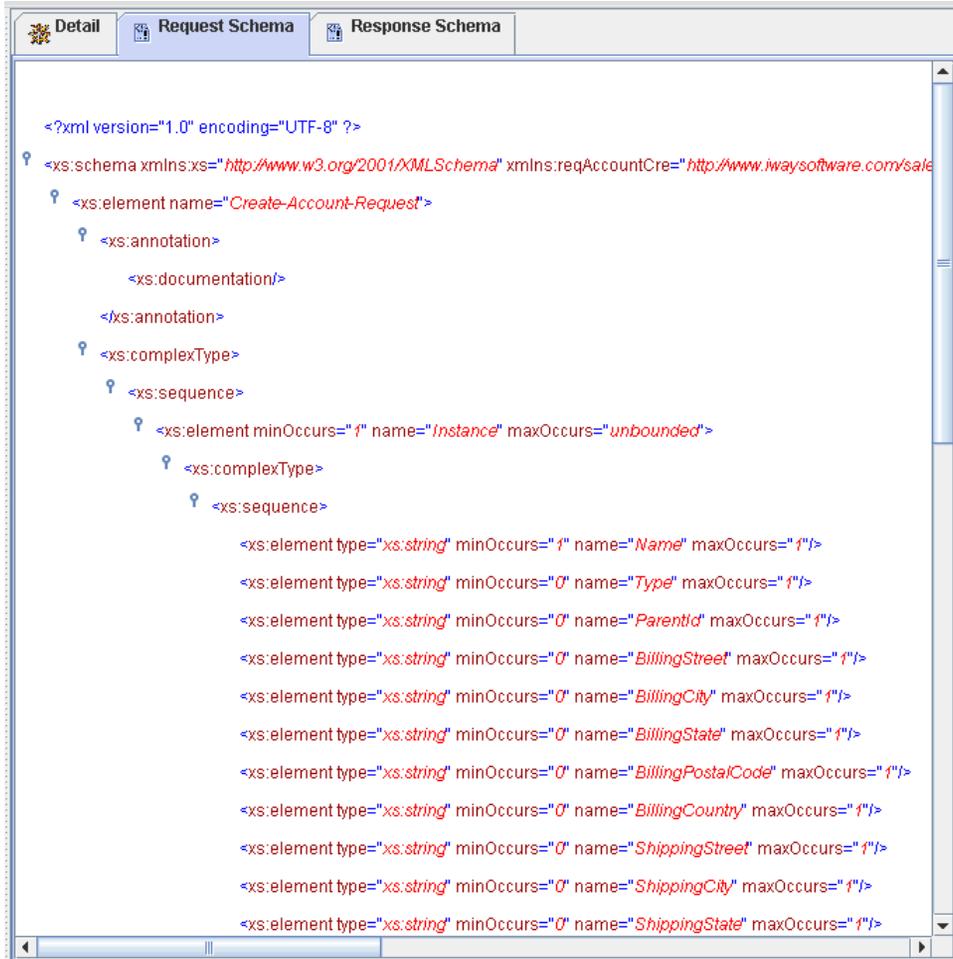
To generate a schema for a Salesforce business object using iWay Explorer:

1. Connect to a Salesforce target, as described in [Configuring and Managing Connections to Salesforce](#) on page 27.
2. Expand a node, for example, *Account*.



3. Select the *Create_Account* method under the expanded node.
The XML request and response schemas are automatically generated by iWay Explorer.
4. Click the *Request Schema* tab in the right pane.

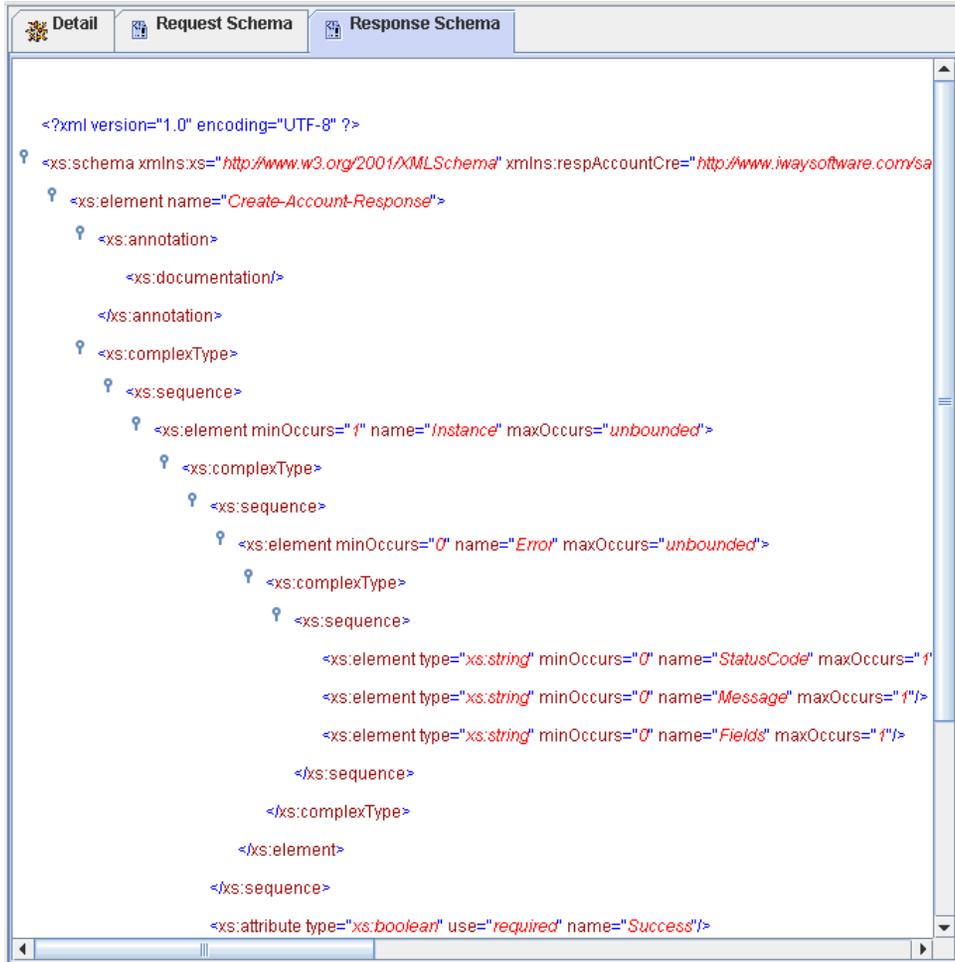
The XML request schema appears in the right pane, as shown in the following image.



To view the complete sample XML request schema, see [Sample XML Request Schema](#) on page 44.

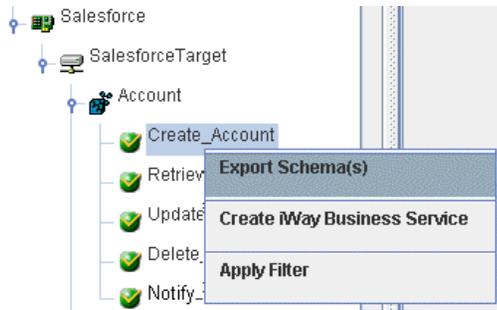
5. Click the *Response Schema* tab in the right pane.

The XML response schema appears in the right pane, as shown in the following image.

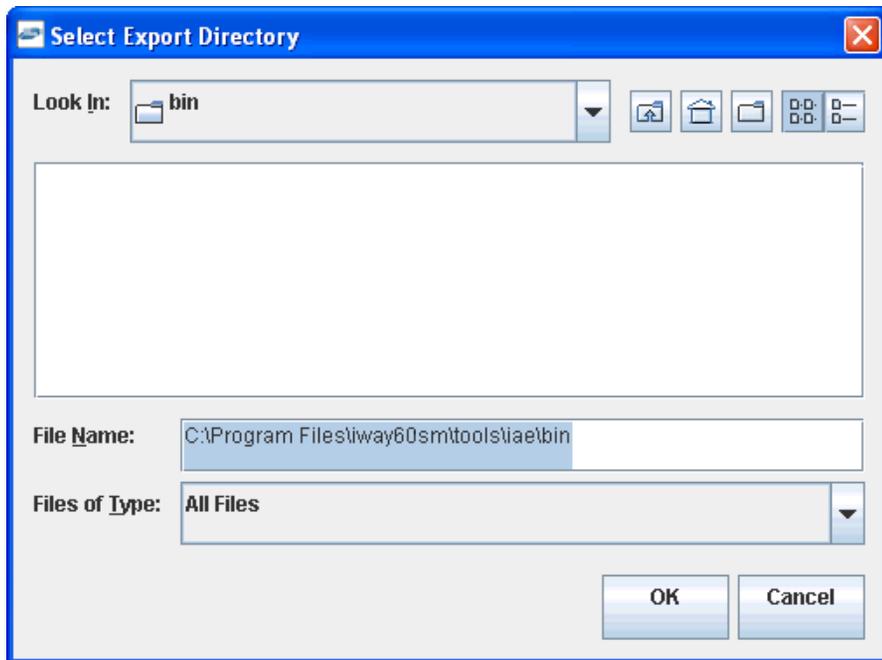


To view the complete sample XML response schema, see [Sample XML Response Schema](#) on page 46.

6. To export XML schemas, right-click *Create_Account* in the left pane, and select *Export Schema(s)*, as shown in the following image.

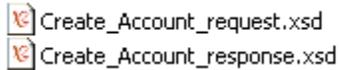


The Select Export Directory dialog box opens, as shown in the following image.



7. Navigate to a directory on your file system where you want to export the XML schemas.
The file path is displayed in the File Name field.
8. Click *OK*.

The XML request and response schemas are now exported to your local file system. The following image shows a sample request schema and a sample response schema that have been exported to a local file system.



Reference: Sample XML Request Schema

The following is a sample XML request schema for the Create_Account method.

```
<?xml version="1.0" encoding="UTF-8" ?>
<!-- Generated by the iBSE 2009-03-19T17:16:04Z -->
<xs:schema
targetNamespace="http://www.iwaysoftware.com/salesforce/CreateAccountRequ
est" attributeFormDefault="unqualified"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:reqAccountCre="http://www.iwaysoftware.com/salesforce/CreateAccount
Request" elementFormDefault="qualified">
<xs:element name="Create-Account-Request">
  <xs:annotation>
    <xs:documentation />
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>

<xs:element minOccurs="1" name="Instance" maxOccurs="unbounded">
  <xs:complexType>
    <xs:sequence>
      <xs:element type="xs:string" minOccurs="1" name="Name"
maxOccurs="1" />
      <xs:element type="xs:string" minOccurs="0" name="Type"
maxOccurs="1" />
      <xs:element type="xs:string" minOccurs="0" name="ParentId"
maxOccurs="1" />
      <xs:element type="xs:string" minOccurs="0" name="BillingStreet"
maxOccurs="1" />
      <xs:element type="xs:string" minOccurs="0" name="BillingCity"
maxOccurs="1" />
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>
```

```
<xs:element type="xs:string" minOccurs="0" name="BillingState"
  maxOccurs="1" />
  <xs:element type="xs:string" minOccurs="0"
    name="BillingPostalCode" maxOccurs="1" />
  <xs:element type="xs:string" minOccurs="0" name="BillingCountry"
    maxOccurs="1" />
  <xs:element type="xs:string" minOccurs="0" name="ShippingStreet"
    maxOccurs="1" />
  <xs:element type="xs:string" minOccurs="0" name="ShippingCity"
    maxOccurs="1" />
  <xs:element type="xs:string" minOccurs="0" name="ShippingState"
    maxOccurs="1" />
  <xs:element type="xs:string" minOccurs="0"
    name="ShippingPostalCode" maxOccurs="1" />
  <xs:element type="xs:string" minOccurs="0" name="ShippingCountry"
    maxOccurs="1" />
  <xs:element type="xs:string" minOccurs="0" name="Phone"
    maxOccurs="1" />
  <xs:element type="xs:string" minOccurs="0" name="Fax"
    maxOccurs="1" />
  <xs:element type="xs:string" minOccurs="0" name="AccountNumber"
    maxOccurs="1" />
  <xs:element type="xs:string" minOccurs="0" name="Website"
    maxOccurs="1" />
```

```

        <xs:element type="xs:string" minOccurs="0" name="Sic"
            maxOccurs="1" />
        <xs:element type="xs:string" minOccurs="0" name="Industry"
            maxOccurs="1" />
        <xs:element type="xs:decimal" minOccurs="0" name="AnnualRevenue"
            maxOccurs="1" />
        <xs:element type="xs:int" minOccurs="0" name="NumberOfEmployees"
            maxOccurs="1" />
        <xs:element type="xs:string" minOccurs="0" name="Ownership"
            maxOccurs="1" />
        <xs:element type="xs:string" minOccurs="0" name="TickerSymbol"
            maxOccurs="1" />
        <xs:element type="xs:string" minOccurs="0" name="Description"
            maxOccurs="1" />
        <xs:element type="xs:string" minOccurs="0" name="Rating"
            maxOccurs="1" />
        <xs:element type="xs:string" minOccurs="0" name="Site"
            maxOccurs="1" />
        <xs:element type="xs:string" minOccurs="0" name="OwnerId"
            maxOccurs="1" />
        <xs:element type="xs:string" minOccurs="0"
            name="CustomerPriority__c" maxOccurs="1" />
        <xs:element type="xs:string" minOccurs="0" name="SLA__c"
            maxOccurs="1" />
        <xs:element type="xs:string" minOccurs="0" name="Active__c"
            maxOccurs="1" />
        <xs:element type="xs:double" minOccurs="0"
            name="NumberofLocations__c" maxOccurs="1" />
        <xs:element type="xs:string" minOccurs="0"
            name="UpsellOpportunity__c" maxOccurs="1" />
        <xs:element type="xs:string" minOccurs="0"
            name="SLASerialNumber__c" maxOccurs="1" />

        <xs:element type="xs:date" minOccurs="0"
            name="SLAExpirationDate__c" maxOccurs="1" />
    </xs:sequence>
</xs:complexType>
</xs:element>
</xs:schema>

```

Reference: Sample XML Response Schema

The following is a sample XML response schema for the Create_Account method.

```

<?xml version="1.0" encoding="UTF-8" ?>
<!-- Generated by the iBSE 2009-03-19T17:16:04Z -->
<xs:schema
targetNamespace="http://www.iwaysoftware.com/salesforce/CreateAccountResp
onse" attributeFormDefault="unqualified"
xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:respAccountCre="http://www.iwaysoftware.com/salesforce/CreateAccoun
tResponse" elementFormDefault="qualified">
<xs:element name="Create-Account-Response">
  <xs:annotation>
    <xs:documentation />
  </xs:annotation>
  <xs:complexType>
    <xs:sequence>

      <xs:element minOccurs="1" name="Instance" maxOccurs="unbounded">
        <xs:complexType>
          <xs:sequence>
            <xs:element minOccurs="0" name="Error" maxOccurs="unbounded">
              <xs:complexType>
                <xs:sequence>
                  <xs:element type="xs:string" minOccurs="0" name="StatusCode"
                    maxOccurs="1" />
                  <xs:element type="xs:string" minOccurs="0" name="Message"
                    maxOccurs="1" />
                  <xs:element type="xs:string" minOccurs="0" name="Fields"
                    maxOccurs="1" />
                </xs:sequence>
              </xs:complexType>
            </xs:element>
          </xs:sequence>
          <xs:attribute type="xs:boolean" use="required" name="Success" />
          <xs:attribute type="xs:string" name="Id" />
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:schema>

```

Null Field Support

iWay Application Adapter for Salesforce now supports null field elements within XML input documents.

For example:

```
<Upsert-CHG_ACCT__c-Request>
  <ExternalId>upID__c</ExternalId>
  <Instance>
    <OwnerId>00540000000zYqdAAE</OwnerId>
    <Name>l</Name>
    <LastName__c>Scilufo</LastName__c>
    <FirstName__c />      <Salutation__c>Mr.</Salutation__c>
    <RecordTypeID__c>012a0000000cqvP</RecordTypeID__c>
    <Email__c>Joseph_scilufo@ibi.com</Email__c>
    <JDE_Number__c>1383507</JDE_Number__c>
    <Division__c>a0UA0000000IGdNMAU</Division__c>
    <Gender__c>M</Gender__c>
    <MM_E__c>45683423</MM_E__c>
    <Vet_Pro__c>True</Vet_Pro__c>
    <upID__c>10001</upID__c>
  </Instance>
</Upsert-CHG_ACCT__c-Request>
```

Using the Upsert Function

The Upsert function creates new objects or updates existing objects. It uses a custom field to determine the presence of existing objects.

Upsert is a term created by merging the words *update* and *insert*. This function is available for objects if the object has an External ID field or a field with the [idLookup](#) field property.

For custom objects, the Upsert function uses an indexed custom field (called an External ID) to determine whether to create a new object or update an existing object.

Prerequisites

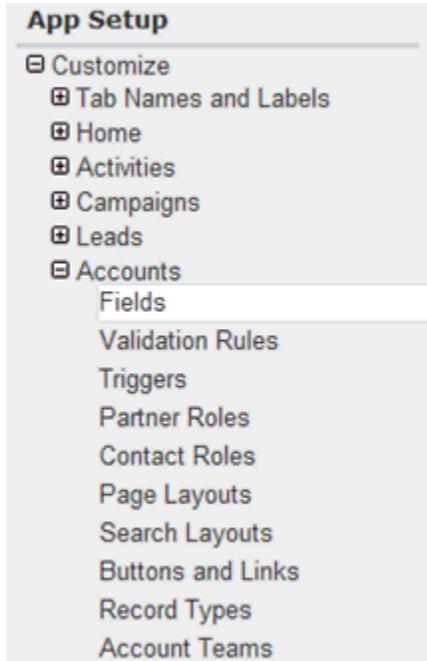
All Salesforce objects in which Upsert can process against require the addition of an External ID field.

Procedure: How to Configure an External ID Field

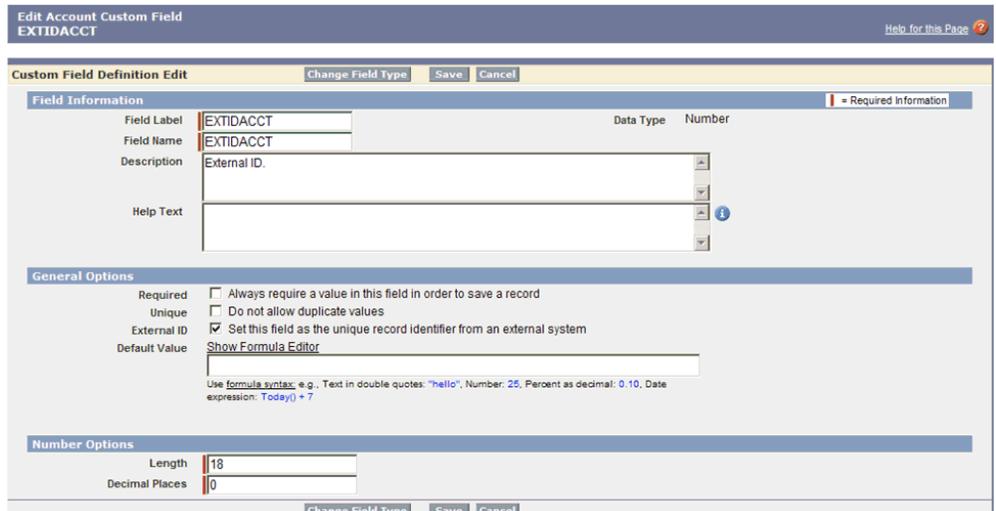
To configure an External ID field:

1. Log on to the Salesforce web console.

- From the App Setup pane on the left, expand *Customize, Accounts*, and then click *Fields*.



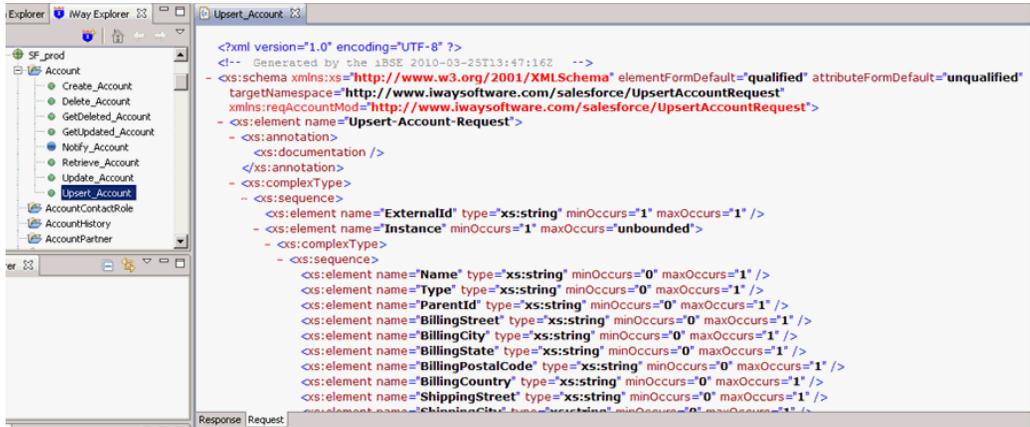
- In the General Options area, click the *External ID* check box (*Set this field as the unique record identifier from an external system*), as shown in the following image.



4. Click Save.

Accessing the Upsert Function Using iWay Explorer

iWay Application Adapter for Salesforce exposes the Upsert function in iWay Explorer. The following image shows a sample XML request schema (.xsd) file for the Account Salesforce object.



The following sample input XML document shows two important elements (`<ExternalID>` and `<EXTIDACCT>`) taken from the Account XML request schema document:

```

<Upsert-Account-Request>
  <ExternalId>EXTIDACCT__c</ExternalId>
  <Instance>
    <Name>NewCoIBM450</Name>
    <Type>other</Type>
    <ParentId>0014000000IOLppAAH</ParentId>
    <BillingStreet>2 Penn Plaza</BillingStreet>
    <BillingCity>New York</BillingCity>
    <BillingState>New York</BillingState>
    <BillingPostalCode>10121</BillingPostalCode>
    <BillingCountry>USA</BillingCountry>
    <ShippingStreet>2 Penn Plaza</ShippingStreet>
    <ShippingCity>New York</ShippingCity>
    <ShippingState>New York</ShippingState>
    <ShippingPostalCode>10212</ShippingPostalCode>
    <ShippingCountry>USA</ShippingCountry>
    <Phone>212 345 1234</Phone>
    <Fax>212 890 345</Fax>
    <AccountNumber>12345</AccountNumber>
    <Website>www.newco.com</Website>
    <Sic>3456</Sic>
    <Industry>Retail</Industry>
    <AnnualRevenue>30000</AnnualRevenue>
    <NumberOfEmployees>1000</NumberOfEmployees>
    <Ownership>Public</Ownership>
    <TickerSymbol>newco</TickerSymbol>
    <Description>New Account NE</Description>
    <Rating>Hot</Rating>
    <Site>New York</Site>
    <OwnerId>00540000000zYqdAAE</OwnerId>
    <CustomerPriority__c>High</CustomerPriority__c>
    <SLA__c>Gold</SLA__c>
    <Active__c>Yes</Active__c>
    <NumberOfLocations__c>3.14159265358979E0</NumberOfLocations__c>
    <UpsellOpportunity__c>Maybe</UpsellOpportunity__c>
    <SLASerialNumber__c>1234</SLASerialNumber__c>
    <SLAExpirationDate__c>1967-08-13</SLAExpirationDate__c>
    <IWAYCUST1__c>Test</IWAYCUST1__c>
    <IWAYCUST2__c>Test1</IWAYCUST2__c>
    <DUNS__c>123456789</DUNS__c>
    <EXTIDACCT__c>450</EXTIDACCT__c>
  </Instance>
</Upsert-Account-Request>

```

<ExternalID> is the External ID field name defined for the EXTIDACCT Account object.

<EXTIDACCT> is defined by the user, which has a value of 450 in this example. If the Upsert request finds a record with this value, the Account record is updated. If no record is found with this value, then a new record is inserted.

Chapter 5

Creating and Publishing iWay Business Services

This section describes how to create and publish iWay Business Services using iWay Explorer.

In this chapter:

- [Understanding iWay Business Services](#)
- [Creating iWay Business Services](#)
- [Configuring the Retrieve Function](#)

Understanding iWay Business Services

iWay Explorer provides web developers with a simple, consistent mechanism for extending the capabilities of the iWay Application Adapter for Salesforce. The iWay Business Services Provider (iBSP) 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.

After you browse the Salesforce business object repository and create an XML schema for the object, you can generate an iWay Business Service for the object you wish to use with your adapter.

Creating iWay Business Services

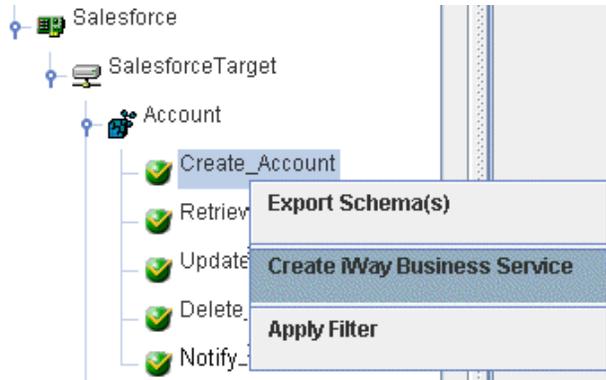
This section describes how to create iWay Business Services.

Procedure: How to Create iWay Business Services

To create iWay Business Services:

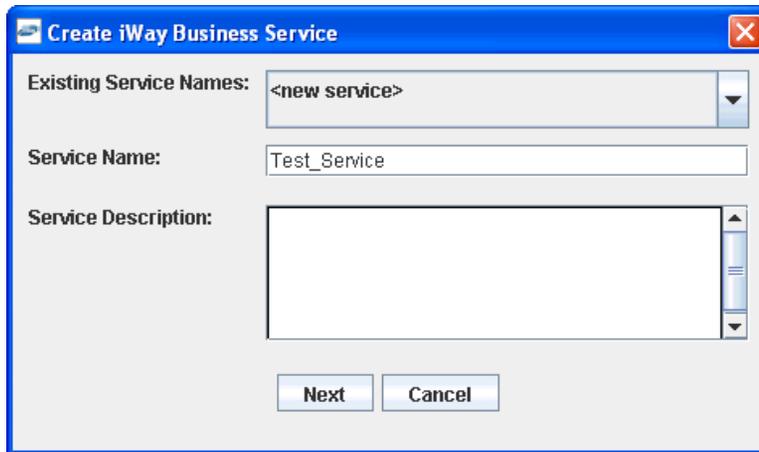
1. Connect to a Salesforce target, as described in [Configuring and Managing Connections to Salesforce](#) on page 27.
2. In the left pane, expand the target node.

3. Locate and select a Salesforce business object, for example, Account.
4. Expand the *Account* node to browse the available methods.



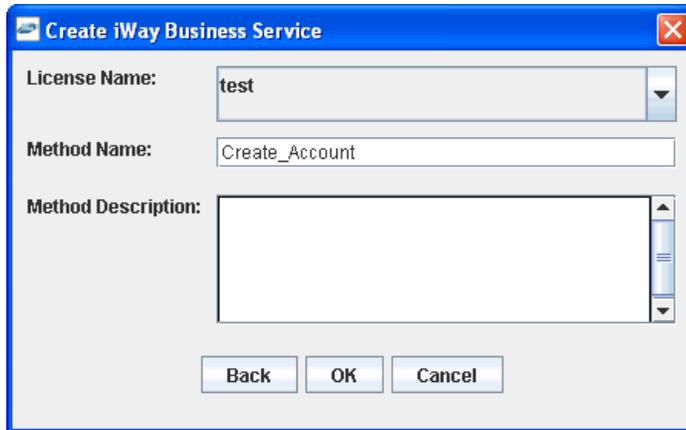
5. Right-click an available method (for example, *Create_Account*) and select *Create iWay Business Service* from the context menu.

The Create iWay Business Service dialog box opens.



6. Perform the following steps:
 - 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. By default, *<new service>* is selected.
 - b. In the Service Name field, type a descriptive name for the iWay Business Service.
 - c. In the Service Description field, type a brief description of the service (optional).
7. Click *Next*.

A second Create iWay Business Service dialog box opens and prompts you for additional information.



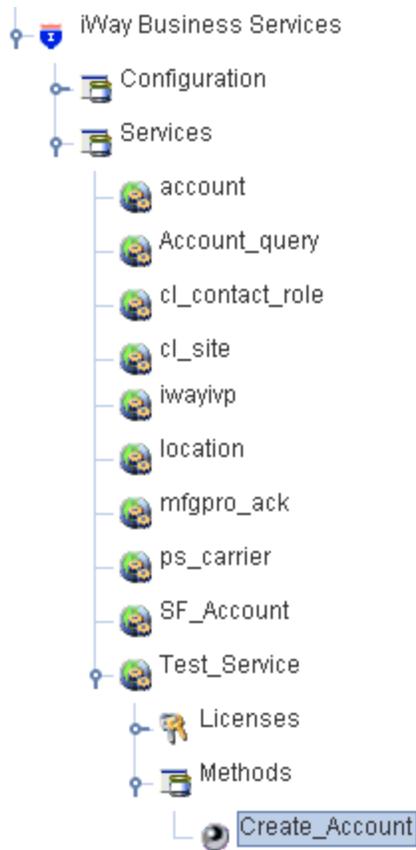
The screenshot shows a dialog box titled "Create iWay Business Service". It has a blue title bar with a close button (X) in the top right corner. The dialog contains three input fields:

- License Name:** A dropdown menu with "test" selected.
- Method Name:** A text box containing "Create_Account".
- Method Description:** A large, empty text area with a vertical scrollbar on the right side.

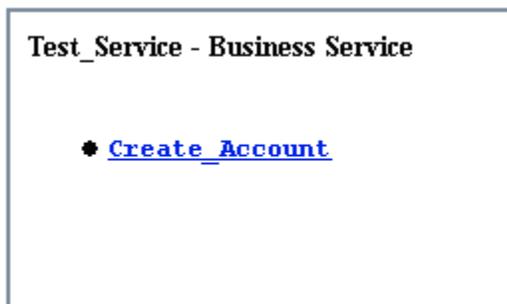
At the bottom of the dialog, there are three buttons: "Back", "OK", and "Cancel".

8. Perform the following steps:
 - a. From the License Name drop-down list, select a license definition. By default, *test* is selected.
 - b. In the Method Name field, type a descriptive name for the method. The name of the method you selected earlier is used as a default value for this field.
 - c. In the Method Description field, type a brief description of the method (optional).
9. Click *OK*.

The iWay Business Services node expands in the left pane. The new iWay Business Service appears under the Services node.

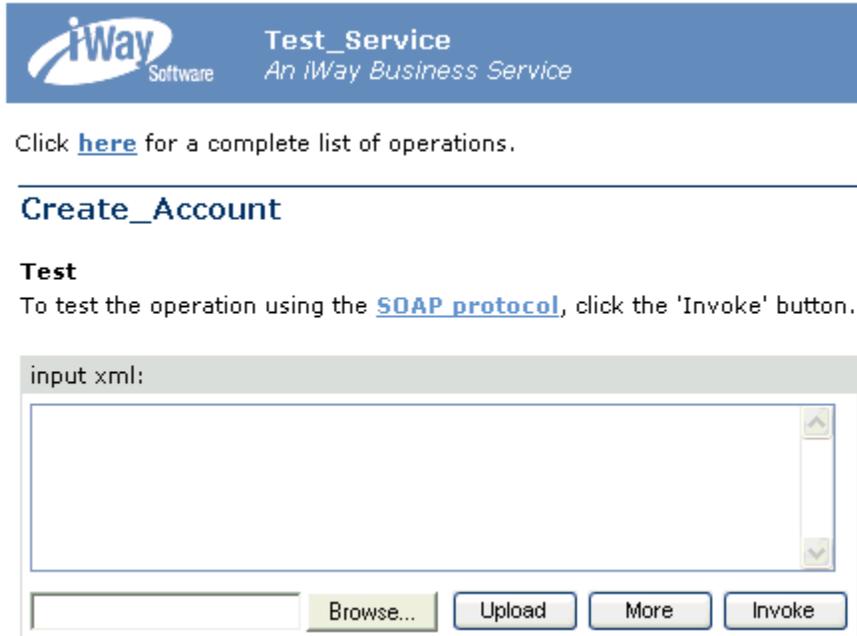


The right pane displays the name of the expanded iWay Business Service and provides a hyperlink to the selected method, for example, [Create_Account](#).



10. Click the *Create_Account* hyperlink in the right pane.

An iWay Business Service test pane opens in a new window of your web browser, as shown in the following image.



11. Enter a sample XML input request document in the input area that will insert a new record in the Salesforce system.

For example:

```
<?xml version="1.0" encoding="UTF-8"?>
<Create-Account-Request>
  <Instance>
    <Name>Siva Krishnajeel</Name>
    <Type>Prospect</Type>
    <ParentId>0014000000IOLppAAH</ParentId>
    <BillingStreet>2 Penn Plaza</BillingStreet>
    <BillingCity>New York</BillingCity>
    <BillingState>New York</BillingState>
    <BillingPostalCode>10121</BillingPostalCode>
    <BillingCountry>USA</BillingCountry>
    <Phone>917-339-5821</Phone>
  </Instance>
</Create-Account-Request>
```

The following is an example of a sample XML input request document that will query a record in the Salesforce system:

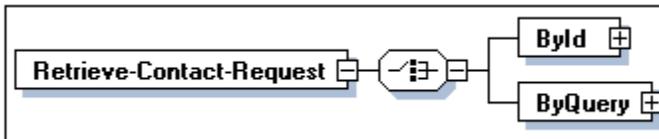
```
<?xml version="1.0" encoding="UTF-8"?>
<Retrieve-Account-Request>
  <ByQuery>
    <Name>Siva Krishnaje</Name>
  </ByQuery>
</Retrieve-Account-Request>
```

12. Click *Invoke*.

The test response appears in the web browser.

Configuring the Retrieve Function

XML request schemas that are generated for the Salesforce Retrieve method include two choice elements, which allow you to select *ById* or *ByQuery*.



If you are using XML Spy as your XML editor to generate an XML input document from a schema that uses the Retrieve method, you must delete the element node that is not required. If you do not delete this node, then the XML input document is generated only for the first element node. In this case, the first element node is *ById*.

If you are using XML Spy to create the SOAP request from a WSDL that uses the Retrieve method for any Salesforce business object, you must delete the *ById* element node. For example:



```

<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
  http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLS
  <SOAP-ENV:Header>
    <m:ibsinfo xmlns:m="urn:schemas-iwaysoftware-com:iwse">
      <m:service>String</m:service>
      <m:method>String</m:method>
      <m:license>String</m:license>
      <m:disposition>String</m:disposition>
      <m:Username>String</m:Username>
      <m>Password>String</m>Password>
      <m:language>String</m:language>
    </m:ibsinfo>
  </SOAP-ENV:Header>
  xmlns:m0="http://www.iwaysoftware.com/salesforce/QueryContactRequest"
  <SOAP-ENV:Body>
    <m:Retrieve xmlns:m="http://iwaysoftware.com/ibsp/iwaf/ismsp2/Retrieve">
      <m0:Retrieve-Contact-Request>
        <m0:ById>
          <m0:Id>String</m0:Id>
        </m0:ById>
        <m0:ByQuery>
          <m0:Id>String</m0:Id>
          <m0:IsDeleted>true</m0:IsDeleted>
          <m0:MasterRecordId>String</m0:MasterRecordId>
          <m0:AccountId>String</m0:AccountId>
          <m0:LastName>String</m0:LastName>
          <m0:FirstName>String</m0:FirstName>
          <m0:Salutation>String</m0:Salutation>
          <m0:Name>String</m0:Name>
          <m0:OtherStreet>String</m0:OtherStreet>
          <m0:OtherCity>String</m0:OtherCity>
        </m0:ByQuery>
      </m0:Retrieve-Contact-Request>
    </m:Retrieve>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
  
```

Once you have deleted the *ById* element node, you can query Salesforce data using the fields in the *ByQuery* element node. You can remove any fields that you do not want to query from the SOAP request.

If you do not want to provide a specific condition to query, you can include a blank query. For example:

```

<Retrieve-Account-Request>
  <ByQuery>
  </ByQuery>
</Retrieve-Account-Request>
  
```

If the SOAP request includes the *ByQuery* element node without a specified query condition, this is considered to be *qualified*. All of the data will be returned for that Salesforce business object.

Configuring Outbound Messaging and Workflow Rules in Salesforce

This section describes how to configure outbound messaging and workflow rules in Salesforce for event handling purposes.

In this chapter:

- [Outbound Messages and Workflow Rules Overview](#)
 - [Creating a Salesforce Outbound Message](#)
 - [Creating a Salesforce Workflow Rule](#)
-

Outbound Messages and Workflow Rules Overview

In a Salesforce system, outbound messages and workflow rules must be configured to enable event handling for the iWay Application Adapter for Salesforce.

The concept of outbound messaging is part of the workflow rule functionality in Salesforce. Workflow rules can be configured to look for specified field changes (for example, a new account or changes to an existing order). As a result, an automatic action is triggered where an outbound message is sent.

Outbound messages send SOAP messages over HTTP or HTTPS to a designated channel when they are triggered by a workflow rule.

Salesforce Considerations for Outbound Messaging

- If the channel is unavailable, messages remain in a queue until sent successfully, or until they are 24 hours old. After 24 hours, messages are dropped from the queue.
- If a message cannot be delivered, the interval between retries increases exponentially, up to a maximum of two hours between retries.
- Messages are retried independent of their order in the queue. This may result in messages being delivered out of order.

- ❑ You cannot build an audit trail using outbound messaging. While each message should be delivered at least once, it may be delivered more than once. Also, it may not be delivered at all if delivery cannot be achieved within 24 hours. Finally, the source object may change after a notification is sent but before it is delivered, so the channel will only receive the latest data, not any intermediate changes.

Creating a Salesforce Outbound Message

The following procedures describe how to create an outbound message, view outbound messages, and track outbound message status using the Salesforce web console.

Procedure: How to Create an Outbound Message

To create an outbound message using the Salesforce web console:

1. Log on to the Salesforce web console.
2. Click *Setup*.

The Personal Setup page opens.



3. In the left pane, expand *Create*, *Workflow & Approvals*, and click *Outbound Messages*.

The All Outbound Messages page opens.

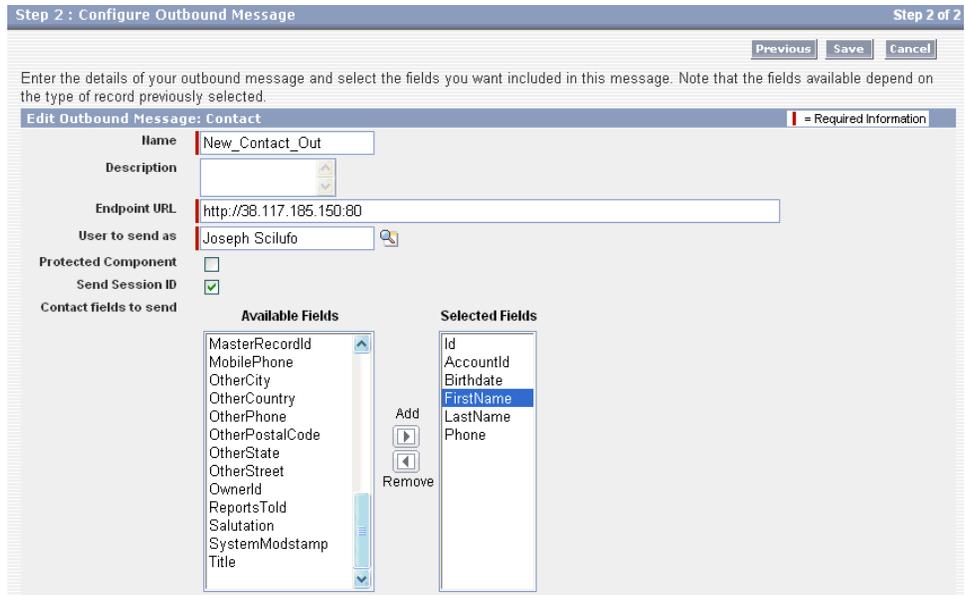
Action	Name	Endpoint URL	Object	Last Modified Date
Edit Del	AccountMessage	http://61.12.5.8:80	Account	2/12/2009
Edit Del	case_outbound	http://61.12.5.8:80	Case	2/13/2009
Edit Del	contact_out	http://38.117.185.150:80	Contact	3/24/2009
Edit Del	Contract_outbound	http://38.117.185.150:80	Contact	2/10/2009
Edit Del	Contract	http://61.12.5.7:80	Contract	1/5/2009
Edit Del	Opportunity Outbound	http://208.175.209.36:80/	Opportunity	11/11/2008
Edit Del	PMSIAS	https://38.117.185.132:443	Account	2/10/2009
Edit Del	ProductRule	http://208.175.209.36:80/	Product	11/18/2008
Edit Del	Solution	http://61.12.5.7:80	Solution	1/5/2009

4. Click *New Outbound Message* to define a new outbound message.

The New Outbound Message page opens and Step 1: Select object is displayed.

5. From the Select object drop-down list, select the object that has the information you want included in the outbound message, for example, *Contact*.
6. Click *Next*.

The Step 2: Configure Outbound Message page opens.



7. Perform the following steps:

- a. In the Name field, enter a name for this outbound message, for example, *New_Contact_Out*.
- b. In the Description field, enter a brief description for this outbound message (optional).
- c. In the Endpoint URL field, enter the URL where the channel that is configured using iWay Explorer is listening. The Salesforce system sends a SOAP message to this channel.

For security reasons, Salesforce restricts the outbound ports you may specify to one of the following:

- 80: This port only accepts HTTP connections.
- 443: This port only accepts HTTPS connections.
- 7000-10000 (inclusive): These ports accept HTTP or HTTPS connections.

- d. In the User to send as field, specify the Salesforce user to use when sending the outbound message.

This user controls data visibility for the outbound message that is sent to the channel.

- e. Select the *Send Session ID* option if you want a Salesforce session ID to be included in the outbound message.

- f. From the *Available Fields* list, select the field(s) you want included in the outbound message and click *Add* to move them to the *Selected Fields* list.
8. Click *Save*.

The Outbound Message (New_Contact_Out) page opens.

The screenshot shows the Salesforce interface for configuring an outbound message. The page title is 'Outbound Message New_Contact_Out'. It includes navigation links for 'Printable View' and 'Help for this Page'. Below the title, there are links to 'Workflow Rules Using This Outbound Message' and 'Approval Processes Using This Outbound Message'. The main section is titled 'Workflow Outbound Message Detail' and contains a table with the following information:

Outbound Message: Contact	
Name	New_Contact_Out
User to send as	Joseph Sciluflo
Description	
Object	Contact
Endpoint URL	http://38.117.185.150:80
Endpoint WSDL	Click for WSDL
Send Session ID	<input checked="" type="checkbox"/>
Fields to Send	Accountid Birthdate FirstName Id LastName Phone
Modified By	Joseph Sciluflo, 3/25/2009 5:12 PM
Created By	Joseph Sciluflo, 3/25/2009 5:12 PM

Below the table, there are three sections:

- Workflow Rules Using This Outbound Message:** This outbound message is currently not used by any workflow rules.
- Approval Processes Using This Outbound Message:** This outbound message is currently not used by any approval processes.

This page provides a detailed summary about the outbound message that you configured.

You are now ready to create a workflow rule to associate with this outbound message for event handling.

Creating a Salesforce Workflow Rule

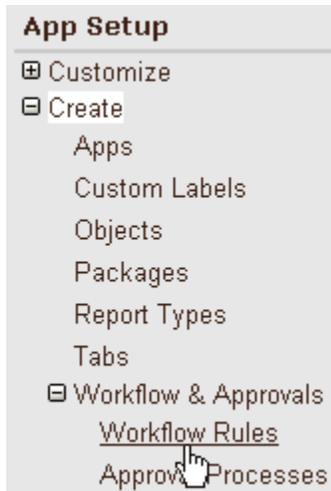
The following procedure describes how to create a workflow rule using the Salesforce web console.

Procedure: How to Create a Workflow Rule

To create a workflow rule using the Salesforce web console:

1. Log on to the Salesforce web console.
2. Click *Setup*.

The Personal Setup page opens.



3. In the left pane, expand *Create*, *Workflow & Approvals*, and click *Workflow Rules*.

The All Workflow Rules page opens.

View: All Workflow Rules [Edit](#) | [Create New View](#)

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Other **All**

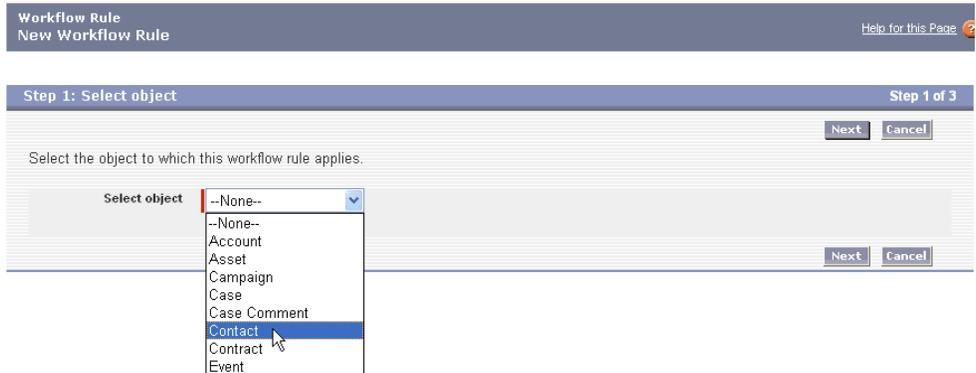
Action	Rule Name [▲]	Description	Object	Active
Edit Del Activate	AccountNumContain3		Account	<input type="checkbox"/>
Edit Deactivate	AccountRule	Account Workflow Rule	Account	<input checked="" type="checkbox"/>
Edit Del Activate	c1		Contact	<input type="checkbox"/>
Edit Del Activate	c2		Contact	<input type="checkbox"/>
Edit Del Deactivate	caserule	rule for case objects	Case	<input checked="" type="checkbox"/>
Edit Del Deactivate	contactrule	workflow rule for contact object	Contact	<input checked="" type="checkbox"/>
Edit Del Activate	contact_rule3		Contact	<input type="checkbox"/>
Edit Del Deactivate	Contract_Rules	Contract Outbound Messages Rules	Contract	<input checked="" type="checkbox"/>
Edit Del Deactivate	MyMasterRule		MyMaster	<input checked="" type="checkbox"/>
Edit Del Deactivate	Opportunity Create and Update		Opportunity	<input checked="" type="checkbox"/>
Edit Del Deactivate	PMSRULE		Account	<input checked="" type="checkbox"/>
Edit Del Deactivate	ProductRule		Product	<input checked="" type="checkbox"/>
Edit Del Deactivate	Solution_Rules	Solution Outbound Messages	Solution	<input checked="" type="checkbox"/>

Show me [fewer](#) [▲] records per list page

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Other **All**

4. Click *New Rule*.

The New Workflow Rule page opens and Step 1: Select object is displayed.



The screenshot shows the 'New Workflow Rule' page in Salesforce. The page title is 'Workflow Rule' and 'New Workflow Rule'. The current step is 'Step 1 of 3: Select object'. The instruction is 'Select the object to which this workflow rule applies.' There is a 'Select object' dropdown menu with a list of objects: '--None--', 'Account', 'Asset', 'Campaign', 'Case', 'Case Comment', 'Contact', 'Contract', and 'Event'. The 'Contact' option is selected. There are 'Next' and 'Cancel' buttons on the right side of the page.

5. From the Select object drop-down list, select the object that you want to associate with the new workflow rule, for example, *Contact*.

Note: You must select the same object for the workflow rule that was used to create the outbound message.

6. Click *Next*.

The Step 2: Configure Workflow Rule page opens.

New Workflow Rule
Contact Help for this Page ?

Step 2: Configure Workflow Rule Step 2 of 3

Previous Save & Next Cancel

Enter the name, description, and criteria to trigger your workflow rule. In the next step, associate workflow actions with this workflow rule.

Edit Rule = Required Information

Object Contact

Rule Name

Description

Evaluation Criteria

Evaluate rule How do I choose?

When a record is created, or when a record is edited and did not previously meet the rule criteria

Only when a record is created

Every time a record is created or edited

Rule Criteria

Run this rule if the following :

Field	Operator	Value	
Contact: Last Name	equals	#	AND
--None--	--None--		AND

Advanced Options...

Previous Save & Next Cancel

7. Perform the following steps:
 - a. In the Name field, enter a name for this workflow rule, for example, *New_Contact_Rule*.
 - b. In the Description field, enter a brief description for this workflow rule (optional).
 - c. In the Evaluation Criteria section, select one the following options that will be used to trigger the workflow rule:
 - When a record is created, or when a record is edited and did not previously meet the rule criteria. (Default)
 - Only when a record is created.
 - Every time a record is created or edited.

- d. In the Rule Criteria section, specify the criteria that will be used to trigger the workflow rule. For example:

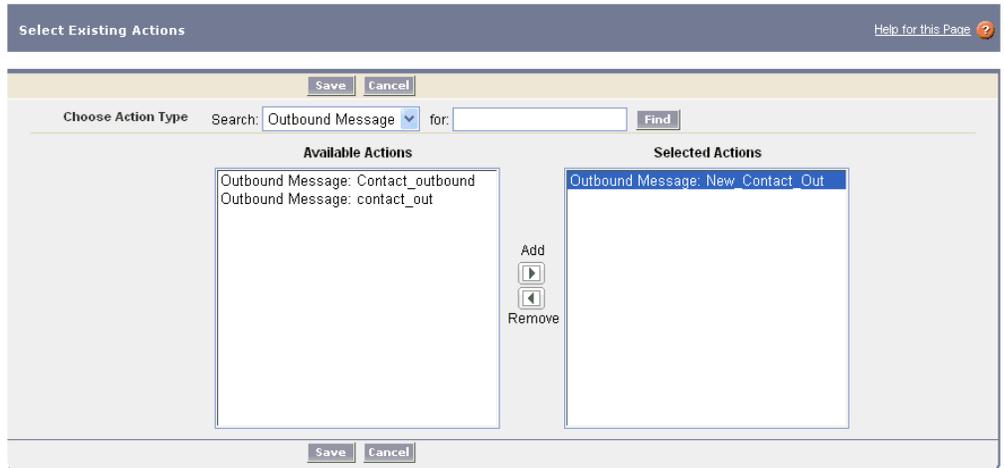
In this example, the *Last Name* field and *equals* condition is selected from the corresponding drop-down lists. In the Value field, the symbol (#) is entered.

8. Click **Save & Next**.

The Step 3: Specify Workflow Actions page opens.

9. From the Add Workflow Action drop-down list, choose *Select Existing Action*.

The Select Existing Actions page opens.



10. Perform the following steps:

- a. From the Search drop-down list, select *Outbound Message*.
- b. From the *Available Actions* list, select the outbound message you want to emit when an event is triggered.
- c. Click *Add* to move the outbound message to the *Selected Actions* list.

11. Click *Save*.

You are returned to the Step 3: Specify Workflow Actions page.



12. Click *Done*.

A summary page opens, which provides details about the workflow rule that was created.

Workflow Rule
New_Contact_Rule
Help for this Page ?

[← Back to List: Workflow Rules](#)

Workflow Rule Detail

[Edit](#) [Delete](#) [Clone](#) [Activate](#)

Rule Name	New_Contact_Rule	Object	Contact
Active	<input type="checkbox"/>	Evaluation Criteria	When a record is created, or when a record is edited and did not previously meet the rule criteria
Description			
Rule Criteria	Contact: Last Name equals #		
Created By	Joseph Scilufio, 3/25/2009 6:41 PM	Modified By	Joseph Scilufio, 3/25/2009 6:41 PM

Workflow Actions

[Edit](#)

Immediate Workflow Actions

Type	Description
Outbound Message	New_Contact_Out

Time-Dependent Workflow Actions

No workflow actions have been added. Before adding a workflow action, you must have at least one time trigger defined.

Procedure: How to View an Outbound Message

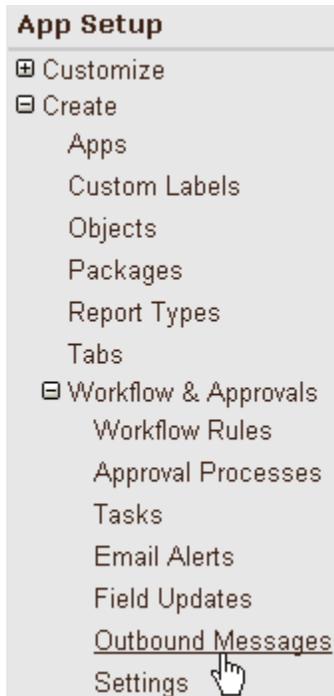
To view an outbound message using the Salesforce web console:

1. Log on to the Salesforce web console.



2. Click *Setup*.

The Personal Setup page opens.



3. In the left pane, expand *Create*, *Workflow & Approvals*, and click *Outbound Messages*.

The All Outbound Messages page opens.

All Outbound Messages [Help for this Page](#)

Outbound Messages are SOAP transactions that Salesforce automatically sends to external systems when triggered.

View: [All Outbound Messages](#) | [Edit](#) | [Create New View](#)

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Other **All**

Action	Name	Endpoint URL	Object	Last Modified Date
Edit Del	AccountMessage	http://61.12.5.8:80	Account	2/12/2009
Edit Del	case_outbound	http://61.12.5.8:80	Case	2/13/2009
Edit Del	contact_out	http://38.117.185.150:80	Contact	3/24/2009
Edit Del	Contact_outbound	http://38.117.185.150:80	Contact	2/10/2009
Edit Del	Contract	http://61.12.5.7:80	Contract	1/5/2009
Edit Del	Opportunity Outbound	http://208.175.209.36:80/	Opportunity	11/11/2008
Edit Del	PMSJAS	https://38.117.185.132:443	Account	2/10/2009
Edit Del	ProductRule	http://208.175.209.36:80/	Product	11/18/2008
Edit Del	Solution	http://61.12.5.7:80	Solution	1/5/2009

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Other **All**

4. Perform any of the following steps depending on your current requirement:
 - a. Click *New Outbound Message* to define a new outbound message.
 - b. Click *View Message Delivery Status* to track the status of an existing outbound message.
 - c. Click the name of an existing outbound message to view its details or view associated workflow rules and approval processes.

Edit Del	Contact outbound	http://38.117.185.150:80
Edit Del	Contract	http://61.12.5.7:80

- d. Click *Edit* to make changes to an existing outbound message.
- e. Click *Del* to delete an existing outbound message.

Procedure: How to Track an Outbound Message Status

To track an outbound message status using the Salesforce web console:

1. Log on to the Salesforce web console.
2. Click *Setup*.

The Personal Setup page opens.



3. In the left pane, expand *Monitoring* and click *Outbound Messages*.

The Outbound Messaging Delivery Status page opens.

Outbound Messaging Delivery Status
Help for this Page

Total items in queue awaiting delivery : 1

Next items for delivery Refresh

Action	Outbound Message ID	Object	# Attempts	Created Date	Next Attempt	Delivery Failure Reason
Retry Del	04k400000004Cth	0014000000MQupY	12	3/25/2009 6:47 AM	3/25/2009 5:06 PM	java.net.SocketTimeoutException: Read timed out

Oldest failures in queue Refresh

Action	Outbound Message ID	Object	# Attempts	Created Date	Next Attempt	Delivery Failure Reason
Retry Del	04k400000004Cth	0014000000MQupY	12	3/25/2009 6:47 AM	3/25/2009 5:06 PM	java.net.SocketTimeoutException: Read timed out

Note: You can also click *View Message Delivery Status* from the All Outbound Messages page to access this page.

4. Perform any of the following steps depending on your current requirement:
 - a. View the status of your outbound messages including the total number of attempted deliveries.
 - b. View the action that triggered the outbound message by clicking any workflow or approval process action ID.
 - c. Click *Retry* to change the Next Attempt date to now. This causes the message delivery to be immediately retried.
 - d. Click *Del* to permanently remove the outbound message from the queue.

Configuring Events for Salesforce

This section describes how to use iWay Explorer to connect to Salesforce and listen for events.

In this chapter:

- ❑ [Salesforce Events Overview](#)
 - ❑ [Creating an Event Port](#)
 - ❑ [Creating a Channel](#)
-

Salesforce Events Overview

Events are generated as a result of activity on an application system. You can use events to trigger an action in your application.

The iWay Application Adapter for Salesforce supports event handling through the Salesforce implementation of outbound messages and workflow rules. Outbound messages send SOAP messages over HTTP or HTTPS to a designated channel when they are triggered by a workflow rule. Workflow rules are used to schedule and execute workflow actions when records meet specified criteria.

For more information, see [Configuring Outbound Messaging and Workflow Rules in Salesforce](#) on page 61.

To create an iWay event, you must create a port and a channel using iWay Explorer. The following is a description of how ports and channels work.

- ❑ **Port.** A port associates a particular business object exposed by an adapter with a particular disposition. A disposition defines the protocol and location of the event data. The port defines the end point of the event consumption. For more information, see [Creating an Event Port](#) on page 76.
- ❑ **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 95.

Creating an Event Port

The following procedures describe how to create an event port using iWay Explorer.

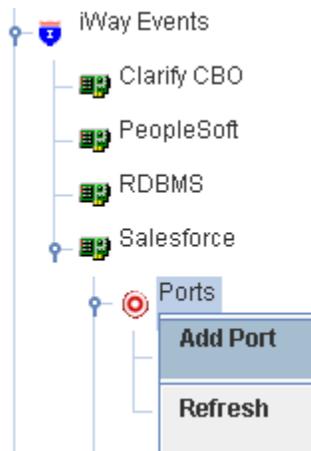
When you use iWay Explorer with an iWay Business Services Provider (iBSP) implementation, the following port dispositions are available:

- File.** The File disposition uses a file URL to specify the destination file name or directory where the event document will be written. During run time, the destination file name may require indexing to avoid overwriting.
- iBSP.** The iBSP disposition enables an event to launch a business service method.
- MSMQ.** The Microsoft Message Queue disposition supports public and private queues.
- JMSQ.** The JMSQ disposition allows an event to be enqueued to a JMS queue.
- SOAP.** The SOAP disposition allows an event to launch a business service specified by a WSDL file. A SOAP action is optional; "" is the default value.
- HTTP.** The HTTP disposition uses an HTTP URL to specify an HTTP end point to which the event document is posted.
- MQSeries.** The MQSeries disposition enables an event to be enqueued to an MQSeries queue. Both queue manager and queue name may be specified.

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

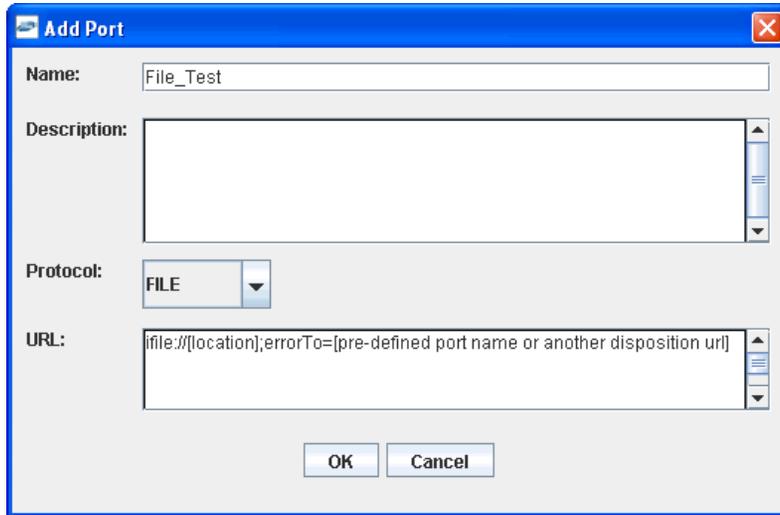
To create an event port for File:

1. Click the *iWay Events* node.
2. In the left pane, expand the *Salesforce* node.



3. Right-click the *Ports* node and select *Add Port* from the context menu.

The following image shows the Add Port dialog box that opens, where you supply information about the port.



4. Perform the following steps:
 - a. In the Name field, type a name for the port, for example, *File_Test*.
 - 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 File destination to which event data is written.

When pointing iWay Explorer to an iBSP deployment, specify the destination file using the following format:

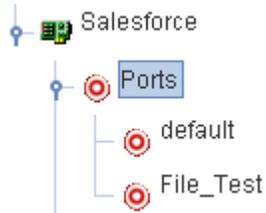
```
ifile://location;[errorTo=errorDest]
```

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

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

5. Click *OK*.

In the left pane, the new event port appears under the ports node. In the right pane, summary information associated with the event port you created is displayed.

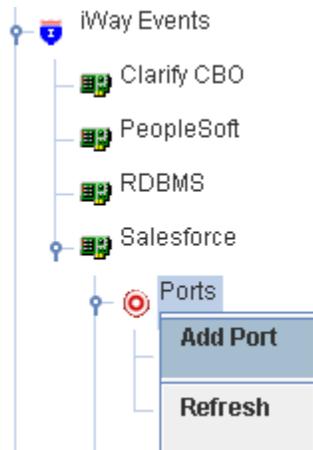


You are ready to associate the event port with a channel.

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

The iBSP disposition enables an event to launch an iWay Business Services method. To create a port for an iBSP disposition using iWay Explorer:

1. Click the *iWay Events* node.
2. In the left pane, expand the *Salesforce* node.



3. Right-click the *Ports* node and select *Add Port* from the context menu.

The following image shows the Add Port dialog box that opens, where you supply information about the port.

4. Perform the following steps:
 - a. In the Name field, type a name for the port, for example, iBSP_Test.
 - 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 iBSP destination using the following format:


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

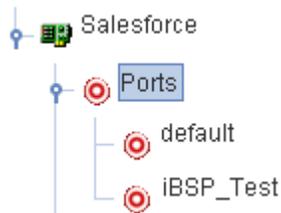
The following table lists and describes the disposition parameters for iBSP.

Parameter	Description
svcName	Name of the service created with iBSP.
mthName	Name of the method created for the web service.

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

5. Click *OK*.

In the left pane, the new event port appears under the ports node. In the right pane, summary information associated with the event port you created is displayed.



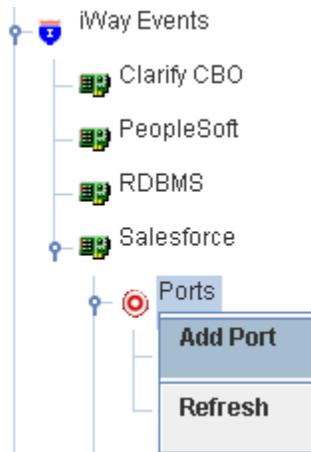
You are ready to associate the event port with a channel.

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

The MSMQ disposition supports public and private queues. To create a port for an MSMQ disposition using iWay Explorer:

1. Click the *iWay Events* node.

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



3. Right-click the *Ports* node and select *Add Port* from the context menu.

The following image shows the Add Port dialog box that opens, where you supply information about the port.

4. Perform the following steps:
 - a. In the Name field, type a name for the port, for example, *MSMQ_Test*.

- b. In the Description field, type a brief description.
- c. From the Protocol drop-down list, select *MSMQ*.
- d. In the URL field, enter an MSMQ destination in the format:

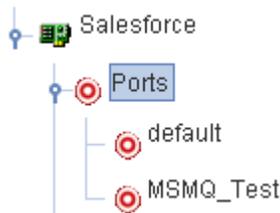
```
msmq://host/private$/qName:[errorTo=errorDest]
```

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

Parameter	Description
host	Name of the host on which the Microsoft Queuing system runs.
queueType	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.
qName	Name of the queue in which messages are placed.
errorTo	Location where error documents are sent. Predefined port name or another full URL. Optional.

- 5. Click *OK*.

In the left pane, the new event port appears under the ports node. In the right pane, summary information associated with the event port you created is displayed.

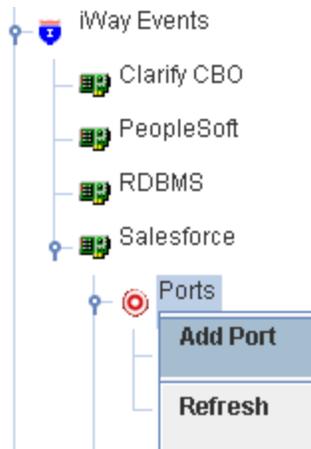


You are ready to associate the event port with a channel.

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

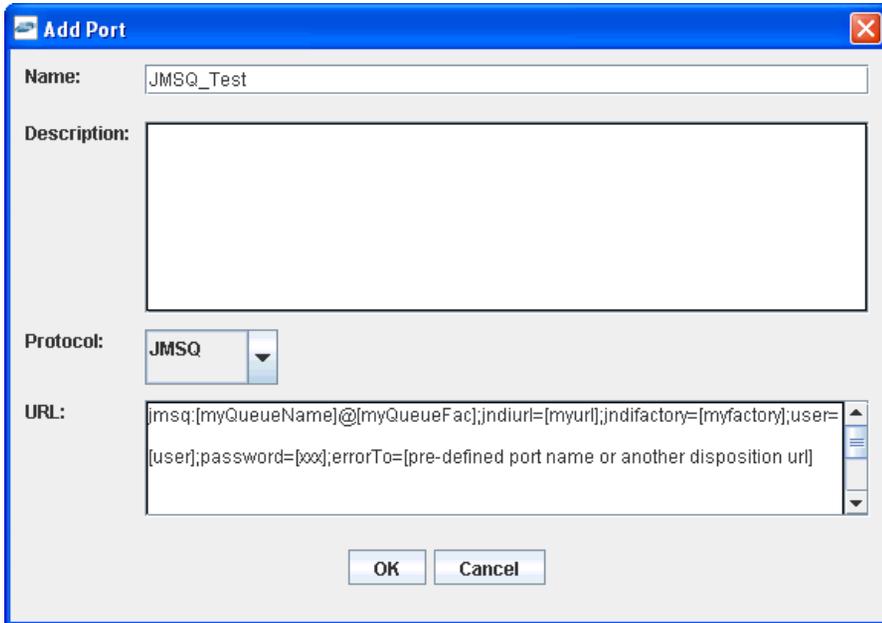
The JMSQ disposition enables an event to be enqueued to a JMS queue. To create a port for a JMSQ disposition using iWay Explorer:

1. Click the *iWay Events* node.
2. In the left pane, expand the *Salesforce* node.



3. Right-click the *Ports* node and select *Add Port* from the context menu.

The following image shows the Add Port dialog box that opens, where you supply information about the port.



4. Perform the following steps:
 - a. In the Name field, type a name for the port, for example, JMSQ_Test.
 - 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 JMS destination.

When pointing iWay Explorer to an iBSP 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]
```

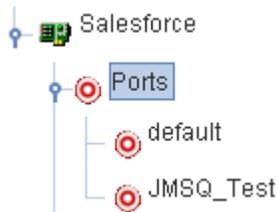
The following table lists and describes the parameters for the disposition.

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

Parameter	Description
Connection Factory	Resource that contains information about the JMS Server.
jndiurl	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>
jndifactory	JNDI context.INITIAL_CONTEXT_FACTORY provided by the JNDI service provider.
user	Valid user name required to access a JMS server.
password	Valid password required to access a JMS server.
errorTo	Location where error documents are sent. A predefined port name or another full URL. Optional.

- Click *OK*.

In the left pane, the new event port appears under the ports node. In the right pane, summary information associated with the event port you created is displayed.



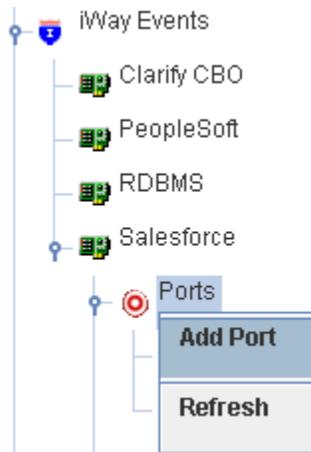
You are ready to associate the event port with a channel.

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

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

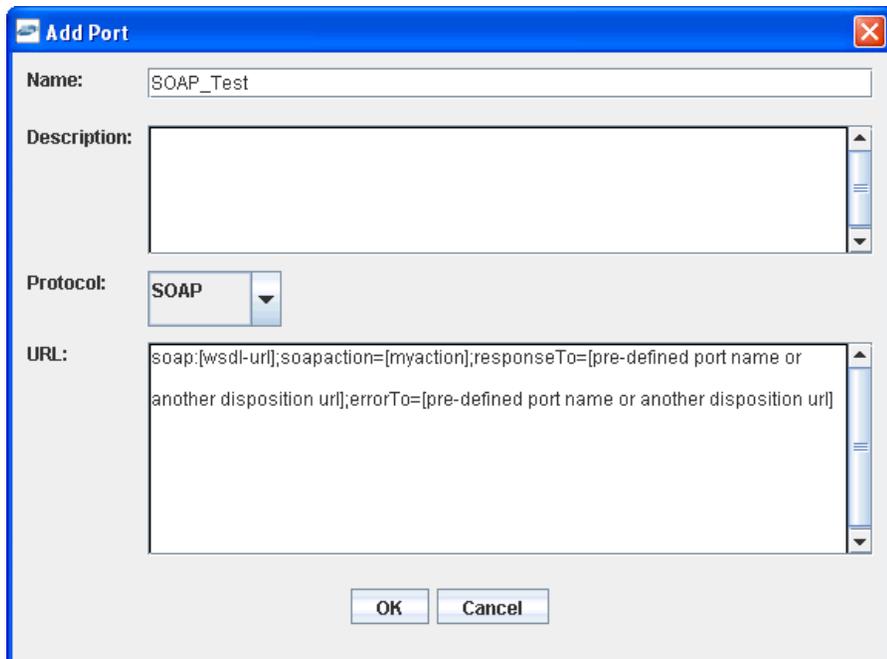
- Click the *iWay Events* node.

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



3. Right-click the *Ports* node and select *Add Port* from the context menu.

The following image shows the Add Port dialog box that opens, where you supply information about the port.



4. Perform the following steps:
 - a. In the Name field, type a name for the port, for example, SOAP_Test.
 - 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=[myaction];
method=[web service method];namespace=[namespace];
responseTo=[pre-defined port name or another disposition URL];
errorTo=[pre-defined port name or another disposition url]
```

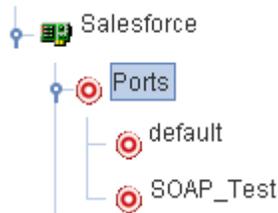
The following table lists and describes the parameters for the disposition.

Parameter	Description
wsdl-url	<p>URL to the WSDL file that is required to create the SOAP message, for example:</p> <pre>http://localhost:7001/ibsp/IBSPServlet/test/ webservice.ibs?wsdl</pre> <p>where:</p> <pre>webservice</pre> <p>Is the name of the web service you created using iWay Explorer.</p> <p>To find this value, you can navigate to the iWay Business Services tab and open the Service Description link in a new window. The WSDL URL appears in the Address field.</p> <p>Alternatively, you can open the WSDL file in a third-party XML editor (for example, XMLSPY) and view the SOAP request settings.</p>

Parameter	Description
soapaction	<p>Method that is called by the SOAP disposition. For example:</p> <p><i>webservice.method@test@</i></p> <p>where:</p> <p><i>webservice</i></p> <p>Is the name of the web service you created using iWay Explorer.</p> <p><i>method</i></p> <p>Is the method being used.</p> <p><i>test</i></p> <p>Is the license that is being used by the web service.</p> <p>This value can be found by navigating to the iWay Business Services tab, opening the Service Description link in a new window, and performing a search for soapAction.</p> <p>You can also open the WSDL file in a third-party XML editor (for example, XML Spy) and view the SOAP request settings to find this value.</p>
method	Web service method you are using. Value is found in the WSDL file.
namespace	XML namespace you are using. Value is found in the WSDL file.
responseTo	<p>Location to which responses are posted. Can be a predefined port name or another URL. Optional.</p> <p>The URL must be complete, including the protocol.</p>
errorTo	Location where error documents are sent. A predefined port name or another full URL. Optional.

5. Click *OK*.

In the left pane, the new event port appears under the ports node. In the right pane, summary information associated with the event port you created is displayed.

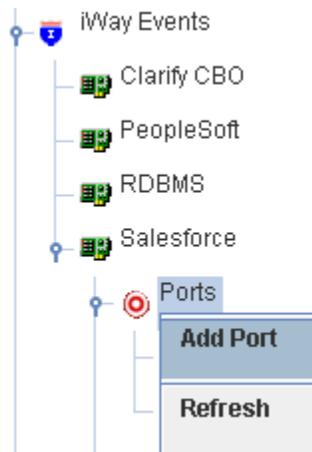


You are ready to associate the event port with a channel.

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

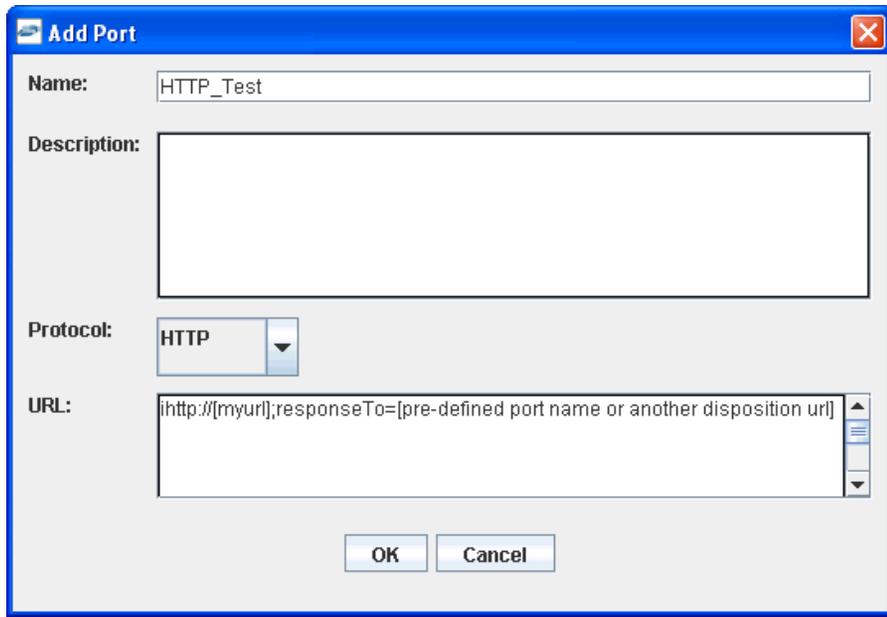
The HTTP disposition uses an HTTP URL to specify an HTTP end point to which the event document is posted. To create a port for an HTTP disposition using iWay Explorer:

1. Click the *iWay Events* node.
2. In the left pane, expand the *Salesforce* node.



3. Right-click the *Ports* node and select *Add Port* from the context menu.

The following image shows the Add Port dialog box that opens, where you supply information about the port.



4. Perform the following steps:
 - a. In the Name field, type a name for the port, for example, HTTP_Test.
 - 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.

When pointing iWay Explorer to an iBSP deployment, specify the destination file using the following format:

`ihttp://url;responseTo=respDest`

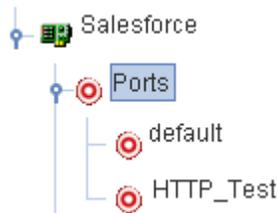
The following table lists and describes the disposition parameters for HTTP.

Parameter	Description
url	URL target for the post operation.

Parameter	Description
respDest	Location to which responses are posted. A predefined port name or another full URL. Optional. 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.

- Click **OK**.

In the left pane, the new event port appears under the ports node. In the right pane, summary information associated with the event port you created is displayed.



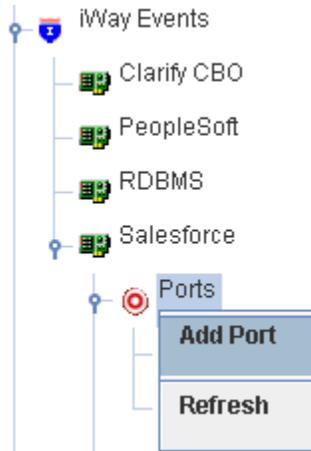
You are ready to associate the event port with a channel.

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

The MQSeries disposition enables an event to be enqueued to an MQSeries queue. Both queue manager and queue name may be specified. To create a port for an MQSeries disposition using iWay Explorer:

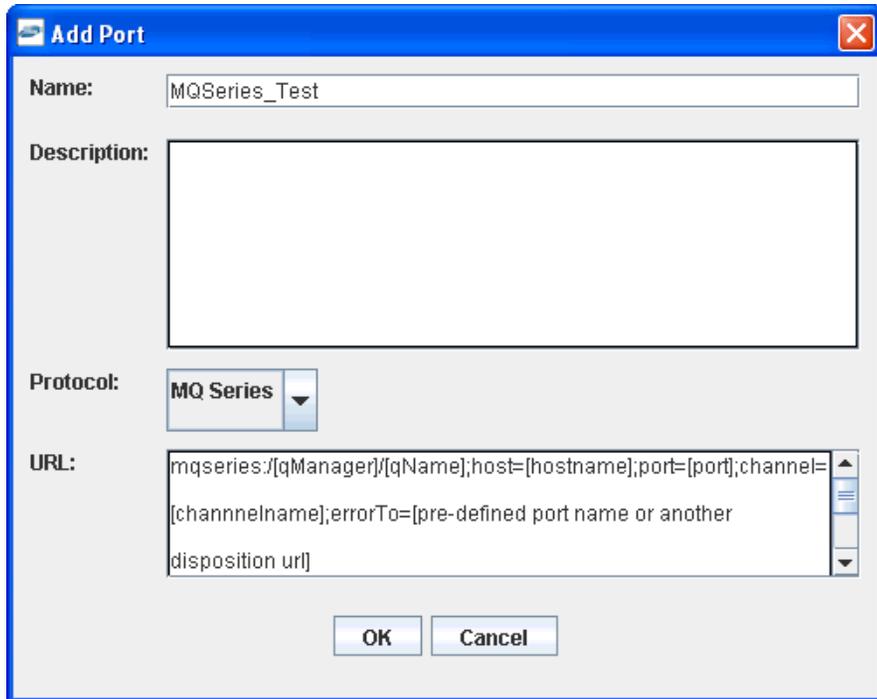
- Click the *iWay Events* node.

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



3. Right-click the *Ports* node and select *Add Port* from the context menu.

The following image shows the Add Port dialog box that opens, where you supply information about the port.



4. Perform the following steps:
 - a. In the Name field, type a name for the port, for example, MQSeries_Test.
 - 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 MQSeries destination.

When pointing iWay Explorer to an iBSP deployment, specify the destination file using the following format:

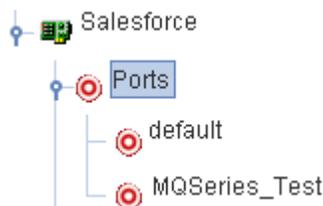
```
mqseries:/qManager/qName;host=[hostname];
port=[port];channel=[channelname];
errorTo=[pre-defined port name or another disposition url]
```

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

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

5. Click *OK*.

In the left pane, the new event port appears under the ports node. In the right pane, summary information associated with the event port you created is displayed.



You are ready to associate the event port with a channel.

Procedure: How to Edit a Port

To edit a port:

1. In the left pane, right-click the port you want to modify.
2. Select *Edit* from the context menu.

The Edit Port dialog box opens.

3. Make the required changes to the port configuration and click *OK*.

Procedure: How to Delete a Port

To delete a port:

1. In the left pane, right-click the port you want to delete.
2. Select *Delete* from the context menu.

The port is removed from the list in the left pane.

Using the Default Event Port

When using iWay Explorer to connect to Salesforce and listen for events, a default event port is available at all times as shown in the following image.



The default event port can be used for testing purposes or when you do not want to route event data to a specific port you configured. The default port is enabled when you start a channel that does not have a specific event port assigned.

The default event data is actually a File disposition that writes to an out.xml file in the following output directory:

```
ifile://./eventOut/out.xml
```

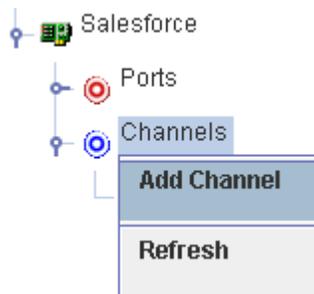
Creating a Channel

The following procedures describe how to create, edit, or delete a channel for your event adapter as well as how to start or stop a channel. All defined event ports must be associated with a channel. You can create a channel using iWay Explorer.

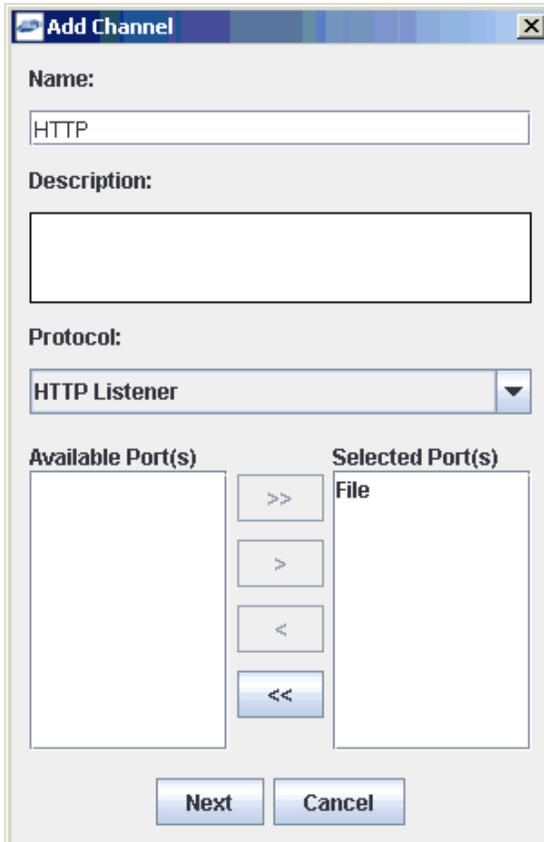
Procedure: How to Create a Channel

To create a channel:

1. Click the *iWay Events* node.
2. In the left pane, expand the *Salesforce* node.
3. Right-click the *Channels* node and select *Add Channel* from the context menu.

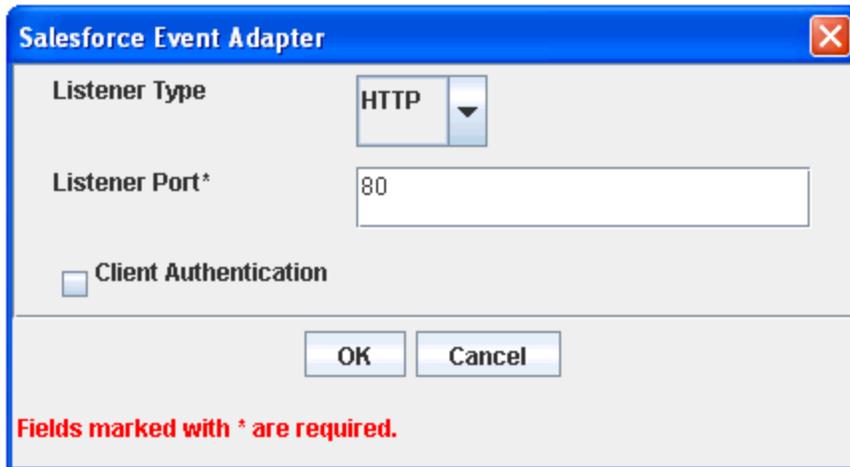


The Add Channel dialog box opens, where you supply information about the channel.



4. Perform the following steps:
 - a. In the Name field, type a name for the channel, for example, HTTP.
 - b. In the Description field, type a brief description.
 - c. From the Protocol drop-down list, select *HTTP Listener*.
Note: For the current release, only the HTTP protocol is supported.
 - d. From the Available Ports area, select a port you want to assign to this channel and click the right arrow to move it to the Selected Ports area.
5. Click *Next*.

The Salesforce Event Adapter dialog box opens, where you must select an available listener type (HTTP or HTTPS) and provide values for the required parameters accordingly.



Note: For demonstration purposes, this procedure uses the HTTP listener as an example. If you want to use HTTPS, you must configure certificate management for the iWay Application Adapter for Salesforce before you configure an HTTPS listener. For more information on configuring certificates, see [Salesforce Certificate Management](#) on page 99.

6. From the Listener Type drop-down list, select *HTTP*.
7. Type 80 in the Listener Port field.

Note: Ensure that port 80 is accessible to the Internet from your system. This port is used to indicate where Salesforce will send the outbound message.

8. If client authentication is required, select the *Client Authentication* check box (optional).
9. Click *OK*.

The channel you created is added beneath the Channels node in the left pane. In the right pane, a table summarizes the information associated with the channel. You are ready to start the channel to listen for events.



10. In the left pane, right-click the channel and select *Start*.

The channel you created is now active.

- a. To stop the channel at any time, right-click the channel.
- b. Select *Stop*.

***Procedure:* How to Edit a Channel**

To edit a channel:

1. In the left pane, right-click the channel you want to modify.
2. Select *Edit* from the context menu.

The Edit Channel dialog box opens.

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

***Procedure:* How to Delete a Channel**

To delete a channel:

1. In the left pane, right-click the channel you want to delete.
2. Select *Delete* from the context menu.

The channel is removed from the list in the left pane.

Salesforce Certificate Management

The iWay Application Adapter for Salesforce supports services and events. For security reasons, Salesforce provides HTTPS support for services. Events support HTTPS and client authentication. The key store that is provided is used for HTTPS support and a trust store is used for client authentication.

In this appendix:

- [Salesforce Certificate Management Prerequisites](#)
 - [Key Store Management](#)
 - [Trust Store Management](#)
-

Salesforce Certificate Management Prerequisites

Before you configure certificate management for the iWay Application Adapter for Salesforce, you must first perform the following steps:

1. Create a new directory for stored files.
2. Configure this new directory as the current directory.

For example:

```
D:\certificate
```

3. Ensure that the Keytool is included in the PATH environment variable.

The Keytool is located in the following directory:

```
<JDK_HOME>\bin\
```

Key Store Management

This section describes how to generate the keypair and generate the certificate signing request.

Note: In this section, *iWay Software* is used as an example for demonstration purposes. You must use the appropriate information that corresponds to your company or organization.

Generating the Key Pair

Use the following command to generate the key pair:

```
D:\certificate>keytool -genkey -v -alias iwayssoftware -validity 365  
-keyalg RSA -keypass iwaysoft -keystore iway.jks -storepass iwaysoft
```

What is your first and last name?

```
[Unknown]: www.iwaysoft.com
```

What is the name of your organizational unit?

```
[Unknown]: iwaysoft
```

What is the name of your organization?

```
[Unknown]: iwaysoft
```

What is the name of your City or Locality?

```
[Unknown]: New York
```

What is the name of your State or Province?

```
[Unknown]: New York
```

What is the two-letter country code for this unit?

```
[Unknown]: US
```

Is CN=www.iwaysoft.com, OU=iwaysoft, O=iwaysoft, L=New York, ST=New York, C=US correct?

```
[no]: yes
```

Generating the Certificate Signing Request

Use the following command to generate the certificate signing request:

```
D:\certificate>keytool -certreq -alias iwayssoftware -file iwaysoft  
-keystore iway.jks -storepass iwaysoft
```

Purchasing the Commercial Certificate From VeriSign or a Similar Certificate Authority

You must purchase the commercial certificate from VeriSign or a similar Certificate Authority (CA).

The following is a link to the VeriSign website that you can use:

```
http://www.verisign.com/ssl/buy-ssl-certificates/index.html
```

Note: For a list of approved Certificate Authorities, it is recommended that you check with Salesforce.

Importing the Root Certificate and Intermediate Certificate

Once you receive the commercial certificate in the mail with the signed certificate, use the following command to import the root certificate:

```
D:\certificate>keytool -import -trustcacerts -alias verisign_root_ca
-file verisign_trial_root.cer -keystore iway.jks -storepass iwaysoft
```

When prompted regarding trust, enter Yes. Then import the intermediate certificate using the following command:

```
D:\certificate>keytool -import -trustcacerts -alias
verisign_intermediate_ca -file verisign_trial_intermediate_ca.cer
-keystore iway.jks -storepass iwaysoft
```

Importing the Signed Certificate

Copy the signed certificate from the mail and paste it into a new empty file that has a .CER extension. Use the following command to ensure that the alias is the same as the one that is used during the key generation:

```
D:\certificate>keytool -import -alias iwaysoftware -file iwaysoft.cer
-keystore iway.jks -storepass iwaysoft
```

Trust Store Management

This section describes how to configure trust store management.

Downloading the Root Certificate and Intermediate Certificate

Download the client certificate (sfdc-client.cert) from Salesforce website.

Download the intermediate certificate (for example, verisignclass3ca.cer) and the root certificate (for example, verisignintermediateca.cer) according to the client certificate.

Importing the Root Certificate and Intermediate Certificate

Use the following command to import the root certificate:

```
D:\ certificate>keytool -import -alias verisign_root_ca -file
verisignclass3ca.cer -keystore truststore.jks -storepass iwaysoft
```

Use the following command to import the intermediate certificate:

```
D:\ certificate>keytool -import -alias verisign_intermediate_ca -file
verisignintermediateca.cer -keystore truststore.jks -storepass iwaysoft
```

Importing the Client Certificate

Before you import the client certificate, verify that the alias is compliant to the certificate.alias key, which is defined in the Salesforce adapter configuration file (LocalStrings.properties). The default is *salesforce*.

Use the following command to import the client certificate:

```
D:\certificate>keytool -import -alias salesforce -file sfdc-client.cert
-keystore truststore.jks -storepass iwaysoft
```

Depending on your environment, the following error may be generated during the import process:

```
keytool error: java.lang.Exception: Input not an X.509 certificate.
```

As a workaround, you must transform the client certificate format to a Base64 encoded binary format.

Note: Before you continue, make sure that the root certificate is installed.

Perform the following steps:

1. On a Windows platform, change the file extension to .CER and double-click the file.

The Open dialog box is displayed.

2. Select *Install Certificate*.
3. Open Internet Explorer.
4. From the menu bar, click *Tools* and select *Internet Options* from the context menu.

The Internet Options dialog box opens.

5. Click the *Content* tab.
6. In the Certificates area, click the *Certificates* button.

The Certificates dialog box opens.

7. Select the certificate you imported previously.
8. Click *Export* and select *Base 64 encoded binary X.509*.
9. Import this format using the following command:

```
D:\certificate>keytool -import -alias salesforce -file
sfdc-client.cert -keystore truststore.jks -storepass iwaysoft
```

Salesforce Batch API

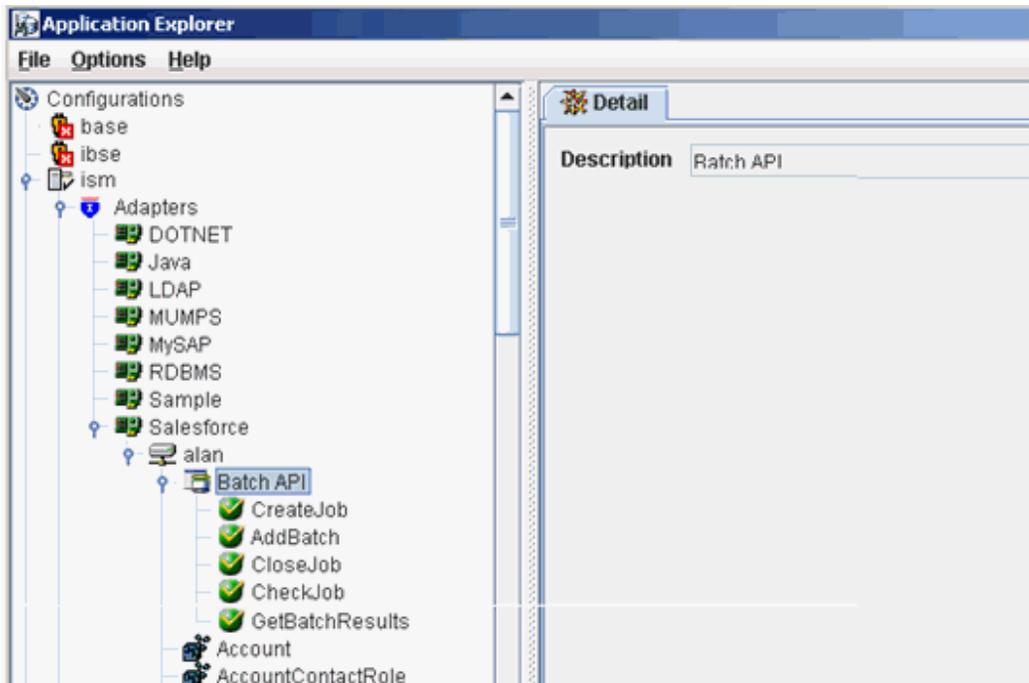
This section provides usage guidelines for the Salesforce Batch API, which can be used to generate requests.

In this appendix:

- [Using the Salesforce Batch API Services](#)

Using the Salesforce Batch API Services

Batch API services are exposed under the *Batch API* node at the root of the Salesforce adapter metadata tree, as shown in the following image.



Procedure: How to Use the Salesforce Batch API

To use the Salesforce Batch API:

1. Create a job using `<Create-Job-Request>`.

For example:

```
<Create-Job-Request location="BatchAPI/CreateJob">
  <jobInfo>
    <operation>insert</operation>
    <object>Contact</object>
    <contentType>CSV</contentType>
  </jobInfo>
</Create-Job-Request>
```

2. Remove the job ID from the response document and record it.

For example:

```
<Create-Job-Response>
  <jobId>750A00000004QzSIAU</jobId>
</Create-Job-Response>
```

3. Add a CSV batch file to the job.

All records in this file must have the same type (for example, Contact) and the first line in the file must specify the field names that are used in the file. For more information about the format of the CSV batch file, see the *Salesforce Bulk API* documentation.

The following is an example of a CSV batch file:

```
FirstName,LastName,Department,Birthdate,Description
Tom1,Jones1,Marketing,1940-06-07Z,Branding guru on the West Coast
Ian1,Duryl,R&D,,World-renowned expert in fuzzy logic
```

4. Reference the full name of the CSV batch file to be uploaded and the job ID in the batch request.

For example:

```
<Add-Batch-Request location="BatchAPI/AddBatch">
  <file>C:/temp/data.csv</file>
  <jobId>750A00000004QzSIAU</jobId>
</Add-Batch-Request>
```

The response contains a batch ID, which can be used for future reference:

```
<Add-Batch-Response>
  <batchId>751A00000004SExIAM</batchId>
</Add-Batch-Response>
```

5. Once all batches have been added to the job, the job must be closed using `<Close-Job-Request>`.

For example:

```
<Close-Job-Request location="BatchAPI/CloseJob">
  <jobId>750A00000004QzSIAU</jobId>
</Close-Job-Request>
```

The status of a job can be queried at any time using <Check-Job-Request>.

For example:

```
<Check-Job-Request location="BatchAPI/CheckJob">
  <jobId>750A00000004QzSIAU</jobId>
</Check-Job-Request>
```

The response contains information about the job as a whole and all of its associated batches.

For example:

```
<Check-Job-Response>
  <jobInfo>
    <id>750A00000004QzSIAU</id>
    <operation>insert</operation>
    <object>Contact</object>
    <createdById>005A00000000U8BSIA0</createdById>
    <createdDate>2010-04-14T16:38:16.000Z</createdDate>
    <systemModstamp>2010-04-14T16:41:49.000Z</systemModstamp>
    <state>Closed</state>
    <concurrencyMode>Parallel</concurrencyMode>
    <contentType>CSV</contentType>
    <numberBatchesQueued>0</numberBatchesQueued>
    <numberBatchesInProgress>0</numberBatchesInProgress>
    <numberBatchesCompleted>1</numberBatchesCompleted>
    <numberBatchesFailed>0</numberBatchesFailed>
    <numberBatchesTotal>1</numberBatchesTotal>
    <numberRecordsProcessed>2</numberRecordsProcessed>
    <numberRetries>0</numberRetries>
    <apiVersion>18.0</apiVersion>
  </jobInfo>
  <batchInfoList>
    <batchInfo>
      <id>751A00000004SExIAM</id>
      <jobId>750A00000004QzSIAU</jobId>
      <state>Completed</state>
      <createdDate>2010-04-14T16:40:33.000Z</createdDate>
      <systemModstamp>2010-04-14T16:40:35.000Z</systemModstamp>
      <numberRecordsProcessed>2</numberRecordsProcessed>
    </batchInfo>
  </batchInfoList>
</Check-Job-Response>
```

- Once a batch is complete, the results can be downloaded to a CSV file using <Get-Batch-Request>.

For example:

```
<Get-Batch-Request location="BatchAPI/GetBatchResults">
  <jobId>750A00000004QzSIAU</jobId>
  <batchId>751A00000004SExIAM</batchId>
  <file>c:/temp/out.csv</file>
</Get-Batch-Request>
```

The CSV file will contain one line for each record in the batch input file. Each line will specify the ID of the affected record and its status.

For example:

```
"Id", "Success", "Created", "Error"
"003A00000008kYUVIA2", "true", "true", ""
"003A00000008kYUWIA2", "true", "true", ""
```

Upsert Operation Support

The Salesforce Batch API supports the Upsert operation, which is used to create new records and update existing records in a database table.

The following is an example of a job request that specifies the Upsert operation:

```
<Create-Job-Request location="BatchAPI/CreateJob">
  <jobInfo>
    <operation>upsert</operation>
    <object>CHG_ACCT__c</object>
    <externalIdFieldName>upID__c</externalIdFieldName>
    <contentType>XML</contentType>
  </jobInfo>
</Create-Job-Request>
```

The following is an example of a reference to the input XML file to be uploaded and the job ID in the batch request:

```
<Add-Batch-Request location="BatchAPI/AddBatch">
  <file>c:\CHG_BATCH_UPSERT\BATCHAPI_XML_INPUT.xml</file>
  <jobId>750400000008TItAAM</jobId>
</Add-Batch-Request>
```

Configuring the Application Adapter for Salesforce in an iWay Environment

After you successfully configure the adapter to represent a particular adapter target, the adapter can be assigned to an iWay Service Manager channel.

In this appendix:

- ❑ [Configuring the Application Adapter for Salesforce in iWay Service Manager](#)

Configuring the Application Adapter for Salesforce in iWay Service Manager

Before configuring the adapter in iWay Service Manager, you must first create a target, which represents a connection to a backend system, using iWay Explorer. For more information on configuring targets and connections using iWay Explorer, see [Creating XML Schemas for Salesforce](#) on page 37.

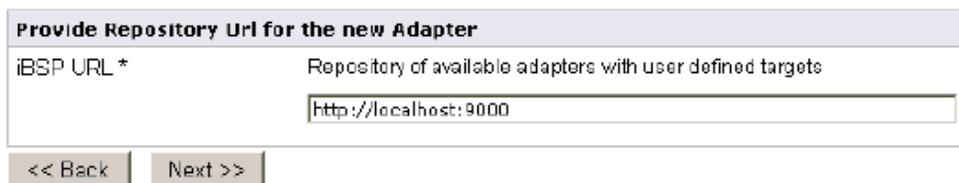
You configure the adapter in the iWay Service Manager console. The configuration process creates run-time connection and persistent data files within Service Manager. The configuration process interrogates the Service Manager repository entries that were built when the target and connection were created using iWay Explorer. The define adapter process creates the run-time repository based on the design-time repository.

Procedure: How to Define the Adapter

To define the adapter:

1. In the Service Manager console, select *Registry*, then *Adapters*.
2. Click *Add*.

The iBSP URL pane opens, as shown in the following image.



Provide Repository Url for the new Adapter

iBSP URL * Repository of available adapters with user defined targets

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3. Enter your iBSP URL, which is the location of the Service Manager repository, for example, <http://localhost:9000>. This field is required.
4. Click *Next*.

An adapter selection pane opens, as shown in the following image.



5. From the Adapter drop-down list, select an adapter, for example, Salesforce, then click *Next*.
6. From the Target drop-down list, select a target you configured for the adapter in iWay Explorer, then click *Next*.

The connection information associated with the target selected is displayed.

- a. Select whether to return an error document when an error occurs.
 - b. Select whether an adapter connection will be reused between executes.
 - c. Review the connection information you specified in iWay Explorer. You can change or update any information.
7. Click *Next*.
 8. Provide a name and, optionally, a description, for the adapter, and click *Finish*.

The adapter appears in the adapters list.

Adapters

iWay Service Manager implements an adapter container to configure/invoke iWay Adapters. The adapter container uses the iWay Business Services Provider to access configurational metadata on behalf of its adapters. Listed below are references to adapters defined in the registry.



Procedure: How to Modify or Update an Adapter Connection

The following image shows the Adapter Defines pane which displays the name of the adapter and the description (optional).

Adapters

iWay Service Manager implements an adapter container to configure/invoke iWay Adapters. The adapter container uses the iWay Business Services Provider to access configurational metadata on behalf of its adapters. Listed below are references to adapters defined in the registry.

<input type="checkbox"/>	Name	Target	References	Description
<input type="checkbox"/>	mySAP	MySAP		none

Buttons: Add, Delete, Rename, Copy

To modify or update an adapter connection:

1. From the Adapters list, click the adapter reference you defined, for example, Salesforce.
The pane that displays the target connection information opens. You cannot change the name of the adapter or the target, but you can edit the connection information.
2. After you modify the connection information, click *Update Connection Properties*.
3. After you make changes or additions to the adapter target in iWay Explorer, click *Update Adapter Data*.
4. Click *Finish*.



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iWay

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