

Integration Guide for WebSphere Commerce with Siebel eBusiness Application Suite using the IBM WebSphere InterChange Server

Version 5.6



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Version 5.6

Note

Before using this information and the product that it supports, read the information in “Notices” on page 51.

First Edition (February 2005)

This edition applies to IBM WebSphere Commerce Version 5.6 and to all subsequent releases and modifications until otherwise indicated in new editions. Make sure that you are using the correct edition for the level of the product.

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Before you begin

The *Integration Guide for WebSphere® Commerce with Siebel eBusiness Application Suite using the WebSphere InterChange Server* is intended for those who want to integrate WebSphere Commerce Version 5.6 with a Customer Relationship Management (CRM) system using the WebSphere InterChange Server. This guide describes how IBM® WebSphere Commerce Version 5.6 can be integrated in particular with Siebel eBusiness Application Suite 7.5.2 using the WebSphere InterChange Server 4.2.2.

The WebSphere Interchange server and adapter provide benefits such as the hub and spoke architecture and process collaborations. In a WebSphere business integration system the WebSphere InterChange Server offers a distributed infrastructure to solve cross-application problems including the capability to:

- Move business information among diverse sources to perform business exchanges across the Internet.
- Process and route business information among disparate applications in the enterprise environment.

The approach described for integrating with Siebel can be used for other CRM systems that the WebSphere InterChange Server supports. This guide will assist developers and engagement teams developing an integrated solution for any backend system like Siebel.

Knowledge of the following is assumed:

- WebSphere Commerce 5.6 Business Edition
- WebSphere InterChange Server 4.2.2
- WebSphere Business Integration (WBI) Adapters 2.3 for WebSphere Commerce and Siebel
- Siebel eBusiness Application Suite 7.5.2

This document provides information on how messages can be exchanged between WebSphere Commerce and Siebel through the WebSphere InterChange Server. It gives an overview of a typical end-to-end flow between the two systems, installation and configuration instructions for the various components, and pointers to the WebSphere InterChange Server entities such as maps and collaboration objects.

The samples provided with this reference application are for WebSphere Commerce 5.6 Business Edition. However, the same principal and pattern can apply to WebSphere Commerce 5.6, Professional Edition.

This guide is divided into the following sections:

Chapter 1. Introduction

A brief overview of the integration of WebSphere Commerce 5.6, Business Edition with Siebel eBusiness Application Suite 7.5.2 using the WebSphere InterChange Server and references to other related documents.

Chapter 2. Prerequisites

Lists the software and hardware prerequisites for this reference application.

Chapter 3. Integration architecture

Describes the outbound and inbound message flow between WebSphere Commerce and Siebel through the WebSphere InterChange Server.

Chapter 4. Entity Mapping

Describes how the entities in WebSphere Commerce and Siebel are mapped.

Chapter 5. Installing and configuring

Describes the installation and configuration instructions for the components of the scenarios implemented for this reference application.

Chapter 6. Verification procedure

A list of instructions to verify the integration points.

Appendix A. Generic business objects

A list of the generic business objects enabled for this reference application.

Appendix B. Application specific business objects

A list of the application specific business objects enabled for this reference application.

Appendix C. Collaboration objects and ports

A list of the collaboration templates, objects, and ports that this reference application uses.

Appendix D. Maps with specific values for WebSphere Commerce

A list of the hard coded WebSphere Commerce fields used in the maps provided with this reference application.

Appendix E. Binding maps to business objects

A list of maps that must be explicitly bound to the business objects for the adapters for WebSphere Commerce and Siebel.

Appendix F. New commands

A list of the WebSphere Commerce commands introduced for this reference application.

Conventions used in this guide

This guide uses the following conventions:

Boldface type	indicates commands or graphical user interface (GUI) controls such as names of fields, buttons, or menu choices.
monospaced type	indicates examples of text that you enter exactly as shown.
<i>Italic type</i>	is used for emphasis and for variables for which you substitute your own values.

Default paths

This guide uses the following default installation paths:

WC_installdir

This indicates the installation path for WebSphere Commerce. When you see this variable, substitute the installation path for your installation of WebSphere Commerce. For Windows[®], substitute C:\IBM\WebSphere\CommerceServer56

WAS_installdir

This indicates the installation path for WebSphere Application Server. When you see this variable, substitute the installation path for your installation of WebSphere Application Server. For Windows, substitute C:\IBM\WebSphere\AppServer

WICS_installdir

This indicates the installation path for WebSphere InterChange Server. When you see this variable, substitute the installation path for your installation of the WebSphere InterChange Server. For Windows, substitute C:\IBM\WICS

Chapter 1. Introduction

This chapter gives an overview of the integration of WebSphere Commerce Business Edition with Siebel eBusiness Application Suite using the WebSphere InterChange Server as middleware. It defines the terms used in this book and provides references to other related sources of information.

In this guide, the following are used interchangeably:

- WebSphere Commerce and WebSphere Commerce 5.6 Business Edition
- WebSphere Business Integration Adapter for WebSphere Commerce and WebSphere Commerce connector.
- WebSphere Business Integration Adapter for Siebel eBusiness Application Suite and Siebel connector.
- Siebel and Siebel eBusiness Application Suite 7.5.2
- Adapter and connector

Overview

As companies use the Internet to open their enterprises to customers, partners, and suppliers, for greater efficiency and productivity such as linking a purchasing department to outside vendors or adjusting inventory levels to match the latest customer buying patterns, they encounter layers of different enterprise systems that have been purchased over time, many of which are unable to operate together.

This reference application is designed to address one such integration process. It integrates Siebel Call Center business processes with the WebSphere Commerce sell-side solution, using the WebSphere InterChange Server capabilities as middleware. This reference application provides the e-commerce functionality of WebSphere Commerce and enables the CRM functionality of the Siebel system for the customer self service channel. Siebel customers can use WebSphere Commerce and this reference application to expose various call center capabilities on the Web, enabling customer self service.

The WebSphere InterChange Server's distributed hub-and-spoke architecture offers integration solutions that automate and streamline business processes, sophisticated business object management, inter-applications connectivity, and data integration. The WebSphere InterChange Server with its dynamic configuration capability automatically propagates to the respective adapters or components. WebSphere InterChange Server application adapters provide seamless connectivity to packaged, legacy, and mainframe applications as well as e-business enabling technologies.

This reference application consists of two parts: Integrating WebSphere Commerce with WebSphere InterChange server and integrating WebSphere InterChange server with the Siebel CRM system.

Integration scenarios for WebSphere Commerce and Siebel

In this scenario, WebSphere Commerce acts as the customer facing self service application to the Siebel system. Customers using WebSphere Commerce and Siebel, can extend and enhance CRM capabilities with the online storefront functionality to provide an integrated Web channel CRM solution.

WebSphere Commerce contains information about the products and services of the seller, and the profile and registration information of the customers. WebSphere Commerce processes the buyer's requests, such as catalog navigation, placing an order, requesting for a quote, and modifying profile information.

Siebel contains information about the seller's products and the customer contacts with their associated organizations. The Siebel system is also used to track buyer activities such as placing orders and quote requests. This enables the Customer Service Representative (CSR) on the seller side to follow up with buyers for further business transactions.

Integrating WebSphere Commerce with Siebel ensures that critical information about a customer's CRM solution is available on the Web and to a CSR. This also allows access to clients through the Web or through a CSR on the phone. The new customers created in Siebel are synchronized with WebSphere Commerce and vice versa. The product data in the Siebel system is uploaded to WebSphere Commerce. The quote requests that buyers create triggers the quote creation activity in Siebel, which enables a CSR to follow up with customers through multiple channels such as telephone or e-mail. Similarly, the orders placed in WebSphere Commerce are synchronized with Siebel for seller side reference and further processing.

Business models enabled

In this reference application, WebSphere Commerce is the Web sales channel and Siebel is responsible for CRM activities. Any customer registered with the WebSphere Commerce system can browse and shop for products that are loaded from Siebel onto the WebSphere Commerce site.

Using this capability, buyers in any part of the world can shop online for products using the WebSphere Commerce online stores and catalog display functionality. Through the integration described in this reference application, client data and activities from the Web are passed into the Siebel application allowing the Web and the call center channels to share the same data. This allows buyers to interact with a business either through the Web or call centers while data is seamlessly integrated across the channels. Connectivity in the current implementation enables the account and contact data from Siebel to be updated in WebSphere Commerce through a set of messages. Integrating WebSphere Commerce with a Siebel application allows sellers to use the WebSphere Commerce rich functionality in personalization, marketing, merchandising, product management, and user management to provide robust Internet selling sites for B2B direct and consumer direct clients.

Benefits

The solution outlined in this reference application drives a number of benefits:

- Provides a self service online capability for clients to view products and create orders.
- Orders created on the Web in WebSphere Commerce are made available in Siebel. Clients can execute existing CRM processes like customer call back on these orders.
- Enables all CRM related data captured in a Web storefront to be accessed by the Siebel CRM business process.
- Create sites leveraging WebSphere Commerce product management, customer management, personalization, and merchandising capabilities leveraging existing data in Siebel.

- Provide highly scalable WebSphere Commerce storefront capabilities utilizing information from a Siebel system.
- Provide operational and business analytical information based on site statistics, usage scenarios, campaign effectiveness, demographics, and other factors.
- Use WebSphere Commerce to create a Notification Mechanism in Siebel to ensure that the employees of the seller organization follow up with customer opportunities and requests. This promotes business.

Integration points

This reference application provides the following functionality:

Organization creation

Organizations using both WebSphere Commerce and Siebel can provide their online customers with the self registration functionality. The organization creation functionality allows new organization entities created in WebSphere Commerce to be registered in Siebel.

Registering this organization entity in Siebel ensures that the customer data is available to a Siebel CSR across all channels. Additionally, Siebel uses this critical information to maintain and track buyer activities. Once a customer is registered in Siebel, a Siebel CSR can notify the customer about further opportunities. Creating customer information in both WebSphere Commerce and Siebel allows organizations to utilize this information in CRM and Web facing functions.

Similarly, when a customer account is created in Siebel, a corresponding organization is registered in the WebSphere Commerce system. This gives buyers the flexibility to use multiple sales channels including access to the Web through the customer self service channel. This enables buyers to use the Web sales channel functionality that WebSphere Commerce provides.

For example, a Siebel CSR reaches the potential buyer organization through multiple channels to register the buyer in Siebel. These organizations are created in WebSphere Commerce as registered buyer organizations, enabling them to shop through the Web channel in the WebSphere Commerce online stores.

Customer creation

WebSphere Commerce allows customers to self-register. Integrating this capability with Siebel ensures that customers registered in WebSphere Commerce are also registered in Siebel, enabling the CSR channel and Web interactions. A customer registered in WebSphere Commerce can create orders and update user profiles. Customers and buyer organizations are created in WebSphere Commerce for B2C and B2B scenarios respectively.

Similarly, when a new contact is created in Siebel, a corresponding customer is registered in WebSphere Commerce using the integration capabilities described in this reference application. Registering this entity in Siebel ensures that the customer data is available to a Siebel CSR across all channels. Additionally, Siebel uses this critical information to maintain and track buyer activities. Once a customer is registered in Siebel, a Siebel CSR can notify the customer about further opportunities. Creating customer information in both WebSphere Commerce and Siebel allows customers to utilize this information in CRM and Web facing functions.

Order creation

Buyers can connect to the self service channel and browse the online catalog in WebSphere Commerce. They can select items, add them to a shopping cart, and place an order. This reference application demonstrates how orders in WebSphere Commerce can be sent to Siebel. This allows the Siebel CSR and other Siebel business functions to utilize the order information captured in WebSphere Commerce. For example, a CSR taking a call from a customer can view the details of an order that the customer created in WebSphere Commerce.

Orders created through multiple sales channels are collected in the Siebel system to analyze customer buying patterns. Using this information suppliers can determine special pricing considerations, and other offers as well as maintain an archive of customer transactions.

Orders created in WebSphere Commerce can be used to trigger activities in Siebel.

Request for quote (RFQ) creation

WebSphere Commerce allows customers to enter online quote requests. This reference application demonstrates how these quote requests can be sent to Siebel. A request for quote in WebSphere Commerce triggers the creation of a quote in Siebel. A Siebel CSR can use this information to complete a quote response. This scenario can be extended to create an activity that alerts a CSR when an RFQ is received.

This reference application can be extended with the following optional activity creation functionality:

1. Messages sent from WebSphere Commerce can trigger activities in Siebel. Modify the collaboration objects in the WebSphere InterChange Server to send activity objects to Siebel.
2. WebSphere Commerce provides the capability that allows buyers to create RFQs and sellers to create RFQ responses. When a seller creates an RFQ response in WebSphere Commerce, the WebSphere Commerce system can be extended to send messages to the WebSphere Interchange server and trigger an activity.

References

Apart from this guide, the following reference documents are available with their respective products:

- Messaging system information related to the WebSphere Commerce Business Edition can be found in the product documentation at http://www.ibm.com/software/webservers/commerce/wc_be/
- For WebSphere InterChange Server refer to <http://www.ibm.com/software/integration/wbiserver/ics/library/infocenter/>
- For information on the WebSphere Business Integration Adapters refer to <http://www.ibm.com/software/integration/wbiadapters/>
- For WebSphere MQ documentation refer to <http://www.ibm.com/software/ts/mqseries/messaging>
- Siebel documentation is available with the product. You can also refer to <http://www.siebel.com>

Note: The preceding Web addresses can change at any time without notice. IBM is not responsible for the authenticity or correctness of information from non-IBM Web sites.

Chapter 2. Prerequisites

This section covers the software and hardware prerequisites for this reference application. This reference application assumes a Windows 2000 operating environment.

Software prerequisites

The software prerequisites include:

WebSphere Commerce 5.6 Business Edition

WebSphere Commerce 5.6 Business Edition is an e-commerce software platform. The messaging system of WebSphere Commerce gives WebSphere Commerce the ability to communicate with its external environment. This communication includes sending messages to and receiving messages from backend systems or external systems. This is achieved through the following components:

- The WebSphere Commerce MQ listener enables integration by processing inbound messages coming from backend systems
- The outbound messaging system allows you to send outbound messages to backend systems.

WebSphere MQ 5.3

WebSphere MQ (formerly MQSeries®) is used as the transport middleware to communicate with various external systems, including the WebSphere InterChange Server.

WebSphere InterChange Server 4.2.2

The WebSphere InterChange Server (formerly IBM CrossWorlds®) is a suite of software integration products that include prebuilt modules for common business integration requirements, and development and management tools. These products supply connectivity for leading e-business technologies and enterprise applications. This reference application uses the complete WebSphere InterChange Server setup, which includes the WBI Adapters.

WebSphere Business Integration Adapters 2.3

The following are the WebSphere Business Integration Adapters required:

WebSphere Business Integration Adapter for WebSphere Commerce

The adapter for WebSphere Commerce enables the WebSphere InterChange Server to exchange messages with WebSphere Commerce. For more information refer to the WBI adapter documentation.

WebSphere Business Integration Adapter for Siebel

The adapter for Siebel enables the WebSphere Interchange server to exchange messages with the Siebel system.

Additionally, the port connector is required. It is used to bind to the collaboration ports, if no specific processing is expected on those ports.

Siebel eBusiness Application Suite 7.5.2

This is a CRM system that contains the master data such as catalog and customer information. The Siebel system has a sophisticated Enterprise Application Interface (EAI) architecture where it can exchange information

in the form of XML messages over SOAP, HTTP, and WebSphere MQ. It provides the Java™ interfaces that can be used to exchange information at the Siebel business object layer.

Hardware prerequisites

For information on hardware prerequisites, refer to the documentation that comes with the appropriate software.

Chapter 3. Integration architecture

In this reference application, WebSphere Commerce and Siebel interact by sending notification messages. The integration points described in this reference application follow the WebSphere Commerce outbound and inbound message flows to send and receive messages respectively. These messages are sent and received through the WebSphere Commerce messaging subsystem.

For more information about the WebSphere Commerce outbound and inbound messages, refer to the WebSphere Commerce Developer Edition information center.

Sending a request from WebSphere Commerce

This section describes the flow for the outbound messages from WebSphere Commerce that allow exchange of data between WebSphere Commerce and Siebel. It explains how messages are used to transport information through various components of this reference application. The WebSphere Commerce outbound process includes creating orders, organizations, and customers. The scenarios described provide the following functionality outbound from WebSphere Commerce:

- Creating a customer
- Creating an organization
- Creating an order
- Creating a quote

Transactions in WebSphere Commerce can trigger messages to be sent to other applications through the WebSphere Commerce messaging system. For example, when an order is created in WebSphere Commerce the OrderCreate XML message is generated to create an order in another application.

In this reference application, when an order is created in WebSphere Commerce, the order related information is sent to another system for further processing like fulfillment. The WebSphere Commerce connector sends the orders to the WebSphere InterChange Server as XML messages. The WebSphere InterChange Server processes this XML message and sends it to other systems like Siebel through the WBI adapters.

When you place an order in WebSphere Commerce:

1. The OrderCreate message in XML format is generated and placed in the WebSphere Commerce remote queue (WebSphere MQ queue) as shown in the following diagram:

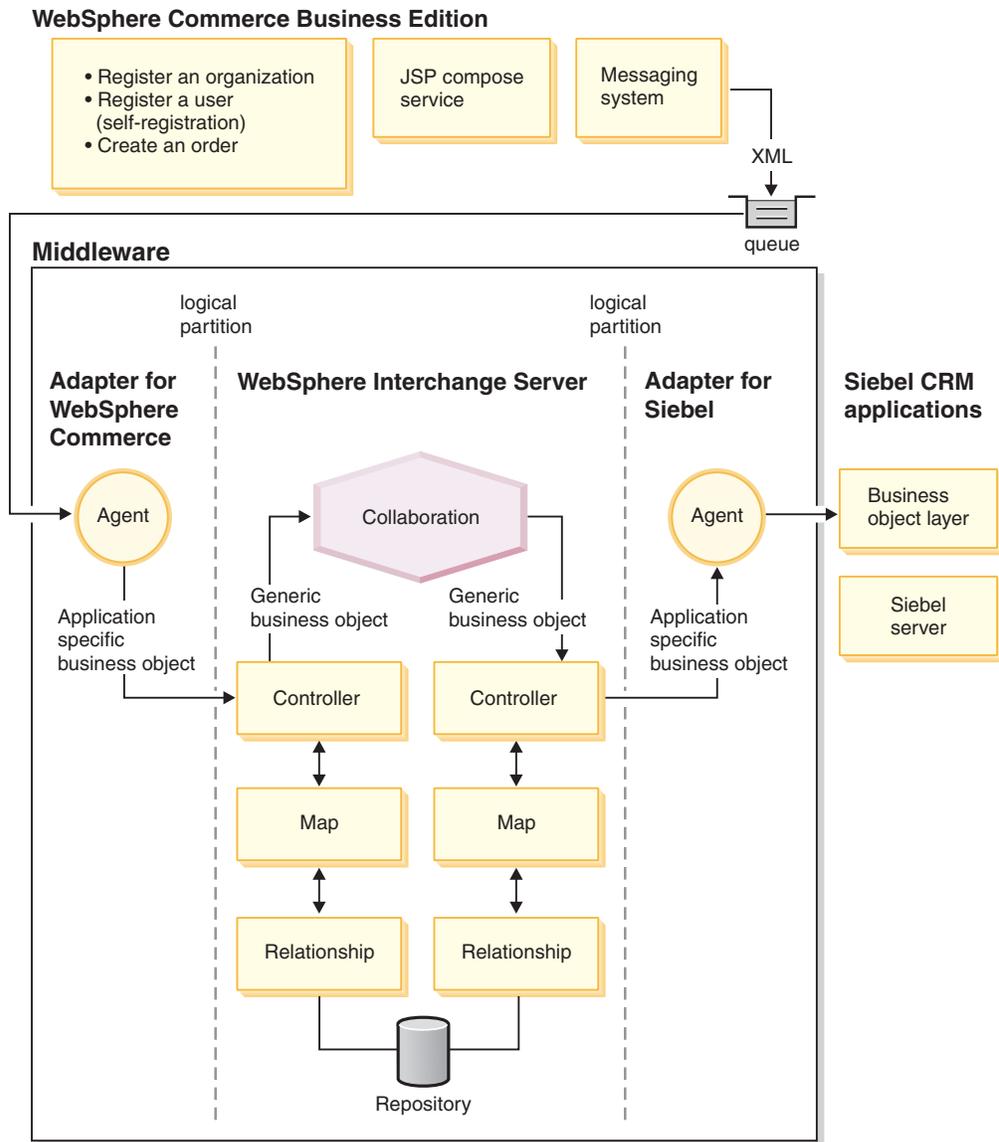


Figure 1. Outbound message flow

2. The adapter for WebSphere Commerce constantly polls for new messages in its input queue, which it passes to the WebSphere Commerce connector controller.
3. The WebSphere Commerce connector controller receives the WebSphere Commerce specific business object from the XML data handlers and invokes the maps that are bound to generate the generic business objects.
4. The generic business objects are passed to the corresponding collaboration object, which processes them.
5. The processed generic business objects are sent to the adapter for Siebel, which uses the maps to create Siebel specific business objects and passes them to the adapter for Siebel in Siebel specific format.
6. The adapter for Siebel sends the message to the Siebel system, to create the order.

Receiving a request from Siebel

WebSphere Commerce supports processing message requests to invoke certain business logic. This reference application uses the message mapping templates to invoke business logic or commands for messages sent from Siebel.

During events such as creating a contact or an account in Siebel, you can configure Siebel to generate messages that will update WebSphere Commerce. The following figure describes the inbound message flow:

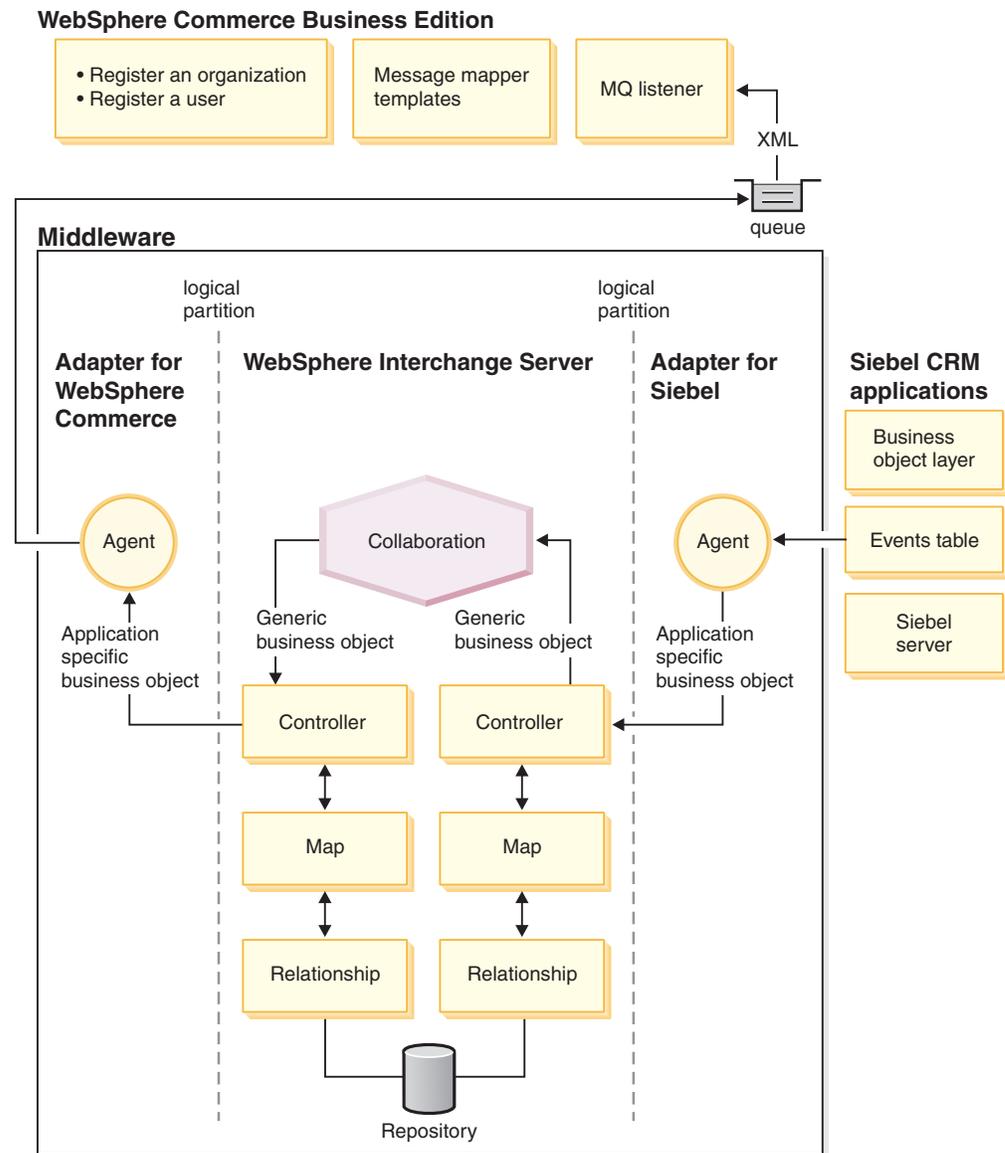


Figure 2. Inbound message flow to WebSphere Commerce

The scenarios described provide the following functionality inbound to WebSphere Commerce:

- Creating an account from Siebel
- Creating a contact from Siebel

In this reference application, when an account is created in Siebel, it can be configured such that the account related information is sent to WebSphere Commerce. The information is sent through a Siebel business object from Siebel to the WebSphere InterChange Server. The WebSphere InterChange Server processes this Siebel business object and sends it to WebSphere Commerce through the WBI adapters.

When you create an account in Siebel:

1. The WBI adapter for Siebel agent polls for the account created, retrieves the data and forwards it to the Siebel connector controller as shown in Figure 2 on page 9.
2. The Siebel connector controller receives the message and invokes the maps to convert the Siebel business objects to generic business objects that the collaboration object processes.
3. The collaboration object sends the processed generic business objects to the WebSphere Commerce connector controller.
4. The WebSphere Commerce connector controller then passes the application specific business objects to the adapter for WebSphere Commerce, which in turn sends the corresponding XML message to WebSphere Commerce.

Chapter 4. Entity mapping

This section describes how the entities in WebSphere Commerce and Siebel are mapped. To integrate WebSphere Commerce with Siebel you must identify the data elements that need to be synchronized and map the WebSphere Commerce entities to the corresponding Siebel entities. The mapping provided in this reference application are sample mappings that you can customize to suit your requirements.

For more information on Siebel integration, refer to the Siebel EAI Guide.

Mapping organizations and customers

The WebSphere Commerce member subsystem stores data for participants of the WebSphere Commerce system. A member can be a user, a group of users (also known as a member group), or an organizational entity (which can be an organization, such as "IBM" or an organizational unit within an organization, such as "Electronic Commerce Division"). Business logic in the member subsystem provides member registration and profile management services. Other services which are closely related to the member subsystem include access control, authentication, and session management.

The member subsystem allows its organizational entity members to be stored in a hierarchal manner. This means that a user will belong to an organization or an organization unit. An organization unit will belong to an organization.

The following features are associated with the member subsystem:

- Registration information
- Profile management
- Access control or authorization
- Security, authentication, and session management

The business processes in the member subsystem that apply to this reference application are:

1. A customer registers with a store.
2. An administrator registers an organization or an organization unit.

Mapping WebSphere Commerce entities with Siebel

The Siebel system defines three types of users:

1. Customers
2. Employees
3. Partners

Customers are stored as contacts and accounts in the Siebel system. Contacts are individuals with whom a company does business or expects to do business in future. A contact is related to one or many accounts and vice versa.

An account represents the relationship between a company and the companies or individuals with whom it conducts business. An account can be a company representing a customer, a prospective customer, a partner, a supplier, or a competitor.

Organization

An organization created in WebSphere Commerce is registered as an account in the Siebel system.

Customer

A customer created in WebSphere Commerce is registered as a contact in the Siebel system.

Mapping the registration process

This section describes how the organization registration and the user registration processes are mapped between WebSphere Commerce and Siebel. When an organization is registered in WebSphere Commerce, the organization create new message is sent to Siebel and a corresponding account is created in the Siebel system.

Similarly, when a customer is registered in WebSphere Commerce, the customer new message is sent to Siebel and a contact which has a relationship with the parent organization (account) is created in Siebel. If the registered customer is a B2C customer, which means that the customer does not have any organization information, then a contact without account information is created in Siebel.

Mapping the order entities

The Order management subsystem provides end-to-end visibility to merchants and customers of the current state of an order and its components. It provides many business processes like end-to-end order process, process back orders, manage returns, manage inventory, manage orders, manage payments, and others. For a detailed description of these business processes, refer to the WebSphere Commerce information center.

In this scenario, the WebSphere Commerce OrderCreate functionality is mapped to the OrderCreate functionality in Siebel. As a result, when an order is created in WebSphere Commerce, the order information is sent to the Siebel system to create an order in Siebel.

A WebSphere Commerce order consists of one or more line items. Similarly, the line items are created in Siebel.

Mapping the RFQ entities

A WebSphere Commerce RFQ consists of one or more line items. Similarly, the line items are created in a Siebel quote.

Chapter 5. Installing and configuring

To enable the integration discussed in this reference application, you must perform the following activities:

- Install and configure WebSphere Commerce Business Edition
- Install and configure WebSphere MQ
- Configure the WebSphere Commerce messaging system
- Configure the Siebel system
- Synchronize product data between WebSphere Commerce and Siebel
- Install and configure the WebSphere InterChange Server

Sample topology

Before you begin your installation you must decide on the hardware topology for this reference application. Table 1 contains the sample topology used for this reference application. The instructions in the following chapters are based on this sample topology.

Table 1. Sample topology

Machine 1	Machine 2	Machine 3
WebSphere Commerce 5.6 Business Edition	WebSphere InterChange Server 4.2.2	Siebel server 7.5.2
WebSphere MQ 5.3	WebSphere MQ 5.3	
	WebSphere Business Integration Adapter for WebSphere Commerce 2.4.0	
	WebSphere Business Integration Adapter for Siebel 4.2	

Installing and configuring WebSphere Commerce

Install WebSphere Commerce 5.6, Business Edition. Refer to the *WebSphere Commerce Installation Guide* for the installation instructions and the post-install configuration. Do the following to configure WebSphere Commerce for this reference application:

1. Run the RegistryUpdate.sql script file provided in the WC56SiebelWBI.zip file from a DB2[®] command window. This SQL script file updates the command registry and message type tables in your WebSphere Commerce database. For the changes to take effect, refresh the WebSphere Commerce registry for view commands and URL commands.
2. From `WAS_installdir\installedApps\cell_name\WC_instance_name.ear` locate the `WebSphereCommerceServerExtensionsLogic.jar` file and make a backup copy of this file.
3. Add the following class files from `WC56SiebelWBI.zip` to `WAS_installdir\installedApps\cell_name\WC_instance_name.ear\WebSphereCommerceServerExtensionsLogic.jar`:
 - `ExtendedPostOrgEntityAddCmdImpl.class`
 - `ExtendedPostUserRegistrationAddCmdImpl.class`

- WrapperOrgEntityAddCmdImpl.class
- WrapperUserRegistrationAdminAddCmdImpl.class

For more information about the class files, refer to “Appendix F. New commands and JSP files” on page 49.

4. Copy the following JSP files from the WC56SiebelWBI.zip file to `WAS_installdir\installedApps\cell_name\WC_instance_name\Stores.war\` directory:

Note: Create a backup copy of the existing `RFQSubmitMessage.jsp` file.

- OrgEntityMessageCreate.jsp
- CustomerMessageCreate.jsp
- RFQSubmitMessage.jsp

Where, *instance_name* is the name of the WebSphere Commerce instance in your installation.

5. Copy the following files from the WC56SiebelWBI.zip file to `WC_installdir\xml\messaging:`

- user_template.xml
- Create_WCS_Organization_20.dtd

If the existing `user_template.xml` file contains mapping templates, then add the contents of the `user_template.xml` file from WC56SiebelWBI.zip to your current file.

For more information on the `user_template.xml` file refer to the WebSphere Commerce messaging system documentation in the WebSphere Commerce Developer Edition information center.

6. Open `sys_template.xml` and locate the following:

```
<TemplateDocument>
  <DocumentType
    version='2.0'>Create_WCS_Customer</DocumentType>
  <StartElement>Create_WCS_Customer</StartElement>
  <TemplateTagName>CustomerAdd20Map</TemplateTagName>
  <CommandMapping>
    <Command CommandName='UserRegistrationAdd'>
      <Constant Field='URL'></Constant>
    </Command>
  </CommandMapping>
</TemplateDocument>
```

- a. Change `<Command CommandName='UserRegistrationAdd'>` to `<Command CommandName='UserRegistrationAdminAdd'>`.
- b. Change `<Constant Field='URL'></Constant>` to `<Constant Field='URL'>UserCreateXMLFormatView</Constant>`.
- c. Search for `<TemplateTagName='CustomerAdd20Map'>`. Add the following line just before `</TemplateTagName>`:

```
<Tag XPath='DataArea/Customer/UserData/UserDataField[1]' />
```

Ensure that the new element added appears between `<Tag XPath='DataArea/Customer/UserData/UserDataField'`
`XPathType='USERDATA' />` and `</TemplateTag>`

When a new user is registered for a particular buyer organization, the user must be approved. This reference application uses the `UserRegistrationAdminAddCmd` command, which approves the user automatically. Alternatively, you can customize the `UserRegistrationAddCmd` command to trigger an event as part of registration process to notify an approver of the registered user.

Configure the WebSphere Commerce messaging system after you complete installing and configuring WebSphere MQ. For more information see, "Configuring the WebSphere Commerce messaging system" on page 16.

Installing and configuring WebSphere MQ

Install WebSphere MQ 5.3 using the documentation provided with the WebSphere MQ product.

To configure WebSphere MQ to work with WebSphere Commerce, WebSphere Commerce requires a queue manager and a minimum of five queues for integration. The five queues include:

Table 2. Queues

Queue	Queue description
Error	Default error queue. Collects erratic inbound messages.
Inbound	Used by SendReceiveImmediate mode of the adapter for WebSphere MQ.
Parallel inbound	Any message that arrives at this queue will be processed in parallel manner.
Serial inbound	Any message that arrives at this queue will be processed in serial manner based on first-in-first-out.
Outbound	Used for WebSphere Commerce initiated outbound messages and reply messages from WebSphere Commerce.

This reference application uses the following:

- A queue manager
- Serial inbound queue
- Outbound queue

For instructions on creating a queue manager and queues, refer to the WebSphere MQ documentation.

For the sample topology provided, your outbound queue must be created as a remote queue to enable communication with the remote WebSphere InterChange Server.

The serial inbound queue must be created as a local queue to receive messages from the WebSphere InterChange Server.

Similarly, you must create a queue manager and queues for the WebSphere InterChange Server. The queues required on Machine 2 to communicate with the WebSphere Commerce messaging system components are:

- A local queue definition for processing the messages coming from the WebSphere Commerce system.
- A remote queue definition that will be mapped to the WebSphere Commerce serial inbound queue. This queue will send messages to the WebSphere Commerce system.

The following table shows how the queues must be mapped between WebSphere Commerce and WebSphere InterChange Server:

Table 3. Mapping queues

WebSphere Commerce	WebSphere InterChange Server
Outbound queue (remote queue)	ICS_Inbound queue (local queue)
Serial inbound queue (local queue)	ICS_Outbound queue (remote queue)

After you create the queues, follow the instructions given in the WebSphere MQ section from the *WebSphere Commerce Additional Software Guide* to complete the other configuration tasks. The instructions include information on how to use WebSphere Commerce and WebSphere Application Server with WebSphere MQ.

Additionally, you need to create MQ channels for communication between the two WebSphere MQ servers. For more information refer to WebSphere MQ documentation on inter-communication.

Channels are used to communicate between the queue managers of the two WebSphere MQ servers. Refer to WebSphere MQ documentation on how to create channels.

Create the sender and receiver channels for communication between the WebSphere MQ servers on the WebSphere InterChange Server and the WebSphere Commerce systems using WebSphere MQ Explorer.

The name of the sender channel in the WebSphere InterChange Server must be identical to the name of the receiver channel in WebSphere Commerce. The name of the receiver channel in the WebSphere InterChange Server must be identical to the name of the sender channel in WebSphere Commerce.

You have now enabled WebSphere MQ to communicate between WebSphere Commerce, and WebSphere InterChange Server.

Configuring the WebSphere Commerce messaging system

Do the following to configure the WebSphere Commerce messaging system:

1. Ensure that you have completed the steps in “Installing and configuring WebSphere MQ” on page 15.
2. Log into the WebSphere Commerce Administration Console as a Site Administrator and do the following:
 - a. From the **Configuration** menu select **Transports**.
 - b. Change the status of WebSphere MQ to Active.
 - c. From the **Configuration** menu select **Message Types**.
 - d. In the Message Type Configuration page select **New**.
 - e. Complete the following in the Message Transport Assignment page:
 - 1) Select the **OrganizationCreateXMLMessage** Message Type from the drop down list.
 - 2) Type zero as the Message Severity.
 - 3) Select **WebSphere MQ** from the Transport list.
 - 4) Select the **Standard Device Format**.
 - 5) Click **Next**. Retain the default values and click **Finish**.
 - f. Repeat steps d and e for the CustomerCreateXMLMessage and RFQ SubmitNotification messages.

Note: For the RFQ SubmitNotification message, by default, the message is associated with an e-mail transport. Change this to the WebSphere MQ transport.

3. Complete the following tasks in the Configuration Manager:
 - a. Register the Create_WCS_Organization_20.dtd file with the Configuration Manager:
 - 1) Open the Configuration Manager.
 - 2) From the Instance list in the left frame select your WebSphere Commerce instance.
 - 3) In the Instance Properties folder select **Messaging**.
 - 4) In the right frame add the Create_WCS_Organization_20.dtd file to the list of Inbound Message DTD Files.
 - 5) Click **Apply**.
 - b. Enable the WebSphere MQ listener:
 - 1) From the Configuration Manager select *Host name* ⇒ **Instance**, then open the **Components** folder.
 - 2) Select **Transport Adapter** (WebSphere MQ listener).
 - 3) Ensure that the check box next to **Enable Component** is enabled and click **Apply**.
 - c. Exit the Configuration Manager.
4. Restart the WebSphere Commerce server instance for the changes to take effect.

Loading product data

To synchronize master data between WebSphere Commerce and Siebel, you can use catalog management utilities like the XMLTransformer, IdResolver, and Loader Package that WebSphere Commerce provides. For more information refer to the WebSphere Commerce Loader package documentation available in the WebSphere Commerce Developer Edition information center.

To load the files onto WebSphere Commerce, do the following:

1. Extract the master data from Siebel into an XML file.
2. Transform the data to an XML as expected by the catalog management utilities.
3. Resolve the XML for all primary key constraints and upload the XML file to WebSphere Commerce.

Extracting product data from Siebel

Siebel provides standard business services to represent the integration object as an XML. This makes it convenient to either save an object to a file, or to send it over a transport such as HTTP or MQ. To write an XML message to a file use the standard business service available in Siebel. For details, refer to the Siebel EAI Guide.

Extracting product data from a Siebel system involves creating an integration object that represents the Siebel business object for product and price. Use the standard business services available to convert the product and price data in XML message format and write it to a file that WebSphere Commerce can use.

Loading data in WebSphere Commerce

Before loading data in WebSphere Commerce, you must write transformation scripts that will read the data extracted from Siebel system and transform into

another XML message format that is expected by the WebSphere Commerce catalog management utilities. For more information on WebSphere Commerce XML message format, XML transformation, ID Resolution of keys, and loading data refer to the WebSphere Commerce Developer Edition information center.

The Loader script creates new products and prices in the WebSphere Commerce database. Some of the information required includes product name, product description, price, and so on. In addition, you will also need to provide other details that the WebSphere Commerce catalog system expects but is not provided by the Siebel system. This includes the store identifier, trading position, and other information. For details on catalog entries and pricing related XML constructs, refer to the sections, "Managing catalog assets" and "Creating pricing assets" available in the WebSphere Commerce Developer Edition information center.

Configuring the Siebel system

This section covers the configuration required in the Siebel system for this reference application. Typically, a Siebel consultant configures the various settings. The information provided here is a quick reference to the different configurations required.

You must configure the Siebel system to communicate with the WBI Adapter for Siebel. This adapter sends and receives requests to and from the WBI Adapter for WebSphere Commerce through the WebSphere InterChange Server collaborations.

The adapter for Siebel polls for events by querying the EVENT table in the Siebel system, and sends requests using the Siebel business objects to process the request. For more information on how the WBI Adapter works with the Siebel system, refer to the *IBM WebSphere Business Integration Adapters Adapter for Siebel eBusiness Applications User Guide Version 4.2.x*.

This reference application supports both, requests sent to Siebel and processing the events notified by Siebel. Configure the Siebel system as described in the *IBM WebSphere Business Integration Adapters Adapter for Siebel eBusiness Applications User Guide Version 4.2.x* to enable this communication.

Installing and configuring the WebSphere InterChange Server

To install and configure the WebSphere InterChange Server, refer to the *WebSphere InterChange Server System Installation Guide for Windows* provided with the product. Additionally, install the following:

- WebSphere Adapter Framework 2.3
- WebSphere Commerce connector agent
- Siebel connector agent

Loading and deploying the assets

From WC56SiebelWBI.zip extract the contents of SiebelRefApp_WBI_Assets.zip into *WICS_installdir\my_extract*. This creates two folders called Users and System that contain the components for this reference application. Load the components on to the WebSphere Studio Application Developer Workbench using the System Manager perspective.

1. Open the System Manager perspective in the WebSphere Studio workbench.
2. Expand **User Projects**, select **InterChange Server Project** and right-click **Import Solution**.

3. From the Import Solution window, browse and select *WICS_install\dir\my_extract* directory. This creates the following assets:
 - a. In the InterChange Server Project folder:
 - SiebelRefApp_UserProj
 - b. In the Integration Component Library:
 - SiebelRefApp

Generating Siebel application specific business objects

You must load the Siebel application specific business objects from your Siebel System. Use the Siebel Object Discovery Agent (ODA) to generate the Siebel application specific business objects. Refer to the Siebel connector documentation on how to use Siebel ODA.

The following Siebel business objects are referenced in the solution:

- Generate a business object corresponding to an account in Siebel
- Generate a business object corresponding to a contact in Siebel
- Generate a business object corresponding to an order in Siebel
- Generate a business object corresponding to a quote in Siebel

In the Siebel ODA wizard, there is an option to save the generated application specific business objects as a XSD file. Follow the on screen instruction to save the Siebel application specific business objects in your file system. The instruction to load the saved Siebel application specific business objects in the WebSphere InterChange Server system manager is described in “Loading Siebel application specific business objects” on page 20.

Generating collaboration templates

This reference application requires the following collaboration templates:

- CustomerSync_WCS_To_SIEBEL
 - CustomerSync_SIEBEL_To_WCS
 - OrganizationSync_WCS_To_SIEBEL
 - OrganizationSync_SIEBEL_To_WCS
 - RequestForQuoteSync_WCS_To_Siebel
 - SalesOrderProcessing
1. Do the following to create the collaboration templates:
 - a. Expand the **SiebelRefApp** folder and navigate to the Collaboration Template folder.
 - b. Paste the CustomerSync collaboration template that you copied.
 2. Do the following to create the CustomerSync_WCS_To_SIEBEL collaboration template:
 - a. Edit the prebuilt CustomerSync collaboration in the process designer tool.
 - b. **Save as** CustomerSync_WCS_To_SIEBEL.
 - c. Follow the instructions in the *Instruction_CustomerSync_WCS_To_SIEBEL.txt* file provided in the *WC56SiebelWBI.zip* file.
 3. Do the following to create the CustomerSync_SIEBEL_To_WCS collaboration template:
 - a. Edit the prebuilt CustomerSync collaboration in the process designer tool.
 - b. **Save as** CustomerSync_SIEBEL_To_WCS.

- c. Follow the instructions in the Instruction_CustomerSync_SIEBEL_To_WCS.txt file provided in the WC56SiebelWBI.zip file.
4. Do the following to create the OrganizationSync_WCS_To_SIEBEL collaboration template:
 - a. Edit the prebuilt CustomerSync collaboration in the process designer tool.
 - b. **Save as** OrganizationSync_WCS_To_SIEBEL.
 - c. Follow the instructions in the Instruction_OrganizationSync_WCS_To_SIEBEL.txt file provided in the WC56SiebelWBI.zip file.
5. Do the following to create the OrganizationSync_SIEBEL_To_WCS collaboration template:
 - a. Edit the prebuilt CustomerSync collaboration in the process designer tool.
 - b. **Save as** OrganizationSync_SIEBEL_To_WCS.
 - c. Follow the instructions in the Instruction_OrganizationSync_SIEBEL_To_WCS.txt file provided in the WC56SiebelWBI.zip file.
6. Do the following to create the RequestForQuoteSync_WCS_To_Siebel collaboration template:
 - a. Edit the CollaborationFoundation template in the process designer tool.
 - b. **Save as** RequestForQuoteSync_WCS_To_Siebel.
 - c. Follow the instructions in the Instruction_RequestForQuoteSync_WCS_To_Siebel.txt file provided in the WC56SiebelWBI.zip file.

Configuring the database connection pool: To configure the database connection pool:

1. In the SiebelRefApp folder locate the **DatabaseConnectionPool** folder and do the following:
 - a. If the WebSphere InterChange Server repository database that you are using is named ICSREPOS, then go to step c.
 - b. If the WebSphere InterChange Server repository database that you are using is not named ICSREPOS, then create a database connection pool named LOOK_UP_CONN_POOL. For more information refer to the *WebSphere InterChange Server System Administration Guide*.

Note: The name of the LOOK_UP_CONN_POOL connection pool is case sensitive.

2. Change the **Login** and **Password** to match the login and password of the WebSphere InterChange Server database repository.

Loading Siebel application specific business objects

Loading the Siebel application specific business objects involves:

1. Open the System Manager perspective in WebSphere Studio workbench.
2. From the System Manger menu select **Tools⇒BusinessObject Designer**.
3. The Business Object Designer opens and the New Business Object window displays. Click **Cancel**
4. From the Business Object Designer menu select **File⇒Open From File**. The Import Business Object(s) from File(s) window displays.
5. Select **SiebelRefApp** from the To Project drop down list.

6. 7. Open the *top_level.xsd*, where *top_level.xsd* is the Top_Level business object corresponding to a Siebel contact, which is generated and stored in the file system. See, “Generating Siebel application specific business objects” on page 19 for more information.
7. Repeat steps 1 to 6 for the following:
 - Account
 - Order
 - Quote

Modifying the relationship component

In the System Manager, from the SiebelRefApp folder, locate the Relationship folder and do the following:

1. From the Relationship folder expand the **Dynamic** folder. This folder contains the following relationship definitions:
 - CustLkUp
 - OrgDNLp
 - OrgLkUp

Note: For more information on the relationships, see “WebSphere InterChange Server relationships” on page 26.

2. Right-click the **CustLkUp** relationship definition and select **edit-definition**. The Relationship Designer displays.
3. In the Relationship Designer right-click the **CustLkUp** relationship definition and select the **Advanced Settings** menu. The Advanced Settings window for the CustLkUp relationship definition opens.
4. Change the DBMS settings to suit your environment.

Repeat steps 2, 3, and 4 to configure the OrgDNLp and OrgLkUp relationship definitions.

CustLkUp relationship: Configure the CustLkUp relationship. In the Integration Component Libraries tree view, do the following:

1. Expand and navigate to **SiebelRefApp_WC56⇒Relationships⇒Dynamic**.
2. Select and double click the **CustLkUp** relationship. The CustLkUp relationship opens in the Relationship Designer tool.

Note: Irrespective of the relationship that you select, all the defined relations are located in the relationship designer tool.

3. Expand the **CustLkUp** relationship; the following relationship participants display:
 - a. CWCust
 - b. SblCnID
 - c. WCCustID
4. Expand the **SblCnID** participant. The **Siebel_Contact_Sample** displays and must be changed to a Siebel contact business object, which you have generated in the “Generating Siebel application specific business objects” on page 19 section.
5. Right click the **SblCnID** participant. Select **Delete**.
6. Select and right click the **CustLkUp** relationship. Select **Add Participant Definition**.
7. Name the new participant SblCnID.

8. Select and right click the **SblCnID** participant created in the previous step. Select **Participant Type** from the menu. This opens a Participant Type window that lists all the business objects available.
9. Select and expand the Siebel business object corresponding to the Siebel contact. Drag and drop the business object over SblCnID.
10. Navigate and select the **Key Identifier Field**. Drag and drop it over the name of the business object in the previous step.
11. Select and right click the **SblCnID** participant. Select **Advanced Settings** from the menu.
12. Two frames will appear with the following names
 - a. storage setting
 - b. stored procedure settings
13. Provide CustLkUp_SblCnID_T as the Table name.
14. Provide CustLkUp_SblCnID_SP as the stored procedure name. Click **OK**.
15. Select **SblCnID** and navigate to **SblCnID⇒siebel contact bo⇒Key Identifier Field**. Right click and select **Advanced Settings**.
16. Provide the name of the selected Key Identifier Field in the Attribute column Name field.
17. Select **CustLkUp** and click **Save**.

OrgDNLp relationship: Configure the OrgDNLp relationship. In the Integration Component Libraries tree view, do the following:

1. Expand and navigate to **SiebelRefApp_WC56⇒Relationships⇒Dynamic**.
2. Select and double click the **OrgDNLp** relationship. The OrgDNLp relationship opens in the Relationship Designer tool.

Note: Irrespective of the relationship that you select, all the defined relations are located in the relationship designer tool.

3. Expand the **OrgDNLp** relationship; the following relationship participants display:
 - a. CWOrgDN
 - b. SblIntId
 - c. WCOrgDN
4. Expand the **SblIntId** participant. The *Siebel_Account_Sample* displays and must be changed to a Siebel account business object, which you have generated in the “Generating Siebel application specific business objects” on page 19 section.
5. Right click the **SblIntId** participant. Select **Delete**.
6. Select and right click the **OrgDNLp** relationship. Select **Add Participant Definition**.
7. Name the new participant SblIntId.
8. Select and right click the **SblIntId** participant created in the previous step. Select **Participant Type** from the menu. This opens a Participant Type window that lists all the business objects available.
9. Select and expand the Siebel business object corresponding to the Siebel account. Drag and drop the business object over SblIntId.
10. Navigate and select the **Integration Key Identifier Field**. Drag and drop it over the name of the business object in the previous step.
11. Select and right click the **SblIntId** participant. Select **Advanced Settings** from the menu.

12. Two frames will appear with the following names
 - a. storage setting
 - b. stored procedure settings
13. Provide OrgDNLp_SblIntId_T as the Table name.
14. Provide OrgDNLp_SblIntId_SP as the stored procedure name. Click **OK**.
15. Select **SblIntId** and navigate to **SblIntId⇒siebel account bo⇒Integration Key Identifier Field**. Right click and select **Advanced Settings**.
16. Provide the name of the selected Integration Key Identifier Field in the Attribute column Name field.
17. Select **OrgDNLp** and click **Save**.

OrgLkUp relationship: Configure the OrgLkUp relationship. In the Integration Component Libraries tree view, do the following:

1. Expand and navigate to **SiebelRefApp_WC56⇒Relationships⇒Dynamic**.
2. Select and double click the **OrgLkUp** relationship. The OrgLkUp relationship opens in the Relationship Designer tool.

Note: Irrespective of the relationship that you select, all the defined relations are located in the relationship designer tool.

3. Expand the **OrgLkUp** relationship; the following relationship participants display:
 - a. CWOrgID
 - b. SblAcID
 - c. WCOrgID
4. Expand the **SblAcID** participant. The *Siebel_Account_Sample* displays and must be changed to a Siebel account business object, which you have generated in the “Generating Siebel application specific business objects” on page 19 section.
5. Right click the **SblAcID** participant. Select **Delete**.
6. Select and right click the **OrgLkUp** relationship. Select **Add Participant Definition**.
7. Name the new participant SblIntId.
8. Select and right click the **SblAcID** participant created in the previous step. Select **Participant Type** from the menu. This open a Participant Type window that lists all the business objects available.
9. Select and expand the Siebel business object corresponding to the Siebel account. Drag and drop the business object over SblAcID.
10. Navigate and select the **Key Identifier Field**. Drag and drop it over the name of the business object in the previous step.
11. Select and right click the **SblAcID** participant. Select **Advanced Settings** from the menu.
12. Two frames will display with the following names:
 - a. storage setting
 - b. stored procedure settings
13. Provide OrgLkUp_SblAcID_T as the Table name.
14. Provide OrgLkUp_SblAcID_SP as the stored procedure name. Click **OK**.
15. Select **SblAcID** and navigate to **SblAcID⇒siebel account bo⇒Key Identifier Field**. Right click and select **Advanced Settings**.

16. Provide the name of the selected Key Identifier Field in the Attribute column Name field.
17. Select **OrgLkUp** and click **Save**.

Developing the map component

For message synchronization, the maps to convert WebSphere Commerce application specific business objects to generic business objects and vice versa are provided in the WC56SiebelWBI.zip file. These maps use the relationship components. Similarly, you must build the maps to convert Siebel application specific business objects to generic business objects and vice versa. You need to build the following maps:

Table 4. Maps required to convert Siebel application specific business objects to generic business objects

Name of the map	Integration message
GBO_CustomerCreate_From_SIEBEL	For customer synchronization from Siebel to WebSphere Commerce
GBO_OrganizationCreate_From_SIEBEL	For organization synchronization from Siebel to WebSphere Commerce

Table 5. Maps required to convert generic business objects to Siebel application specific business objects

Name of the map	Integration message
GBO_CustomerCreate_To_SIEBEL	For customer synchronization from WebSphere Commerce to Siebel
GBO_OrganizationCreate_To_SIEBEL	For organization synchronization from WebSphere Commerce to Siebel
GBO_OrderCreate_To_SIEBEL	For order synchronization from WebSphere Commerce to Siebel
GBO_RFQ_To_Siebel	For quote synchronization from WebSphere Commerce to Siebel

Loading the generic business objects and connector

Import the generic business objects and connector components from the WebSphere InterChange Server instance to the SiebelRefApp folder:

1. Right click the **SiebelRefApp** folder.
2. Select **Components**. The wizard displays.
3. Select the following components from the WebSphere InterChange Server instance:

Table 6. Importing the WebSphere InterChange Server instance components

Component	Asset
Connectors	SiebelConnector, WebSphereCommerce Connector, PortConnector
Business objects (Generic business objects)	Order, Item, Customer, Contact, CustomerPartner, MO_DataHandler_Default

Note: Ensure that you select the Deep option when importing the components.

Compiling and deploying

This section assumes that you have completed building all the maps as described in the “Developing the map component” on page 24 section.

1. Compile the maps:
 - a. Expand the **Integration Component Libraries**.
 - b. Select **SiebelRefApp⇒Maps**.
 - c. Right click the **Maps** folder and select **Compile All**. This compiles all the maps required for this reference application.
2. Specify the Supported Business Objects and Associated maps properties for the adapter for WebSphere Commerce. For more information, see “Configuring the WebSphere Business Integration Adapter for WebSphere Commerce” on page 28.
3. Specify the details for the Standard and Connector specific properties. Refer to the *Guide to the IBM WebSphere Business Integration Adapter for WebSphere Commerce*
4. Specify the Supported Business Objects and Associated maps properties for the adapter for Siebel. For more information, see “Configuring the WebSphere Business Integration Adapter for Siebel” on page 29.
5. Specify the details for the Standard and Connector specific properties. Refer to the *Guide to the IBM WebSphere Business Integration Adapter for Siebel eBusiness Application User Guide, Version 4.2.x*.
6. For the port connector, specify only the Supported Business Objects. See “Appendix B. Application specific business objects” on page 39, for the list of generic business objects to be specified for the port connector.
7. Configure the ConfigurationMetaObject. See, “Configuring the ConfigurationMetaObject” on page 28.
8. To check if all the ports in the collaboration object are bound correctly to the appropriate connectors, see “Appendix C. Collaboration objects and ports” on page 41.
9. Update the SiebelRefApp_UserProj
 - a. Select **User Projects⇒Interchange Server Projects⇒SiebelRefApp_UserProj**
 - b. Right click and select **Update Project**.
 - c. Click **Finish**.
 - d. A message stating that the *business_object* already exists and would you like to replace it appears. Click **Yes to ALL**.
10. Deploy the delivered assets:
 - a. Ensure that the server is running.
 - b. In the InterChange Server Component Management window expand the **InterChange Server Instances** and select your server.
 - c. Right click and select **Connect**.
 - d. Select **UserProject⇒InterChange Server Project⇒SiebelRefApp_UserProj**.
 - e. Right click **SiebelRefApp_UserProj** and select **Deploy User Project**.
 - f. From the Deploy wizard select the Destination Server from the drop down list:
 - Deploy the business objects:
 - 1) Expand **SiebelRefApp_UserProj**.
 - 2) Select the check box corresponding to Business Object and click **Finish**.

- Deploy the maps:
 - 1) Complete steps 10d and 10e.
 - 2) Expand **SiebelRefApp_UserProj**.
 - 3) Select the check box corresponding to **Maps** and click **Finish**.
 - Deploy the connectors:
 - 1) Complete steps 10d and 10e.
 - 2) Expand **SiebelRefApp_UserProj**.
 - 3) Select the check box corresponding to **Connectors** and click **Finish**.
 - Deploy the collaboration objects:
 - 1) Complete steps 10d and 10e.
 - 2) Expand **SiebelRefApp_UserProj**.
 - 3) Select the check box corresponding to **Collaboration Objects** and click **Finish**.
11. In the InterChange Server Components window do the following:
- a. From the InterChange Server Instances tree select the server on which you deployed the assets.
 - b. Expand the server and right click the **Maps**
 - c. Invoke the **Compile All** option. This displays the Maps compiled successfully message in the System Manager Console.

WebSphere InterChange Server relationships

Relationships are used to maintain the cross references between entities, across applications. For example, an organization in WebSphere Commerce is an account in Siebel and a customer in WebSphere Commerce is a contact in Siebel. This reference application uses the following relationships:

1. CustLkUp
2. OrgDNLp
3. OrgLkUp

Note: All three relationships are of 'SimpleIdentityRelationship' type.

CustLkUp

This relationship maintains the cross reference between the WebSphere Commerce customer and the Siebel contact. The key in this relationship is:

- Logon ID — When a customer is created in WebSphere Commerce.
- e-mail ID field — When a contact is created in Siebel.

The participants in this relationship are:

Table 7. Participants in the CustLkUp relationship

Participant	Description
WCS_Create_WCS_Customer	Application Specific business object
Customer	Generic business object
Siebel_Contact_Sample	Application Specific business object

After loading the relationship in the System Manager, change the participant definition provided for the CustLkUp relationship. Replace Siebel_Contact_Sample with the Siebel application specific business object corresponding to a contact. See, "Generating Siebel application specific business objects" on page 19 for more information.

OrgDNLP

This relationship maintains the cross reference between the WebSphere Commerce organization's Distinguished Name (DN) and the Siebel account unique identifier.

A customer created in WebSphere Commerce must be associated with an organization. This means that the organization and customer share a parent child relationship. This relationship is used when customer creation is initiated from Siebel to WebSphere Commerce. In Siebel, a contact need not be associated with an account. But in WebSphere Commerce a customer must be associated with an organization. This relationship contains the Siebel account unique identifier and the corresponding WebSphere Commerce organization DN.

Note: In case of a B2C customer, the relationship will be with the WebSphere Commerce default organization.

The WebSphere InterChange server collaboration uses this relationship during runtime to maintain the organization and customer association in WebSphere Commerce. To associate a customer with an organization in WebSphere Commerce you must specify one of the following:

- The DN of an organization
- The encrypted form of the Organization Id

This relationship contains the DN of the organization in WebSphere Commerce and the Siebel account unique identifier. The participants in this relationship are:

Table 8. Participants in the OrgDNLP relationship

Participant	Description
WCS_Create_WCS_Organization	Application Specific business object
Organization	Generic business object
Siebel_Account_Sample	Application Specific business object

After loading the relationship in the System Manager, change the participant definition provided for the of the OrgDNLP relationship. Replace Siebel_Account_Sample with the Siebel application specific business object corresponding to an account. See, "Generating Siebel application specific business objects" on page 19 for more information.

OrgLkUp

This relationship maintains the cross reference between the WebSphere Commerce organization's orgentityId and the Siebel account unique identifier.

A customer created in WebSphere Commerce must be associated with an organization. This means that the organization and customer share a parent child relationship.

This relationship is used when customer creation is initiated from WebSphere Commerce to Siebel. In Siebel, a contact does not have to be associated with an account. But this reference application requires a parent child relationship to be maintained in Siebel. The WebSphere InterChange server collaboration uses this relationship during runtime to maintain the account and contact association in Siebel. To associate a contact with an account in Siebel you must know the unique identifier of the account. The participants in this relationship are:

Table 9. Participants in the OrgLkUp relationship

Participant	Description
WCS_Create_WCS_Organization	Application specific business object
Organization	Generic business object
Siebel_Account_Sample	Application specific business object

After loading the relationship in the System Manager, change the participant definition provided for the of the OrgLkUp relationship. Replace Siebel_Account_Sample with the Siebel application specific business object corresponding to an account. See, “Generating Siebel application specific business objects” on page 19 for more information.

Configuring the ConfigurationMetaObject

The WebSphere Commerce connector static meta object consists of a list of conversion properties defined for all the specific business objects that WebSphere Commerce supports. For this reference application, inbound messages to WebSphere Commerce from Siebel require the *ConfigurationMetaObject* meta object to be configured to suit your environment. The value of *ConfigurationMetaObject* is MO_WCSConfig. This involves editing the application specific information of the inbound messages to WebSphere Commerce.

Open the meta object in the business object designer tool and update the application specific information with the queue manager and queue name to suit your setup. Deploy the meta object to the WebSphere InterChange Server instance for the changes to take effect. For more information refer to the *Guide to the IBM WebSphere Business Integration Adapter for WebSphere Commerce Adapter Version 2.3.x*.

Error monitoring and tracking in the WebSphere InterChange Server

This reference application involves exchanging messages between WebSphere Commerce and Siebel using the WebSphere InterChange Server as a hub. If either WebSphere Commerce or Siebel fail to process a request that the other application sends, then the middleware needs to handle these failures. For example, if a customer create message sent from WebSphere Commerce to Siebel fails to be registered in the Siebel system, then the WebSphere InterChange server must handle this failure and take corrective measures. To do this, you can extend the capability of the current solution to implement error handling routines in the collaborations deployed in the WebSphere InterChange Server.

Configuring the WebSphere Business Integration Adapter for WebSphere Commerce

The WBI adapter for WebSphere Commerce allows the WebSphere InterChange Server collaborations to exchange business objects with the WebSphere Commerce Server, which sends and receives messages over its messaging system using WebSphere MQ.

Configuring the adapter for WebSphere Commerce involves setting the values for the generic and connector specific configuration properties. Do the following:

1. Open the WebSphere Commerce connector using the connector configurator.
 - a. Specify the WebSphere Commerce specific business objects in the Supported Business Objects tab.

- b. Select the **Agent supported** check box for the WebSphere Commerce application specific business objects.
- c. Specify the related generic business objects. Clear the **Agent supported** check box for generic business objects.

For more details about the supported objects, see “Appendix A. Generic business objects” on page 37 and “Appendix B. Application specific business objects” on page 39 respectively.

2. In the connector specific properties set the value of the ConfigurationMetaObject to MO_WCSCConfig.
3. Specify the associated maps with Explicit Binding for the supported business objects. See, “Appendix E. Binding maps to business objects” on page 47 to identify the business objects that require maps to be specified.

4. Set the BO prefix:

The application specific business objects for the WebSphere Commerce application are generated with the ‘WCS’ prefix. Ensure that ‘WCS’ is set for the BOPrefix property of the MO_DataHandler_Default object. Use the Business Object Designer tool to navigate to the following object hierarchy:

- MO_DataHandler_Default—The parent business object
- Text.xml—The child object of MO_DataHandler_Default
- BOPrefix—Property name (Set WCS as the default value for this property)

For more information on configuring the standard and connector properties, refer to the *The IBM WebSphere Business Integration Adapter Guide for WebSphere Commerce, Adapter Version 2.3.x*.

5. Deploy the adapter for WebSphere Commerce and the business objects for the changes to take effect. Ensure you have deployed the maps and collaboration objects. For more information on editing the adapter properties and deploying the adapter, refer to the *Implementation Guide for WebSphere InterChange Server*.

Configuring the WebSphere Business Integration Adapter for Siebel

The WBI adapter for Siebel enables the WebSphere InterChange Server to send and receive information to and from Siebel. Configuring the adapter for Siebel involves setting the values for the generic and agent specific configuration properties. Do the following:

1. Open the **Siebel connector** using the connector configurator.
 - a. Specify the Siebel specific business objects in the Supported Business Objects tab.
 - b. Select the **Agent supported** check box for the Siebel application specific business objects.
 - c. Specify the related generic business objects. Clear the **Agent supported** check box for generic business objects.

For more details about the supported objects, see “Appendix A. Generic business objects” on page 37 and “Appendix B. Application specific business objects” on page 39 respectively.

2. For the supported business object specify the associated map with the **Explicit Binding** option selected. See, “Appendix E. Binding maps to business objects” on page 47 to identify the business objects that require maps for conversion.
3. Deploy the adapter for Siebel and the business objects for the changes to take effect. For more information on editing the adapter properties and deploying the adapter, refer to the *Implementation Guide for WebSphere InterChange Server*.

For more information, refer to the *IBM WebSphere Business Integration Adapter for Siebel eBusiness Application User Guide, Version 4.2.x* available with the WBI Adapters documentation.

Associating the collaboration objects

The collaboration objects associated with the sample messages are provided with this reference application. For the list of collaboration objects and the corresponding port binding information, see “Appendix C. Collaboration objects and ports” on page 41.

This reference application also provides customized collaboration templates for the CustomerSynchronization and the OrganizationSynchronization messages. For more information, refer to “Customized collaboration templates” on page 41 in Appendix D.

Port connector

The collaboration ports that are not used in a collaboration object to support a message are bound to the port connector. For details, see “Appendix C. Collaboration objects and ports” on page 41.

Configuring relationships in the WebSphere InterChange Server

This reference application provides three relationship definitions required for integration:

1. OrgLkUp: This relationship is required to synchronize the organization information between WebSphere Commerce and Siebel by maintaining the parent-child hierarchy.
2. OrgDNLp: This relationship is required to synchronize the organization information between Siebel and WebSphere Commerce by maintaining the parent-child hierarchy.
3. CustLkUp: This relationship is required to synchronize the customer information between WebSphere Commerce and Siebel.

The OrgLkUp and OrgDNLp relationship definitions must be populated with the initial values to enable this integration.

The WebSphere Commerce server instance comes with a root organization and a default organization. You must create a root organization and a default organization corresponding to those present in WebSphere Commerce and Siebel system as accounts, using Siebel Call Center. Note the unique identifier of both accounts created in the Siebel system.

Using the WebSphere InterChange Server Relationship Manager populate the initial values for the relationship definitions. For more information refer to the *Map Development Guide* available with the WebSphere InterChange Server documentation.

Populate the OrgLkUp relationship definition with the following values:

Table 10. Values for the OrgLkUp relationship definition

Name of the WebSphere Commerce organization	WCOrgID	SblAcID	CWOrgID

Table 10. Values for the OrgLkUp relationship definition (continued)

Root organization	The DN value from the ORGENTITY table	Look for the unique identifier in the record properties	As this is a WebSphere InterChange server managed entity you don't need to populate the values for this participant.
Default organization	The DN value of the Default organization, the DN value of the Root organization	Look for the unique identifier in the record properties	As this is a WebSphere InterChange server managed entity you don't need to populate the values for this participant.

Populate the OrgDNLp relationship definition with the following values:

Table 11. Values for the OrgDNLp relationship definition

Name of the WebSphere Commerce organization	WCOrgDN	SblIntID	CWOrgDN
Root organization	The DN value from the ORGENTITY table	Look for the unique identifier in the record properties	As this is a WebSphere InterChange server managed entity you don't need to populate the values for this participant.
Default organization	The DN value of the Default organization, the DN value of the Root organization	Look for the unique identifier in the record properties	As this is a WebSphere InterChange server managed entity you don't need to populate the values for this participant.

Summary

You have now completed the following:

- Installing and configuring WebSphere MQ
- Configuring the WebSphere Commerce messaging system
- Installing and configuring WebSphere InterChange Server
- Configuring the WebSphere InterChange Server queue manager
- Configuring the WebSphere Commerce adapter for WebSphere InterChange Server

WebSphere Commerce is now enabled to communicate with the WebSphere InterChange Server. The WebSphere InterChange Server system is configured to connect to your Siebel backend system. You have loaded the business objects, maps, relationships, and collaboration objects, and loaded the master data. To test the integration points see, Chapter 6, "Verification procedure," on page 33.

Chapter 6. Verification procedure

This chapter provides the procedural details to verify the end-to-end flow of information between WebSphere Commerce and Siebel for the integration points described in this reference application. Before you begin, confirm that the WebSphere MQ queue manager and the channels are running and are in the active stage. Ensure that the WebSphere Commerce and Siebel connector agents are running.

Errors can be detected in the WebSphere InterChange server system log, Siebel connector and WebSphere Commerce connector agent logs, or WebSphere Commerce logs respectively.

Verifying the integration points

Before you verify the integration points do the following:

1. Ensure that the corresponding application specific business objects (for WebSphere Commerce and Siebel) and maps are loaded into the WebSphere InterChange Server repository.
2. Ensure that the collaboration objects are configured and bound to the appropriate connectors. See, "Appendix C. Collaboration objects and ports" on page 41 for details.
3. Ensure that the business objects and solution specific maps are explicitly bound for the connectors. For details see, "Appendix E. Binding maps to business objects" on page 47.
4. Ensure that the collaborations, connectors, maps, and relationships are running.
5. Ensure that you have published an AdvancedB2BDirect store.
6. Start the WebSphere Commerce and Siebel connector agents. Execute one of the business scenarios described in this reference application.
7. Ensure that you start the receiver and sender channels in both the WebSphere MQ servers. The status of the channels must be "running".

Creating a customer

The customer create integration point allows the creation of a customer in WebSphere Commerce and a contact in Siebel.

Creating a customer in WebSphere Commerce

In this scenario, a customer self registers in the AdvancedB2BDirect store. After the registration is complete, the customer information is sent to Siebel. As a result, both systems, WebSphere Commerce and Siebel contain the customer information required for CRM activities.

To create customer information in WebSphere Commerce, do the following:

1. Open the Store logon form. For example, the AdvancedB2BDirect store LogonForm.
2. Select the **Register** link to create a new customer in WebSphere Commerce.
3. Enter the customer information, specify the organization that the customer belongs to, and save the details. This registers the new customer in WebSphere Commerce. If the customer belongs to a buyer organization, then the role of Registered Customer must be assigned before logging into the store.

4. Log into Siebel Call Center. Use the site map to navigate to the Contacts. In the Contacts tab you can query for the details about the contact. For example, you can search for the last name, which is a mandatory field. For more information on how to query, refer to the Siebel documentation.

Customizing the customer registration process: The default implementation in this reference application notifies the Siebel system of the new customer in WebSphere Commerce immediately after self registration. In the WebSphere Commerce system, if the customer is a business user associated with a buyer organization, then the customer registration can either be pre-approved or use an approval process. If an approval process is involved, then you can customize the default implementation using one of the following options:

- Create the new customer in Siebel with the status as inactive. When an administrator in WebSphere Commerce approves the registered customer send a notification to Siebel to change the status of the customer to active.
- Delay the entire registration process until the customer is approved and then send the customer registration message to Siebel.

In addition to customizing the default implementation of the reference application, to participate in the approval process, the WebSphere Commerce approval process must be customized to make the message call to Siebel.

Creating a contact in Siebel

To create contact information in Siebel ensure that you have completed the configuration in “Configuring relationships in the WebSphere InterChange Server” on page 30 and then do the following:

1. Log into the Siebel Call Center with administrator privileges.
2. Use the site map to navigate to the contact screen. Create a new contact with the address in Siebel and save the details. This verifies that the contact is created successfully in Siebel. From the IBM Events tab in the Siebel Call Center ensure that the Siebel contact create event is populated in the IBM EVENTS table. For more information, refer to the *IBM WebSphere Business Integration Adapters Adapter for Siebel eBusiness Applications User Guide Version 4.2.x*.
3. To verify the information in WebSphere Commerce, log into the Organization Administration Console. From the main menu select the Users menu, which displays all the users registered in WebSphere Commerce. This displays the logonId, first name, and last name of the contact created in Siebel.

Resetting the password: When a customer is registered in Siebel, the E-mail ID of the customer is used as the LogonID for WebSphere Commerce. The default password provided for the LogonID is *db2admin*. To maintain security this default password must be reset immediately after the customer is created in WebSphere Commerce.

When the customer is created successfully in WebSphere Commerce, you can initiate the password reset request:

1. Identify the required parameters for the reset password command.
2. Identify a DTD file for the reset password backend integration message. Derive the XML message for the password reset based on this DTD.
3. Create an application specific business object from the DTD using the XMLODA (Object Discovery Agent) utility.
4. Edit the customer synchronization collaboration template to add a new port to send the reset password request.

5. Retrieve the required values such as LogonId and Password for the reset password action. These values are available in the response business object (triggeringBusObj) generated after a customer is created successfully in WebSphere Commerce. Refer to the WebSphere Commerce Developer Edition information center for information about the reset password command.
6. Set the relevant information in the application specific business object for reset password and send it to the adapter for WebSphere Commerce through the port that you created in step 4.
7. The adapter for WebSphere Commerce receives the password reset request and sends the XML message to the WebSphere MQ queue.
8. WebSphere Commerce picks up the XML message and resets the password of the customer.

Creating an organization

The organization create integration point allows the creation of an organization in WebSphere Commerce and an account in Siebel.

Creating an organization in WebSphere Commerce

When organizations are created in WebSphere Commerce, the organization information is sent to Siebel. A corresponding account is created in Siebel.

To create organization information in WebSphere Commerce, do the following:

1. Log into the WebSphere Commerce Organization Administration Console with administrator privileges.
2. Select the **Organization** link from the main menu to create a new organization in WebSphere Commerce.
3. Add the information about the organization and save the details. As soon the details are saved, the WebSphere Commerce Administration Console displays the details of the organization created. This verifies that the organization is created successfully.
4. To verify the information in Siebel, log into the Siebel Call Center with administrator privileges. Use the site map to navigate to the account. In the account tab you can query the details of the account. Query for the name of the account in Siebel, which is the name of the organization created in WebSphere Commerce.

Creating an account in Siebel

To create account information in Siebel, do the following:

1. Log into the Siebel Call Center with administrator privileges.
2. Use the site map to navigate to the account screen. Create a new account in Siebel and save the details. This verifies that the account is created successfully in Siebel. From the IBM Events tab in the Siebel Call Center ensure that the Siebel account create event is populated in the IBM EVENTS table. For more information, refer to the *IBM WebSphere Business Integration Adapters Adapter for Siebel eBusiness Applications User Guide Version 4.2.x*
3. To verify the information in WebSphere Commerce, log into Organization Administration Console. From the main menu select the Organization menu, which displays all the organizations registered in WebSphere Commerce. Look for the name of the account that you created in Siebel. The keys used between the accounts and organizations are the unique identifier of the account created in Siebel and the DN of the organization in WebSphere Commerce.

Creating an order

Using this reference application, customers can create orders in WebSphere Commerce. The order information is then sent to Siebel for further processing. This requires the synchronization of the product information between the two system. For more information, see “Loading data in WebSphere Commerce” on page 17. Similarly, the customer and address information must be synchronized.

To create an order in WebSphere Commerce and check whether the order is created and processed correctly in the Siebel system, do the following:

1. If the customer belongs to a buyer organization, then the role of Registered Customer must be assigned before logging into the store.
2. Ensure that the customer and product data in WebSphere Commerce are consistent with that in the Siebel system.
3. Log into the WebSphere Commerce store as a customer, using a valid user ID.
4. Add products to the shopping cart and submit an order. This generates the XML order create message. It may take some time to deliver the message, as determined by the scheduler configuration in WebSphere Commerce. By default, the scheduler process for sending messages into WebSphere MQ runs at an interval of five minutes. Note down the order number created in the order confirmation page.
5. To check whether the order create XML was successfully parsed, formatted, and sent to the Siebel system, log into the Siebel Call Center. Use the site map to navigate to the orders screen. In the orders tab you will find details of the order and its line items.

Creating a request for quote

To create a quote in WebSphere Commerce and check whether the quote is created and processed correctly in the Siebel system, do the following:

1. Ensure that the organization, customer, and product data in WebSphere Commerce are consistent with that in the Siebel system.
2. Enable the following as described in the WebSphere Commerce Developer Edition information center:
 - a. The RFQ Trading Mechanism.
 - b. The RFQ Notification Messaging.
3. Log into the WebSphere Commerce store as a customer with Buyer administrator privileges, using a valid user ID. You must use the logon ID of the customer created using the customer create message.
4. Create a new RFQ. Specify the start date and end date accordingly. To ensure immediate activation of the RFQ, leave the start date field empty.
5. Add products to the RFQ using the shopping cart feature.
6. Submit the RFQ. This generates the XML quote create message. It may take some time to deliver the message, as determined by the scheduler configuration in WebSphere Commerce. By default, the scheduler process for sending messages into WebSphere MQ runs at an interval of five minutes.
7. To check whether the RFQ is successfully synchronized with the Siebel system, log into the Siebel Call Center.
8. Navigate to the quotes screen.
9. Verify if a new quote corresponding to the RFQ is created. Verify the line items. The values of the quote name and integration ID for the new quote created in Siebel must be associated with the values for the WCS RFQ Name and WCS RFQ ID in WebSphere Commerce.

Appendix A. Generic business objects

The following are the generic business objects that must be bound to the Siebel connector, the WebSphere Commerce connector, and the Port connector:

Note: The agent support must be disabled for all generic business objects.

Table 12. Generic business objects

WebSphere Commerce connector	Siebel connector	Port connector
Customer	Customer	Customer
CustomerPartner	CustomerPartner	CustomerPartner
Order	Order	Order
Organization	Organization	Organization
OrganizationPartner	OrganizationPartner	OrganizationPartner
Item		Item
RFQ	RFQ	Contact

Appendix B. Application specific business objects

Ensure that the WebSphere Commerce connector and the Siebel connector are bound to the following application specific business objects.

Note: Enable agent support for all application specific business objects.

Table 13. Application specific business objects for WebSphere Commerce

WebSphere Commerce connector	Remarks
WCS_Create_WCS_Customer	This is used for customer synchronization
WCS_Create_WCS_Organization	This is used for organization synchronization
WCS_Report_NC_PurchaseOrder	This is used for order synchronization
WCS_Request_WCS_Quote	This is used for quote synchronization
MO_DataHandler_Default	This is the data handler that is modelled as a business object that the WBI adapter for WebSphere Commerce uses.
MO_WCSConfig	This is specific to the WBI adapter for WebSphere Commerce. See "Configuring the ConfigurationMetaObject" on page 28

Table 14. Application specific business objects for Siebel

Siebel connector	Remarks
Specify the name of the Siebel business object corresponding to the contact.	This is used for contact synchronization
Specify the name of the Siebel business object corresponding to the personal address.	This is used for contact synchronization
Specify the name of the Siebel business object corresponding to the account .	This is used for account synchronization
Specify the name of the Siebel business object corresponding to the orders.	This is used for order synchronization
Specify the name of the Siebel business object corresponding to the quote.	This is used for quote synchronization

To provide the Siebel connector name in the preceding table, you should have completed generating the Siebel application specific business object as described in the "Generating Siebel application specific business objects" on page 19 section.

Appendix C. Collaboration objects and ports

The following table lists the messages, their collaboration templates, objects, and ports:

Table 15. Collaboration templates, objects, and ports

Message	Collaboration template name	Collaboration object	From port	To port	Destination App Retrieve	Other ports
Organization Create from WebSphere Commerce to Siebel	Organization Sync_WCS_To_SIEBEL	Organization Sync_WCS_To_SIEBEL_Obj	WebSphere Commerce Connector	Siebel Connector	Port Connector	To Customer Partner Wrapper - Port Connector
Organization Create from Siebel to WebSphere Commerce	Organization Sync_SIEBEL_To_WCS	Organization Sync_SIEBEL_To_WCS_Obj	Siebel Connector	WebSphere Commerce Connector	Port Connector	To Customer Partner Wrapper - Port Connector
Customer Create from WebSphere Commerce to Siebel	Customer Sync_WCS_To_SIEBEL	Customer Sync_WCS_To_SIEBEL_Obj	WebSphere Commerce Connector	Siebel Connector	Port Connector	To Customer Partner Wrapper - Port Connector
Customer Create from Siebel to WebSphere Commerce	Customer Sync_SIEBEL_To_WCS	Customer Sync_SIEBEL_To_WCS_Obj	Siebel Connector	WebSphere Commerce Connector	Port Connector	To Customer Partner Wrapper - Port Connector, Retrieve Personal Address-Siebel Connector
Order Create from WebSphere Commerce	SalesOrder Processing	Order Sync_WCS_To_SIEBEL_Obj	WebSphere Commerce Connector	Siebel Connector	Port Connector	To Item Wrapper, Destination App Retrieve, ToContact Wrapper To Customer Wrapper- Port Connector
Quote Create from WebSphere Commerce	RequestFor QuoteSync_WCS_To_Siebel	RequestFor QuoteSync_WCS_To_Siebel_Obj	WebSphere Commerce Connector	Siebel Connector	Siebel Connector	ToItem Wrapper, Customer Partner Wrapper, To Customer Wrapper

Customized collaboration templates

A collaboration template is a specification of the logic within the collaboration. This reference application uses the following collaboration templates:

Organizationsync_WCS_To_SIEBEL

Source

The source of this template is the prebuilt CustomerSync collaboration template, which is customized for this reference application.

Prerequisite

Using the Organizationsync_WCS_To_SIEBEL collaboration template requires the Organization and OrganizationPartner generic business objects. These business objects originate from the prebuilt Customer and CustomerPartner business objects.

Description

The Organizationsync_WCS_To_SIEBEL collaboration template is customized to ensure the synchronization of organization information between WebSphere Commerce and Siebel. In WebSphere Commerce, the organization structure is maintained as a parent child relationship; the collaboration template allows this paradigm to be maintained in Siebel.

Customization

The business logic incorporated into the Organizationsync_WCS_To_SIEBEL collaboration template uses the LookUp relationship and sets the appropriate ParentOrganizationID.

When an organization is created in WebSphere Commerce using the Organization Administration Console, the resulting XML message is sent to the WebSphere Commerce messaging subsystem. The adapter for WebSphere Commerce picks up the XML message and sends it to the Organizationsync_WCS_To_SIEBEL collaboration in the WebSphere InterChange Server. The WebSphere InterChange Server Relationship components are used to store the WebSphere Commerce OrganizationID and the Siebel account unique identifier. The primary process is to look for the Siebel account unique identifier of the WebSphere Commerce organization's ParentId and synchronize the values. This maintains the parent child relationship when organizing the accounts in Siebel.

Organizationsync_SIEBEL_To_WCS

Source

The source of this template is the prebuilt CustomerSync collaboration template, which is customized for this reference application.

Prerequisite

Using the Organizationsync_SIEBEL_To_WCS collaboration template requires the Organization and OrganizationPartner generic business objects. These business objects originate from the prebuilt Customer and CustomerPartner business objects.

Description

The Organizationsync_SIEBEL_To_WCS collaboration template is customized to ensure the synchronization of organization information between WebSphere Commerce and Siebel. In WebSphere Commerce, the organization structure is maintained as a parent child relationship; the collaboration template allows this paradigm to be maintained in Siebel.

Customization

The business logic incorporated into the Organizationsync_SIEBEL_To_WCS collaboration template uses the LookUp relationship and sets the appropriate ParentOrganizationID.

When an account is created in Siebel, a corresponding organization must be created in WebSphere Commerce. To maintain the organization's hierarchical structure in WebSphere Commerce, the backend system expects the ParentOrganizationID information from Siebel. The WebSphere InterChange Server Relationship components are used to store the WebSphere Commerce OrganizationId and the Siebel account unique identifier. This collaboration looks for the appropriate OrganizationId of the parent organization in Siebel and synchronizes the same Id in WebSphere Commerce.

CustomerSync_WCS_To_SIEBEL

Source

The source of this template is the prebuilt CustomerSync collaboration template, which is customized for this reference application.

Prerequisite

Using the CustomerSync_WCS_To_SIEBEL collaboration template requires the Customer and CustomerPartner generic business objects. These business objects originate from the prebuilt Customer and CustomerPartner business objects.

Description

The CustomerSync_WCS_To_SIEBEL collaboration template is customized to ensure the synchronization of customer information between WebSphere Commerce and Siebel. In WebSphere Commerce, the organization and customer structure is maintained as a parent child relationship; the collaboration template allows this paradigm to be maintained in Siebel.

Customization

The business logic incorporated into the CustomerSync_WCS_To_SIEBEL collaboration template uses the LookUp relationship and sets the appropriate ParentOrganizationID.

When a customer registers with WebSphere Commerce, the resulting XML message is sent to the WebSphere Commerce messaging subsystem. The adapter for WebSphere Commerce picks up the XML message and sends it to the CustomerSync_WCS_To_SIEBEL collaboration in the WebSphere InterChange Server. The WebSphere InterChange Server Relationship components are used to store the WebSphere Commerce CustomerLogonID and the Siebel contact unique identifier. The primary process is to look for the Siebel contact unique identifier of the WebSphere Commerce OrganizationId with which the customer is registered and synchronized with the Siebel contact ParentAccountId. This maintains the parent child relationship between the account and contact in Siebel.

CustomerSync_SIEBEL_To_WCS

Source

The source of this template is the prebuilt CustomerSync collaboration template, which is customized for this reference application.

Prerequisite

Using the CustomerSync_SIEBEL_To_WCS collaboration template requires the Customer and CustomerPartner generic business objects. These business objects originate from the prebuilt Customer and CustomerPartner business objects.

Description

The CustomerSync_SIEBEL_To_WCS collaboration template is customized to ensure the synchronization of customer information between WebSphere Commerce and Siebel. In WebSphere Commerce, the organization and customer structure is maintained as a parent child relationship; the collaboration template allows this paradigm to be maintained in Siebel.

Customization

The business logic incorporated into the CustomerSync_WCS_To_SIEBEL collaboration template uses the LookUp relationship and sets the appropriate ParentOrganizationID and DistinguishedName.

When a contact is created in Siebel, a corresponding customer and related information must be created in WebSphere Commerce. To maintain the organization and customer hierarchal structure, the WebSphere Commerce system expects the ParentOrganizationID information in one the following forms:

- Encrypted Parent OrganizationID
- DistinguishedName of the Parent Organization

The WebSphere InterChange Server Relationship components are used to store the DistinguishedName of the WebSphere Commerce organization and the unique identifier of the Siebel account. This collaboration looks for the appropriate DistinguishedName of the parent organization in Siebel and synchronizes it with the Id in WebSphere Commerce.

RequestForQuoteSync_WCS_To_Siebel

Source

The source of this template is the CollaborationFoundation template, which is customized for this reference application. The CollaborationFoundation template is provided with WebSphere InterChange Server.

Description

The RequestForQuoteSync_WCS_To_Siebel collaboration template is customized to ensure the synchronization of RFQ between WebSphere Commerce and Siebel. Using the RequestForQuoteSync_WCS_To_Siebel collaboration template requires the RFQ generic business object. This business object is not provided with the WebSphere InterChange Server. A new business object is developed for this reference application based on the WebSphere Commerce RFQ entity.

Appendix D. Maps with specific values for WebSphere Commerce

The following are WebSphere Commerce specific values in the maps provided with this reference application. You can change them according to your configuration settings:

Table 16. Maps with WebSphere Commerce specific values

Map name	Hard coded attributes and values
GBO_CustomerCreate_To_WCS	Credentials.LogonId/ 'wcsadmin' 'db2admin'
	Credentials.password/ 'db2admin9'
	Registration.LogonInfo.Password/ 'db2admin'
	Registration.LogonInfo.VerifyPassword/
	Customer.Profile.Type/ 'B'

Note: Ensure that the values entered in the fields described previously are in accordance with your configuration settings.

Appendix E. Binding maps to business objects

The following tables list the maps that you must explicitly bind to the business objects for WebSphere Commerce connector and Siebel connector:

Adapter for WebSphere Commerce

The following table lists the business objects and maps for the adapter for WebSphere Commerce:

Table 17. Business objects and maps for the adapter for WebSphere Commerce

Business object	Map
Customer	GBO_CustomerCreate_To_WCS
Organization	GBO_OrganizationCreate_To_WCS
WCS_Create_WCS_Customer	GBO_CustomerCreateFrom_WCS
WCS_Create_WCS_Organization	GBO_OrganizationCreateFrom_WCS
WCS_Report_NC_PurchaseOrder	GBO_OrderCreate_From_WCS
MO_WCSConfig meta object	Not applicable
WCS_Request_WCS_Quote	GBO_RFQ_From_WCS

For more information on the functionality, see “Integration points” on page 3

Adapter for Siebel

The following table lists the business objects and maps that must be developed for the adapter for Siebel:

Table 18. Business objects and maps for the adapter for Siebel

Business object	Map
Customer	GBO_CustomerCreate_To_SIEBEL
Order	GBO_OrderCreate_To_Siebel
Organization	GBO_OrganizationCreate_To_SIEBEL
Name of the Siebel business object corresponding to an account	GBO_OrganizationCreate_From_SIEBEL
Name of the Siebel business object corresponding to a contact	GBO_CustomerCreate_From_SIEBEL
RFQ	GBO_RFQ_To_Siebel

For more information on the functionality, see “Integration points” on page 3

Appendix F. New commands and JSP files

The following are the new WebSphere Commerce commands introduced for this reference application:

ExtendedPostOrgEntityAddCmdImpl.class

The PostOrgEntityAddCmd is invoked after an organization is created. This command contains a default implementation, which can be customized to include additional tasks when creating a new organization. In this implementation, the PostOrgEntityAddCmd is extended to create XML messages that are sent to Siebel through MQ transport.

ExtendedPostUserRegistrationAddCmdImpl.class

The PostUserRegistrationAddCmd is invoked after a customer is created. This command contains a default implementation, which can be customized to include additional tasks when creating a new customer. In this implementation, the PostUserRegistrationAddCmd is extended to create XML messages that are sent to Siebel through MQ transport.

Wrapper commands

When the URL parameter is set from the message mapper template for requests sent through the WebSphere Commerce messaging system, the user and organization registration commands cannot process this URL parameter to compose the response. As a result, wrapper commands are written to resolve the URL. These commands set the URL in the request properties. This ensures that the URL parameter set for the messages in the template file is available at run time to retrieve the JSP file name from the VIEWREG table and compose the response. The template file can be the system or user template. The two wrapper commands added for this reference application are:

- WrapperOrgEntityAddCmdImpl
- WrapperuserRegistrationAdminAddCmdImpl

The following table lists the new commands, JSP files, and their description:

Command name/JSP name	Description
ExtendedPostOrgEntityAddCmdImpl	Organization create from WebSphere Commerce to Siebel
ExtendedPostUserRegistrationAddCmdImpl	Customer create from WebSphere Commerce to Siebel
WrapperOrgEntityAddCmdImpl	Organization create from Siebel to WebSphere Commerce
WrapperUserRegistrationAdminAddCmdImpl	Customer create from Siebel to WebSphere Commerce
OrgEntityMessageCreate.jsp	Compose the XML message to be sent to Siebel
CustomerMessageCreate.jsp	Compose the XML message to be sent to Siebel
RFQSubmitMessage.jsp	Compose the XML message to be sent to Siebel

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