IBM

e-Commerce Hosting Solutions Guide

Using WebSphere Commerce V5.5 Business Edition

- Select application and runtime patterns for e-commerce hosting
- Team development scenario for customization of hosted stores
- Administration of the site, B2C and B2B stores

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Note: Before using this information and the product it supports, read the information in “Notices” on page xvii.

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Preface

This IBM® Redbook is a customization and deployment guide for IBM WebSphere Commerce V5.5 using the hosting model. The book provides IT architects, developers, and administrators with the critical knowledge to deploy, customize, and manage a WebSphere® Commerce runtime environment and hosting hub with multiple stores.

Part 1, Introduction to hosting, provides an overview of the hosting model in WebSphere Commerce V5.5 Business Edition and then discusses what is included in the eSite.sar that is available with this book. Following this is a discussion about patterns and a detailed look at the Hosting Composite Pattern and its application in our example hosting site.

Part 2, ITSO hosting example, introduces the Big Computer Company, LLC., our imaginary customer. We provide an overview of their business goals and objectives in creating a hosting site as well as some detailed requirements. A high-level solution design is provided as well as detailed design specifications for customizations to the standard eSite model that are mandated by the requirements. This part of the book also includes an overview of our development and deployment environment and processes.

Part 3, Manage the ITSO hosting example, begins with publishing the eSite.sar file, creating needed organizations and users and stores. Details for implementing the customizations are provided. We then cover the three levels of administration in great detail: site, hub, and store.

Part 4, Appendixes, includes WebSphere Commerce implementation, WebSphere Commerce Studio implementation, common procedures, and error handling scenarios.

The team that wrote this redbook

This redbook was produced by a team of specialists from around the world working at the International Technical Support Organization, Raleigh Center.

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Figure 1 The IBM Redbook team left to right, front row (Sergio Takahaki Yanai Tiossa, Vance Piket, David Felty), back row (Greg Palis, Walter McNichols, Chris McCollum, Leonardo Djekki)

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Part 1

Introduction to hosting

This part of the book provides an overview of the hosting model in WebSphere Commerce V5.5 Business Edition and then discusses what is included in the eSite.sar that is available with this book. Following this is a discussion about patterns and a detailed look at the Hosting Composite Pattern and its application in our example hosting site.

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1

Introduction

This chapter describes our objectives, our focus, who can benefit from the content of this book, and where to find additional information.

This chapter includes these sections:

- Our objectives
- Conventions used in this book
- Target audience of this IBM Redbook
- For more information

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1.1 Our objectives

The objective in writing the IBM Redbook is twofold. The first is to provide an overview of the new hosting model in WebSphere Commerce V5.5 Business Edition. The second is to provide an example implementation of the eSite hosting model that focuses on two key aspects: customization and administration in a hosting environment.

We do not attempt to offer architectural design or capacity planning as these topics are covered quite well in:

- *WebSphere Commerce V5.5 Handbook, Customization and Deployment Guide*, SG24-6969
- *WebSphere Commerce V5.5 Capacity Planning*, ZG24-6733

The goal is to provide information to current and future customers of WebSphere Commerce who need information about how best to install, customize, and administer a hosting site based on WebSphere Commerce V5.5 Business Edition.

1.2 Conventions used in this book

In writing this guide, we attempted to follow established standards and practices utilized in other documentation about WebSphere Commerce so that it will be easy to read and contain familiar terminology.

This book uses the following highlighting 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, as well as directory paths.
- *Italic type* is used for variables for which you substitute your own values.
- Blue type indicates linkable Web addresses or URLs. These values should be used as listed unless the value *host_name* is included. If this is the case, then a valid host name should be substituted in place of the *host_name*.

This book uses the following conventions for specific values that must be substituted:

- *WC_installdir* indicates the installation directory for WebSphere Commerce. The default installation directory for WebSphere Commerce on the Windows 2000 operating system is:

  C:\Program Files\WebSphere\CommerceServer55

- *WAS_installdir* indicates the installation directory for WebSphere Application Server. The default installation directory for WebSphere Application Server on the Windows 2000 operating system is:

  C:\Program Files\WebSphere\AppServer

- *WCStudio_installdir* indicates the installation directory for WebSphere Commerce Studio. The default installation directory is:

  C:\WebSphere\CommerceStudio55

- *host_name* indicates a fully qualified host name to be substituted in a Web address. The host name for our WebSphere Commerce server was:

  M23VNX78.ITSO.RAL.IBM.COM

- *node_name* indicates the short name of the computer. This is the first part of the *host_name*, without the domain.

- *server_name* indicates the name of the server in WebSphere Application Server. The default server name for a WebSphere Commerce server is:

  WC_wc_instance_name

  The default server name for a WebSphere Commerce Payments server is:

  *wpm_instance_name*_Commerce_Payments_Server

- *wc_instance_name* indicates the name of the WebSphere Commerce instance. The default instance name is demo.

- *wpm_instance_name* indicates the name of the WebSphere Commerce Payments instance. The default name is wpm.

- *dbname* indicates the name of the WebSphere Commerce or WebSphere Commerce Payments database.

- *dbuser* indicates the user ID that owns the schema in the WebSphere Commerce or WebSphere Commerce Payments database.

- *dbpassword* indicates the password for the associated *dbuser*.

Note: All of the development and testing for this book was done on the Windows platform. All references to OS-specific functions refer to the Windows platform unless otherwise indicated.

1.3 Target audience of this IBM Redbook

As is the nature of a handbook, this book is multi-purpose: It includes architecture, design, development, customization, deployment, and administration topics. The target audience can be best matched by role to the topic of interest within the book.

1.3.1 Roles and skills

Several common roles are needed for a team to execute a WebSphere Commerce hosting project during the development life cycle. In this section, we define the following key roles and skills to be used as a cross-reference with the topics of interest within the book:

- Project manager
- IT architect
- Database Administrator (DBA)
- Java programmer
- Web developer
- Tester
- Line-of-business (LOB) user
- Site Administrator
- Hub Administrator
- Seller/Store Administrator

Project manager

The project manager is responsible for managing and leading the project team throughout all phases of the project and also acts as a contact point to interact with the customer. The project manager should have a general understanding of the WebSphere Commerce product and be familiar with the product architecture.

IT architect

The IT architect looks after the overall project technical architecture/design, quality assurance of the solution, knowledge transfer to customers, and mentoring to the project technical team members. The architect should have WebSphere Commerce architecture and design skills. Based on project scope and complexity, one or more WebSphere Commerce architects can work to create detailed project technical designs. The work effort can be divided based on common WebSphere Commerce subsystems, such as Catalog, Member, Order, and communication with back-end or legacy systems. The technical design is developed with the assistance of the lead developer.

Database administrator (DBA)

The WebSphere Commerce V5.5 database schema contains more than 600 tables with numerous columns. It is critical that someone on the development team be very familiar with the WebSphere Commerce database schema for development implementation and migration. In addition, the database owner is often responsible for managing the WebSphere Commerce XML data files that are used to populate the WebSphere Commerce instance database with catalog, store, and site data. The DBA is responsible for creation and migration of the WebSphere Commerce instance database and ongoing database operations.

Java developer

The WebSphere Commerce programmer is responsible for the Java programming of the application assets of the site. The WebSphere Commerce architect/technical lead can also participate in implementing the new or transitioned site. The WebSphere Commerce programmer must have in-depth knowledge of the WebSphere Commerce framework, programming, and store models. In addition, they must have a strong background in J2EE programming and development tooling. The focus of the Java programmer is on developing WebSphere Commerce commands (servlets) and EJBs.

Web developer

The Web developer focuses on the front-end assets, such as JavaServer Pages (JSPs), HTML, and management of product images within the display pages.

Tester

There are many types of tests, such as unit test, functional verification test (FVT), system verification test (SVT), integration test, and customer acceptance test (CAT). The test lead is responsible for developing and executing a test plan for quality assurance. The members of the test team should be well versed in the product architecture, features of the site, and operational usage to simulate the transactions of a customer and a line-of-business user.

Site administrator

The WebSphere Commerce site administrator installs, configures, and maintains WebSphere Commerce and the associated software and hardware. The site administrator responds to system warnings, alerts, and errors, and diagnoses and resolves system problems. This role typically controls access and authorization (creating and assigning members to the appropriate role), manages the Web site, monitors performance, and manages load balancing tasks. The site administrator may also be responsible for establishing and maintaining several server configurations for different stages of development such as testing, staging, and production. This role also handles critical system

backups and resolves performance problems. For very large sites, some of the installation and configuration task may be performed by the system administrator.

Hub administrator

This role, which manages stores within a hosting hub, is unique to the hosting model. While this role could be performed by the site administrator, it is more aligned with the stores to ensure coordination of activities (marketing, catalog management) among individual stores.

Line-of-business (LOB) user

The line-of-business (LOB) users are typically responsible for managing the operations of the site. They can be marketing users where they are responsible for promoting the Web site to customers, managing the data needs for catalog management, and customer service-related tasks. Within WebSphere Commerce, there are many predefined roles that can be assigned to LOB users. The WebSphere Commerce administration tools can be configured to allow access only to specific functions within the tools by user role assigned to the user logged into the tool.

1.3.2 Matching topics in this book to roles and skills

The topic set in this WebSphere Commerce V5.5 Handbook is diverse. Table 1-1 provides a summary of the topics in this book, by part and chapter, aligning them with the defined roles and skills.

Table 1-1 Matching redbook topics to roles and skills

Part	Chapter	Primary	Secondary
Part 1, “Introduction to hosting”			
	Chapter 1, “Introduction”	All roles	
	Chapter 2, “Hosting model in WebSphere Commerce V5.5”	All roles	
	Chapter 3, “Applying Patterns”	IT Architect	Project Manager
Part 2, “ITSO hosting example”			
	Chapter 4, “Requirements analysis”	IT Architect	Project Manager
	Chapter 5, “Solution design”	IT Architect DBA	Project Manager
	Chapter 6, “Detailed design”	IT Architect Java Developer Web Developer	Project Manager DBA

Part	Chapter	Primary	Secondary
	Chapter 7, “Development guidelines”	IT Architect Java Developer Web Developer	Project Manager
Part 3, “Manage the ITSO hosting example”			
	Chapter 8, “Publish the SAR and create stores”	Site Admin	Hub Admin
	Chapter 9, “ITSO sample code”	Site Admin Tester	Java Developer Web Developer
	Chapter 10, “Manage the site”	Site Admin	Hub Admin
	Chapter 11, “Manage the hub”	Hub Admin	Site Admin
	Chapter 12, “Manage a B2C store”	Seller Admin LOB User	Hub Admin
	Chapter 13, “Manage a B2B store”	Seller Admin LOB User	Hub Admin
Part 4, “Appendixes”			
	Appendix A, “WebSphere Commerce implementation” on page 773	Site Admin DBA	Tester
	Appendix C, “WebSphere Commerce Studio implementation” on page 827	Java Developer Web Developer	DBA
	Appendix B, “Common procedures” on page 809	Site Admin Hub Admin	DBA
	Appendix D, “Error-handling scenarios” on page 853	Site Admin Java Developer Web Developer	DBA
	Appendix E, “Process Flows” on page 867	LOB User Seller Admin	Hub Admin
	Appendix F, “Additional material” on page 923	Site Admin Java Developer Web Developer	DBA

1.4 For more information

A vast amount of information is available about WebSphere Commerce and related topics such as WebSphere Application Server, WebSphere Studio Application Developer, and DB2. Sometimes the key to solving a problem is

knowing where to find the necessary information. This section highlights the key product documentation, Web sites, and IBM Redbooks.

1.4.1 IBM WebSphere Commerce product documentation

Even if you are a big fan of IBM Redbooks, you should be aware that there is a vast amount of knowledge available only in the product documentation. The product documentation PDFs and online help are updated periodically and can be downloaded from the WebSphere Commerce Technical Library found at:

- IBM WebSphere Commerce V5.5, Business Edition

  http://www.ibm.com/software/genservers/commerce/wcbe/library/lit-tech-general.html

- IBM WebSphere Commerce V5.5, Professional Edition

  http://www.ibm.com/software/genservers/commerce/wcpe/library/lit-tech-general.html

We have categorized the product documentation as follows:

- Readme files for WebSphere Commerce and WebSphere Commerce Studio

  It is very important that you review the contents of the Readme files.

- Online information
  - WebSphere Commerce online information

    The online information is installable with the WebSphere Commerce runtime or can be downloaded and viewed from a Web browser. It is very useful when looking for information by search topic, role, and task.

  - WebSphere Commerce Studio online information

    The online information is installable with the WebSphere Commerce Studio or can be downloaded and accessed from a Web browser. It is very useful when looking for information by search topic.

- Overview
  - *What's New in IBM WebSphere Commerce V5.5*
  - *IBM WebSphere Commerce V5.5 Fundamentals Guide*

- Runtime environment installation and configuration

  The runtime environment installation and configuration guides are listed by platform:

  - Microsoft® Windows
    - *Quick Beginnings* for Windows 2000, IBM WebSphere Commerce V5.5
    - *Installation Guide*, IBM WebSphere Commerce V5.5 for Windows 2000

- UNIX® (IBM AIX and SUN Solaris)
  - *Quick Beginnings* for AIX, IBM WebSphere Commerce V5.5
  - *Quick Beginnings* for Solaris, IBM WebSphere Commerce V5.5
  - *Installation Guide,* IBM WebSphere Commerce V5.5 for UNIX systems
- IBM OS/400®
  - *Quick Beginnings* for OS/400, IBM WebSphere Commerce V5.5
  - *Installation Guide,* IBM WebSphere Commerce V5.5 for OS/400
- Linux
  - *Quick Beginnings* for Linux, IBM WebSphere Commerce V5.5
  - *Installation Guide,* IBM WebSphere Commerce V5.5 for Linux
- *Additional Software Guide, IBM WebSphere Commerce V5.5* (common for all platforms)

► Development environment installation and configuration

- *Installation Guide,* IBM WebSphere Commerce Studio V5.5

► Migration guides

Migration guides are listed by version to migrate from and by platform.

► Integration

- WebSphere Commerce Analyzer
  - *Installation and Configuration Guide, IBM WebSphere Commerce Analyzer V5.5*
  - *Datamart Reference, IBM WebSphere Commerce Analyzer V5.5*
  - *Technical Reference, IBM WebSphere Commerce Analyzer V5.5*
- WebSphere Commerce Payments
  - *Payments Programming Guide and Reference, IBM WebSphere Commerce V5.5*
  - *Payments Cassette for Paymentech Supplement, IBM WebSphere Commerce V5.5*
  - *Payments Cassette for BankServACH Supplement, IBM WebSphere Commerce V5.5*
  - *Payments Cassette for VisaNet Supplement, IBM WebSphere Commerce V5.5*
  - *Payments Offline Cassette Supplement, IBM WebSphere Commerce V5.5*
  - *Payments Custom Offline Cassette Supplement, IBM WebSphere Commerce V5.5*

- Store development and programming
  - *Sample Store Guide, IBM WebSphere Commerce V5.5*
  - *Store Development Guide, IBM WebSphere Commerce V5.5*
  - *Programming Guide and Tutorials, IBM WebSphere Commerce V5.5*
  - *Web Services Guide, IBM WebSphere Commerce V5.5*
- Administration
  - *Administration Guide, IBM WebSphere Commerce V5.5*
  - *Security Guide, IBM WebSphere Commerce V5.5*

1.4.2 Web sites

This section lists Web sites where you can find additional information about WebSphere Commerce and related topics:

- IBM WebSphere Commerce V5.5, Business Edition
  - Home page

    http://www.ibm.com/software/genservers/commerce/wcbe/index.html
  - Technical Library

    http://www.ibm.com/software/genservers/commerce/wcbe/library/lit-tech-general.html
  - Support

    http://www.ibm.com/software/genservers/commerce/wcbe/support/
- IBM WebSphere Commerce V5.5, Professional Edition
  - Home page

    http://www.ibm.com/software/genservers/commerce/wcpe/index.html
  - Technical Library

    http://www.ibm.com/software/genservers/commerce/wcpe/library/lit-tech-general.html
  - Support

    http://www.ibm.com/software/genservers/commerce/wcpe/support/
- IBM WebSphere Commerce Zone (development information)

  http://www.software.ibm.com/wsdd/zones/commerce/
- IBM Services for IBM WebSphere Commerce Software

  http://www.ibm.com/software/genservers/commerce/services/
- How to Buy IBM WebSphere Commerce

  http://www.ibm.com/software/swprod/swprod.nsf/(BuildHTBPage)?OpenAgent&DocID=BMAL-5KSR6N

- IBM Redbooks

  http://www.ibm.com/redbooks

1.4.3 IBM Redbooks

IBM Redbooks are developed and published by IBM's International Technical Support Organization (ITSO). We develop and deliver skills, technical know-how, and materials to technical professionals of IBM, Business Partners, and customers, and to the marketplace generally.

The ITSO teams with IBM Divisions and Business Partners in the process of developing IBM Redbooks, Redpapers, Technotes, training, and other materials. The ITSO is part of the IBM Global Technical Support organization within IBM Global Sales and Distribution.

The ITSO's value-add information products address product, platform, and solution perspectives. They explore integration, implementation, and operation of realistic customer scenarios.

IBM Redbooks and Redpapers can be downloaded as PDFs at:

http://www.ibm.com/redbooks

If you are interested in participating in creating an IBM Redbook, Redpaper or workshop, click the **Residency** link on the IBM Redbooks Web site.

WebSphere Commerce Redbooks

We recommend the following IBM Redbooks for WebSphere Commerce:

- *WebSphere Commerce V5.5 Handbook, Customization and Deployment Guide*, SG24-6969
- *WebSphere Commerce V5.5 Capacity Planning*, ZG24-6733
- *WebSphere Digital Media V5.5 Solutions Guide*, SG24-6085
- *Best Practices and Tools for Creating IBM WebSphere Commerce Sites*, REDP3616
- *WebSphere Commerce V5.4 Catalog Design and Content Management*, SG24-6855
- *WebSphere Commerce Portal V5.4 Solutions Guide*, SG24-6890

WebSphere Redbooks

We recommend the following IBM Redbooks for WebSphere Application Server V5 and WebSphere Studio Application Developer V5:

- *IBM WebSphere Application Server V5.1 System Management and Configuration: WebSphere Handbook Series*, SG24-6195
- *IBM WebSphere V5.1 Performance, Scalability, and High Availability: WebSphere Handbook Series*, SG24-6198
- *IBM WebSphere V5.0 Security WebSphere Handbook Series*, SG24-6573
- *WebSphere Studio Application Developer Version 5 Programming Guide*, SG24-6957

Other Redbooks

The following IBM Redbooks may be useful for specific integration topics with WebSphere Commerce and supporting software:

- *Enhance Your Business Applications: Simple Integration of Advanced Data Mining Functions*, SG24-6879
- *DB2 UDB/WebSphere Performance Tuning Guide*, SG24-6417
- *Patterns: Custom Designs for Domino & WebSphere Integration*, SG24-6903
- *IBM Certification Study Guide - pSeries AIX System Administration*, SG24-6191
- *IBM HTTP Server (powered by Apache): An Integrated Solution for IBM eServer iSeries Servers*, SG24-6716
- *Enterprise Business Portals II with IBM Tivoli Access Manager*, SG24-6885
- *Measuring e-business Web Usage, Performance, and Availability*, SG24-6931

2

Hosting model in WebSphere Commerce V5.5

This chapter describes the new Hosting infrastructure and architecture that is provided with WebSphere Commerce V5.5 Business Edition. It provides an overview of the samples that are shipped with the product, then discusses in detail the eSite model that is provided with this redbook.

This chapter contains the following sections:

- Overview
- eSite.sar
- Store directory

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2.1 Overview

IBM WebSphere Commerce V5.5 Business Edition includes a new infrastructure and architecture to support the Hosting business model. The Hosting business model can be used to support the following business scenarios:

- Hosting of merchants by an Internet Service Provider (ISP)
- Hosting of resellers by a manufacturer
- Providing unique storefronts for different enterprise customers or for product brands by a seller

In the first two scenarios, the merchants or resellers are most often different, independent companies that are given access to a centralized facility that is owned and operated by yet another separate company that operates the hosting site. The third scenario is different in that a single company serves as both merchant/reseller and hosting provider. This guide focuses on the third scenario.

WebSphere Commerce V5.5. Business Edition provides several sample *SAR* files that enable you to get a hosting site up and running quickly. A SAR (store archive) is a file in standard zip format with the *.sar* extension. It contains all of the required components to create a working store.

Table 2-1 describes the functions that are available in the provided files.

Table 2-1 Hosting model store archives

Store archive name	Description
Hosting.sar	Contains the organization structure, predefined user roles, and necessary access control policies and policy group subscriptions to create a reseller hosting environment, plus the necessary assets to create a hosting solution, including a service provider site, store directory, shared catalog, and hosted seller stores.
HostingOrganizationStructure.sar	Contains the organization structure and predefined user roles to create a hosted environment.
StoreDirectory.sar	Contains all of the necessary assets to create a navigable directory of all stores available in the site.
HostingHub.sar	Contains all of the necessary assets to create the hub site.

Store archive name	Description
CatalogAssetStore.sar	Contains all of the necessary assets to create a shared catalog.
HostedStorefrontAssetStore.sar	Contains all of the necessary assets to create a storefront.

In order to provide unique storefronts for different enterprise customers (or product brands by a seller), do not use any of the hosting SAR files that are shipped with WebSphere Commerce V5.5 Business Edition. This redbook provides another archive file, *eSite.sar*, for use in creating a hosting environment.

2.2 eSite.sar

This archive file provides the following functionality:

- A B2B Asset store that enables the selling organization to set up different storefronts to target each of their business customers
- A B2C Asset store that enables the selling organization to set up different storefronts to target specific customer demographics
- A Catalog Asset store that includes a shared catalog (without inventory management enabled)
- The eSite Hub for creating and managing the stores and related organizations
- Default organizations, menus, and access control policies that can be customized

An eSite Business to Business (B2B) Web site provides a richly featured, fully customizable extranet site for business customers who want better control of their purchases. The selling organization can set up different storefronts to target each of their business customers. Each eSite storefront will automatically reflect special discounts, product configurations, and special instructions to which the business customer is entitled.

On an eSite, the seller can have a customized storefront and customized product catalog per business customer or partner. All other B2B functions also apply, such as user and order approval, and user and account management by the business customer or partner.

The seller can also create multiple Business to Consumer (B2C) Web sites based on the provided asset store. Each store can be customized to provide a unique look and feel. They can use all or part of a shared catalog, or each store

can utilize a separate catalog. This enables a seller to create different stores that are customized for particular sets of customers or customer groups.

The remainder of this chapter describes the features of eSites in greater detail.

2.2.1 eSite Hub

In order to manage relationships with the hosted stores, hosting models usually include a hub (known in WebSphere Commerce as a hub store). This hub provides self-provisioning tools that enable the merchant and administrator to create and administer a store, as well as tools that enable the hosting provider to manage all hosted stores.

The eSite Hub is created when the eSite.sar is published. The steps required to accomplish this are detailed in Chapter 8, “Publish the SAR and create stores” on page 225. After the archive file is published successfully, you can access the eSite Hub by entering this address into your Web browser:

```
http://host_name/webapp/wcs/stores/servlet/eSiteHub/index.jsp
```

The default eSite Hub Welcome page is depicted in Figure 2-1.

Figure 2-1 eSite Hub Welcome page

The eSite Hub is the primary access point for managing stores and organizations. Details of the processes involved are provided beginning in Part 3, “Manage the ITSO hosting example” on page 175. The functions provided are:

- Manage organizations

  Provides the capabilities to manage users and organizations as well as approvals.

- Create store

  Starts the **Store Creation Wizard**. This is a multi-step process to create a store based on one of the available asset stores. You can also create a new asset store. The running stores that are created differ from the traditional store in that they are “light” stores. Instead of utilizing their own set of JSPs, they use the JSPs provided in the asset store on which they are based. These JSPs can be customized so that each store created from a single asset store can have a unique look and feel.

Figure 2-2 eSite Hub flow

- Manage store

  Provides most of the functionality required to manage individual stores. Select the store to manage and are then provided a menu. The menu options are customized for each type of store:

  - The eSite Hub provides functionality to open and close individual stores within the hub.
  - An asset store enables you to create marketing campaigns that will function across all running stores based on that asset store.
  - The Catalog Asset store enables you to maintain the shared catalog.
  - A running store enables you to customize the look and feel of the store, create marketing campaigns unique to that store, manage a private catalog for that store, filter contents and set prices on a shared catalog, and manage inventory, customers, and orders for that store.

2.2.2 Organization structure

All users in your business scenario must be assigned a role in the WebSphere Commerce organization structure:

- Customers who access your site, browse your catalog, and place orders
- Employees who administer the site, including updating the catalog, creating new promotions, or managing orders
- Resellers and other business partners who complete transactions on your site

The WebSphere Commerce organization structure provides a framework for the users, or entities, in your business scenario. This framework is organized in a hierarchical structure that mimics typical organizational hierarchies with entries for organizations and organizational units and users. The organizations and organizational units in the framework act as owners for parts of your business. All parts of your business, including customers, administrators, stores, catalogs, and distributors, must be owned by an organization or organizational unit.

The organization structure and the access control model are closely related, in that the access control model applies access control policies to organizations rather than to different entities (stores, customers, administrators, and so on). The policies that apply to an entity (or resource) are applied to the organization that owns the entity or resource.

Figure 2-3 on page 21 outlines the basic WebSphere Commerce organization structure with access control.

- **Root organization**: The root organization is the top-level organization and is its own parent. All organizations in the WebSphere Commerce organization

structure are descendents of the root organization. In this example, the site administrators are owned by the root organization.

- **Default organization**: The default organization is under the root. All guest customers and all customers in consumer direct businesses belong to the default organization.
- **Child organizational entities**:One or more other levels of organizational entities can exist beneath the parent organizational entities. You can add as many child organizational entities as necessary to support your business.

WebSphere Commerce access control structure is flexible enough to support all entities in the supported business models. During instance creation, only the root organization and default organization are created. The basic access control structure is installed during instance creation, regardless of the business model.

Figure 2-3 Basic access control

The root organization owns the following default policy groups:

- Management and administration
- Common shopping
- B2C
- B2B

The default organization owns the following default policy groups:

- Guest shopper management

However, the root organization only subscribes to the management and administration policy group. The policies in this policy group apply to all of the resources owned by this root and its descendants, except for those descendants that subscribe to a policy group. Because the default organization subscribes to the policy groups, the policies from the root organization are not inherited. For the default organization, the policies in the management and administration and guest shopper management policy groups are applied to any resources owned by the default organization.

For more detailed information about the default policy groups, see the appendix of the *IBM WebSphere Commerce Security Guide*.

Figure 2-4 shows the access control architecture contained in the eSite.sar file.

Figure 2-4 eSite.sar access control

- eSite seller organization and roles: Account Representative, Buyer (Sell-side), Category Manager, Customer Service Representative, Customer Service Supervisor, Marketing Manager, Operations Manager, Pick Packer, Product Manager, Receiver, Returns Administrator, Sales Manager, Seller

Administrator, Seller, Store Administrator, Channel Manager, Registered Customer

- eSite organization and roles: Seller, Marketing Manager, Operations Manager, Category Manager, Seller Administrator, Channel Manager, Registered Customer
- eSite Hub organization and roles: Seller, Marketing Manager, Category Manager, Seller Administrator, Channel Manager, Registered Customer
- Asset store organization and roles: Marketing Manager, Operations Manager, Category Manager, Channel Manager
- eSite Hub catalog
- eSite Hub (store)
- B2C storefront asset store
- B2B storefront asset store
- Policy group: Channel Policy Group, FashionFlow Policy Group
- Channel administrator

2.2.3 SAR deployment

This section illustrates the deployment of Hosting.sar into your instance. It illustrates the policy subscriptions and access control roles that are set up as part of this deployment.

The asset store organization does not subscribe directly to any policy groups. As a result, it inherits the management and administration policy group from the root organization. These policies apply to the asset store organization and the asset stores that it owns. The asset store organization owns the hosted storefront asset store policy group, but does not subscribe to it.

Figure 2-5 eSite asset store organization

Note: The individual hosted seller organizations will subscribe to the eSite storefront asset store policy group when the hosted store is created.

The eSite Hub (Figure 2-6) subscribes directly to the management and administration policy group, the B2B policy group, and owns and subscribes to the channel store policy group. As a result, these policies apply to the channel administrators, who are directly under the hosting hub organization, as well as to the channel store (eSite Hub).

The hosting hub policy group contains the following policies:

- AllUsersExecuteChannelStoreAllUsersViews
- ContractAdministratorsForChannelOrgExecuteCreate CommandsOnMemberResource
- ContractAdministratorsForChannelOrgExecuteContract DeployCommandsOnContractResource
- ContractAdministratorsForChannelOrgDisplayContract DatabeanResourceGroup

Figure 2-6 eSite Hub organization

The hosted seller organization does not subscribe directly to any policy groups. As a result it inherits the management and administration policy group from the root organization. These policies apply to the hosted seller organization and the hosted seller A organizations that it owns, as well as to the hosted seller A administrators.

Figure 2-7 eSite organizations and policies

The consumer direct organization subscribes directly to the management and administration, the common shopping, B2B, and B2C policy groups, and the hosted storefront asset store policy group. These policies apply to all stores owned by the consumer direct organization.

2.3 Store directory

The store directory (Figure 2-8) can be created by publishing the StoreDirectory.sar file that is included in the additional materials provided with this book. It has been customized to work with the eSite.sar file. *Do not* use the StoreDirectory.sar file that is shipped with WebSphere Commerce V5.5. This file assumes that the Hosting.sar file has been published.

Figure 2-8 Store directory organization

The store directory organization subscribes directly to the management and administration policy group and owns and subscribes to the store directory policy group. As a result, these policies apply to the store directory, which is directly under the store directory organization.

The store directory policy group contains the following policy:

- AllUsersExecutePublicStoreAllUsersViews

For more information about creating a customized store directory for use in the eSite model, see “Customized store directory” on page 92.

Part 2

ITSO hosting example

In this part, we introduce our imaginary customer: Big Computer Company, LLC. We provide an overview of their business goals and objectives in creating a hosting site as well as some detailed requirements. A high-level solution design is provided, plus some detailed design specifications for customizations to the standard eSite model that are mandated by the requirements. This part of the book also includes an overview of our development and deployment environment and processes.

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3

Applying Patterns

This chapter contains the following sections:

- Patterns for e-business
- Example of pattern usage
- Pattern application for an e-commerce site
- The hosting composite pattern

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3.1 Patterns for e-business

When experienced IT architects face a business problem, they may not realize it but they use patterns. They have seen the business problem before and have devised a solution to solve the problem. In recognizing the problem pattern and in remembering the previous solution, they have chosen a Runtime pattern to solve a recognized Business pattern. If the architect were to share the patterns, others would appreciate a standard notation and terminology so they could be in a position to easily evaluate the material and judge its relevance to the current problem.

The IBM Patterns for e-business have the advantage of being proven. More than 20,000 successful projects have been delivered, taking advantage of the patterns approach found at the IBM Patterns for e-business Web site (`http://ibm.com/developerworks/patterns/`). The IBM Patterns for e-business also provide a standardized terminology and notation that enables easy communication.

3.1.1 Patterns for e-business overview

The following overview has been taken directly from the IBM Patterns for e-business Web site.

Patterns for e-business are a group of reusable assets that can help speed the process of developing Web-based applications. This site breaks down these reusable assets into the following elements:

- *Business* patterns identify the interaction between users, businesses, and data. Business patterns are used to create simple, end-to-end e-business applications.
- *Integration* patterns connect other Business patterns together to create applications with advanced functionality. Integration patterns are used to combine Business patterns in advanced e-business applications.
- *Composite* patterns are combinations of Business patterns and Integration patterns that have themselves become commonly used types of e-business applications. Composite patterns are advanced e-business applications.
- *Custom designs* are similar to Composite patterns, as they combine Business patterns and Integration patterns to form an advanced, end-to-end solution. These solutions, however, have not been implemented to the extent of Composite patterns, but are instead developed to solve the e-business problems of one specific company, or perhaps several enterprises with similar problems.

- *Application* and *Runtime patterns* are driven by the customer's requirements and describe the shape of applications and the supporting runtime needed to build the e-business application.
- Product mappings to populate the solution are based on proven implementations.
- Guidelines for the design, development, deployment, and management of e-business applications also come into play.

The Patterns leverage the experience of IBM architects to create solutions quickly, whether for a small local business or a large multinational enterprise. As shown in Figure 3-1, customer requirements are quickly translated through the different levels of Patterns assets to identify a final solution design and product mapping appropriate for the application being developed.

Figure 3-1 Patterns for e-business process

3.1.2 Example of pattern usage

This section discusses how to apply the IBM Patterns for e-business material to assist in the definition of a solution using a simple business problem as an example. We have included the simple example here as a summary and roadmap of our approach.

Determining the Business patterns

The first step is to determine the Business pattern or patterns that are applicable. Before starting, it is necessary to have an appreciation of the current environment, including some knowledge of:

- Business goals and drivers for the organization
- Business goals, drivers, and requirements for the specific initiative
- IT goals for the organization
- IT goals and non-functional requirements for the initiative

Your goals do not all have to be defined precisely, but you do need a good understanding of what you plan to design. There are two broad approaches that may be used to kick off the process for making the determination of a Business pattern. Approach 1 is more suitable for smaller problems or if there is already a good appreciation of what the solution will look like from an operational perspective. Approach 2 on page 35 is more suitable for complex problems or if there is less of an appreciation of the indicative solution from an operational perspective.

In either case, we need an appreciation of what the solution will look like from an operational perspective.

Note: An overview of the method for selecting Business and Integration patterns is described in the material at the IBM Patterns for e-business Web site (`http://www-106.ibm.com/developerworks/patterns/`) and in more detail in the book *Patterns for e-business: A Strategy for Reuse*, by Jonathan Adams, Srinivas Koushik, Guru Vasudeva, and George Galambos; IBM Press; ISBN 1-931182-02-7.

The two approaches we used to determine Business patterns in this book are simple and are consistent with the processes of the Patterns for e-business site. We have provided more details about how we used the process in an effort to help users of patterns more easily learn and understand the process.

1. Fast path based on advanced knowledge

   We could start by workshopping an overview diagram to identify users and functional nodes within the solution. We could look at the material that is presented on the IBM Patterns for e-business Web site and perform a look and feel match against the pattern guidance material.

   The architect may at this time move directly to a Composite pattern, if knowledge of the business need matches a Composite pattern description. In most cases, it is still necessary to review the individual Business patterns and choose appropriate Application patterns. Simply, the selection of Application patterns to form a Composite pattern cannot be automated as an individual

initiative will have different IT goals and non-functional requirements that will influence the Application pattern selection.

2. Standard approach for a custom design with multiple Business and Integration patterns

   The starting point with this approach is to produce a high-level business description of the solution in order to find the users and the interaction between users and functional systems. This description is a high-level use case. If business requirements have already been documented for the solution to be designed, the task is obviously somewhat simplified and, in some cases, may have been performed already.

   The following is an example of such a business description that has been extracted in a simplified form from Chapter 4, “Requirements analysis” on page 49: The user will use a browser to connect to the solution via the Internet. He or she will be able to browse and select products for purchase from the product catalog. Products selected for purchase are added to the shopping cart. The user can then commit the contents of the shopping cart to an order. The order is transferred to the fulfillment system.

Solution overview diagram

Whatever the method of familiarization, when we have described the solution, we can develop a solution overview diagram. The following symbols are provided in *Patterns for e-business: A Strategy for Reuse*, to enable a common notation to be used for this purpose:

- A rectangle represents a new or modified business function.
- A rectangle with two vertical lines represents an existing system that interfaces with the solution but is not modified by it. This system is one of the users.
- A picture or other icon that represents other users within the system.
- Connectors, which link the other three symbols.

The first step in drawing the solution overview diagram is to identify the key business functions and users in the high-level business description. The underlined items are the users in the solution and the items in bold are the business functions. In this example, they are:

- User
- Browser
- Product catalog
- Search (referred to as Product Search and Selection)
- Order
- Fulfillment system

Figure 3-2 shows how the diagram looks after the first step: adding all users and functional components.

Figure 3-2 Solution overview diagram: users and functional components identified

The next step is to walk through all processes described in the business description and draw the appropriate connectors detailed as interaction in the high-level business description between components. Figure 3-3 shows this view of the solution overview diagram.

Figure 3-3 Solution overview diagram: connectors added

Choosing the appropriate Business patterns

From the four basic Business patterns detailed in the IBM Patterns for e-business material, we now select those that are applicable to the problem at hand. Read the descriptive text for each of the Business patterns and choose those relevant.

The four patterns are described briefly here.

The Self-Service business pattern

Also known as the User-to-Business pattern, Self-Service addresses the general case of internal and external users interacting with enterprise transactions and data.

The Collaboration business pattern

Sometimes called User-to-User, the Collaboration business pattern addresses the interactions and collaborations among users. This pattern can be observed in solutions that support small or extended teams who need to work together in order to achieve a joint goal.

The Information Aggregation business pattern

The Information Aggregation business pattern, also known as User-to-Data, can be observed in e-business solutions that enable users to access and manipulate data that is often aggregated from multiple sources. This Business pattern captures the process of taking large volumes of data, text, images, video, and so on and using tools to extract useful information from them.

The Extended Enterprise business pattern

The Extended Enterprise business pattern (Business-to-Business or B2B) addresses the interactions and collaborations between business processes in separate enterprises. This pattern can be observed in solutions that implement programmatic interfaces to connect inter-enterprise applications.

Solution overview diagram including Business patterns

Having identified the Business patterns that apply to our solution, we can now add them to the solution overview diagram. As observed, there is only one relevant Business pattern that is applicable in our simple example. That is the Self-Service business pattern used for browsing and selecting products and placing an order. Figure 3-4 on page 38 shows the new solution overview.

Figure 3-4 Solution overview diagram: Business Patterns added

Choosing the Integration patterns

There are two styles of Integration pattern detailed in the IBM Patterns for e-business material. These are:

- Access Integration
- Application Integration

The Access Integration pattern

The Access Integration pattern describes those recurring designs that enable access to one or more Business patterns. In particular, this pattern enables access from multiple channels (devices) and integrates the common services.

The Application Integration pattern

The Application Integration pattern brings together multiple applications and information sources without the user directly invoking them. This pattern is most effectively applied when developmental efforts require the seamless execution of multiple applications and access to their respective data in order to automate a complex, new business function.

Solution overview diagram including Integration patterns

Now that we have identified the different Integration patterns of the system, we can add them to the solution overview diagram. Figure 3-5 on page 39 shows the result.

Figure 3-5 Solution overview diagram: Integration patterns added

Composite patterns

When Business patterns and Integration patterns are combined to assemble solutions that perform complex business functions, certain recurring pattern combinations begin to emerge. These Composite patterns could be thought of as super patterns. Composite patterns represent commonly occurring combinations of Business patterns and Integration patterns, and they typically solve major portions of functionality within a solution.

Our example business problem is extremely simple. If it were more complex, we would now determine whether the combination of Business and Integration patterns is itself a recurring pattern.

Application patterns

Now that we have selected the Business patterns and Integration patterns, we choose the Application pattern that will satisfy each of the Business and Integration patterns.

Business and IT drivers, goals, and requirements

As stated in “Determining the Business patterns” on page 34, we need to have an appreciation of the most important business and IT drivers, goals, and requirements, both for the initiative we are designing for and the organization as a whole. We also need an appreciation of the existing environment with which the finished solution will integrate.

You can get some of this material from IT guidelines, policies, and standards of the organization, and from any project requirement, charter, or feasibility

documents that have been produced. You can get other material by interviewing subject matter experts and executive sponsors within the organization.

We use this information to perform a match against the characteristics of the Application patterns so that a selection can be made.

The following business drivers have been produced to demonstrate Application pattern selection. These drivers are for the system as a whole and also for the organization for which the solution is being designed.

The business drivers are:

- Reduce costs by reducing the staff workload associated with servicing client orders.
- Increase customer satisfaction by providing a Web-centered access channel enabling client organizations to have Self-Service capability.
- Decrease end-to-end response order time by providing Self-Service capability.
- Realize past investments by integrating with the existing order system.

The following IT drivers have been produced to demonstrate Application pattern selection. The IT drivers are:

- Must be able to scale to support additional products and users
- Easily extended for other purposes
- Integration with existing systems
- Ease of maintenance
- Buy before build

Comparison against Application pattern characteristics

Using the characteristics of the Application patterns as presented on the IBM Patterns for e-business Web site against the goals, drivers, and requirements, we choose appropriate Application patterns. In our simple example shown in Figure 3-5 on page 39, we only have the one Business pattern for which the selection of an Application pattern is required.

Application pattern selection discussion

The characteristic, easily extended for other purposes, has been matched because we may need to provide for additional access channels that are not provided for at present.

All functionality on the back-end systems hints toward the Router application pattern.

The Router pattern also provides isolation of function from the delivery channel. This enables functionality to change at some time in the future with little impact on the delivery channel. More important, the core functionality and data for our example initiative are in the back-end system.

The Decomposition and Agent application patterns were rejected because they provide for additional functionality not required for our business problem.

The first thought is to reject the Router pattern because the characteristics of the Web site indicate that it will not assist in improving organizational efficiency. This statement appears to have no relevance for our simple usage.

As such, the Router application pattern is seen as a suitable pattern for our solution to satisfy Self-Service access to product configuration, product search and selection, and order functionality.

Figure 3-6 Self-service Router pattern

3.2 Pattern application for an e-commerce site

The patterns do not provide enough information from which to fully define a B2B commerce solution, nor do they endeavor to do so. The patterns are designed to meet 80% of most common customer requirements.

The IBM Patterns for e-business also make no attempt to replace a delivery methodology such as IBM Global Method or Rational® Unified Process. They are designed to operate alongside such a methodology.

So what do they provide us?

Patterns for e-business significantly shortcut arriving at a view of the architecture for most of a solution. Patterns for e-business also lessen risk by enabling the user to design a solution that is constructed on proven architectural patterns.

Following the process down to the formation of product-specified runtime, and using the guidelines and best practices available, patterns provide a specification Protocol Firewall of the operational architecture. This may not be complete, but it certainly provides a suitable level of understanding for the construction of a proposal. Indeed, the runtime diagram produced is suitable for direct inclusion with a proposal. The logical nodes that are identified to allow choosing Business patterns provide a head start in identifying components within the proposal. Some of the more technical components are identified as the Runtime patterns are defined.

However, when the IBM Patterns for e-business are combined with a suitable methodology, the material can be used to provide a technical framework that can be used right through the project. They provide a natural grouping of major subsystems that is useful right through from business analysis to testing. As an example, the Business patterns identified for the project are suitable for grouping functional tests. The Application Integration patterns are suitable for grouping interface tests for integration testing.

The Composite patterns are very useful for those defining a more complex solution where the business need matches a Composite pattern description. After the Composite pattern has been identified, it is possible to research package-based solutions that have the possibility of satisfying a large proportion of the solution in total.

For an e-commerce business need that aligns well with a Composite pattern, it is possible, with experience, to choose the Composite pattern directly from high-level requirements. This allows package investigation to commence very early in the project's life and can run in parallel with the full architectural definition for the solution.

One benefit of IBM Patterns for e-business that should not be overlooked when producing a B2B or any other solution is the promotion of a standardized notation and terminology that is offered. Simply from an ease-of-communications point of view, in an organization that provides e-business solutions, using a standard terminology and notation is likely to save time and effort, and therefore to reduce cost in the long run. As an example, if an architect talks about a population, a multi-step, information aggregation–based solution for a section of an initiative's solution, anyone familiar with the IBM Patterns for e-business can immediately picture how that area of the solution is structured without needing a detailed explanation.

3.3 The hosting composite pattern

In defining a composite pattern for electronic commerce hosting sites, we first discuss composite patterns. We then focus on two related composite patterns that have already been defined: electronic commerce and the sell-side hub pattern from e-marketplaces. We then compare and contrast the aspects of these two composite patterns to determine the needed aspects of a hosting composite pattern.

3.3.1 Composite patterns

Composite patterns combine Business patterns and Integration patterns to create complex, advanced e-business applications. A solution design composed of these multiple building blocks is only considered a Composite pattern when it is recurrently employed to solve the problems of businesses across a wide range of industries.

When Business patterns and Integration patterns are combined to assemble solutions that perform complex business functions, certain recurring pattern combinations begin to emerge. For instance, most solutions today provide a personalized user experience. These solutions typically expose key functions of line-of-business applications by integrating with them. Consequently, most of these solutions combine an Access Integration pattern, a Self-Service pattern, and an Application Integration pattern to enable this complex functionality. Composite patterns represent commonly occurring combinations of Business patterns and Integration patterns such as this, and they typically solve major portions of functionality within a solution.

The Patterns for e-business are designed for reuse in nearly any Web-based application development scenario. As such, the possible combinations of Business patterns and Integration patterns to form Composite patterns are extensive.

3.3.2 Electronic commerce composite pattern

Electronic commerce is the set of products and processes facilitating the secure purchase of goods and services over the Web, including such functions as:

- Advertising
- Marketing
- Shopping
- Purchasing
- Paying
- Shipping/delivery

Electronic commerce is a special case of online interaction between users and businesses in which products are sold through a catalog using a shopping cart. The pattern can also include links to back-office systems that provide inventory updates, order processing, delivery systems, and credit checking.

Electronic commerce solutions enable enterprises to reach new customers and manage transactions electronically. Consumers can purchase with confidence and know that their transactions are secure and their privacy is protected.

As shown in Figure 3-7, the Composite pattern for an electronic commerce solution consists of the following mandatory patterns:

- A Self-Service business pattern, which provides customers access to Web site functions such as browsing the catalog, placing an order, making a payment, and checking order status

Figure 3-7 Electronic commerce as a composite pattern

- An Information Aggregation pattern, which is used to aggregate information from multiple sources into a unified catalog of items
- An Application Integration pattern that is used to combine the Self-Service pattern and the Information Aggregation pattern to provide a unified solution to the customer

Additionally, electronic commerce solutions can have several variants that optionally include the following patterns:

- An Access Integration pattern that provides for more sophisticated functions aimed at increasing the user-friendliness of the site, such as personalization and pervasive device access
- A Collaboration business pattern that provides functions such as automatic order confirmation through e-mail or online capabilities with customer service representatives
- An Extended Enterprise pattern that can be used to implement a direct connection with a shipping company that is used to ship the order to the customer

3.3.3 Sell-side hub composite pattern

e-Marketplaces are trading exchanges, sell-side hubs, and buy-side hubs that facilitate and promote buying, selling, and business communities among trading partners within certain industries. These solutions represent some of the most comprehensive and complex e-business applications that exist today. There are three types of e-Marketplaces:

- Trading Exchange
- Sell-Side Hub
- Buy-Side Hub

We focus on the Sell-Side Hub, as it more closely resembles the eSite model.

In a Sell-Side Hub, the seller owns the e-Marketplace and uses it as a vehicle to sell goods and services to prospective buyers across the Web. As shown in Figure 3-8 on page 46, the Composite pattern for the Sell-Side Hub includes the following patterns:

- Access Integration pattern that helps provide a unified customer interface
- Self-Service business pattern that enables users to browse through a catalog, create an order, and plan an order with the hub
- Information Aggregation business pattern that is used to create the e-Marketplace catalog from the multiple sources of supplier's product files, pricing files, and advertising literature

- Application Integration patterns that integrate the Business Patterns that are a part of the Sell-Side Hub

Figure 3-8 Sell-Side Hub composite pattern

In addition to these basic functions, there can be several variations on this pattern. These include:

- Adding a Collaboration business pattern that allows for and enables auctions, reverse auctions, and other collaborative buying functions
- Adding an Information Aggregation business pattern that helps integrate and present a unified catalog that combines raw catalog data with expert advice, product comparisons, and recommendations from public Internet sites
- Adding an Extended Enterprise business pattern that integrates the Sell-Side hub with external service providers such as a financial institution to handle credit processing or a shipping company to handle physical delivery of goods

3.3.4 Hosting composite pattern

An eSites hosting solution combines attributes from the electronic commerce pattern and the Sell-Side Hub. It is an online interaction between users and businesses in which the seller owns the site or sites. Depending on the requirements, it can contain one or more individual sites targeted at different user communities, both consumer and business.

As Figure 3-9 indicates, the hosting composite pattern consists of the following business patterns:

- Self-Service business pattern that enables users to browse through a catalog, create an order, and plan an order with one of the hosted stores
- Information Aggregation business pattern that is used to create the shared catalog from the multiple sources of supplier's product files, pricing files, and advertising literature

Figure 3-9 Hosting composite pattern

Additionally, the variations on this pattern can include:

- Adding an Access Integration pattern that helps provide a unified customer interface across one or more of the hosted stores
- Application Integration patterns that integrate the Business Patterns that are a part of the seller's processes
- Adding a Collaboration business pattern that allows for and enables auctions, reverse auctions and other collaborative buying functions such as requests for quotes (RFQ)
- Adding an Extended Enterprise business pattern that integrates the hosted stores with external service providers such as a financial institution to handle credit processing or a shipping company to handle the physical delivery of goods

4

Requirements analysis

This chapter describes our imaginary customer and the requirements they have for their e-business solution. It contains the following sections:

- Overview
- High-level business description
- Business goals
- Assumptions
- Existing environment
- Functional requirements
- Non-functional requirements
- Standards and policies

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4.1 Overview

In this section, we briefly describe:

- What requirements are
- The necessity of requirements
- The gathering of requirements

4.1.1 Definition of key terms

The terms that are used when referring to the requirements phase include the following.

Functional requirements

Functional requirements describe in detail what the solution is expected to do in terms of functionality. The customer wants the system to satisfy certain business needs of their organization. The customer's wish list is the list of requirements.

Non-functional requirements

Non-functional requirements are those aspects of a business system that define the functionality of a system indirectly. They are general attributes that the solution must satisfy.

The most important non-functional requirements are performance, availability, security, systems management, and constraints.

As with functional requirements, non-functional requirements have to be measurable.

Principles, policies, standards, and guidelines

These are general rules that an organization adheres to when using or deploying IT and business assets.

Requirements and specifications

There is a difference between requirements and specifications: Requirements are what the customer wants to see in a solution, and specifications define what a system will actually do after it is built. In an ideal world, the specifications align completely to the requirements, but sometimes there are issues that prevent the fulfillment of all requirements (for example, when the designated product does not provide a certain function that is needed to met the specification).

The importance of requirements

Without a proper set of requirements, a team of architects would not be able to design a solution that fits the customer's needs. Further, without a specification document that derives from those requirements, it would not be possible to determine in a methodical way whether the produced solution meets the specification.

4.1.2 How to gather requirements

The process of gathering functional requirements differs from the process of gathering non-functional requirements.

Gathering functional requirements

Normally, functional requirements are gathered through a series of workshops with the customer. The project manager and an IT architect work together with a group of the customer's employees that consists of their project manager and representatives from various groups that are involved in the project. It is important that all aspects of the customer's organization are involved to ensure that a complete set of requirements can be derived.

We have assumed that our sample project has reached a phase where basic requirements are already stated, a high-level proposal has already been written, and the product has already been chosen by the customer. Given these assumptions, we proceed to requirements gathering by collecting all existing documentation on the project and then elaborate on any open issues during the workshops.

Note: It is not always possible for a solution to meet all requirements. Therefore, it is important for the customer to establish priorities on their requirements. This way, if there are problems in delivering the solution with all of the requested features, you at least know which are the most important features to your customer and can concentrate on those.

Gathering non-functional requirements

Non-functional requirements can be gathered in a variety of ways:

- Let the customer fill out questionnaires
- Hold interviews
- Conduct workshops
- Research existing documents
- Benchmark existing applications

The best way to start is to be prepared. Create a questionnaire that will be given to key members of the customer's organization (IT manager, customer's project

manager, other business and IT contact personnel). The questions should be specific and deal with such issues as:

- Number of concurrent users
- Size and number of catalogs
- Number of orders per day, week, month
- Performance of key functions such as registration, search, and checkout
- Solution availability
- Data retention requirements
- Security issues
- Benchmark results of existing applications

After you collect the results of the questionnaires, compare the results and highlight differences to key questions. When reviewing the results, ensure that answers are clear, concise, and measurable. “It should be fast” is not a requirement. What should be fast? How fast should it be? Under what conditions should it be this fast?

Hold several workshops to review the findings and resolve any issues. As with functional requirements, the list of non-functional requirements should be prioritized by the customer. Ensure that the customer is made aware of the associated costs of each requirement. Meeting a key performance requirement may mean a significant hardware expense.

4.2 High-level business description

Our imaginary customer, Big Computer Company, LLC, is located in New York. They currently sell several lines of computers and peripherals as well as a series of technical books. They have a retail outlet and also sell directly to businesses through a small sales force. They have a small Web site that has yet to generate any significant business.

4.3 Business goals

With their new e-business solution, Big Computer Company, LLC, plans to:

- Increase their retail operations by enhancing their Web presence.
- Increase their commercial business by creating two distinct Web channels, one for small businesses to browse and purchase products at wholesale prices, and one for large customers with contracts in place.
- Increase customer satisfaction by providing a Web-based access channel that enables client organizations to have self-service capability to place orders and review order status via the Internet.

4.4 Assumptions

The following assumptions were made:

1. The customer has decided to adopt IBM WebSphere Application Server as their standard runtime platform.
2. The initial scope of the project has been defined, and key stakeholders within the customer have been identified.
3. The product, IBM WebSphere Commerce V5.5 Business Edition, has been selected by the customer.
4. The customer has an existing Web presence.

4.5 Existing environment

This section describes the existing environment at Big Computer Company, LLC.

4.5.1 Business perspective

- All functionality to be enabled by the solution is currently in place for manual access channels (that is, the solution will offer functionality currently available in the form of paper-based forms and manual processes).
- The Big organization has multiple fulfillment centers located throughout the United States to enable speedy servicing of customer requests.

4.5.2 IT perspective

- Big Computer Company has an existing product inventory and a separate pricing system.
- The Big organization employs the use of WebSphere MQ, providing intersystem communications between corporate systems.
- Detailed information about the products and the matching pictures for the printed catalog are stored in a product management system (PMS). This system has been used for producing printed catalogs.
- Big already has an array of highly available Web servers that host their Web presence and provide public access to a part of their technical documentation (the technical documentation repository). There is also a secure access area that holds documentation of a competitive, confidential nature that may only be viewed by Big customers. This repository is also fed from the PMS.
- The Big organization has an existing authentication, authorization, and registration capability used by the technical documentation repository.

4.6 Functional requirements

In this section, we discuss the functional requirements of the solution for Big Computer Company. For easy reference, the requirements are structured into several subsystems: Catalog, Member, Order, and Marketing.

4.6.1 Catalog subsystem

- A catalog search capability will be provided to users to enable them to find products without having to browse the catalog.
- Authenticated users will have the ability to browse a catalog. A catalog for perusal can be selected based on:
  - A contract
  - A combination of contracts
  - The catalog in full
- Business customers can negotiate with Big for certain conditions for the purchase of certain products. The outcome of these negotiations is captured in a contract between Big and their customer.
- Big is planning to connect their catalog system to one or several of their suppliers in the future.

4.6.2 Member subsystem

- New users will be able to self-register (that is, apply for a user ID) in order to gain access to the ordering system.
- New registration requests will be validated by a user organization representative before individual user access is provided. This validating role is called the buyer administrator.
- A client organization's buyer administrator will be validated by a Big employee before access is provided.

Table 4-1 gives a summary of the different user types that will deal with the B2C stores, and Table 4-2 on page 55 provides a list of user types for the B2B stores.

Table 4-1 User types for B2C stores

User type	Explanation
Anonymous user	May browse the catalog and make purchases. May self-register.

User type	Explanation
Registered customer	May browse the catalog and make purchases.
Administrator	Administers the system.

Table 4-2 User types for B2B stores

User type	Explanation
Anonymous user	May only browse the catalog. May self-register.
Registered customer	May browse the catalog and make purchases.
Buyer	May self-register. Must be approved before making purchases. May make purchases for his organization.
Buyer administrator	Grants access rights to buyers.
Buyer approver	Approves buyers' purchases.
Administrator	Administers the system.

4.6.3 Order subsystem

- The solution will provide client organizations with the ability to place an order through the Internet. It will service:
  - Requests from users from client organizations wishing to place an online order via Web browser
  - Requests from compatible client organization systems that will interoperate with it to place an online order (using a machine interface)
- Business users must authenticate to place an order.
- Business users will have the ability to place standing orders. Standing orders are orders with consistently the same shopping cart, which reoccur over time and follow a given schedule.
- Business users will have the ability to create template orders. Template orders are based on previous orders that can be modified to satisfy the current need. They can then be named and saved for further use.
- Business users will be able to use the bulk order form. Bulk order forms let users who already know what they need bypass the catalog browsing. This is

done via a Web page with a list of entry fields where users enter several product stock keeping units (SKUs) at the same time. By submitting the bulk order form, all products are put into the user's shopping cart.

- Order approval functions in the B2B stores will be as follows:
  - Approval must be provided by a client organization's buyer approver for orders over a pre-defined monetary value.
  - The buyer approver will have the ability to configure the trigger level for approval of orders for their company.
  - The system will notify the buyer approver as well as the buyer:
    - Every time an approval is necessary
    - Every time an approval has been given
    - Every time an order has been rejected by the buyer approver
- Order status functions will be as follows:
  - Users will be able to view the status of current and past orders. This also includes orders placed through other channels.
  - Authorization control will provide the ability for a standard buyer to see all orders placed by that user.
  - Buyer approvers will be able to access all orders placed by their organization regardless of the channel that was used for placing the order.
- Machine interface features will be as follows:
  - The functionality offered by the machine interface will be limited to placing an order and checking the status of a current or past order.
  - The following data will be delivered to the client organizations using the cXML protocol:
    - Product information
    - Pricing information
    - Order request
    - Order status request
    - Error information for the configuration and operation of the machine interface
  - Future requirements may include integrating with the OCI protocol.
- Orders in the B2B stores are paid by invoice. There will be no online payment facility.
- Orders in the B2C stores are to be paid by credit card.

4.6.4 Marketing subsystem

- The system will produce periodic marketing reports. Theses reports provide information that enables targeted advertising based on customer usage and other customer activity.
- The frequency of report generation will be configurable.
- The reports will be available at the site level as well as the individual store.

4.7 Non-functional requirements

In this section, we discuss the non-functional requirements of the solution for Big Computer Company, LLC. The non-functional requirements are structured into these categories: Capacity and performance, Availability, Security, Systems management, Scalability, Maintainability, Manageability, System usability, and Data integrity and failure recovery.

4.7.1 Capacity and performance

- The total user base is expected to be 10,000.
- In normal operating conditions, the number of concurrent users will be 30.
- In abnormal operating conditions (peak loads), the number of concurrent users will be 100.
- The estimated Internet connection speed of the users is 128 kbit/sec.
- Response times:
  - 5 second read response times in normal operating conditions
  - 10 second read response times in normal operating conditions
  - 8 second write response times in abnormal operating conditions
  - 16 second write response times in abnormal operating conditions

Note: These figures do not cover Internet access channels because the developers have no control over these environments.

- Product displays expected in one day: 1500.
- The ratio between dynamic versus static pages is an estimated 20 to 1.
- Average page size: 30 KB.
- Average static file size: 10 KB.

4.7.2 Availability

- The complete system will be available during normal business hours across North American time zones.
- The Web servers will operate 24 hours a day, 7 days a week.
- The Web servers will have a 99.5% availability to ensure that a meaningful error message is provided to the users if the shop application is unavailable.

4.7.3 Security

- Authentication will be controlled by the WebSphere Commerce security subsystem.
- There will be interactive users as well as batch users (that is, external systems using the machine interface of the solution).
- User sessions will time-out after 30 minutes of inactivity. This figure will be configurable.
- A single user will not be able to use multiple concurrent connections to the system. User accounts will be locked after five invalid logon attempts. Unlocking will have to be done by the user's buyer administrator.
- Invalid logon attempts will be logged for auditing purposes.
- Because of the competitive nature of the transactions between Big Computer Company and its customers, Secure Socket Layer (SSL) encryption will be used throughout the user session, starting with the logon screen.
- The encrypted SSL transactions will use a key length of 128 bit or shorter, if the end user's browser does not support a higher key length.
- An anonymous user's browsing session will not be encrypted as this information is open to anyone anyway. This will save computing power for the system.

4.7.4 Systems management

- Interfaces from existing systems providing pricing information, product information, inventory, fulfillment capability, and order status information will be batch-based.
- There is a weekly backup process in place on Saturday night that requires the application servers to be brought down. The downtime will be between 2:00 a.m. and 4:00 a.m.
- System management problems and issues are tracked in a custom-built problem tracking database.

- Logging:
  - Errors must be captured in log files for troubleshooting.
  - The system must be capable of capturing all interaction between components and users for contract tracing of error conditions.
  - The level of information must be configurable to obtain a balance of everything for error resolution and key elements only for normal operation.
  - All updates must be captured for auditing purposes.

4.7.5 Scalability

The system will be able to scale to support additional products in the catalog as well as additional concurrent users and additional geographies.

4.7.6 Maintainability

The solution will be compliant with industry-standard technologies.

4.7.7 Manageability

The frequency of batch updates to and from interfacing systems will be configurable for each interface.

4.7.8 System usability

The solution will support the following Web browsers (cookies must be enabled):

- Internet Explorer 5.01 and later
- Netscape Communicator 4.7 and later
- Mozilla 1.0 and later
- Opera 5 and later

4.7.9 Data integrity and failure recovery

- Mean Time To Recovery (MTTR) for normal failure condition will be no greater than one hour (backup restore time).
- MTTR for disaster condition will be no greater than 12 hours (setting up new machine, installing software, restoring backup).
- Mean Time Between Failure (MTBF) for normal failure condition during normal hours of operation will be no less than 200 hours for the Web servers. It will be less than that for the overall solution.

Note: The MTBF can be calculated as follows:

Availability = (MTBF / (MTBF + MTTR))

or

MTBF = (A x MTTR) / (1 - A)

The projected solution has an availability of 99.5% (A=0.995) for the Web servers and an MTTR of 1 hour (h) in normal failure conditions.

This gives us: x = 199 h, which means: to achieve the demanded 99.5% availability, the system must be able to run for at least 200 h with only 1 h downtime or approx. 2400 h with 12 h downtime in a disaster condition.

When referring to availability, it is popular to use the “nines” such as “three nines” for an availability of 99.9%. However, few people realize the implication of this. In the example above, 99.9% availability would mean 41 days with only 1 h downtime, and 99.99% would mean more than one year with 1 h downtime.

4.8 Standards and policies

In the following sections, every notable standard within your customer’s organization should be recorded. We will provide only a rough overview here.

4.8.1 Business standards

- The solution will initially support only users in the United States, with an option to expand this to worldwide users.
- The solution will initially support only US English, with an option to expand to multiple languages in the future.
- The solution will initially support US dollars as the standard currency, with an option to expand to multiple currencies in the future.

4.8.2 Platform standards

Big Computer Company uses the following systems in its IT production environment:

- IBM zSeries® Host Server
- Intel® Pentium® IV based servers on Windows 2000 Server

- Intel Pentium III and Pentium II based desktop computers as clients, using Windows 2000 Professional SP4 and Internet Explorer 5.5 SP2 as a Web browser
- Database: IBM UDB DB2
- WebSphere MQ for interhost communication
- IBM WebSphere Application Server is the platform of choice for future applications
- IBM Tivoli® Management Suite is used as the systems management platform

Only IBM xSeries® servers with Windows 2000 server SP4 or later are allowed in network segments other than the intranet.

4.8.3 Application standards

The following standards apply for any application within the Big Computer Company IT environment:

- ERP system: Big Computer Company does not use a single ERP system. Instead, the functions of an ERP system are made up of different applications, such as pricing, inventory, fulfillment, and so on.
- Product management system: custom-built software running on Windows 2000 Server using C++ as development language and IBM UDB DB2 as database.
- Product inventory implemented as a custom-built DB2 application on a zSeries server.
- Pricing system: custom-built J2EE application implemented on an AIX-based WebSphere system.
- Technical documentation repository: custom-built J2EE document server application implemented on an AIX-based WebSphere system.
- Authentication and authorization: IBM Tivoli Access Manager for e-business.
- External product configurator: custom-built J2EE software on an AIX-based WebSphere system.
- Development: Rational ClearCase® is used as a source code version-control system.

4.8.4 Technical standards

- Network standard: 100 Mb Ethernet

- Firewall topology standards at Big Computer Company, LLC: the segments of the network consist of:
  - De-militarized zone (DMZ)
  - Application zone
  - Database zone
  - Big Computer Company, LLC intranet

Note: In a real-life customer situation, one would also assess which technical standards are in place regarding:

- Access control and security
- Development languages
- Electronic Data Interchange (EDI)
- Electronic Fund Transfer (EFT)
- Public Key Infrastructure (PKI)
- User Interface
- EAI layer/architecture

Because these topics are not relevant in the context of this redbook, we will not discuss this any further.

5

Solution design

This chapter provides an overview of the solution design and its benefits for Big Computer Company, LLC. It includes the following:

- System context
- System architecture
- Component model
- Store navigation
- Shared catalog hierarchy
- Site organizational hierarchy

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5.1 System context

The System Context model initially represents the entire system as a single object or process and identifies the interfaces between the system and external entities. Usually shown as a diagram, this representation defines the system and identifies the information and control flows that cross the system boundary.

The System Context highlights several important characteristics of the system: users, external systems, batch inputs and outputs, and external devices.

- External events to which the system must respond
- Events that the system generates that affect external entities
- Data that the system receives from the outside world and that must be processed in some way
- Data produced by the system and sent to the outside world

The objects within the system boundary define the scope over which the development team has some control. Users and systems outside the boundary of the system are those that affect the system operation and development but are beyond the control of developers within the currently defined scope of the project.

Figure 5-1 System Context diagram

5.2 System architecture

The Architecture Overview Diagram is a schematic diagram that represents the governing ideas and candidate building blocks of an IT system or enterprise architecture. It provides an overview of the main conceptual elements and relationships in an architecture, which frequently include candidate subsystems, components, nodes, connections, data stores, users and external systems.

As communication is its main purpose, it is more important for the Architecture Overview Diagram to be simple, brief, clear, and understandable than comprehensive or accurate in all details. Consequently, the diagram uses an informal rich picture notation. It typically includes supporting text that explains the main concepts of the architecture.

Figure 5-2 Architecture overview diagram

5.3 Component model

The Component Model describes the entire hierarchy of components in terms of their responsibilities, their interfaces, their (static) relationships, and the way they collaborate to deliver required functionality.

A component is a relatively independent part of a system. It is characterized by its responsibilities and eventually by the interface(s) it offers. Components can be separated into smaller components or combined into larger components. A

component (as used here) is a very general concept and is not restricted to any particular technology.

Figure 5-3 Component model

In this section, we limit our discussion to the following software components of the WebSphere Commerce runtime architecture:

- Web server
- WebSphere Application Server
- Database Server
- WebSphere Commerce Server
- WebSphere Commerce Payments Server

5.3.1 Web server

The Web server can be installed on the WebSphere Commerce node or a remote node, which optionally can be clustered for load balancing. Regardless of whether the Web server is local or remote, it must be configured to use the WebSphere Application Server plug-in. There are several supported Web server plug-ins. The IBM HTTP Server and plug-in are found on the WebSphere Application Server CD that is included with WebSphere Commerce.

The majority of the WebSphere Commerce tooling and store application assets are J2EE components (JSPs, servlets, EJBs, and so on) that run on the application server located on the WebSphere Commerce node. There are some static HTML pages and images found in the WebSphere Commerce tools and stores that can be served by the Web server.

Incoming HTTP requests from Web browser clients are received by the Web server and WebSphere plug-in. The WebSphere plug-in, via the use of the plugin-cfg.xml file, redirects requests to applications on the WebSphere Application Server on the WebSphere Commerce node.

In the event that you want to set up a remote Web server, you must manually configure the WebSphere Application Server virtual host aliases and regenerate the WebSphere plugin-cfg.xml file on the WebSphere Commerce node. The updated plugin-cfg.xml file must then be copied manually to the remote Web server. The Web server host name must be updated in the WebSphere Commerce instance and the WebSphere Commerce Payments instance via the Configuration Manager. In addition, static application assets that are to be served by the Web server (HTML, images) also must be copied manually to the remote Web server. When the remote Web server has reloaded the plugin-cfg.xml file and the WebSphere Application Server has been restarted to reflect the configuration changes, the remote Web server host name can be used by the Web browser client to access the WebSphere Commerce tools and stores.

5.3.2 WebSphere Application Server

The WebSphere Commerce Server leverages the J2EE technologies provided by the WebSphere Application Server such as JSPs, servlets (WebSphere Commerce commands), EJBs, XML, Web Services, security, MQ embedded messaging, and so on.

IBM WebSphere Commerce V5.5 includes the IBM WebSphere Application Server V5 base edition and Network Deployment Edition. The base edition is suitable for single-tier, two-tier, and three-tier runtime configurations. When multiple WebSphere Application Servers are needed for scalability, such as horizontal application clustering, then the Network Deployment Edition is needed.

5.3.3 Database Server

IBM DB2 Universal Database™ V8.1, Enterprise Server Edition is included with WebSphere Commerce V5.5. In addition, Oracle9i (9.2.0.1) Enterprise Server and Standard Edition are supported (not included). The Database Server is used for the WebSphere Commerce instance database and the WebSphere Commerce Payments database.

The WebSphere Commerce instance database is used for store configuration data such as taxes, shipping, customer profile information, and the product catalog. More than 600 tables and numerous columns are built into the WebSphere Commerce V5.5 schema.

The WebSphere Commerce Payments database is used for payment configuration, such as accounts, payment types, cassettes, and payment transaction data.

The database server software can be installed on the same node as WebSphere Commerce or on a remote Database Server node.

For more information about implementing a remote Database Server node, refer to “Add a remote database server node” on page 797.

5.3.4 WebSphere Commerce Server

The WebSphere Commerce Server is a WebSphere enterprise application, which runs on its own application server within the WebSphere Application Server. The WebSphere Commerce application software is installed via the WebSphere Commerce Installer.

After installation, WebSphere Commerce must be configured using the Configuration Manager. The Configuration Manager is used to create the WebSphere Commerce instance. During instance creation, an application server for the WebSphere Commerce Server and the enterprise application is deployed.

For most runtime topologies, the configuration of the WebSphere Application Server is performed for the user via the WebSphere Commerce Configuration Manager. When adding a remote Web server, remote WebSphere Commerce Payments node, and clustering using the WebSphere Application Server Network Deployment Edition, some manual configuration is needed.

5.3.5 WebSphere Commerce Payments Server

The WebSphere Commerce Payments Server is a WebSphere enterprise application that runs on its own application server within the WebSphere Application Server.

After installation, the WebSphere Commerce Payments must be created using the Configuration Manager. When creating a WebSphere Commerce Payments instance using the Configuration Manager, the WebSphere Commerce Payments instance application server is created and the WebSphere Commerce Payments enterprise application is deployed.

The WebSphere Commerce Payments Server can be installed on the WebSphere Commerce node or on a remote node.

5.4 Store navigation

This section describes the standard store navigation provided in the two asset stores that are created when you publish the eSite.sar file.

5.4.1 B2C asset store

The B2C asset store was based on the Fashion Flow store model and has much of the same functionality as the standard Consumer Direct store. Figure 5-4 provides a navigational flow of the standard B2C asset store.

Figure 5-4 B2C asset store navigation flow

The seller administrator has the capability to make defined changes to the flow of stores based on the B2C asset store through the manage store menu, which is accessed from the eSite Hub. The capability to alter the flow within stores based on the B2C asset store is described in “Store: Change Flow” on page 467.

5.4.2 B2B asset store

The B2B asset store was based on the Tooltech store and has much of the same functionality as the standard B2B direct store. Figure 5-5 provides a navigational flow of the standard B2B asset store.

Figure 5-5 B2B asset store navigation flow

The seller administrator has the capability to make defined changes to the flow of stores based on the B2B asset store through the manage store menu, which is accessed from the eSite Hub. The capability to alter the flow within stores based on the B2B asset store is described in “Store: Change flow” on page 741.

5.5 Shared catalog hierarchy

This section describes the shared catalog that was loaded to the Catalog Asset store. It contains five top-level categories:

- Redbooks
- Thinkpad
- Net Vista
- Monitors
- Printers

Figure 5-6 Shared catalog hierarchy

The products in the Redbooks category do not have multiple items, but the products in the rest of the catalog do. The major difference between this catalog and the one that is loaded when the eSite archive file is published is that this one contains inventory for our three stores.

Before you load this catalog, you must delete the existing product data while retaining the catalog. Follow the instructions in “Delete sample data” on page 814 to remove the existing product data from the shared catalog. After this has been done, you can load the new catalog and inventory data by following the instructions in “Load sample data” on page 815.

5.6 Site organizational hierarchy

This section describes the organizational structure of the Big Computer Company, LLC, site. Figure 5-7 shows the organizations as they were loaded with the eSite.sar file. Figure 5-8 on page 74 shows the structure after we added our organizations and created our stores.

Figure 5-7 Original eSite organizational hierarchy

The organizations created by the publishing of the eSites.sar file are displayed in blue in both diagrams. This enables you to see the newly created organizations and their location in the hierarchy.

Figure 5-8 Organizational structure after store creation

We created an organization underneath the eSite Seller Organization for each store that we built. When the store was created with the Store Creation Wizard, an organizational unit was generated by the system and the store was placed under that organizational unit. The name of the organizational unit was a concatenation of the name of the organization and a store type.

- MPS - B2C store
- BPS - B2B store

We also created a buyer organization for each of the B2B stores.

6

Detailed design

This chapter provides a cookbook for customizing an eSites installation. It acts as a step-by-step development guide for implementing several different customizations. For each customization, the following will be provided:

- A brief overview that describes the customization and the benefits provided
- A list of prerequisites and assumptions required before development
- A detailed list of steps required to develop the customization

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6.1 Overview

This chapter is aimed solely at developers and thus provides a fair amount of in-depth technical steps and procedures. Its purpose is to act as a step-by-step development guide to cover the following customizations:

- New storefront style and template
- New e-Marketing Spot
- Customized store directory
- Dynamic text messages
- New asset store
- Custom shopcart display
- New coupon promotion
- Custom accelerator menu
- Custom registration menus

6.2 New storefront style and template

This customization shows how to develop a new style for stores based on the eSite Store Front Asset store.

6.2.1 Overview

WebSphere Commerce V5.5 provide the capability to dynamically change the look and feel of the hosted stores based on style-color-banner combinations. With this customization, you can create a new style through manage store → Store → Change Style on the eSite Hub.

6.2.2 Prerequisites

This customization assumes that WebSphere Commerce Studio is installed and configured as in Appendix C, “WebSphere Commerce Studio implementation” on page 827. It also assumes that the eSite SAR file has been published successfully and that at least one B2C store based on the eSite Store Front Asset store has been created using WebSphere Commerce Studio as in Chapter 8, “Publish the SAR and create stores” on page 225.

All of the following steps are intended to enable a developer to re-create the customization within the local WebSphere Commerce Studio environment. A basic understanding of WebSphere Commerce Studio is assumed.

6.2.3 Steps

The Style Editor (Store → Change Style) is based on the WebSphere Commerce Flow infrastructure. The options presented in the Style Editor are based on information from the style.xml file (Figure 6-2 on page 79), located at:

```
Stores\Web Content\WEB-INF\xml\tools\stores\<storeDirectory>\devtools\flow\
style\style.xml
```

That file is part of the hosted storefront asset store. In turn, style.xml refers to features and components defined in the flow repository files for the store (Figure 6-4 on page 85), found in the directory:

```
Stores\Web Content\WEB-INF\xml\tools\stores\<storeDirectory>\devtools\flow\
repository\
```

The components defined in the repository map to the actual file assets such as JSPs, images, and cascading style sheets (CSS). Adding new style options requires modifying the style.xml and repository files, as well as adding new JSPs, images, and CSSs.

Three options can be added to the Style Editor:

- *Styles*, which define the look and feel for the store's header, footer, and sidebar. Each style choice maps to a store directory containing the header, footer, and sidebar JSPs for that style.
- *Color*, which define the color for the store. Each color choice maps to its own style sheet, as well as to a directory containing the store's images rendered in that particular color.
- *Banners*, which define the banner image used by the store. Each banner choice maps to a banner image.

The new style definition is archived by following five simple steps:

1. Create new header, footer, and sidebar JSPs.

   Creates new header, footer, and sidebar JSPs based on existing JSPs from the eSite Store Front Asset store. A new directory must be created to hold the new JSPs for this style. Ensure that the same file name is used for each JSP.

   In this case we created the *style3* directory. It is a copy of the style2 directory, so the required JSP files are in it already.

   Figure 6-1 on page 78 shows the new style3 directory, which contains the same files as the style2 directory. No changes to the JSP files are required because the style change will be applied to the cascading style sheet (css) files later in this section.

Figure 6-1 Create a Style3 directory based on the existing Style2 directory

2. Define a new style in the style XML file.

   Available style, color, and banner options are defined in the style.xml file (Figure 6-2 on page 79), which is located in:

   ```
   Stores\WebStores\Web Content\eSiteStoreFrontAssetStore\css\
   Content\WEB-INF\xml\tools\stores\eSiteStoreFrontAssetStore\devtools\flow
   \style\style.xml
   ```

Figure 6-2 style.xml file location

Required changes to the style.xml file are:

a. Add a new option ID under the StylePanelOptions option group.

   Style choices are defined in the StylePanelOptions option group of the style.xml file. This is the section that starts with:

```
<option-group id="StylePanelOptions" type "radio" panel="StylePanel">
```

   The new option ID should enable a unique style feature, which will be added later in the flow repository. Also, a new preview thumbnail image should be created for this style as referenced by the `src` attribute in the corresponding style option. We do this later in this section.

   The new style option is based on the existing ones and looks similar to:

```
<option-group id="StylePanelOptions" type "radio" panel="StylePanel">
<option id="Style.1"
enables-features="Style.f.1"
enables-options="Color.1 Color.2 Color.3 Color.4 Color.5 Color.6"
src="tools/stores/$storeDir$/style/styles/style1.gif"
selected-by-default="true" />
<option id="Style.2"
enables-features="Style.f.2"
enables-options="Color.7 Color.8 Color.9 Color.10 Color.11 Color.12"
src="tools/stores/$storeDir$/style/styles/style2.gif" />
<option id="Style.3"
enables-features="Style.f.3"
```

```
enables-options="Color.13 Color.14 Color.15 Color.16 Color.17
Color.18"
src="tools/stores/$storeDir$/style/styles/style3.gif" />
</option-group>
```

b. Add new options under the ColorPanelOptions group.

Color choices are defined in the ColorPanelOptions group of the style.xml file, which is located in the section that starts with this line:

```
<option-group id="ColorPanelOptions" type="radio" panel="ColorPanel">
```

We added six new options under the ColorPanelOptions group. These options are the six new style-color combinations. Each color option enables a unique feature defined in the repository. Preview thumbnail images should be created, and we will create those images later.

The code to be added is:

```
<option id="Color.13"
enables-features="Color.f.13"
enables-options="Banner.1 Banner.7 Banner.13"
src="tools/stores/$storeDir$/style/colors/color3_1.gif"
selected-by-default="true" />
<option id="Color.14"
enables-features="Color.f.14"
enables-options="Banner.2 Banner.8 Banner.14"
src="tools/stores/$storeDir$/style/colors/color3_2.gif"
selected-by-default="true" />
<option id="Color.15"
enables-features="Color.f.15"
enables-options="Banner.3 Banner.9 Banner.15"
src="tools/stores/$storeDir$/style/colors/color3_3.gif"
selected-by-default="true" />
<option id="Color.16"
enables-features="Color.f.16"
enables-options="Banner.4 Banner.10 Banner.16"
src="tools/stores/$storeDir$/style/colors/color3_4.gif"
selected-by-default="true" />
<option id="Color.17"
enables-features="Color.f.17"
enables-options="Banner.5 Banner.11 Banner.17"
src="tools/stores/$storeDir$/style/colors/color3_5.gif"
selected-by-default="true" />
<option id="Color.18"
enables-features="Color.f.18"
enables-options="Banner.6 Banner.12 Banner.18"
src="tools/stores/$storeDir$/style/colors/color3_6.gif"
selected-by-default="true" />
```

c. Add new options under the BannerPanelOptions group.

   Banner choices are defined in the BannerPanelOptions option group of the style.xml file, which is in the section that starts with:

   ```
   <option-group id="BannerPanelOptions" type="radio" panel="BannerPanel">
   ```

   We are using the existing banner, so no changes are required in this section. If we were creating a new banner, it would be added under the BannerPanelOptions group.

d. Save your change to the style.xml file.

3. Create style sheets for each combination.

   Create new CSSs for each style-color combination. The CSS files that make up the look and feel are located in the following directory (path is shown in Figure 6-3 on page 82):

   ```
   Stores\Web Content\eSiteStoreFrontAssetStore\css\
   ```

Figure 6-3 Cascading style sheet files

Notice that there are six css files for each defined style. We added six more CSSs to the new style. In order to create CSSs for the new style, copy and paste six Master*.css files from an existing style. For example, copy Master1_1.ccs and name the new file Master3_1.css. Repeat the process for the five remaining files.

After you have copied the six files, each CSS must be changed to reflect the new style. Be aware of the principal difference between each of the actual Master files for each category, which is the master color. We do not want to change the master color. (The idea is to adjust the new style to fit your needs, so of course you may change the CSSs to achieve that goal.) We are going to

provide the changes we implemented.See Appendix F, “Additional material” on page 923 for more information. Remember that each Master file has a different color, so the changes must be applied to each one of the six master files.

Attention: Be sure not to overwrite the master color.

Our new style should look light, having fewer colors and fewer underline links.

Here are the changes made to the Master3_1.ccs file. Remember to apply similar changes to the other Master css files (Master3_2 - Master3_6). In the Main navigation section, we changed the text-decoration attributes from underline to `none`, in order to display fewer underline links:

```
/* Main navigational link style */
a.mainNavLinks:link {font-family: verdana, arial, helvetica,
sans-serif;text-decoration: none;font-size: 8pt;color:
white;font-weight: bold;padding: 0px;margin: 0px;}
a.mainNavLinks:visited {font-family: verdana, arial, helvetica,
sans-serif;text-decoration: none;font-size: 8pt;color:
white;font-weight: bold;padding: 0px;margin: 0px;}
a.mainNavLinks:active {font-family: verdana, arial, helvetica,
sans-serif;text-decoration: none;font-size: 8pt;color:
white;font-weight: bold;padding: 0px;margin: 0px;}
a.mainNavLinks:hover {font-family: verdana, arial, helvetica,
sans-serif;text-decoration: none;font-size: 8pt;color:
white;font-weight: bold;padding: 0px;margin: 0px;}
```

The next change was made in the `Header Styles -> Table Styles` section. We changed the color of the whitespace under the store name to `black`. We also changed the color of the category links to `white`:

```
/* Header Styles -> Table Styles */
/* The header table consists of 2 columns & 2 rows */
/* Background for the font.storeName text */
td.storeName {background-color: #235173;}
/* Background for the a.mainNavLinks links */
td.mainNavRightTop {text-align: right;background-color:
#235173;padding-right: 0px;margin-right: 0px;padding-top:
0px;padding-bottom: 0px;}
/* White space under the store name */
td.underStoreName {background-color: black;}
/* Background for the a.categoryLinks links */
td.categoryLinksRightBottom {text-align: right;background-color:
white;padding-right: 0px;margin-right: 0px;}
```

We added `background-color: transparent` to the first three category links and set the background color attribute of the last category link to `#eeeeee`. The

text-decoration attribute of the last category link was changed from underline to none:

```
/* Category link style */
a.categoryLinks:link {font-family: verdana, arial, helvetica,
sans-serif;text-decoration: none;font-size: 8pt;color:
#727272;font-weight: bold;background-color: transparent;}
a.categoryLinks:visited {font-family: verdana, arial, helvetica,
sans-serif;text-decoration: none;font-size: 8pt;color:
#727272;font-weight: bold;background-color: transparent;}
a.categoryLinks:active {font-family: verdana, arial, helvetica,
sans-serif;text-decoration: none;font-size: 8pt;color:
#727272;font-weight: bold;background-color: transparent;}
a.categoryLinks:hover {font-family: verdana, arial, helvetica,
sans-serif;text-decoration: none;font-size: 8pt;color:
#727272;font-weight: bold;background-color: #eeeeee;}
```

The color of the heading text in the sidebar was changed to black:

```
/* Regular text used in the sidebar */
font.sidebarText {font-family: verdana, arial, helvetica,
sans-serif;font-size: 8pt;color: black;padding: 0px;margin:
0px;text-decoration: none;}
/* Heading text in the sidebar. See td.mainHeading */
font.mainHeading {font-family: verdana, arial, helvetica,
sans-serif;font-size: 8pt;font-weight: bold;color: Black;padding:
0px;margin: 0px;text-decoration: none;}
```

The next set of changes was made to the background and style of the sidebar. We changed the background color to black, incremented the padding attributes to 30px, and added a thin dashed border:

```
/* Sidebar Styles -> Table Styles */
/* The background & style of the sidebar */
td.sidebar {background-color: black;padding: 30px;margin:
30px;margin-left: 30px;margin-top: 30px;border-style:dashed;
border-top-width: thin; border-right-width: thin; border-bottom-width:
thin; border-left-width: thin;}
```

The final change was made to the background color of the main heading:

```
/* Background for the font.mainHeading text */
td.mainHeading {background-color: white;padding-top: 30px;padding-left:
2px;padding-right: 2px;padding-bottom: 0px;margin: 0px;}
/* When viewing Sub categories, a list of them is displayed on the
sidebar and the current category is highlighted. Background for class
font.sidebarText*/
td.subcategory {padding-left: 3px;margin-left: 3px;background-color:
white;}
```

4. Add the corresponding features to the repository:

   a. Define the new style feature in the Features.xml file.

      The Features.xml file (location shown in Figure 6-4) must be changed to add the new features. The Features.xml file is located in:

```
Stores\Web Content\WEB-INF\xml\tools\stores\eSiteStoreFrontAssetStore
\devtools\flow\repository\
```

Figure 6-4 Repository files location

      Add the new feature for the created style. Usually, you will find more than two features for a style already defined in the Features.xml file; for example:

```
<!-- Features for style  -->
<feature id="Style.f.1" enables="StyleDir.i1.impl1"/>
<feature id="Style.f.2" enables="StyleDir.i1.impl2"/>
<feature id="Style.f.3" enables="StyleDir.i1.impl3"/>
<feature id="Style.f.4" enables="StyleDir.i1.impl4"/>
<feature id="Style.f.5" enables="StyleDir.i1.impl5"/>
<feature id="Style.f.6" enables="StyleDir.i1.impl6"/>
```

As you can see, the feature with id=Style.f.3 is already defined. If you are adding more than six styles, add your style as shown in the previous code.

New colors should be defined similarly:

```
<feature id="Color.f.13" enables="vfile.style13.css vfile.color13.dir"/>
<feature id="Color.f.14" enables="vfile.style14.css vfile.color14.dir"/>
<feature id="Color.f.15" enables="vfile.style15.css vfile.color15.dir"/>
<feature id="Color.f.16" enables="vfile.style16.css vfile.color16.dir"/>
<feature id="Color.f.17" enables="vfile.style17.css vfile.color17.dir"/>
<feature id="Color.f.18" enables="vfile.style18.css vfile.color18.dir"/>
```

The color number corresponds to the numbers used in the Style.xml file.

We did not make any banner changes, so we do not have to add any new information in the banner option group.

b. Add the style feature at StyleDir.xml.

To add the new features, change the StyleDir.xml file (Figure 6-5) in:

```
Stores\Web Content\WEB-INF\xml\tools\stores\eSiteStoreFrontAssetStore
\devtools\flow\repository\
```

Figure 6-5 Location of StyleDir.xml file

c. Add the following element if it is not already present in the StyleDir.xml file:

```
<simple-implementation id="StyleDir.i1.impl3"
url="include/styles/style3/" virtual-page-interface-id="StyleDir.i1" />
```

d. Add these virtual-file-implementation elements to the StyleDir.xml file:

```
<virtual-file-implementation virtual-file-id="vfile.stylesheet"
url="css/Master3_1.css" id="vfile.style13.css"/>
<virtual-file-implementation virtual-file-id="vfile.stylesheet"
url="css/Master3_2.css" id="vfile.style14.css"/>
<virtual-file-implementation virtual-file-id="vfile.stylesheet"
url="css/Master3_3.css" id="vfile.style15.css"/>
<virtual-file-implementation virtual-file-id="vfile.stylesheet"
url="css/Master3_4.css" id="vfile.style16.css"/>
<virtual-file-implementation virtual-file-id="vfile.stylesheet"
url="css/Master3_5.css" id="vfile.style17.css"/>
<virtual-file-implementation virtual-file-id="vfile.stylesheet"
url="css/Master3_6.css" id="vfile.style18.css"/>
```

5. Create a preview thumbnail image for the new style.

   The final step is to create the preview thumbnail images on the Style Editor GUI that are used to choose the desired style-color combination.

   We copied the existing image and renamed it. After the new style functionality is functional, you will capture the actual look and feel and make the thumbnail images. “Usage” on page 264 shows how to use the new functionality. For now, simply copy the existing images. We need one image for the new style and six images for the new different color combinations for that style.

   The image for the style is located in:

   ```
   tools\stores\eSiteStoreFrontAssetStore\style\styles\
   ```

   The name for the new style image is style3.gif.

   The images for style color combinations are located in the directory:

   ```
   tools\stores\eSiteStoreFrontAssetStore\style\colors\
   ```

   The names of the style-color combination images are: style3_1.gif, style3_2.gif, style3_3.gif, style3_4.gif, style3_5.gif, and style3_6.gif.

Figure 6-6 Thumbnail images

A folder must be created for each supported language to store the Go button image. The image is named go_button.gif. For English, add six new folders named `color13` through `color18` in the en_US\images\colors\ folder. These folders are related to the colors defined for the style. Each folder holds a button image.

6.3 New e-Marketing Spot

This section lists the steps required to add an e-Marketing Spot for stores created as a child of the eSite Seller Organization.

6.3.1 Overview

Customizations described in this section include:

- Adding new e-Marketing Spot code into a WebSphere Commerce Studio Version 5.0 project
- Customizing the new e-Marketing Spot code to display titles above the e-Marketing Spot area on the desired store page
- Inserting code into a store page where the e-Marketing Spot is to be displayed
- Registering and scheduling the e-Marketing Spot (see 9.3, “New e-Marketing Spot” on page 272)

6.3.2 Prerequisites

This customization assumes that WebSphere Commerce Studio is installed and configured as per Appendix C, “WebSphere Commerce Studio implementation” on page 827. It also assumes that the eSite.sar file has been published successfully and that at least two B2C stores based on the eSite Store Front Asset store have been created using WebSphere Commerce Studio as per Chapter 8, “Publish the SAR and create stores” on page 225.

Note: The two B2C stores must be created by logging into the eSites Management Tool as the eSite Seller Organization administrator. This enables the user to create an e-Marketing Spot that will appear across all stores on the desired store page.

All steps that follow are meant to enable a developer to re-create the customization within the local WebSphere Commerce Studio environment. A basic understanding of WebSphere Commerce Studio is assumed.

The page designer must communicate with the e-Marketing Spot registrar to ensure that the e-Marketing Spot name used in the registrar and page design processes is the same.

6.3.3 Steps

1. Add new e-Marketing Spot code to the Stores Web Project in WebSphere Commerce Studio Version 5.0:

   a. In J2EE Perspective, locate the Stores project.

   b. Browse to the /Stores/Web Content/eSiteStoreFrontAssetStore/include folder.

   c. Copy the ShopCartProductESpot.jsp file provided with this book to the /include directory. (See “Customization 6.3 New e-Marketing Spot” on page 925.)

   Code for this file is based on the e-Marketing Spot code example in the *IBM WebSphere Commerce Store Development Guide Version 5.5*, Chapter 42: “Adding e-Marketing Spots to your store”.

   The ShoppingCartProductESpot.jsp file may be copied and used to place e-Marketing Spots on other store pages.

   > **Note:** The ShoppingCartProductESpot.jsp e-Marketing Spot was developed to work with the eSites Hosting Solution model.

2. Customize the e-Marketing Spot to add a title above the area where the e-Marketing Spot is displayed:

   a. In the ShoppingCartProductESpot.jsp file, locate the following code:

```
<TR>
   <TD colspan="2">
   <font
class="textCustomColor"><%=infashiontext.getString(“SHOPCART_MERCHAND
ISING_ESPOT_TITLE")%></font>
   </TD>
</TR>
```

   b. The title is dynamically retrieved from the infashiontext resource bundle. The key to the string is: SHOPCART_MERCHANDISING_ESPOT_TITLE.

   c. In the J2EE Perspective, locate the Stores Project.

   d. Browse to the /Stores/Web Content/eSiteStoreFrontAssetStore/WEB-INF/classes/eSite StoreFrontAssetStore folder.

   e. Open the infashiontext.properties file.

   f. Search for the SHOPPINGCART_TITLE property key.

g. Add a new line to the file *under* the line with the SHOPPINGCART_TITLE key:

```
SHOPCART_MERCHANDISING_ESPOT_TITLE=Merchandising Association:
```

The property value `Merchandising Association:` may be modified to display an appropriate title above the Merchandising association e-Marketing Spot on the store page.

h. Repeat steps a on page 90. through g. for the property key/value pairs shown in Table 6-1.

Table 6-1 New e-Marketing Spot title property key/value pairs

Key	Value
SHOPCART_PRODUCT_ESPOT_TITLE	Product Recommendation:
SHOPCART_CATEGORY_ESPOT_TITLE	Category Recommendation:
SHOPCART_AWARENESS_ESPOT_TITLE	Awareness Advertisement:

i. Browse to the /Stores/Web Content/eSiteStoreFrontAssetStore/WEB-INF/classes/eSite StoreFrontAssetStore folder.

j. Locate the infashiontext_en_US.properties file.

k. Follow steps f. and g. to modify the file.

l. If an e-Marketing Spot is desired on a page other than the Shopping Cart page, new property key/value pairs should be defined in the infashiontext.properties file for each type of e-Marketing Spot.

m. The ShoppingCartProductESpot.jsp file is copied to a new JSP in the /Stores/Web Content/eSiteStoreFrontAssetStore/include folder.

n. Newly defined keys in the infashiontext.properties file should replace the Shopping Cart e-Marketing Spot Title key names in the new file. In the new e-Marketing Spot file, SHOPCART_MERCHANDISING_ESPOT_TITLE is replaced with PRODUCTDISPLAY_MERCHANDISING_ESPOT_TITLE. See step a on page 90. for an example of code that is to be modified.

o. Follow steps l. through n. using the infashiontext_en_US.properties file.

3. Include e-Marketing Spot on the Shopping Cart page:

a. In the J2EE Perspective, locate the Stores project.

b. Browse to the Stores/Web Content/eSiteStoreFrontAssetStore/ShoppingArea/ShopcartSection folder.

c. Open the OrderItemDisplay.jsp file.

d. Search for the text `SHOPPING_CART3`.

e. Move to the </tr> tag after the `SHOPPING_CART3` text.

f. Add the following code after the </tr> tag:

```
<tr>
   <td>width="10" height="1"> </td>
   <td align="left" colspan="5" valign="middle" width="580">
   <!-- PROMO CONTENT STARTS HERE -->
   <jsp:include page="../../include/ShopCartProductESpot.jsp"
                flush="true">
      <jsp:param name="emsName" value="ShopCartPage" />
      <jsp:param name="catalogId" value=<%= catalogId %>" />
   </jsp:include>
</tr>
<tr>
   <td width="10"> </td>
   <td> </td>
</tr>
```

The code has two parameters: `emsName` and `catalogId`.

The emsName parameter is the name given to the e-Marketing Spot when it is configured in the database. 9.3, “New e-Marketing Spot” on page 272 describes how to configure your new e-Marketing Spot for use.

The catalogId parameter is the ID of the catalog that the user is currently viewing. Catalog ID information is determined from the HTTP information for the OrderItemDisplay page.

4. Customize the ShoppingCartProductESpot.jsp file and the code defined in step 3 on page 91.f to fit the layout of the OrderItemDisplay.jsp file.

5. Stop and restart the WebSphere Commerce Test Server. This is required for the server to pick up changes to the JSP and properties files.

6. Register and schedule the e-Marketing Spot in the database using the **manage store** function on the eSite Hub menu. Refer to 9.3, “New e-Marketing Spot” on page 272 for a detailed explanation of how to register an e-Marketing Spot.

Note: The e-Marketing Spot must be coded, registered, and scheduled in order to appear on store pages.

6.4 Customized store directory

This customization shows how to add a directory of all hosted stores based on the eSite Store Front Asset store or the eSite B2B Asset Store.

6.4.1 Overview

WebSphere Commerce provides the StoreDirectory.sar file. The StoreDirectory.sar file will be modified in this customization. The steps required to customize the StoreDirectory.sar file are described in this section of the document. “Customized store directory” on page 304 provides the steps for the deployment of the modified SAR file and a description of its usage.

6.4.2 Prerequisites

This customization assumes that WebSphere Commerce Studio is installed and configured as per Appendix C, “WebSphere Commerce Studio implementation” on page 827. It also assumes the eSite SAR file has been published successfully and that at least one B2C store based on the eSite Store Front Asset store has been created using WebSphere Commerce Studio as per Chapter 8, “Publish the SAR and create stores” on page 225.

6.4.3 Steps

These steps generate a new SAR file based on the MallDirectory.sar file. The new SAR file is named `NewMallDirectory` and is described in Appendix F, “Additional material” on page 923.

1. Get the SAR file that is to be customized.

   Copy X:\sampleSARs\samplestores\Hosting\StoreDirectory.sar to a temporary directory. We named it `TempSar`.

2. Unzip the SAR file.

   Using your preferred unzip utility, unzip the StoreDirectory.sar to at the TempSar directory. Delete the StoreDirectory.sar in the TempSar directory.

3. Change the ForeignKeys file to fit the requirements.

   Look for the ForeignKeys.dtd file at \TempSar\WEB-INF\store\ResellerHosting\data. Change the contents of the file to:

```
<?xml version="1.0" encoding="UTF-8"?>
<!ENTITY STORE_DIR "eSite">
<!ENTITY ORGANIZATION_DN "o=esite organization,o=root organization">
<!ENTITY ORG_DN_RESELLER "o=esite seller organization,o=root organization">
<!ENTITY ORGANIZATION_DN_HCP "ou=esite hub organization,o=esite
organization,o=root organization">
<!ENTITY ORG_DN_HCP_PART "ou=esite hub organization,">
<!ENTITY STORE_IDENTIFIER_HCP "eSite Hub">
<!ENTITY STORE_DIR_HCP "eSiteHub">
```

```
<!ENTITY ORGANIZATION_DN_PBS "ou=store directory organization,o=esite
organization,o=root organization">
<!ENTITY ORG_DN_PBS_PART "ou=store directory organization,">
<!ENTITY STORE_IDENTIFIER_PBS "PublicStore">
<!ENTITY STORE_DIR_PBS "public">
<!ENTITY ORGANIZATION_DN_PROFILE "ou=asset store organization,o=esite
organization,o=root organization">
<!ENTITY ORG_DN_PROFILE_PART "ou=asset store organization,">
<!ENTITY STORE_IDENTIFIER_RPS "eSiteStoreFrontAssetStore">
<!ENTITY STORE_DIR_RPS "eSiteStoreFrontAssetStore">
<!ENTITY STORE_IDENTIFIER_CPS "eSite Catalog Asset Store">
<!ENTITY STORE_DIR_CPS "eSiteCatalogAssetStore">
<!ENTITY STORE_IDENTIFIER_BPS "B2BESiteAssetStore">
<!ENTITY STORE_DIR_BPS "B2BESiteAssetStore">
<!ENTITY ko_KR "-9">
<!ENTITY zh_TW "-8">
<!ENTITY ja_JP "-10">
<!ENTITY de_DE "-3">
<!ENTITY en_US "-1">
<!ENTITY pt_BR "-6">
<!ENTITY fr_FR "-2">
<!ENTITY zh_CN "-7">
<!ENTITY it_IT "-4">
<!ENTITY es_ES "-5">
```

4. Modify the Header file to remove the link to the search page.

   a. Edit \TempSar\public\include\ MallHeader.jsp and remove the following HTTP and JSP command:

   ```
   <a href="javascript:gotoBody(3);" class="nav">
   <%= storeText.getString("mallProductSearch") %></a>
   ```

   b. Save and close the file.

   In implementing this change, we remove the search link from MallHeader.jsp that is included in MallDirectory.jsp.

   Note: Steps 5 and 6 are applied to MallDirectory.jsp. We recommend that you make changes to a copy of the file MallDirectory.jsp instead of changing the original file.

5. Change the logic of MallDirectory.jsp to list all hosted stores. The original version of MallDirectory.jsp lists the stores by category. The eSite model does not populate the store category table, so this method will not work.

   The changes are described as follows:

   a. Create an enumeration to hold the result of calling the method findAll() on the StoreAccessBean.

b. Loop through the enumeration while there are more elements.

c. For each iteration, check the value of STORETYPE. The store type being used is a three-letter identifier. When the second letter of the STORETYPE is an H, it means that this is a hosted store.

d. Get the status of the store. Only open stores will have an active link in the MallDirectory page.

e. Get the store language.

f. Use the StoreEntityDescriptionAccessBean to get the store name.

g. Use the StoreEntityDescriptionAccessBean to get the store description.

h. Construct the list of stores.

i. Provide the ability to access the open stores directly with a Web address.

j. Provide a short description of each store.

6. Provide a dynamic method to change the image associated with each store.

   a. Create a customized picture for each store.

      The default picture presented on the MallDirectory page came in the original MallDirectory.sar file. The picture is named column1.jsp. Three additional images have been added to the StoreDirectory.sar file. (See Appendix F, “Additional material” on page 923.) The name convention of the new image files is column1<StoreIdNumber>.jpg, where StoreIdNumber is the number of the hosted store.

   b. Add JavaScript to be able to change the displayed image:

```
<script language="JavaScript">
function change (storeAddPicture) {
document.picture.src = storeAddPicture;
}
</script>
```

7. Create a zip file with the contents of the Temp directory.

   Using your preferred zip utility, zip the contents of TempSar. Name the file StoreDirectory.sar.

   Our completed file is provided in the additional materials. See “Customization 6.4 Customized Store Directory” on page 926 for implementation instructions.

6.5 Dynamic text messages

This section lists the steps required to add a custom dynamic text message for hosted stores based on the eSite Store Front Asset store.

6.5.1 Overview

Under the current model there is a facility for setting pre-defined dynamic text messages on store pages by using the Change Page store administration page. This customization demonstrates how to add a new dynamic text message to a page for stores created based on the eSite Store Front Asset store (that is, eSite B2C stores).

In this example a new dynamic text message is added to the Shopping Cart page. Currently the Shopping Cart page displays at the top of the list of items a static text message that says `Your cart contains`. This customization replaces that static text message with a dynamic text message. It then adds the ability for the Seller to set the text of the message for a particular store via the Change Pages store administration page.

This customization then demonstrates how to create dynamic text messages that can be shared across all stores that are based on the eSite Store Front Asset store. In this example a new dynamic text message is added to the home page to display a site-level promotion notice. It then enables the site administrator to set the text of the message for all stores via the Change Pages store administration page.

6.5.2 Prerequisites

This customization assumes that WebSphere Commerce Studio is installed and configured as per Appendix C, “WebSphere Commerce Studio implementation” on page 827. It also assumes that the eSite SAR file has been published successfully and that at least two B2C stores based on the eSite Store Front Asset store have been created using WebSphere Commerce Studio as per Chapter 8, “Publish the SAR and create stores” on page 225.

All steps are intended to enable a developer to re-create the customization within the local WebSphere Commerce Studio environment. A basic understanding of WebSphere Commerce Studio is assumed.

6.5.3 Steps

1. Add properties to hold and display the dynamic text.

   All text that is displayed for stores that were created based on the eSite Store Front Asset store are stored in three properties files:

   – infashiontext_*locale*.properties: Contains the static text used in the store. For example, this file currently contains the message `Your cart contains.`

– infashiontext_dynamic_*locale*.properties: Contains the dynamic text used in the store. This file will be modified to add a new a property to contain the dynamic text message.

– infashiontext_dynamic_labels_*locale*.properties: Contains the text used on the Change Pages store administration page to describe the meaning of dynamic text messages. This file will be modified to add a new label and description for the dynamic text message.

This step adds a new dynamic text message called ShoppingCart_Text for the Shopping Cart JSP by updating the eSite Store Front Asset store dynamic properties files. This customization uses the US English locale.

a. In the J2EE Navigator perspective, locate the Stores project.

b. Browse to the /Web Content/WEB-INF/classes/*eSiteStoreFrontAssetStoreName* folder.

c. Open the infashiontext_dynamic_en_US.properties file in the Source view of the Properties Editor.

d. Locate the lines of text that define the property for the home page text. This appears as:

```
# Home page -
ShoppingArea/CatalogSection/CategorySubsection/StoreCatalogDisplay.jsp
# {0} is the Company name
Home_Text1 =
```

e. Insert a new line after the lines above and add:

```
# Shopping cart page - ShoppingArea/ShopcartSection/OrderItemDisplay.jsp
ShoppingCart_Text = Your cart contains:
```

Figure 6-7 Adding property to infashiontext_dynamic_en_US.properties

f. Save and close the file.

g. Open the infashiontext_dynamic_labels_en_US.properties file in the Source view of the Properties Editor.

h. Locate the lines of text that define the property for the home page text. This appears as:

```
# Home page -
ShoppingArea/CatalogSection/CategorySubsection/StoreCatalogDisplay.jsp
Home = Home
Home_Text =
```

i. Insert a new line after the lines above and add:

```
# Shopping cart page -
ShoppingArea/ShopcartSection/OrderItemDisplay.jsp
ShoppingCart = Shopping Cart
ShoppingCart_Desc = The message displayed at the top of the shopping
cart
```

Figure 6-8 Adding property to infashiontext_dynamic_labels_en_US.properties

j. Save and close the file.

2. Create a preview page.

   The Change Pages store administration page features a View Location button for each message. Clicking this button displays a preview indicating the location on the page where the dynamic message will appear. The preview page is a standalone HTML page that is identical to the real page but with the dynamic message text highlighted.

   The easiest way to create a preview page is to browse to the existing page and use the HTML source as the basis for the preview page. To do this, follow these steps:

   a. Browse to the existing store page that will contain the dynamic text. In this case, the page in question is the Shopping Cart page.

Figure 6-9 Viewing the source of the Shopping Cart page

b. Select **View** → **Source** in the browser window.

   This opens a window containing the page's HTML source code.

c. Locate the lines of text that contain the static message `You have selected`. They will appear as:

```
<font class="textCustomColor">
   You have selected:
</font>
```

d. Highlight the static message. Wrap the text in a red-bordered table:

```
<font class="textCustomColor">
   <table border="10" style="border-color:red;" width="100%">
      <tr>
         <td><font class="strongtext">You have selected:</font></td>
      </tr>
   </table>
</font>
```

e. Locate the lines of text that define the style sheet. The text appears as:

```
<link
   rel="stylesheet"
   href="/wcsstore/eSiteStoreFrontAssetStore/css/Master1_1.css"
   type="text/css">
```

f. Because the preview page will be placed in a location different from the real Shopping Cart page, the path to the style sheet must be updated as:

```
<link
   rel="stylesheet"
   href="../StandardTheme.css"
   type="text/css" />
```

g. Save the updated preview page as Preview_ShopCart.html.

h. In the J2EE Navigator perspective, locate the Stores project.

i. Copy the Preview_ShopCart.html file into the Stores/Web Content/tools/stores/*eSiteStoreFrontAssetStoreName*/text/preview/en_US folder.

3. Add a new option to the Change Pages store administration page.

   This step adds a new option to the Change Pages store administration page that enables the Seller to set the message contents. It does this by adding a new section for the ShoppingCart_Text to the StoreFront.xml file, which contains the list of all dynamically configurable store front text.

   a. In the J2EE Navigator perspective, locate the Stores project.

   b. Browse to the Stores/Web Content/WEB-INF/xml/tools/stores/*eSiteStoreFrontAssetStoreName*/devtools/storefront folder.

   c. Open the StoreFront.xml file in the Source view of the XML Editor.

   d. Add the following lines within the <store-front-text> enclosing tags:

```
<!-- Shopping cart page -
ShoppingArea/ShopcartSection/OrderItemDisplay.jsp -->
<page>
   <label>
      <message
         key="ShoppingCart"
         resource="infashiontext_dynamic_labels"/>
   </label>
   <description>
      <message
         key="ShoppingCart_Desc"
         resource="infashiontext_dynamic_labels"/>
   </description>
   <content rows="15">
```

```
            <message
                key="ShoppingCart_Text"
                resource="infashiontext_dynamic"/>
        </content>
        <location
file="tools/stores/$storeDir$/text/preview/$locale$/Preview_ShopCart.
html" />
</page>
```

Figure 6-10 Adding new page section to StoreFront.xml

e. Save and close the file.

4. Update the Shopping Cart page.

   This step updates the Shopping Cart JSP page to display the dynamic text message instead of the current static message. It does this by modifying the JSP code to retrieve the dynamic message from the infashiontext_dynamic_en_US.properties file that was edited previously.

   a. In the J2EE Navigator perspective, locate the Stores project.

b. Browse to the Stores/Web Content/*eSiteStoreFrontAssetStoreName*/ShoppingArea/ShopcartSection folder.

c. Open the OrderItemDisplay.jsp file in the Source view of the JSP Editor.

d. Locate the line that displays the current static message:

```
<%=infashiontext.getString("CART_CONTAINS")%>
```

e. Change the line to use the dynamic text message:

```
<%=infashionDynamictext.getString("ShoppingCart_Text")%>
```

Figure 6-11 Updating OrderItemDisplay.jsp to use dynamic text

f. Save and close the file.

5. Restart the server:

a. In the Servers view, locate the WebSphereCommerceServer instance.

b. Right-click the instance and select **Restart**.

At this stage, the shopping cart for all hosted stores that are based on the eSite Store Front Asset store display a dynamic text message at the top of the items list. The text currently reads `Your cart contains`. To modify the text via the Change Pages store administration page, follow the steps as outlined in “Usage” on page 311.

This completes the customization for adding a new dynamic text message to a store. The text can be updated on a store-by-store basis.

Next, the customization demonstrates how to create a new dynamic text message that can be shared across all stores. Again, the dynamic text is updated via the Change Pages store administration page, except that this time it must be performed by the site administrator and the selected store must be the eSite Store Front Asset store. When the text is updated, all stores that are based on the eSite Store Front Asset store will display the updated text.

Note: The following steps are slightly more complex than the previous section. This is because the ability to add site-wide dynamic text messages is not directly supported in Commerce Accelerator. Thus it requires modification to Commerce Accelerator as detailed below.

6. Install the fix pack for Commerce Accelerator.

   This step updates the Commerce Accelerator class files required to support site-wide dynamic text messages.

   a. Download the .imported_classes.jar file required for the dynamic text messages customization as per Appendix F, “Additional material” on page 923.
   b. Locate the WebSphere Commerce workspace directory in the local file system.
   c. Browse to the /Enablement-BaseComponentsLogic folder.
   d. Replace the existing .imported_classes.jar file with the downloaded version.

7. Add the menu option.

   This step enables the Change Pages menu option when the site administrator selects to manage the eSite Store Front Asset store. By default the Change Pages menu option is not displayed when managing a Store Front Asset store. This step modifies the Commerce Accelerator MPS XML file to add the Change Pages menu option. The Commerce Accelerator MPS XML file contains the list of all menu options when managing Store Front Asset stores.

   a. Locate the WebSphere Commerce installation directory in the local file system.

b. Browse to the /Commerce/xml/tools/common folder.

c. Open the CommerceAcceleratorMPS.xml file in a text editor.

d. Add the following menu option within the <menu> tag:

```
<menuitem name="store" enabled="true" users="seller">
   <node name="changeText"
url="/webapp/wcs/tools/servlet/DialogView?XMLFile=devtools.StoreTextD
ialogMPS" users="seller"/>
</menuitem>
```

Figure 6-12 Adding menu option to CommerceAcceleratorMPS.xml

e. Save and close the file.

8. Add a new resource.

   The CommerceAcceleratorMPS.xml file references a new resource called devtools.StoreTextDialogMPS that is used to render the Change Pages store administration page. This step updates the resources XML file, which defines the namespace for the Dev Tools Framework and must be updated to add an entry for the new resource.

   a. Locate the WebSphere Commerce installation directory in the local file system.

b. Browse to the /Commerce/xml/tools/devtools folder.

c. Open the resources.xml file in a text editor.

d. Locate the section that defines the Store Text dialog resource:

```
<!-- Store Text Dialog -->
<resourceBundle name="StoreTextRB"
bundle="com.ibm.commerce.tools.devtools.properties.StoreTextRB" />
<resourceXML name="StoreTextDialog"
file="tools/devtools/StoreTextDialog.xml" />
```

e. Add the new resource to the Store Text dialog section so that it appears in the following:

```
<!-- Store Text Dialog -->
<resourceBundle name="StoreTextRB"
bundle="com.ibm.commerce.tools.devtools.properties.StoreTextRB" />
<resourceXML name="StoreTextDialog"
file="tools/devtools/StoreTextDialog.xml" />
<resourceXML name="StoreTextDialogMPS"
file="tools/devtools/StoreTextDialogMPS.xml" />
```

Figure 6-13 Adding new resource to resources.xml

f. Save and close the file.

9. Add a new Accelerator Dialog specification.

   The new Change Pages resource added to the resources XML file references a new Accelerator Dialog specification called StoreTextDialogMPS.xml, which

is used to render the Change Pages store administration page. This step creates that new specification using an existing specification.

a. Locate the WebSphere Commerce installation directory in the local file system.

b. Browse to the /Commerce/xml/tools/devtools folder.

c. Copy the StoreTextDialog.xml file to StoreTextDialogMPS.xml in the same folder.

d. Open the StoreTextDialogMPS.xml file in a text editor.

e. Modify it to use the new Store Front XML file such that it appears in the following:

```
<dialog resourceBundle="devtools.StoreTextRB"
   windowTitle="windowTitle in Dialog.xml"
   finishConfirmation="finishConfirmation"
   cancelConfirmation="cancelConfirmation"
finishURL="StoreTextUpdate?storeFrontFile=devtools/storefront/StoreFr
ontMPS.xml">

   <panel name="Panel"
url="StoreTextDialogView?storeFrontFile=devtools/storefront/StoreFron
tMPS.xml" hasCancel="YES" hasFinish="YES"
helpKey="MC.devtools.StoreText.Help" />

   <jsFile src="/wcs/javascript/tools/devtools/StoreTextDialog.js" />
</dialog>
```

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE dialog SYSTEM "../common/DialogPanels.dtd">
<!--
 *=================================================================
 * Licensed Materials - Property of IBM
 *
 * 5724-A18
 *
 * (c) Copyright International Business Machines Corporation. 2003
 *     All rights reserved.
 *
 * US Government Users Restricted Rights - Use, duplication or
 * disclosure restricted by GSA ADP Schedule Contract with IBM Corp.
 *=================================================================
-->
<dialog resourceBundle="devtools.StoreTextRB"
        windowTitle="windowTitle in Dialog.xml"
        finishConfirmation="finishConfirmation"
        cancelConfirmation="cancelConfirmation"
    finishURL="StoreTextUpdate?storeFrontFile=devtools/storefront/StoreFrontMPS.xml">

        <panel name="Panel"
                url="StoreTextDialogView?storeFrontFile=devtools/storefront/StoreFrontMPS.xml"
                hasCancel="YES"
                hasFinish="YES"
                helpKey="MC.devtools.StoreText.Help" />

        <jsFile src="/wcs/javascript/tools/devtools/StoreTextDialog.js" />
</dialog>
```

Figure 6-14 Creating the new StoreTextDialogMPS.xml

f. Save and close the file.

10. Modify the Accelerator Dialog.

By default the Commerce Accelerator Dialog automatically uses the Store Front XML file to render the options for the Change Pages store administration page. This step modifies the Commerce Accelerator Dialog JSP to enable it to accept a new Store Front XML file as identified by the new Dialog specification. The new Store Front XML file will contain site-wide options for the Change Pages store administration page.

a. In the J2EE Navigator perspective, locate the Commerce Accelerator project.

b. Browse to the Stores/Web Content/tools/devtools/text folder.

c. Open the Dialog.jsp file in the Source view of the JSP Editor.

d. Locate the lines that initialize the Store Front data bean, which appear as:

```
StoreFrontDataBean storeFrontDataBean = new StoreFrontDataBean();
String uiStoreDir = null;
try {
   storeFrontDataBean.setCommandContext(cmdContext);
   storeFrontDataBean.populate();
   uiStoreDir = storeFrontDataBean.getStoreDir();
} catch (ECException e) {
```

e. Modify the JSP code to accept an alternative filename such that is appears as follows:

```
String storeFrontFilename = request.getParameter("storeFrontFile");
StoreFrontDataBean storeFrontDataBean = new StoreFrontDataBean();
String uiStoreDir = null;
try {
   storeFrontDataBean.setCommandContext(cmdContext);
   storeFrontDataBean.setStoreFrontFilename(storeFrontFilename);
   storeFrontDataBean.populate();
   uiStoreDir = storeFrontDataBean.getStoreDir();
} catch (ECException e) {
```

Figure 6-15 Modifying Dialog.jsp to accept the new Store Front file

f. Save and close the file.

11. Create a new Store Front XML file.

The new Accelerator Dialog specification for the Change Pages store administration page references a new Store Front XML file called StoreFrontMPS.xml. This new Store Front XML file will contain site-wide

options for the Change Pages store administration page. This step creates the new Store Front XML file using an existing one:

a. In the J2EE Navigator perspective, locate the Stores project.

b. Browse to the Stores/Web Content/WEB-INF/xml/tools/stores/*eSiteStoreFrontAssetStoreName*/devtools/storefront folder.

c. Copy the StoreFront.xml file to StoreFrontMPS.xml in the same folder.

d. Open the StoreFrontMPS.xml file in the Source view of the XML Editor.

e. The new StoreFrontMPS.xml file should contain only the new option for the new dynamic promotion notice that is being added. Thus, modify the file to appear as follows:

```
<store-front-text>

<!-- Home page -
ShoppingArea/CatalogSection/CategorySubsection/StoreCatalogDisplay.js
p -->
<page>
   <label>
      <message key="HomePagePromo"
resource="sitetext_dynamic_labels"/>
   </label>
   <description>
      <message key="HomePagePromo_Desc"
resource="sitetext_dynamic_labels"/>
   </description>
   <content rows="15">
      <message key="HomePagePromo_Text" resource="sitetext_dynamic"/>
   </content>
   <location
file="tools/stores/$storeDir$/text/preview/$locale$/Preview_HomePageP
romo.html" />
</page>

</store-front-text>
```

Figure 6-16 Creating the new StoreFrontMPS.xml

f. Save and close the file.

12. Add properties to hold and display the dynamic text.

This step creates two new properties files to hold and display the site-wide text displayed for stores that were created based on the eSite Store Front Asset store. These files are created as follows:

– sitetext_dynamic_*locale*.properties: Contains the dynamic text used across stores. This file is modified to add a new a property to contain the dynamic text message.

– sitetext_dynamic_labels_*locale*.properties: Contains the text used on the Change Pages store administration page to describe the meaning of the message. This file is modified to add a new label and description for the dynamic text message.

This step adds a new dynamic text message called HomePagePromo_Text for the Home Page JSP by updating the eSite Store Front Asset store

dynamic site-wide properties files. This customization uses the US English locale.

a. In the J2EE Navigator perspective, locate the Stores project.

b. Browse to the Stores/Web Content/WEB-INF/classes/*eSiteStoreFrontAssetStoreName* folder.

c. Create a new properties file called sitetext_dynamic_en_US.properties.

d. Open the sitetext_dynamic_en_US.properties file in the Source view of the Properties Editor.

e. Add the following lines to define a new property to hold the dynamic site promotion message:

```
# Home page -
ShoppingArea/CatalogSection/CategorySubsection/StoreCatalogDisplay.jsp
HomePagePromo_Text =
```

Figure 6-17 Creating the new sitetext_dynamic_en_US.properties file

f. Save and close the file.

g. In the J2EE Navigator perspective, locate the Stores project.

h. Browse to the Stores/Web Content/WEB-INF/classes/*eSiteStoreFrontAssetStoreName* folder.

i. Create a new properties file called sitetext_dynamic_labels_en_US.properties.

j. Open the sitetext_dynamic_labels_en_US.properties file in the Source view of the Properties Editor.

k. Add the following lines to define the new properties that will be used to display the dynamic site promotion message:

```
# Home page -
ShoppingArea/CatalogSection/CategorySubsection/StoreCatalogDisplay.jsp
HomePagePromo = Home Page Promotion
HomePagePromo_Desc = The message displayed on the home page of all
hosted stores.
```

Figure 6-18 Creating the new sitetext_dynamic_labels_en_US.properties file

l. Save and close the file.

13. Create a preview page.

The Change Pages store administration page features a View Location button for each message. Clicking this button displays a preview of the page that indicates where on the page the dynamic message will appear. The preview page is a standalone HTML page that is identical to the real page with the dynamic message text highlighted.

The easiest way to create a preview page is to browse to the existing page and use the HTML source as the basis for the preview page. To do this, follow these steps:

a. Browse to the existing store page that will contain the dynamic text. In this case the page in question is the Home page.

b. In the browser window select **View** → **Source**.

This opens a window containing the HTML source of the page.

c. Locate the table cells at the start of the main contents. They appear as:

```
<!--MAIN CONTENT STARTS HERE-->
<table cellpadding="0" cellspacing="0" width="600" border="0">
   <tr>
      <td valign="top" colspan="3"></td>
      <td valign="top" colspan="3"></td>
      <td valign="top" align="center" rowspan="2">
      <!-- PROMO CONTENT STARTS HERE -->
```

d. Enter a new dynamic message in the first table column and highlight it by wrapping the text in a red-bordered HTML table as follows:

```
<!--MAIN CONTENT STARTS HERE-->
<table cellpadding="0" cellspacing="0" width="600" border="0">
   <tr>
      <td valign="top" colspan="3">
         <table border="10" style="border-color:red;" width="100%">
            <tr>
            <td><font class="strongtext">New promotion text
here!</font></td>
            </tr>
         </table></td>
      <td valign="top" colspan="3"></td>
      <td valign="top" align="center" rowspan="2">
      <!-- PROMO CONTENT STARTS HERE -->
```

e. Locate the lines of text that define the style sheet. The text appears as:

```
<link
   rel="stylesheet"
   href="/wcsstore/eSiteStoreFrontAssetStore/css/Master1_1.css"
   type="text/css">
```

f. Because the preview page will be placed in a different location from the real Shopping Cart page, the path to the style sheet must be updated:

```
<link
   rel="stylesheet"
   href="../StandardTheme.css"
   type="text/css" />
```

g. Save the updated preview page as Preview_HomePagePromo.html.

h. In the J2EE Navigator perspective, locate the Stores project.

i. Copy the Preview_HomePagePromo.html file into the Stores/Web Content/tools/stores/*eSiteStoreFrontAssetStoreName*/text/preview/en_US folder.

14. Create a variable for the resource bundle.

The Environment Setup JSP page is included in all store pages and contains resource bundles used to read the properties files. This step updates the Environment Setup JSP page to declare a new resource bundle variable to read the new properties file sitetext_dynamic_labels_en_US.properties.

a. In the J2EE Navigator perspective, locate the Stores project.

b. Browse to the Stores/Web Content/*eSiteStoreFrontAssetStoreName*/include folder.

c. Open the EnvironmentSetup.jsp file in the Source view of the JSP Editor.

d. Locate the lines of code that declare the resource bundles:

```
JSPResourceBundle infashiontext = (JSPResourceBundle)
request.getAttribute("ResourceText");
JSPResourceBundle infashionDynamictext = (JSPResourceBundle)
request.getAttribute("ResourceDynamicText");
JSPResourceBundle auctionSampletext = (JSPResourceBundle)
request.getAttribute("AuctionSampleText");

if (infashiontext == null)
{
   infashiontext =  new
JSPResourceBundle(sdb.getResourceBundle("infashiontext"));
   request.setAttribute("ResourceText", infashiontext);
}

if (infashionDynamictext == null)
{
   infashionDynamictext =   new
JSPResourceBundle(sdb.getResourceBundle("infashiontext_dynamic"));
   request.setAttribute("ResourceDynamicText", infashionDynamictext);
}
if (auctionSampletext == null)
```

```
{
   auctionSampletext =  new
JSPResourceBundle(sdb.getResourceBundle("AuctionSample"));
   request.setAttribute("AuctionSampleText", auctionSampletext);
}
```

e. Add the JSP code to read the new properties file to this section such that it appears as follows:

```
JSPResourceBundle infashiontext = (JSPResourceBundle)
request.getAttribute("ResourceText");
JSPResourceBundle infashionDynamictext = (JSPResourceBundle)
request.getAttribute("ResourceDynamicText");
JSPResourceBundle auctionSampletext = (JSPResourceBundle)
request.getAttribute("AuctionSampleText");
JSPResourceBundle siteDynamicText = (JSPResourceBundle)
request.getAttribute("SiteDynamicText");

if (infashiontext == null)
{
   infashiontext =  new
JSPResourceBundle(sdb.getResourceBundle("infashiontext"));
   request.setAttribute("ResourceText", infashiontext);
}

if (infashionDynamictext == null)
{
   infashionDynamictext =   new
JSPResourceBundle(sdb.getResourceBundle("infashiontext_dynamic"));
   request.setAttribute("ResourceDynamicText", infashionDynamictext);
}
if (auctionSampletext == null)
{
   auctionSampletext =  new
JSPResourceBundle(sdb.getResourceBundle("AuctionSample"));
   request.setAttribute("AuctionSampleText", auctionSampletext);
}
if (siteDynamicText == null)
{
   siteDynamicText = new
JSPResourceBundle(sdb.getResourceBundle("sitetext_dynamic"));
   request.setAttribute("SiteDynamicText", siteDynamicText);
}
```

Figure 6-19 Adding code to declare the resource bundle in EnvironmentSetup.jsp

f. Save and close the file.

15. Update the Home page.

This step updates the Home JSP page to display the dynamic text message. It does this by modifying the JSP code to retrieve the dynamic message from the sitetext_dynamic_en_US.properties file using the resource bundle created earlier.

a. In the J2EE Navigator perspective, locate the Stores project.

b. Browse to the Stores/Web Content/*eSiteStoreFrontAssetStoreName*/ShoppingArea/CatalogSection/CategorySubsection folder.

c. Open the StoreCatalogDisplay.jsp file in the Source view of the JSP Editor.

d. Locate the lines of code that display the home page text dynamic message. They appear as:

```
<td valign="top"></td>
<td valign="top"
colspan="3"><%=infashionDynamictext.getString("Home_Text1",storeName)
%></td>
```

e. Add the JSP code to display the dynamic text message as follows:

```
<td valign="top"
colspan="3"><%=siteDynamicText.getString("HomePagePromo_Text")%></td>
<td valign="top"
colspan="3"><%=infashionDynamictext.getString("Home_Text1",storeName)%>
</td>
```

Figure 6-20 Adding code to display the dynamic text in StoreCatalogDisplay.jsp

f. Save and close the file.

16. Restart the server:
    a. In the Servers view, locate the WebSphereCommerceServer instance.
    b. Right-click the instance and select **Restart**.

The customization is now complete. To add further dynamic text messages:

- Add new options to StoreTextMPS.xml.
- Add new properties to sitetext_dynamic_*locale*.properties and sitetext_dynamic_labels_*locale*.properties.
- Create a preview page.
- Update the target JSP to display the dynamic text message.

At this stage the home page for all stores created based on the eSite Store Front Asset store display the same dynamic text message at the top of the page. Because the message was not set to contain any text the message appears blank. To modify the text via the Change Pages store administration page, follow the steps outlined in “Usage” on page 311.

6.6 New asset store

This section lists the steps required to add a new asset store to the eSite Hub.

6.6.1 Overview

The eSite model provides two asset stores for use in creating hosted stores: eSite Store Front Asset store (B2C) and eSite B2B Asset store (B2B). This customization demonstrates how to add a new asset store to the eSite Hub to support new hosted store types.

6.6.2 Prerequisites

This customization assumes that WebSphere Commerce Studio is installed and configured as per Appendix C, “WebSphere Commerce Studio implementation” on page 827. It also assumes that the eSite SAR file has been published successfully and that at least one B2C store based on the eSite Store Front Asset store has been created using WebSphere Commerce Studio as per Chapter 8, “Publish the SAR and create stores” on page 225.

All steps are intended to enable a developer to re-create the customization within the local WebSphere Commerce Studio environment. A basic understanding of WebSphere Commerce Studio is assumed.

6.6.3 Steps

1. Create a new store archive file.

   A SAR file contains resources such as JSP pages, XML flow files, and properties files for the new asset store. The generation of these resources is beyond the scope of this customization, so a new SAR file is provided in the additional materials included with this book. Note that this SAR file was based on the existing eSite Store Front Asset store SAR file. For more information about the creation of SAR files, refer to *IBM WebSphere Commerce Store Development Guide Version 5.5*.

   a. Download the CustomB2CStore.sar file required for the new asset store customization as per Appendix F, “Additional material” on page 923.

   b. Locate the WebSphere Commerce installation directory on the local file system.

   c. Browse to the /Commerce/samplestores folder.

   d. Copy the CustomB2CStore.sar file into this folder.

2. Update the SAR Registry.

   This step updates the SARRegistry.xml file. The SARRegistry.xml file contains the list of all known SAR files available for publishing.

   a. In the local file system, locate the WebSphere Commerce installation directory.

   b. Browse to the /Commerce/xml/tools/devtools folder.

   c. Open the file SARRegistry.xml in a text editor.

   d. Add an entry for the new SAR file by adding the following lines at the end of the file within the <SAR-properties> tag:

```
<SampleSAR fileName="CustomB2CStore.sar" relativePath="">
   <view name="default"/>
</SampleSAR>
```

Figure 6-21 Registering the SAR file in SARRegistry.xml

   e. Save and close the file.

3. Restart the server.

   a. In the Servers view, locate the WebSphereCommerceServer instance.

   b. Right-click the instance and select **Restart**.

4. Publish the SAR file.

   After the SAR file has been registered, the next step is to publish it, following these steps:

   a. Log onto the WebSphere Commerce Accelerator Administration Console as the Site Administrator.

   b. Select **Site** and click **OK**.

   c. Select **Store Archives** → **Publish**.

      A new Store Archive called CustomB2CStore.sar is be displayed.

   d. Select the check box next to CustomB2CStore.sar and click **Next**.

e. Select the appropriate Organization and click **Next**. Note that the selected organization should match the organization used to create the existing eSite stores.

f. Click **Finish**.

g. Click **OK**.

h. Wait until the publish status of CustomB2CStore.sar has changed to Successful. Click **Refresh** to refresh the displayed status.

Figure 6-22 Successful publication of CustomAssetStore.sar file

5. Create new Hosting Contracts.

   At this stage a new SAR file has been created, registered, and published successfully. However, before a new store can be created, hosting contracts must be created for the new store types. A hosting contract contains all of the necessary information for the Store Creation wizard to create the store. It is beyond the scope of this step to describe the procedures to create a hosting contract from scratch; thus this step will reuse the existing hosting contracts for the eSite Store Front Asset store.

   a. Locate the WebSphere Commerce installation directory in the local file system.

   b. Browse to the /Commerce/xml/trading/xml folder.

   c. Copy the DeploymentHostingContractMHS.xml file to DeploymentHostingContractXHS.xml.

d. Copy the TemplateHostingContractMPS.xml file to TemplateHostingContractXPS.xml.

e. Open the file TemplateHostingContractXPS.xml in a text editor.

f. Locate the line that defines the store type:

```
<Store type="MHS" defaultLocale="%HOSTED_STORE_DEFAULT_LOCALE%"
defaultCurrency="%HOSTED_STORE_DEFAULT_CURRENCY%"
directory="%HOSTED_STORE_DIRECTORY_NAME%"
remoteURL="%HOSTED_STORE_HOMEPAGE_URL%" sequence="0"
initialState="suspend">
```

g. Change the store type from MHS to XHS as follows:

```
<Store type="XHS" defaultLocale="%HOSTED_STORE_DEFAULT_LOCALE%"
defaultCurrency="%HOSTED_STORE_DEFAULT_CURRENCY%"
directory="%HOSTED_STORE_DIRECTORY_NAME%"
remoteURL="%HOSTED_STORE_HOMEPAGE_URL%" sequence="0"
initialState="suspend">
```

Figure 6-23 Changing the store type in TemplateHostingContractXPS.xml

h. Save and close the file.

6. Update the eSite Store Creation wizard.

   Currently the eSite Store Creation wizard supports only the creation of MPS (Hosted B2C stores) and BPS (Hosted B2B stores) store types. This step updates the wizard to accept the new XPS (Custom B2C stores) store type.

   a. In the J2EE Navigator perspective, locate the Stores project.

   b. Browse to the Stores/Web Content/eSiteHub folder.

   a. Open the CreateStore.jsp file in the Source view of the JSP Editor.

   b. Locate the line of code that defines the store types:

```
scwURL.append("/SCWLogonView?storetype=BPS&storetype=MPS&storeId=");
```

   c. Add the XPS store type as follows:

```
scwURL.append("/SCWLogonView?storetype=BPS&storetype=MPS&storetype=XP
S&storeId=");
```

Figure 6-24 Adding the new XPS store type to CreateStore.jsp

   d. Save and close the file.

7. Create and register new Accelerator menus.

   In order for the Seller to manage stores based on the new store types, Accelerator menus for the new store types must be created and registered. This step reuses the existing Accelerator menus for the eSite Asset Store Front store.

   a. Locate the WebSphere Commerce installation directory in the local file system.

   b. Browse to the /Commerce/xml/tools/common folder.

   c. Copy the CommerceAcceleratorMHS.xml file to CommerceAcceleratorXHS.xml.

   d. Copy the CommerceAcceleratorMPS.xml file to CommerceAcceleratorXPS.xml.

   e. Open the resources.xml file in a text editor.

   f. Register the new Accelerator menus by adding the following lines within the <resource> tag:

```
<resourceXML name="merchantCenterXHS"
   file="common/CommerceAcceleratorXHS.xml" />
<resourceXML name="merchantCenterXPS"
   file="common/CommerceAcceleratorXPS.xml" />
```

Figure 6-25 Registering the Accelerator menus in resources.xml

g. Save and close the file.

8. Load access control policies.

   To enable the Seller to gain access to the new Accelerator menus, new access control policies must be created and loaded. It is beyond the scope of this step to create new access control policies from scratch, so access control policy files are provided in the additional materials available with this book. For more information about creating access control policies, refer to *IBM WebSphere Commerce Security Guide Version 5.5*.

   Download the three access control policy files required for the new asset store customization as per Appendix F, “Additional material” on page 923.

   ```
   CustomB2CStorePreReqUserGroups_en_US.xml
   CustomB2CStorePreReqAccessControlPolicies_en_US.xml
   CustomB2CStorePreReqAccessControlPolicies.xml
   ```

   h. Locate the WebSphere Commerce installation directory in the local file system.

   i. Browse to the /Commerce/xml/policies/xml folder.

   j. Copy the policy files into this folder.

k. Open a command window.

l. Change directories to *WC_installdir*/bin.

m. Issue the following commands:

```
acugload dbname dbuser dbpassword
CustomB2CStorePreReqUserGroups_en_US.xml

acpload dbname dbuser dbpassword
CustomB2CStorePreReqAccessControlPolicies.xml

acpnlsload dbname dbuser dbpassword
CustomB2CStorePreReqAccessControlPolicies_en_US.xml
```

In this syntax:

```
dbname is the name of the WebSphere Commerce database
dbuser is the schema owner
dbpassword is the password for the schema owner
```

n. Close the command window.

9. Register the new store types.

For the new store types to be recognized, they must be registered in the specific WebSphere Commerce instance XML file. The instance XML file contains all configuration parameters for a particular WebSphere Commerce instance. This step registers the new stores in the instance XML file.

a. Locate the WebSphere Commerce installation directory in the local file system.

b. Browse to the /Commerce/instances/*wc_instance_name*/xml folder.

c. Open the file *wc_instance_name*.xml in a text editor, where *wc_instance_name* is the name of the WebSphere Commerce instance.

d. Locate the list of supported store types that are defined within the <supportedStoreType> tag.

e. Add the new stores types to the list of supported store types as follows:

```
<supportedStoreType>
      <wca storeType="B2B" />
      <wca storeType="B2C" />
      <wca storeType="BHS" />
      <wca storeType="BPS" />
      <wca storeType="CPS" />
      <wca storeType="CHS" />
      <wca storeType="RHS" />
      <wca storeType="RPS" />
      <wca storeType="HCP" />
      <wca storeType="MHS" />
      <wca storeType="MPS" />
```

```
    <wca storeType="SCP" />
    <wca storeType="SHS" />
    <wca storeType="SPS" />
    <wca storeType="XHS" />
    <wca storeType="XPS" />
  </supportedStoreType>
```

Figure 6-26 Registering the new store types in wc_instance_name.xml

f. Save and close the file.

10. Restart the server:

a. In the Servers view, locate the WebSphereCommerceServer instance.

b. Right-click the instance and select **Restart**.

This completes the customization. At this stage, new stores can be created based on the new asset store. To verify this, create a new store using the steps outlined in “Usage” on page 321.

6.7 Custom shopcart display

This section lists the steps required to customize the shopping cart for stores that were created based on the eSite Store Front Asset store.

6.7.1 Overview

Currently the shopping cart for stores that were created based on the eSite Store Front Asset store (that is, eSite B2C stores) displays only a textual description for each item listed. This customization demonstrates how to customize the shopping cart display to add a feature to display thumbnail images for each item listed in the shopping cart. It also adds the ability for the Seller to enable or disable this feature via the Change Flow store administration page.

6.7.2 Prerequisites

This customization assumes that WebSphere Commerce Studio is installed and configured as per “WebSphere Commerce Studio installation” on page 829. It also assumes that the eSite SAR file has been published successfully and that at least one B2C store based on the eSite Store Front Asset store has been created using WebSphere Commerce Studio as per Chapter 8, “Publish the SAR and create stores” on page 225.

These steps are intended to enable a developer to re-create the customization within the local WebSphere Commerce Studio environment. A basic understanding of WebSphere Commerce Studio is assumed.

6.7.3 Steps

The steps for customizing the shopping cart for stores that were created based on the eSite Store Front Asset store are:

1. Add the new feature.

   The flow repository describes the set of available features in a store. A feature is a way to describe the available choice at an abstract level in order to reflect what the user might think can be enabled or disabled within the site. By enabling certain features, the user has control over what components of the store should be activated, thereby influencing the flow of the site.

   This step adds the new feature to the flow repository, specifically by adding the feature to the Features.xml file. The Features.xml file contains a list of all of the features in the flow repository.

   a. In the J2EE Navigator perspective, locate the Stores project.

b. Browse to the Stores/Web Content/WEB-INF/xml/tools/stores/*eSiteStoreFrontAssetStoreName*/devtools/flow/repository folder.

c. Open the Features.xml file in the Source view of the XML Editor.

d. Add the following line:

```
<feature id="ShoppingCartImages"/>
```

Figure 6-27 Adding the ShoppingCartImages feature to Features.xml

e. Save and close the file.

2. Add the option to enable/disable the new feature.

   This step adds a new panel to the Change Flow notebook that controls the Change Flow store administration user interface. The panel will have one check box that can be used to enable or disable the feature.

   a. In the J2EE Navigator perspective, locate the Stores project.

b. Browse to the /Web Content/WEB-INF/xml/tools/stores/*eSiteStoreFrontAssetStoreName* /devtools/flow/ui folder.

> **Hint:** There is an XML file for each panel in the Change Flow notebook. The easiest way to add a new panel is to copy the XML of an existing similar panel and modify it as needed.

c. Copy the QuickCheckout.xml file to ShoppingCart.xml in the same folder.

d. Open the ShoppingCart.xml file in the Source View of the XML editor.

e. Change all occurrences of `QuickCheckoutPanel` to **ShoppingCartPanel**.

f. Change all occurrences of `QuickCheckout.checkout` to **ShoppingCartImages**.

g. Change all remaining occurrences of `QuickCheckout` to **ShoppingCartImages**.

h. Change the display priority of the panel to **9**. This will position the feature ninth on the list when the Change Flow user interface is displayed.

i. The ShoppingCart.xml file should now contain the following:

```
<display version="1.0">
   <panel
      id="ShoppingCartPanel"
      title="ShoppingCartPanel.title"
      description="ShoppingCartPanel.description"
      display-priority="9" />

   <option-group
      id="ShoppingCartImages"
      type="checkbox"
      display-priority="1"
      panel="ShoppingCartPanel" >

      <option
         id="ShoppingCartImages.checkboxEnable"
         label="ShoppingCartImages.checkboxEnable.label"
         enables-feature="ShoppingCartImages" />

   </option-group>
</display>
```

Figure 6-28 Creating the new ShoppingCart.xml

j. Save and close the file.

3. Add the text for the new feature.

   This step adds the text to the properties file used to display the new feature on the Change Flow store administration user interface. All text for the Change Flow store administration page is contained in a location-specific properties file. This customization uses the US English locale.

   a. In the J2EE Navigator perspective, locate the WebSphereCommerceServer project.

   b. Browse to the /properties/tools/stores/*eSiteStoreFrontAssetStoreName*/devtools/flow/ui folder.

   c. Open the config_en_US.properties file in the Source View of the properties editor.

Hint: There is a section for each panel in the Change Flow notebook. The easiest way to add a new section is to copy the properties of an existing similar section and modify it as needed.

d. Copy the QuickCheckout section to the bottom of the file and change the keys and values such that it appears as follows:

```
#######################################################################
#
#Shopping Cart panel
#
#######################################################################
ShoppingCartPanel =Shopping Cart
ShoppingCartPanel.title =Shopping Cart
ShoppingCartPanel.description =Shopping Cart allows thumbnail images to
be shown for all items in the shopping cart.
ShoppingCartImages.checkboxEnable.label =Show thumbnail images for
shopping cart items
```

Figure 6-29 Adding the Shopping Cart panel to config_en_US.properties

e. Save and close the file.

4. Add the new feature to the store.

   This step adds the feature to the Shopping Cart JSP page by inserting the appropriate JSP code to enable the thumbnails to appear immediately before the item description. It does this by inserting an HTML <IMG> tag immediately before the item description to display the thumbnail image from the catalog:

   a. In the J2EE Navigator perspective, locate the Stores project.

   b. Browse to the /Web Content/*eSiteStoreFrontAssetStoreName*/ShoppingArea/ShopcartSection folder.

   c. Open the OrderItemDisplay.jsp file in the Source View of the JSP editor.

d. Locate the line that displays the short description of the shopping cart item:

```
<%=orderItem.getCatalogEntry().getDescription(cmdcontext.getLanguageI
d()).getShortDescription()%>
```

e. Place the cursor immediately in front of the above text.

f. Insert a new line and then insert the following text:

```
<img border="0" width="50" height="50"
src="<%=orderItem.getCatalogEntryDataBean().getObjectPath()%><%=order
Item.getCatalogEntry().getDescription(cmdcontext.getLanguageId()).get
ThumbNail()%>" />
<br>
```

Figure 6-30 Adding JSP code for thumbnail image to OrderItemDisplay.jsp

g. Save and close the file.

5. Restart the server:
   a. In the Servers view, locate the WebSphereCommerceServer instance.
   b. Right-click the instance and select **Restart**.

At this stage, the shopping cart for all hosted stores based on the eSite Store Front Asset store has this feature enabled. To verify this, browse to a hosted store and add an item to the shopping cart. A thumbnail image will be displayed in the Item column for each item in the shopping cart.

Figure 6-31 Verifying the thumbnail images feature is in the shopping cart

Next, make the feature configurable via the Change Flow store administration page.

6. Make the new feature configurable.

   This step adds code to the Shopping Cart JSP to turn the feature on and off, specifically by wrapping the JSP code inserted from the previous step in the JSP <flow:ifEnabled> tags. The JSP displays the thumbnail images

dependent on the status of the ShoppingCartImages feature (that is, enabled or disabled).

a. In the J2EE Navigator perspective, locate the Stores project.

b. Browse to the /Web Content/*eSiteStoreFrontAssetStoreName*/ShoppingArea/ShopcartSection folder.

c. Open the OrderItemDisplay.jsp file in the Source View of the JSP editor.

d. Enclose the newly added JSP code with <flow:ifEnabled> tag.

e. The code should now appear as:

```
<flow:ifEnabled feature="ShoppingCartImages">
   <img border="0" width="50" height="50"
src="<%=orderItem.getCatalogEntryDataBean().getObjectPath()%><%=order
Item.getCatalogEntry().getDescription(cmdcontext.getLanguageId()).get
ThumbNail()%>" />
   <br>
</flow:ifEnabled>
```

f. Save and close the file.

7. Restart the server:

a. In the Servers view, locate the WebSphereCommerceServer instance.

b. Right-click the instance and select **Restart**.

At this stage, the shopping cart for all stores that were created based on the eSite Store Front Asset Store has this feature disabled. To verify this, browse to a hosted store and add an item to the shopping cart. Thumbnail images will not be displayed in the Item column for each item in the shopping cart because the feature has not been enabled via the Change Flow store administration page. To enable the feature, follow the steps as outlined in 9.7.4, “Usage” on page 326.

To make the feature enabled by default for all stores, do the following:

8. Enable the feature by default.

This step adds the feature to the list of selected features by adding the feature to the fsf.xml file. The fsf.xml file contains the list of preselected features for stores that were created based on the eSite Store Front Asset store.

a. In the J2EE Navigator perspective, locate the Stores project.

b. Browse to the /Web Content/WEB-INF/xml/tools/stores/*eSiteStoreFrontAssetStoreName*/devtools/flow/fsf folder.

c. Open the fsf.xml file in the Source View of the XML editor.

d. Add the following line within the <selected-features> tag:

```
<feature id="ShoppingCartImages"/>
```

Figure 6-32 Adding the feature to fsf.xml

e. Save and close the file.

9. Enable the feature by default for any newly created stores.

   This step enables the feature by default for any newly created stores based on the eSite Store Front Asset store. It does this by adding the feature to the SCF XML file. The SCF XML file contains the store configuration of a store that was created based on the eSite Store Front Asset store.

   a. In the J2EE Navigator perspective, locate the Stores project.

   b. Browse to the /Web Content/WEB-INF/xml/tools/stores/*eSiteStoreFrontAssetStoreName* /devtools/flow/scf folder.

   c. Open the scf.xml file in the Source View of the XML editor.

d. Add the following line within the <features> tag:

```
<feature id="ShoppingCartImages"/>
```

Figure 6-33 Adding the feature to scf.xml

e. Save and close the file.

6.8 New coupon promotion

This customization demonstrates how to create coupon promotions for hosted stores based on the eSite Store Front Asset store.

6.8.1 Overview

The Marketing subsystem of WebSphere Commerce provides multiple marketing functions. One of those functions is the electronic coupon.

Coupon promotion enables you to offer customers incentives to purchase. A coupon is an instance of a coupon promotion. The coupon functionality includes the following features:

- Support for guest customers to capture and redeem coupons. A guest customer can accept coupons from banner advertisements, manage coupons using a Wallet, and redeem them. Because a guest customer is active only for a given session, the coupon can be e-mailed to their Wallet for later use.
- Enables the Marketing Manager to create coupon promotions at the product level, the category level, or the order level.
- Provides summary information for an existing coupon promotion.
- Enables the Marketing Manager to modify an existing coupon promotion.

Coupon Creation

Coupons are created through the *manage store* menu on the eSite Hub.

In order to be able to create the coupon, marketing campaign, and other customizations described in this section, you must have the right level of authority. Several defined roles have the authority to access these functions:

- Seller
- Seller Administrator
- Logistic Manager
- Marketing Manager
- Sales Manager

These users can perform various business operations ranging from completing customer orders and checking order status to deploying and monitoring a storewide marketing campaign.

1. Ensure that the WebSphere Commerce Server is running before proceeding to the next steps.
2. In the Java Navigator perspective, locate the Stores project.
3. Browse to the /Web Content/WEB-INF/eSiteHub folder (Figure 6-34 on page 141).

Figure 6-34 File index.jsp used to load the eSite Hub

4. Right-click the index.jsp file and select **Run on Server**. The Logon page loads in your Web browser.
5. Log on to the eSite Hub as the Store Administrator.
6. Select **Manage Store**.
7. Select a store that was created based on the eSite Store Front Asset Store and click **OK**.
8. The menu at the top of the page lists the functions that are available for the user you just entered.

Basic Concepts

The creation of the coupon is related to other marketing concepts, such as e-Marketing Spots, Campaigns, Campaign Initiatives, and Ad Copy.

e-Marketing Spots display advertising content, category recommendations, or product recommendations. In this section an e-Marketing Spot is used as the way to access a promotion.

Another important marketing component is the Campaign. A Campaign is a major marketing effort, and it functions as a container for Initiatives. Campaign Initiatives are individual messages used to achieve a campaign's business objective.

Ad Copy is also an important part of the coupon-creation process. Ad Copy refers to the information, images, and other media used to support a marketing activity. Ad copy is also referred to as sales collateral.

Coupon Wallet

A coupon wallet is a repository for a registered customer's captured coupons. A coupon is added to a customer's coupon wallet when the customer clicks a coupon banner ad. A coupon wallet facilitates the management of coupons for the customer. For example, a customer may view, delete, and check the details of the coupons in the wallet. Moreover, the system also checks the coupon wallet for determining applicable coupons at the time of checkout.

Note: We do not advocate the use of coupons in regions where local laws prohibit their use.

Coupon Promotions

Coupon Promotions enable a Product Manager to offer customers incentives to purchase. A coupon is an instance of a coupon promotion. A coupon can apply to specific products (referred to as a product type condition), categories, or to the total purchase (referred to as an order type condition). For example, if you have many red baseball caps in stock, you can offer 25% off the price of these caps for a limited time. Or you could offer $3 off the price of a baseball cap to everyone who purchases products totalling at least $50 from your store.

The coupon may be offered to a customer via the Web through the store front, or it may be offered through e-mail. Regardless of how a coupon is obtained, it can be redeemed during checkout by customers.

Coupon promotions are available in the following business models: consumer direct, B2B direct, and reseller-hosted store. An eCoupon is an online electronic equivalent of a paper coupon. It is an electronic offer made by an online store to a customer. The eCoupon gives the customer a discount on some or all items in an order. The eCoupon may be subject to conditions, such as only one coupon per order.

Metrics for coupons:

- Number of products or categories sold with coupon redeemed
- Revenue generated for the product or category with coupon redeemed
- Revenue generated for order with coupon redeemed

There are three components of electronic coupons:

Coupon Promotion A promotion run by a Product Manager. The promotion offers coupons to customers.

Coupon An electronic version of a paper coupon. A coupon is an instance of a Coupon Promotion that can be uniquely identified within the system.

Coupon Wallet A collection of a registered or guest customer's eCoupons.

Coupon promotion screen flow

The following charts illustrate the process flow during the creation of the coupon. The difference between the three flows are the different purchase condition types available. The possible purchase condition types are:

Product Percentage or amount off product price

Category Percentage or amount off products in a specific category

Order Percentage or amount off order total

Here is an explanation of the coupon creation flow. First, enter the common information for all three types of product purchase conditions. See Figure 6-35 on page 144 for details: In the last block of the figure is a Purchase Type Condition. Your selected Purchase condition determines which flow you will follow:

- See Figure 6-36 on page 145 for a description of product type purchase condition flow.
- See Figure 6-37 on page 146 for a description of the order type purchase condition flow.
- See Figure 6-38 on page 147 and Figure 6-39 on page 148 for a description of the category type purchase condition flow.
- Instructions for the creation of the Coupon are listed in 6.8.3, "Steps" on page 149.

Figure 6-35 Common flow

Figure 6-36 Product type purchase condition

Figure 6-37 Order type purchase condition

Figure 6-38 Category type flow, part one

Figure 6-39 Category type flow, part two

6.8.2 Prerequisites

This customization assumes that WebSphere Commerce Studio is installed and configured as per Appendix C, “WebSphere Commerce Studio implementation” on page 827. It also assumes that the eSite SAR file has been published successfully and that at least one B2C store based on the eSite Store Front Asset store has been created using WebSphere Commerce Studio as per Chapter 8, “Publish the SAR and create stores” on page 225.

You must have configured WebSphere Commerce Payments Server.

All steps are intended to enable a developer to re-create the customization within the local WebSphere Commerce Studio environment. A basic understanding of WebSphere Commerce Studio is assumed.

6.8.3 Steps

Store Services enables you to configure Coupons and other features in published stores. To set up a coupon promotion:

1. Define the coupon promotion:
   a. Log on to the eSite Hub.
   b. Click **manage store**.
   a. From the Merchandise menu, click **Coupon Promotions**. The Coupon Promotion window displays a list of the currently defined coupon promotions.
   b. Select **New** to create a new coupon promotion. This opens the Coupon Promotion General Information page.
   c. In the Name text box, type `Coupon Promotion 01 Order-type`.
   d. In the Description text box, type a description of the coupon that you are offering. We use `15% off order`.
   e. Determine when this coupon will be in effect: always or for a specified time period.
      - Select **a specified time period**.
      - Type the start date (today's date in the format indicated), and the end date (a week from today in the format indicated).
      - Have it start at `7:00` and end at `23:00`.
   f. Click **Next** to go to the Description page.
   g. In the Short Description text box, type `Coupon 01`.
   h. In the Long Description box, type `This coupon promotion gives customers 15% off per order`.
   i. Type the Thumbnail Path and Full Image Path:

      `image\discount_15_percent.gif`

      For this customization we use the same path for both fields. Normally, you will choose different ones.

      > **Important:** The image should exist and be customized for each supported language.

   j. Create a new folder to hold the images in your store:
      i. In the J2EE Navigator perspective, locate the Stores project.
      ii. Browse to the /Web Content/ folder.

iii. Create a new folder. The name of the folder must be the same as was used to name the store you are working on.

iv. Inside the newly created folder, create a new folder named `images`.

v. Create or find a promotion image to attach to the coupon. The image used here is discount_15_percent.gif, which you can find in \Stores\Web Content\eSiteStoreFrontAssetStore\en_US\images.

vi. Copy the image into the new images directory.

k. Click **Next** to go to the Details page.

l. Select your currency: **USD**.

m. Under Number of Coupons to offer, select **Any number**.

n. You would select:

Product type	To apply a percentage or amount off the product price
Order type	To apply a percentage or amount off products in a specific category
Category type	To apply a percentage or amount off of the order total

We want to apply the coupon to the entire order, so under Purchase Condition Type, select **Order Type**.

o. Select **Next** to go to the Order Purchase Condition page.

p. For the Minimum amount qualification, type `150`. This is the minimum amount that a customer has to spend to receive the coupon promotion. If you wish to apply a maximum amount qualification, you may also do so here. If you make that selection, a text box appears for you to type the amount. However, in this case, do not type a maximum.

q. Select **Next** to go to the Coupon Value page.

r. Determine whether you want your coupon as a percentage or a fixed amount. We have said that we want to offer 15% off the order, so select **Coupon as a percentage**. (If you had chosen a fixed amount, a text box would appear for you to type the amount.) The thumbnail image refers to the 15% off promotion.

s. Click **Finish** to save the coupon promotion. The coupon promotion is displayed in the Coupon Promotion list and automatically set as active. You should receive a message stating that the coupon promotion was created successfully. Click **OK**.

t. Return to the Coupon Promotions page to see the coupon.

> **Note:** You must propagate your coupon promotion data from the development server to the production WebSphere Commerce Server before any customer orders can make use of it. Contact your site administrator for assistance.

2. Define the ad copy.

   Ad copy refers to all of the support material created for your campaigns. Typically, this material is created by writers and graphic artists. Ad copy must include display content such as product pictures, graphics used in advertising, and marketing text.

   All awareness advertisements require ad copy to be defined in the WebSphere Commerce database prior to its use on the site. Therefore, communication must take place between the marketing and creative departments prior to a campaign to establish requirements. After the ad copy is defined, it can be referenced when creating campaigns, and it will be displayed as appropriate.

   To create ad copy and other campaign assets:

   a. Click the **manage store** option on the eSite Hub.

   b. From the Marketing menu, select **Ad Copy**.

   c. Select **New** to create copy for your new coupon promotion. (If you want to change, delete, or receive a summary of an existing promotion, select those options). This opens the General Definition page.

   d. In the Ad Copy name text box, type `Coupon Promotion 01 Ad Copy`.

   e. From the Type pull-down list, choose **Image**.

   f. Determine whether you want **Select WC command as click action** or Specify URL as click action. In this case, choose the first option.

   g. From the Command pull-down list, choose **Coupon Promotion**. Click **List** to select the coupon promotion. This opens the Coupon List page.

   h. Check the box next to your coupon promotion. Click **OK** to return to the General Definition page. This page has two custom fields for adding additional information, if needed.

   i. Click **Next** to open the Description Definition page.

   j. In the Location text box, type the relative path name of the Flash or image file relative to the store home directory. We use the same path as in step 1 to point to Thumbnail Path and Full Image Path. (At deployment that would

be *WAS_installdir*/InstalledApps/*server_name*.ear /wcstores.war/store_n/images/coupon_15_percent.gif

k. In the Marketing text box, type the text that will be displayed with the coupon image in the store. This page has two custom fields for adding additional information, if needed.

l. Click **Finish**. You should see a message stating that the ad copy was created successfully. Click **OK**.

m. Return to the Ad Copy page, and you should see your ad copy. If you choose, you can select this ad copy to change it, delete it, or receive a summary.

3. Create a campaign.

   Campaigns serve to organize your marketing efforts. Campaigns are typically created by either a Marketing Manager, or by a merchant. They are often associated with a certain set of objectives. For instance, a Back to School campaign may have an objective of increasing sales of children's clothes during the campaign.

   Within WebSphere Commerce, campaigns contain any number of campaign initiatives, which define a condition. The campaign initiatives generate targeted content for the customers, when the defined condition is evaluated to be true. The result is that a campaign is the high-level marketing element that organizes the initiatives.

   Campaigns are created using the Campaign wizard which is available from the Marketing menu after selecting **manage store** on the eSite Hub.

   Now you are ready to create a campaign.

   a. From the Marketing menu, select **Campaign**. This opens the Campaign window, which contains a list of currently defined campaigns.

   b. Select **New** to create a new campaign on the General Definition page.

   c. Type a campaign name, `Campaign 1`. Type a campaign description, such as `15% off your order when you spend $150`. This description will appear in the Campaign List window to help identify the campaign. Click **Next** to open the Business Objectives Definition page.

   d. Type the campaign sponsor and campaign objectives. Type `Campaign Owner`, and the objective is `To increase consumer spending for the store`.

   e. Click **Finish** to save the campaign. You should receive a message stating that the campaign was created successfully. Click **OK**. The campaign is displayed in the Campaigns list. You must create initiatives before this campaign can be used.

4. Create campaign initiatives.

   Campaign initiatives, typically created by a Marketing Manager, serve to generate your targeted marketing content. They can be associated with a campaign that contains a collection of initiatives. As an example of this relationship, if an office supply store had a Back to School campaign, the initiatives would be responsible for lower-level actions, such as advertising a discount on pens or suggesting lined paper to any customer who has registered and listed their occupation as a student.

   Campaign initiatives are capable of displaying three types of dynamic content:

   – Suggestive selling initiative

     Designed to provide rule-based product recommendations, targeted at a specific customer audience, and based on a customer's profile and other customers' behavior. Intended to create cross-sell and up-sell opportunities.

   – Collaborative filtering-based recommendations

     Also intended to create product recommendations, but they use a different recommendation algorithm, which targets items based on customers' overall behavior rather than predefined rules.

   – Awareness advertisements

     Designed to provide advertising content targeted at a specific customer audience. Based on the same criteria as those used for suggestive selling, but they are intended to increase a customer's awareness about activities at the online store, highlight special offers, and to increase brand awareness.

   Initiatives can be incorporated into any page on the site. When the site is designed, special placeholders called *e-Marketing Spots* are placed on the site. When displayed to a customer, these placeholders are replaced by the specific targeted content. Target locations are assigned by scheduling initiatives to display in e-Marketing Spots in the desired locations.

   Campaign initiatives contain a condition that determines when and to whom they are displayed. This condition is defined when the initiative is created and can be changed during the lifetime of the initiative to adjust the initiative's visibility and the displayed content.

   Campaign initiatives generate statistics about their use, which can be viewed by Merchants and Marketing Managers using the WebSphere Commerce Accelerator. The statistics illustrate an initiative's click through rate for each e-Marketing Spot where it is implemented. These statistics provide feedback on the effectiveness of the initiative, as well as comparative success rates among the various locations in which it displays.

Campaign initiatives are created using the Campaign Initiative wizard, which is available in the Marketing menu that displays after selecting **manage store** on the eSite Hub.

To create a campaign initiative:

a. From the Marketing menu, select **Campaign Initiatives**. The Campaign Initiatives window opens, containing a list of currently defined campaign initiatives.

b. Select **New** to create a new campaign initiative from the General Definition page.

c. Type a campaign initiative name: `Campaign 1 - Coupon promotion`.

d. In the description text box, type a description for your initiative, such as `Campaign initiative for the Campaign 1 - Coupon promotion`.

e. From the campaign pull-down list, select the campaign name (in this case, **Campaign 1**).

f. In the initiatives classification list, select **Advertise Coupon**.

g. Click **Next** to go to the Defining displayed dynamic content (what) page.

h. From the right box, select the correct available ad copy for this campaign initiative, `Coupon Promotion 01 Ad Copy`.

i. Click **Add** to add the copy to the Selected ad copy box.

j. Click **Next** to go to the Defining target customers (who) page.

k. Select **Target all customers**. If you select Target customer profiles, you must have some customer profiles already defined.

l. Click **Next** to go to the Defining dates for targeting customers (when) page.

m. Select **Everyday**, as you have already set your specified time period.

n. Click **Next** to go to the Defining target customer behaviors (which) page. If any customer behaviors are already defined, they will appear here.

o. In this scenario, we do not want to add a customer behavior. Click **Finish** to save this campaign initiative. You should receive a message stating that the campaign initiative was created successfully. The campaign initiative is displayed in the Campaign Initiatives list. If you want to change, duplicate, suspend, resume, or delete this initiative, select the appropriate option and follow the wizard to complete those steps.

5. Schedule the coupon promotion using e-Marketing Spots.

   The e-Marketing Spots reserve space on your store pages in which personalized marketing content displays. The e-Marketing Spots are used during page creation to reserve space for the dynamic content that will be

shown to your customers. When a page is requested by a customer, any e-Marketing Spots present on the page will communicate with the rule server to process the rule-based code associated with the spot. Each e-Marketing Spot has one or more campaign initiatives associated with it. e-Marketing Spots are supported by special data beans that are used in conjunction with JSP technology to generate Web page content using the WebSphere Commerce rule processing system.

e-Marketing Spots are created using the e-Marketing Spot wizard in the WebSphere Commerce Accelerator. Placement and creation of e-Marketing Spots must be determined collaboratively among the merchant responsible for the content, the page designer responsible for creating JavaServer Pages (JSP) files, and the media designer assigned to create any graphics or text displayed in the spot. This ensures that the spots are implemented in a way that provides adequate space and retains the site design's aesthetics. e-Marketing Spots should be named descriptively so as to include their location, such as HomePageAd or CheckOutPageRecommendation. This helps to reduce confusion about where it will appear and what content it should contain. If necessary, numbers can be added to the name to differentiate between two e-Marketing Spots appearing on the same page. e-Marketing Spot names must be valid Java identifiers.

Now you are ready to schedule the coupon promotion:

a. From the Marketing menu, select **e-Marketing Spots**.

b. From this list, select **StoreHomePage** to have the coupon display on your store's home page.

c. Select the **schedule** button. This takes you to the Campaign Initiative Scheduling page.

d. Schedule a new campaign initiative by selecting **New**. This takes you to the Schedule Campaign Initiatives page.

e. In the **selected campaign** pull-down list, select the campaign name, in this case, **Campaign 1**.

f. From the right box, you should select the correct **Available Campaign Initiatives** copy for this campaign initiative. Click over **Campaign 1 - Coupon promotion**.

g. Click **Add**, to add the campaign initiative to the Selected Campaign Initiative box.

h. The start date for the campaign initiative is set, by default, to your actual system date and time.

i. You decide to **run this campaign initiative indefinitely**, so you select that choice. Click **OK** to save the scheduling information. You will see that your

campaign initiative is scheduled. If you want to change the schedule, select it and make your changes.

Reload the store front page in your browser to view the coupon promotion. If the coupon promotion does not show up, WebSphere Commerce is still using the old pages. Go to *WC_installdir* /instances/*wc_instance_name*/cache. Delete everything and refresh the browser.

6.9 Custom accelerator menu

This section lists the steps required to add a custom menu option to Accelerator for stores created based on the eSite Store Front Asset store.

6.9.1 Overview

Under the current model, when a Seller selects to manage a store, a standard menu is provided. This customization demonstrates how to add a new option to that menu to load a custom JSP page for stores that were created based on the eSite Store Front Asset store (that is, eSite B2C stores).

In this example, a new menu option, **Custom** → **Registered Users**, will be added. When selected, it loads a custom-made page to display the number of registered users who have logged onto the site during the past seven days. Note that this menu option will appear for all stores that are based on the eSite Store Front Asset store because the Accelerator menu that is displayed is dependent on store type, which in this case is a Hosted Store (that is, a B2C hosted store).

6.9.2 Prerequisites

This customization assumes that WebSphere Commerce Studio is installed and configured as per Appendix C, “WebSphere Commerce Studio implementation” on page 827. It also assumes that the eSite.sar file has been published successfully and that at least two B2C stores based on the eSite Store Front Asset store have been created using WebSphere Commerce Studio as per Chapter 8, “Publish the SAR and create stores” on page 225.

All steps are intended to enable a developer to re-create the customization within the local WebSphere Commerce Studio environment. A basic understanding of WebSphere Commerce Studio is assumed.

6.9.3 Steps

To add a custom menu option:

1. Add properties to display the menu text.

   All text that is used to render the Accelerator menu is stored in the mccNLS.properties file. This step adds two new properties to this file to store the text for the new menu option. This customization uses the US English locale.

   a. In the J2EE Navigator perspective, locate the WebSphereCommerceServer project.

   b. Browse to the /properties/com/ibm/commerce/tools/properties folder.

   c. Open the mccNLS_en_US.properties file in the Source view of the Properties Editor.

   d. Add the following properties, as shown in Figure 6-40 on page 158:

```
#
#Custom
#
custom=Custom
registeredCustomers=Registered Customers
```

Figure 6-40 Adding new properties to mccNLS_en_US.properties

e. Save and close the file.

2. Add the new menu option.

   All Accelerator menu options for hosted B2C stores are stored in the CommerceAcceleratorMHS.xml file. This step adds the new menu options to this file.

   a. In the local file system, locate the WebSphere Commerce installation directory.

   b. Browse to the /Commerce/xml/tools/common folder.

   c. Open the CommerceAcceleratorMHS.xml file in a text editor.

   d. Insert the new menu option, as shown in Figure 6-41 on page 159:

```
<menuitem name="custom"
   enabled="true" users="seller">

<node  name="registeredCustomers"
   url="/webapp/wcs/tools/servlet/RegisteredCustomersView"
```

```
                    users="seller"/>

                </menuitem>
```

CommerceAcceleratorMHS.xml - Notepad

File Edit Format Help

```
        <node  name="invReports"
               url="/webapp/wcs/tools/servlet/ShowContextList?context=B2C_Operations_Inv
               users="catMgr opMgr seller" />

        <node  name="omReports"
               url="/webapp/wcs/tools/servlet/ShowContextList?context=B2C_Operations_Ord
               users="catMgr makMgr opMgr seller"/>

        <node  name="operationalReports"
               url="/webapp/wcs/tools/servlet/OperationalReportsHomeView"
               users="catMgr makMgr opMgr seller"/>

    </menuitem>

    <menuitem name="custom"
              enabled="true"
              users="seller">

        <node  name="registeredCustomers"
               url="/webapp/wcs/tools/servlet/RegisteredCustomersView"
               users="seller"/>

    </menuitem>

    <menuitem name="help"
              enabled="true"
              type="help"
              users="all"/>

</menu>
```

Figure 6-41 Adding the new menu options to CommerceAcceleratorMHS.xml

e. Save and close the file.

3. Create a custom JSP page.

   This step creates a new JSP page that will be invoked when the new menu option is selected. It is beyond the scope of this step to create a new JSP page from scratch, so an example has already been created and is provided as additional materials. The example page will retrieve the number of registered users who logged onto the site during the past seven days.

   a. Download the RegisteredCustomers.jsp file as per Appendix F, “Additional material” on page 923.

   a. In the J2EE Navigator perspective, locate the CommerceAccelerator project.

   b. Browse to the /Web Content/tools/catalog folder.

   c. Copy the RegisteredCustomers.jsp file into this folder.

Figure 6-42 Creating the new JSP page RegisteredCustomers.jsp

d. Save and close the file.

For more information about creating custom JSP pages, refer to *IBM WebSphere Commerce Programming Guide and Tutorials Version 5.5*.

4. Register a View command to load the JSP page.

In order for the JSP page to be loaded, it must be requested through a View command. This step registers a View command to load the new JSP page:

a. Open a DB2 command line window by selecting **Start** → **Programs** → **IBM DB2** → **Command Line Tools** → **Command Line Processor**.

b. Connect to the database using:

```
connect to dbname user dbuser using dbpassword
```

- *dbname* is the database name.
- *dbuser* is the database schema owner.
- *dbpassword* is the password for the database user.

c. Register a new View command by entering the following statement:

```
insert into viewreg(VIEWNAME, DEVICEFMT_ID, STOREENT_ID,
INTERFACENAME, CLASSNAME, PROPERTIES, DESCRIPTION, HTTPS, LASTUPDATE)
values ('RegisteredCustomersView', -1, 0,
'com.ibm.commerce.tools.command.ToolsForwardViewCommand',
'com.ibm.commerce.tools.command.ToolsForwardViewCommandImpl',
'docname=tools/catalog/RegisteredCustomers.jsp', 'Used to display
statistics for Registered Customers', 0, null)
```

d. Commit the changes by entering `commit`.

Figure 6-43 Registering the View Command in the database

e. Quit and close the command line processor window.

5. Create and load an access control policy.

   In order for the Seller to gain access to the View command, a new access control policy must be created. This step creates and loads a new command-level access control policy that grants the Seller access to the new View command. It is beyond the scope of this step to create a new access control policy from scratch, so an example has already been created and is provided in the additional materials. For more information about creating access control policies, refer to *IBM WebSphere Commerce Security Guide Version 5.5*.

   a. Download the RegisteredCustomersViewPolicy.xml file as per Appendix F, “Additional material” on page 923.

   b. In the local file system, locate the WebSphere Commerce installation directory.

   c. Browse to the /Commerce/xml/policies/xml folder.

   d. Copy the RegisteredCustomersViewPolicy.xml file into this folder.

RegisteredCustomersViewPolicy.xml - Notepad

File Edit Format Help

```
<!DOCTYPE Policies SYSTEM "../dtd/accesscontrolpolicies.dtd">

<!-- New policy that governs access to the view command RegisteredCustomersView. -->

<Policies>

        <!-- Declares a new action called RegisteredCustomersView that invokes the
             view command called RegisteredCustomersView. -->

        <Action Name="RegisteredCustomersView" CommandName="RegisteredCustomersView">
        </Action>

        <!-- Adds the new action to pre-existing action groups such that the
             following roles have access to the action:

             - Sellers
             - Customer Service Supervisors
             - Sales Managers
             - Operations Managers -->

        <ActionGroup Name="SellersViews" OwnerID="RootOrganization">
                <ActionGroupAction Name="RegisteredCustomersView"/>
        </ActionGroup>

        <ActionGroup Name="CustomerServiceSupervisorViews" OwnerID="RootOrganization">
                <ActionGroupAction Name="RegisteredCustomersView"/>
        </ActionGroup>

        <ActionGroup Name="SalesManagersViews" OwnerID="RootOrganization">
                <ActionGroupAction Name="RegisteredCustomersView"/>
        </ActionGroup>

        <ActionGroup Name="OperationsManagersViews" OwnerID="RootOrganization">
                <ActionGroupAction Name="RegisteredCustomersView"/>
        </ActionGroup>

</Policies>
```

Figure 6-44 Creating the new access control policy

e. Save and close the file.

f. In a command window, locate the WebSphere Commerce installation directory.

g. Change to the Commerce\bin folder.

h. Issue the following command to load the policy into the database:

```
acpload dbname dbuser dbuser_password xml_file
```

- *dbname* is the database name.
- *dbuser* is the database schema owner.
- *dbpassword* is the password for the database user.
- *xml_file* is the name of the policy file. In this case, specify `RegisteredCustomersViewPolicy.xml`.

For example:

```
acpload wc1dev db2admin db2admin RegisteredCustomersViewPolicy.xml
```

6. Restart the server:
   a. In the Servers view, locate the WebSphereCommerceServer instance.
   b. Right-click the instance and select **Restart**.

This completes the customization. Now, when the Seller manages a store based on the eSite Store Front Asset store, the custom menu option will be displayed. If the Seller selects this menu option, the number of registered customers who logged onto the site in the past seven days will be displayed on the Registered Customers page. To verify this, follow the steps outlined in “Usage” on page 332.

6.10 Custom registration menus

This section lists the steps required to customize the registration pages for the eSite Hub store.

6.10.1 Overview

Currently the eSite Hub store provides the facility for user and organization registration via a single menu option called Registration on the logon page. Selecting this menu option opens the Organization Registration page, on which the administrator can register a new organization. In order to register a new user, the administrator must select the Register User button, which loads the User Registration page.

This customization demonstrates how to customize the eSite Hub store registration menu to provide a cleaner navigation path for user and organization registrations. It provides separate user and organization registration menu options from the logon page. It also removes the Register User button from the Organization Registration page to avoid any navigation confusion.

Currently, to register a user via the User Registration page, the administrator must type in the name of the organization that the user belongs to. This customization modifies the User Registration page to provide a pull-down list (instead of the text entry field) that contains all of the valid organizations in the database. This reduces the possibility of the administrator entering the wrong organization.

6.10.2 Prerequisites

This customization assumes that WebSphere Commerce Studio is installed and configured as per Appendix C, “WebSphere Commerce Studio implementation” on page 827. It also assumes that the eSite SAR file has been published

successfully using WebSphere Commerce Studio as per Chapter 8, “Publish the SAR and create stores” on page 225.

All steps are intended to enable a developer to re-create the customization within the local WebSphere Commerce Studio environment. A basic understanding of WebSphere Commerce Studio is assumed.

6.10.3 Steps

To customize the registration pages for the eSite Hub store:

1. Add the text for the new menu options.

   This step adds the text used to render the new menu options by adding new properties to the B2C Hosting Channel properties file. The B2C Hosting Channel properties file contains all of the menu text for the eSite Hub store. This customization uses the US English locale.

   a. In the J2EE Navigator perspective, locate the Stores project.

   b. Browse to the /Web Content/WEB-INF/classes/*HubStoreName* folder.

   c. Open the b2cHostingChannel_en_US.properties file in the Source view of the Properties Editor.

   d. Under the Navigation section, add the following properties:

```
navigationUserRegistration=user
navigationHubRegistration=organization
```

Figure 6-45 Adding properties to b2cHostingChannel_en_US.properties

e. Save and close the file.

2. Add the new menu options.

   This step adds the JSP code for two new menu options to the eSite Hub Logon page: one for user registration and one for organization registration.

   a. In the J2EE Navigator perspective, locate the Stores project.

   b. Browse to the /Web Content/*HubStoreName*/include folder.

   c. Open the CachedNavigation.jsp file in the Source view of the JSP Editor.

   d. Locate the lines of code that display the registration menu option:

```
<tr>
   <td width="19"></td>
   <td width="123"><a
href="javascript:go('registration','OrgRegistrationAddFormView')"><%=
storeText.getString("navigationRegistration") %></a></td>
```

```
   <td> </td>
</tr>
```

e. Replace the lines of code in step d on page 165. with the following lines:

```
<tr>
   <td width="19"></td>
   <td class="menu" width="123"><%=
storeText.getString("navigationRegistration") %>
   </td>
   <td> </td>
</tr>
<tr>
   <td width="19"></td>
   <td width="123"><a
href="javascript:go('registration','UserRegistrationAddFormView')">&n
bsp;   <%=
storeText.getString("navigationUserRegistration") %></a></td>
   <td> </td>
</tr>
<tr>
   <td width="19"></td>
   <td width="123"><a
href="javascript:go('registration','OrgRegistrationAddFormView')">&nb
sp;   <%=
storeText.getString("navigationHubRegistration") %></a></td>
<td> </td>
</tr>
```

Figure 6-46 Adding JSP code to display menu items in CachedNavigation.jsp

Add a new style to display the registration menu heading in the correct font:

f. Locate the lines of code that display the style definitions:

```
<style>
A {
    font-family : Verdana, Geneva, Arial, Helvetica, sans-serif;
    color : White;
    text-decoration : none;
    font-size : 10pt;
}
A:HOVER {font-family : Verdana, Geneva, Arial, Helvetica, sans-serif;
    color : Orange;
    text-decoration : none;
    font-size : 10pt;
}
</style>
```

g. Place the cursor at the start of the line containing the </style> tag. Insert a new line and add the following text:

```
.menu {
   font-family : Verdana, Geneva, Arial, Helvetica, sans-serif;
   color : White;
   text-decoration : none;
   font-size : 10pt;
}
```

Figure 6-47 Adding JSP code to style the menu items in CachedNavigation.jsp

h. Save and close the file.

3. Remove the Register User button.

   This step removes the Register User button from the Organization Registration JSP by wrapping the JSP code for the button in HTML comment tags.

   a. In the J2EE Navigator perspective, locate the Stores project.

b. Browse to the /Web Content/*HubStoreName* folder.

c. Open the OrgRegistrationAddForm.jsp file in the Source view of the JSP Editor.

d. Locate the lines of code that display the Register User button:

```
<table cellpadding="0" cellspacing="0" border="0" width="616">
   <form
      name="userRegistrationForm"
      method="post"
      action="UserRegistrationAddFormView">

      <input
         type="hidden"
         name="<%= ECConstants.EC_STORE_ID %>"
         value="<%= storeId %>" />
      <input
         type="hidden"
         name="<%= ECConstants.EC_LANGUAGE_ID %>"
         value="<%= langId %>" />
      <input
         type="hidden"
         name="actionName"
         value="registration" />

      <tr>
         <td colspan="2" ><%= storeText.getString("OrgReg_Text6")
%>  <button type="button" name="userRegistrationButton"
id="form" onclick="javascript:userRegistration();"><%=
storeText.getString("OrgReg_Text7") %></button></td>
      </tr>
   </form>
</table>
```

e. Comment out the lines of code in step d. by enclosing them in `<!--` and `-->` HTML comment tags.

Figure 6-48 Commenting out the code for the Register User button

f. Save and close the file.

4. Restart the server:

   a. In the Servers view, locate the WebSphereCommerceServer instance.

   b. Right-click the instance and select **Restart**.

At this stage, the menu displayed on the logon page for the eSite Hub store has two new options. The first option, called organization, loads the Organization Registration page. The second option, called user, loads the User Registration page. The Organization Registration page will no longer display the Register User button. To verify this, browse to the eSite Hub store Logon page.

Figure 6-49 Verifying the changes

Now replace the Organization text entry field on the User Registration page with a pull-down list.

5. Provide an organization pull-down list.

   This step replaces the organization text entry field with an organization pull-down list on the User Registration page. It does by making the text entry field hidden and adding the appropriate JSP code to read the organizations from the database and populate a pull-down list. The pull-down list populates the text entry field whenever a new selection is made.

   a. In the J2EE Navigator perspective, locate the Stores project.

   b. Browse to the /Web Content/*HubStoreName* folder.

   c. Open the UserRegistrationAddForm.jsp file in the Source view of the JSP Editor.

   d. Locate the lines of code that display the Organization text entry field:

```
<tr>
   <td colspan="2" >
```

```
            <input
               type="text"
               name="<%= ECUserConstants.EC_ORG_ORGENTITYNAME %>"
               value="<%= strOrganizationName %>"
               size="45"
               maxlength="128" />
         </td>
      </tr>
```

e. Modify the text entry field to be hidden. Set the type to hidden as follows:

```
      <input
         type="hidden"
```

f. Add the JSP code to populate and display the pull-down list:

```
      <tr>
         <td colspan="2" >
            <select
               name="organization"
               onchange="<%= ECUserConstants.EC_ORG_ORGENTITYNAME
      %>.value=this[this.selectedIndex].value">

            <%
            OrganizationAccessBean bean = new OrganizationAccessBean();

            for (Enumeration e = bean.findAllOrganization();
               e.hasMoreElements() ;) {

               bean = (OrganizationAccessBean) e.nextElement();

               if (bean.getOrganizationName().equals(strOrganizationName))
      {
            %>
                  <option
                     value="<%=bean.getOrganizationName()%>"
                     SELECTED><%=bean.getOrganizationName()%></option>
            <%
               } else {
            %>
                  <option
                     value="<%=bean.getOrganizationName()%>">
                     <%=bean.getOrganizationName()%></option>
            <%
               }
            }
            %>

            </select>
         </td>
      </tr>
```

Figure 6-50 Adding a pull-down list in UserRegistrationAddForm.jsp

g. Save and close the file.

At this stage, the text entry field on the User Registration page no longer displays. In its place is a pull-down list containing all of the valid organizations in the database. To verify this, browse to the eSite Hub Logon page and select **user** to load the User Registration page.

Figure 6-51 Verifying that the User Registration page now displays a pull-down list

Part 3

Manage the ITSO hosting example

In this part, we publish the eSite.sar file and create needed organizations, users, and stores. We list the steps for implementing the customizations described earlier in the book. We then cover the three levels of administration in great detail: site, hub, and store.

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7

Development guidelines

In this chapter, we introduce a project development methodology that was adapted specifically for the creation of e-commerce sites using the IBM WebSphere Commerce family of software products. After reading this chapter, you should have a clear understanding of the following topics relevant to the development methodology:

- Development methodology
- Development environment
- Build and deploy process

Note: This chapter is based on *Best Practices and Tooling for Creating IBM WebSphere Commerce Sites*, REDP3616. We encourage you to read this Redpaper for more detailed information.

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7.1 Development methodology

Gone are the days when creating e-commerce sites was considered a fine art requiring highly specialized skills. e-commerce development has become a rather mature field since it was first introduced in the mid-1990s. Experience proves that using a systematic methodology to develop software applications for e-commerce systems greatly reduces project risk and improves proper alignment of software functionality with customer business requirements, which are two key influencers of project profitability and customer satisfaction.

The key characteristics of a systematic development methodology are:

- It uses a systematic software development method.
- The method has been validated and refined via empirical experience gained through e-commerce development.
- The framework of the methodology is centered on established project management principles to help define work-products, deliverables, and timeline (or phases) to deliver software on time and within budget to meet customers' business needs.

The methodology that is outlined in this chapter is flexible enough to support the creation or transition of both small-scale and large-scale e-commerce sites.

7.1.1 Definitions

The methodology documented in this book uses specific terminology with unique connotations. To improve your understanding of the project development methodology, this book began with an overview of terminology that enables you to use this vocabulary when communicating and sharing knowledge of the methodology with others.

Phase

The development methodology consists of a set of time-bound or function-bound phases (for example, the design phase). From a systems view, a phase has very clear input and output work-products, such as the customer requirements document. A phase takes one or more work-products and performs a set of activities or tasks to enhance existing work-products or create new ones. Usually, a phase is closed before starting the next one in the sequence. A phase can have zero or more subphases. In this book, the word *phase* refers both a phase and a subphase of a project.

Note: Other industry methodology standards may use the term *activity* as a subdivision of a phase.

Work-products

Work-products are tangible pieces of information or artifacts that can be created, shared, and communicated. For example, work-products may be:

- An education or training roadmap
- A macro design document
- Deployment code
- An e-commerce database with customer information

Deliverable

A work-product becomes a deliverable when it has been highlighted in a contractual document that has been signed by both the customer and a service provider, such as a Statement of Work (SOW) or a Document of Understanding (DOU).

Customer

The customer should be viewed as one who either owns a e-commerce site or who wishes to develop an e-commerce site. In either case, the customer defines and approves the business requirements for the e-commerce site.

Customer IT Team

A team consisting of one or more members, each assigned by the customer, that is responsible for maintaining the customer e-commerce site and associated computing infrastructure such as the back-end or legacy systems.

Project team

Owing to its responsibilities, the project team is prominently positioned with the methodology in this book, as the methodology seeks to emphasize the activities of this team. Because a project team may consist of sub-teams, such as design team or test team, the appropriate sub-team is identified by name if a methodology task is its responsibility. In other words, the project team is the primary reference team used either explicitly or implicitly throughout this book unless specified otherwise.

In terms of projects, a project team is sanctioned and supported by the customer during an in-house project. During a consulting engagement, the project team is controlled and supported by outside services organizations, such as ISSW, IGS, or IBM Business Partners. No matter the allegiance of the project team, all should carefully access project execution and control requirements whenever team members are geographically dispersed.

The assessment typically would be based on evaluation of factors such as frequency of communication, the quantity and nature of control information

supplied, and the difference between expected and observed progress in project execution.

Each project manager or leader needs to understand the working relationships among team members in order to plan and coordinate project activities appropriately, especially when the teams reside in different locations. This topic is an important part of project management discipline. However, as further information about implications of dispersal on projects would be available from a project management specialist, we will not discuss the topic further in this book.

Project database

A database of project-specific information should be established and maintained for all team members to access. This would hold background information, reports, minutes of meetings, results of discussions, and indeed any other kind of information that is relevant to the execution of the project.

This project database could be implemented using any available tool, such as a Lotus® Notes database. If may be better to make use of collaborative facilities such as those provided by Lotus QuickPlace®, which supports external access by customers using Web browsers.

Task

A task is an activity that is performed during one or more phases of the project.

A typical project phase involves many tasks, and each may be executed either sequentially or in parallel with one another. In addition, depending on their individual requirements, tasks may be completed by individual team members or distinct teams or sub-teams.

A task is likely to require input in the form of work-products, and after it has been completed, it will produce one or more output work-products. For example, when creating a database, you would require a data model for the target database to define and create the database schema. When complete, the target database may then be populated with customer or sample data to create the required database. In this case, the input work-products necessary to create a sample database are:

- The data model
- The database schema
- The sample data

The output work-product of the database task is a sample database ready to be used by the project team during the implementation phase.

The scope of a project task can be contained within a single phase or across multiple ones. An example of a multi-phase task is the creation of a WebSphere Commerce design. The output of the design task normally would be a set of work-products that are listed as output from the micro design phase.

Ideally, tasks are completed within their parent phases. However, under some circumstances often dependent on the task itself, it may be necessary to revisit a task during a later phase. This is the case particularly when later work uncovers an issue that must be revisited, such as modification to a database design. Such situations should be considered exceptions and treated as such.

Strategy

In this book's terms, a strategy is a method for executing a task. A project team may execute tasks in a variety of ways to produce desired output work-products. Therefore, many strategies may be used to complete specific project tasks and create the associated output work-products.

Because a strategy is associated with a task, its scope may reside within a single phase or span multiple ones. For example, the Test Phase, which is one of the main phases of the overall methodology, may require tests to be completed during each subphase. If so, the tests likely would include Functional Verification, System, and User-acceptance testing. On the other hand, all testing may be combined under a comprehensive test plan, such as System Verification Test and User-acceptance Testing.

Each strategy possesses factors that influence its selection by the project team as the strategy for a particular project phase or phases. Factors most likely to influence a project team's decision-making process are:

- Resource skill level
- Business requirements
- Availability of tooling or aids to streamline tasks

Before pursuing any one given strategy, you are strongly encouraged to assess and compare the advantages and disadvantages of potential strategies in order to select the appropriate ones for your project's requirements.

7.1.2 Overview

Figure 7-1 graphically represents the six phases of a typical project development methodology. We focus on four core phases, which are:

- Design

- Implementation
- Site testing
- Deployment

Note that the four core phases normally are positioned between pre-project and post-project phases. In Figure 7-1, the pre-project phase is entitled *Pre-sales*, and the post-project phase is defined as *Site maintenance / enhancements*.

Note: The IBM Redpaper *Best Practices and Tools for Creating IBM WebSphere Commerce Sites*, REDP3616, includes chapters for each of the phases listed.

Figure 7-1 A phase-based project development methodology

After the e-commerce site has been launched, any new modifications added to the site following the end of the project should be managed as functionality enhancements. During the lifetime of the e-commerce site, one or more of the methodology phases may be repeated as necessary to facilitate enhancements. Typically, repeated implementations of the methodology are required to incorporate significant enhancements to the site, such as new versions of WebSphere Commerce software or updates, or to accommodate changing business requirements.

Core development phases

In Figure 7-2 on page 183, each of the core development phases is positioned along with its likely subphases. Note that the subphases tend to be iterative and in some instances may even overlap each other. It is important to understand

that proper assessment of a project helps determine which, if any, of the subphases apply. Also note that subphase relevance and scope vary from project to project.

Figure 7-2 The main phases of the project development methodology

Pre-sales phase

A customer must consider, assess, and plan an e-commerce site carefully. Understanding site requirements, defining the nature and intricacies of the

existing site for transition projects, and documenting the required features and functions of the target WebSphere Commerce site are key customer activities that should be completed during this phase. Note that special attention should be paid to adequately defining and documenting business requirements as opposed to technical constraints or implementation details.

A common event during this phase is for the customer to request estimates of resources required, time to develop, and other details such as the machine specification required to host the final site. The intention is to use the provided numbers for budgeting or sizing purposes. It may be possible to provide extremely rough estimates, based on similar previous projects. It would be impractical to provide more accurate figures until later in the project.

Design phase

The design phase marks the beginning of the WebSphere Commerce project and consists of the following three subphases:

1. Solution outline
2. Macro design
3. Micro design

Taken together, these subphases represent incremental and iterative design activities that enable the project team to define the target system details.

Implementation phase

During the implementation phase, the project team focuses on coding the design that resulted from design phase activities. This phase also includes continuous and incremental unit testing and the integration of required software components.

Site testing phase

The site testing phase covers several formal subphases, all of which enable the project team to test the newly developed or transitioned e-commerce site assets systematically.

Deployment / launch phase

During the deployment / launch phase, the project team assists the customer IT team in bringing the e-commerce site to a production-ready state and, as required by the customer, to support and help its IT team to enable the site.

Site maintenance and enhancement phase

During this phase, no new major design activities are undertaken, as all customer IT team activity centers on maintaining and enhancing current site functionality to satisfy new or changing business requirements. The duration of site maintenance and enhancement can range from a few months to several

years, and all activity should center on maintaining and enhancing established site functionality to support new or changing business requirements.

It is possible that one or more significant site improvement projects may be initiated during the enhancement period, perhaps to reflect a new customer branding scheme. Architecturally, however, the site implementation remains largely unchanged.

The lifetime of an e-commerce site stretches beyond the time period for the WebSphere Commerce project itself, shown as the Project Duration in Figure 7-1 on page 182. The overall site lifetime can be viewed as a sum of project durations, including transitioned projects and the maintenance and enhancement phases.

Not all site transitions are as complex as moving from WebSphere Commerce Suite V4.x or older versions to WebSphere Commerce V5.x or newer versions. For example, moving from WebSphere Commerce V5.1 to WebSphere Commerce V5.4 requires only a fraction of the effort that is required for transitioning WebSphere Commerce Suite V4.x to WebSphere Commerce V5.x. The key reason for the difference between the work efforts is the technology change in the programming models: Version 4.x is built on Net.Data® and C++, but Version 5.x uses JSP and Java / J2EE exclusively.

7.1.3 Using the methodology

Using the methodology effectively involves certain considerations that are elaborated in this section. Understanding the implications and requirements for each of the several considerations outlined here improves your ability to employ the methodology during any given project.

Understanding these considerations is important for helping you to adapt the methodology we present to meet specific requirements of the development work for a given project. For example, the methodology presented in this book provides guidelines for deciding between the use of all design subphases (solution outline, macro design, and micro design), or combining one or more subphases within a given e-commerce project. Understanding and carefully evaluating these guidelines, and applying the results to an e-commerce project, increases the chance of the project manager making the best decision for the project, and so increases the probability of success.

Customizing and adopting the methodology

It is possible to customize this methodology such that it could be applied to building all types of e-commerce sites using IBM WebSphere Commerce software. This includes different business models (B2B, B2C, hosting, supply chain, demand chain), which may be small, medium, or large in size.

For each phase, we describe core strategies that aid the project team in completing key tasks. Approaches for customizing the methodology are also provided to enable project teams to tailor it to specific project requirements. All of the strategies identified in this book are grounded in best practices that ISSW derived from actual WebSphere Commerce projects and engagements.

New and transition sites

There are two scenarios for creating a commerce site. In the first, a new site is developed using WebSphere Commerce V5.5 or possibly WebSphere Commerce V5.4. The second scenario focuses on transitioning older sites, typically based on WebSphere Commerce Suite V4.1, V5.1 or V5.4, to newer versions of the product, usually WebSphere Commerce V5.5.

Our emphasis here is on transition projects that migrate e-commerce sites from WebSphere Commerce Suite V4.x or older versions to the Java / J2EE releases of WebSphere Commerce V5.x (or later versions when available). The terms *migration* and *transition* are used interchangeably to describe the task of updating WebSphere Commerce sites or assets.

Project roles and skills requirements

Any project has specific role and skill requirements. Most of the activities here are described from the perspective of either a project manager or a WebSphere Commerce architect. The purpose of this book is to enable project managers, WebSphere Commerce architects, designers, and developers to define, plan, and execute WebSphere Commerce projects efficiently by providing appropriate guidance, recommendations, and examples. Common roles and skills needed for typical WebSphere Commerce projects are discussed in detail in the Redpaper *Best Practices and Tools for Creating IBM WebSphere Commerce Sites*, REDP3616.

Structuring information

Each section detailing a phase or subphase from the development methodology begins with a table that summarizes phase requirements, inputs, and outputs. This table is structured so that the reader may refer to it at any given time to review the phase's core components.

Because each phase and subphase is likely to have a corresponding list of tasks requiring completion, each task may have one or more execution strategies. Some tasks and strategies are discussed in detail, and others only receive cursory mention. Strategy tables are provided to summarize the elements and rationale for each strategy so as to enable the reader to select an appropriate one to complete a task. Note that the development methodology may accommodate many strategies, so the reader is encouraged to develop strategy tables, using the provided templates, when building project plans. Also, the

reader is encouraged to assess and review all strategies first, prior to selecting one to proceed with.

The following recommendations will aid in developing appropriate project plans:

1. It is very important that the main phases of the project development methodology are not ignored or skipped when building a project plan.
2. In principle, the subphases of this methodology can be combined, overlapped, deleted, replaced with other subphases, or supplemented by new subphases to suit project needs.
3. The list of tasks and strategies that are specified here represent a subset of the possible tasks and strategies that could be applicable during a project. We recommend adding new and relevant tasks and strategies when creating a project plan.
4. Prior to customizing any subphases, fully assess the associated advantages and disadvantages of the customizations. All tasks and strategies listed in this book are based on best practices gained from direct experience.

Case studies

While describing the various phases and tasks of the development methodology, we provide examples to aid your understanding. Many of the examples were inspired by case studies of real projects. The examples will provide concrete scenarios for you to use and adapt during your planning efforts.

Related methodology concepts

We use specific terminology to describe a WebSphere Commerce development methodology. The terms are in common use among the Toronto-based IBM Software Services commerce team and originate from IBM Global Services terminology, adapted slightly for WebSphere Commerce implementation projects.

We consider other methodologies used within IBM or as part of engagements where IBM consultants work with customers on implementation projects. The purpose is to highlight that the literal terms used in this book are less significant than the concepts they embody, with the proviso that all consultants and developers working on a project must have an agreed and common understanding of the terms being used.

Note: It is not possible to provide significant detail for the methodologies within the scope of this redbook.

In deciding the methodology and terminology to be used, the starting point should be to assess:

- Project team and customer team familiarity with existing methods and terms
- The match between the conceptual model that underpins the method, and the project requirements

For example, a project team that has worked with the customer team on previous projects is likely to have developed their own local interpretation of terms that have evolved as an optimized amalgamation of standard methods and terms. It would be unwise to discard the procedural and teaming benefits of this localization, as long as the basic rigor of the method is maintained.

Similarly, a methodology that focuses on code implementation using an object-oriented model may be inappropriate to use on a project that simply requires reconfiguration of standard components rather than development of code using an object-oriented language.

IBM Method

Not surprisingly, IBM has a well-established discipline for managing development projects. Within that context, some development methodologies are optimized according to the nature of the project work. For example, the process of designing and developing a system performance assessment tool may have differences when compared with the design and development of an embedded hardware component for a Point-of-Sale terminal.

The intent is to ensure that a balance is found between a process that is structured insufficiently (and so allows freedom and flexibility but is hard to measure and document) and a process that is too structured, and so constrains creativity and may be bureaucratic or slow.

Rational Unified Process

The Rational Unified Process® (RUP®) is a software engineering process. Its purpose is to provide a disciplined approach to identifying and assigning tasks and responsibilities within a development project. RUP is intended to be configurable according to project circumstances.

The complexity of most significant development projects makes it unlikely that a simple sequential development model will succeed. Rather, an iterative process must be applied where earlier steps will be revisited and refined in the light of subsequent understanding and progress on the problems and tasks. RUP supports iterative development in several ways, for example using frequent test releases of code or assets to allow customer testing, verification, and feedback.

RUP identifies four development phases:

1. Inception
2. Elaboration
3. Construction
4. Transition

Table 7-1 shows how the RUP phases correspond (approximately) to the phases identified in this book.

Table 7-1 Comparison between RUP and e-commerce

RUP	e-commerce methodology
Inception	Pre-sales
Elaboration	Design phase * Solution outline * Macro design * Micro design
Construction	Implementation and testing * Project implementation * Functional Verification Test * System Integration Test * System Verification Test * User Acceptance Test
Transition	Site deployment and launch

Summary

In this section, we defined a project development methodology that can be used to develop new e-commerce sites or to transition existing sites built with earlier versions of WebSphere Commerce software.

After reading this section, you should be able to:

- Describe the core phases of the development methodology
- Define key development terms and concepts
- Discuss relevant deployment conditions

7.2 Development environment

In past releases of WebSphere Commerce, customers had the burden of inventing a development and team environment that worked best for their environment. This can be a very costly and time-consuming process, and the skill and knowledge level required to architect such a framework is demanding. Previous versions of WebSphere Commerce Studio (VisualAge for Java and

WebSphere Studio “classic”) did not support an integrated and well-defined team environment that was reliable and that provided an efficient build environment.

The environments for development, build, and team are closely related, thus we will describe them together. With the help of the team environment support in WebSphere Studio Application Developer, it is now possible for team members to do their work in their own workbenches and merge it into a team repository. The build environment can retrieve the latest changes and produces a driver that can be used later for testing and production.

7.2.1 WebSphere Commerce Studio overview

Before getting into the design details of the WebSphere Commerce Studio workspace, let us review what a J2EE application server is. The application server collaborates with the Web server to return customized responses to client requests. Application code including servlets, JavaServer Pages (JSPs), Enterprise JavaBeans (EJB) components, and their supporting classes run in an application server. In keeping with the J2EE component architecture, servlets and JSPs run in a Web container, and enterprise beans run in an EJB container.

In WebSphere Application Server, a J2EE application is represented by, and packaged in, an enterprise archive file called an EAR. After you have created the EAR file, you can deploy the application to a J2EE application server.

The WebSphere Commerce Server is a J2EE application that has:

- Presentation layer consisting of several Web modules, running in the Web container
- Processing layer consisting of a group of EJB modules, running in the EJB container

WebSphere Studio Application Developer has a similar EAR concept to represent a J2EE application - it is done via the concept of a workspace. Each J2EE artifact in the EAR file can be mapped to a corresponding J2EE project in WebSphere Studio Application Developer.

WebSphere Commerce Studio workspace

The WebSphere Commerce Studio workspace is composed of several EJB, Web archive (WAR), and Java projects. (See Figure 7-3.) Each business component in WebSphere Commerce Server can be grouped into one or more sets of projects.

Figure 7-3 WebSphere Commerce Studio EJB, Web modules

The idea is to have a clear separation between the presentation layer and the processing layer (Figure 7-4 on page 192):

- Presentation layer that runs in the Web container
- JSP, HTML, static images, JavaScript
- Processing layer that runs in the EJB container
- Data objects - session and CMP entity EJBs
- Logic code - commands and data beans

Figure 7-4 WebSphere Commerce presentation and processing layers

Processing layer

The WebSphere Commerce Server is composed of the following subsystems:

- Catalog
- Marketing
- Merchandising
- Member
- Order Management
- Payment
- Trading
- Enablement

The Enablement subsystem is the foundation of the product that the other subsystems depend on. Within each subsystem, there are several business components that further partition the subsystem into many related but functionally different models. The WebSphere Commerce Studio workspace provides a logical breakdown of these business components and presents a structure inside of WebSphere Studio Application Developer for the purpose of code customization.

Each business component in WebSphere Commerce Studio can be grouped into one or more sets of projects. Each of these project groups exists in pairs, so each EJB project should have a corresponding Java project. All EJB data objects for a particular subcomponent go into an EJB project, and the rest of its business-related logic non-EJB codes go into a Java project.

An EJB project and a Java project for customization have been created and configured to run with the WebSphere Commerce Server. All customization code should be placed into one of these two modules, depending on the type of Java code being put in.

Presentation layer

There are four Web projects in the WebSphere Commerce Studio workspace:

- Commerce Accelerator
- Organization Administration
- Site Administration
- Stores

Only JSPs (no Java code) are placed inside these Web modules.

A special type of Web server alias proxy project is introduced to handle Web server aliases. These special Web alias proxy projects are only needed for the WebSphere Test Environment and cannot be exported along with the EAR file to the WebSphere Application Server runtime environment. The main reason for introducing this type of project is that WebSphere Studio Application Developer WebSphere Application Server lacks the ability to interact with Web servers; therefore static images, JavaScript, and HTML pages used in a Web alias cannot be resolved.

A Web alias proxy project is indeed a Web project with the context root set to serve the required Web alias. Within the project is a simple file-serving servlet that is used to handle loading file assets from other Web modules. Only one Web alias can be served per Web alias proxy project.

Workspace elements

The WebSphere Commerce Studio workspace is a collection of EJB, Web, and Java projects. Each of these projects consists of a mixture of binary and source files. Source files are shipped and packaged into the WebSphere Commerce Studio workspace only if they belong to public components, which you can customize or make extensions to. Binary files, on the other hand, are included, but in a separate binary folder in order to get the product to work properly and for the source code to compile successfully.

The next few sections describe the structure of each WebSphere Commerce Studio project type and their contents.

EAR projects

The structure of Enterprise Archive (EAR) projects is as follows:

```
EAR project
   META-INF/
```

```
      application.xml
      ibm-application-ext.xmi
   lib/
      *.jar
   properties/
      *.properties
   .project
```

An Enterprise Application project contains the hierarchy of resources that is required to deploy an enterprise (J2EE) application. It can contain a combination of Web modules, EJB modules, JAR files, and application client modules. It includes a deployment descriptor and an IBM extension document as well as files that are common to all J2EE modules that are defined in the deployment descriptor.

Enterprise Application projects are exported as EAR files that include all files defined in the Enterprise Application project, as well as the appropriate module archive file for each J2EE module project defined in the deployment descriptor, such as WAR files and EJB JAR files.

The following two files are created in the EAR project:

- application.xml

  Deployment descriptor for the enterprise application, as defined in J2EE 1.3. This file is responsible for associating Web and EJB projects to a specific EAR file. An editor is also provided for this file, which is launched either by double-clicking the file in the navigator or selecting the EAR file in the J2EE view and choosing the Open in Editor item from the context menu.

- ibm-application-ext.xml

  IBM-specific extensions to the enterprise application. Similar to those defined in ibm-web-ext.xml Web module extension file, but with scope across the whole application.

As the name of the project suggests, only application-level resources can be found here. What goes into the lib directory is the third-party JARs, the application-level utility JARs, and properties files.

Web project

The Web project structure is as follows:

```
Web project
   Java Source/
      *.properties
   Web Content/
      META-INF/
         MANIFEST.MF
```

```
      WEB-INF/
         classes/
            *.properties
         lib/
         ibm-web-bnd.xmi
         ibm-web-ext.xmi
         web.xml
      images/
         *.jpg
      *.jsp
      *.html
   .classpath
   .project
```

A WAR file has a specific hierarchical directory structure. The top-level directory is the document root of the application. The document root is where JSP pages, client-side classes and archives, and static Web resources are stored. The document root contains a subdirectory called WEB-INF that contains the web.xml deployment descriptor, tag library descriptor files, classes, and lib directories.

The Web project uses a J2EE directory structure in organizing the following folders and files:

- Java Source

  The source folder contains the project Java source code for properties files. When resources are added to a Web project, they are automatically compiled and the generated files are added to the Web Content/WEB-INF/classes directory. Contents of the source directory are not packaged in WAR files.

- Web Content

  The webApplication folder contains the contents of the WAR file that will be deployed to the server. It contains all Web resources (including HTML files, JSP files, and graphics) needed for the application. Any files not under Web Content are considered development resources, such as .java and .sql files, and will not be deployed when the project is unit tested or published.

- Web Content/WEB-INF

  The Web Content/WEB-INF folder contains the supporting Web resources for a Web application, including the web.xml deployment descriptor file and the classes and lib directories.

  – Web Content/WEB-INF/classes

    The Web Content/WEB-INF/classes folder contains the Java compiler output directory. The classes in this directory are used by the application class loader to load the classes. Folders in this directory will map package and class names. The .class files are automatically placed in this directory

when the Java compiler compiles the source files from the source directory. Any files placed directly into this directory will be deleted by the Java compiler when it runs.

– Web Content/WEB-INF/lib

  The Web Content/WEB-INF/lib folder supports .jar files that your Web application references. Any classes contained in these .jar files will be available for your Web application.

  The default directory structure in the Web project adheres to the J2EE specification. This specification defines a project directory structure that specifies the location of Web content files, class files, class paths, deployment descriptors, and supporting metadata. The Web project hierarchy mirrors that of the Web application created from a project. The Web Content folder contains all of your Web resources, including HTML, JSP, graphic files, cascading style sheets (CSS), web.xml (deployment descriptor), classes, and lib folders (not served directly to a client).

For Web application development, the key files managed in a Web project are:

- web.xml

  Deployment descriptor for the Web module, as defined in J2EE 1.3. This file contains general information about the Web application, including servlet mappings, security information and the welcome page.

- ibm-web-bnd.xml

  WebSphere bindings for the Web application. This file contains bindings to references used at the Web module level as defined by IBM. J2EE provides a mechanism to use local names for external resource objects; however, the J2EE specification does not define how these objects are referenced at runtime. This implementation is left to the vendor to implement in their own way. This file is the IBM implementation.

- ibm-web-ext.xml

  IBM-specific extensions to the Web module. This file is used by WebSphere to support additional options beyond the J2EE specification, such as reloading intervals, the default error page, and whether file serving is allowed and servlet invoking is enabled in the Web module.

- .classpath

  Application Developer uses this file to store metadata about the build path for the project when compiling Java classes and executing Java applications.

EJB project

The core components of an EJB project are source and binary folder, XML-based deployment descriptor, and industry-standard files (Example 7-1 on page 197).

Example 7-1 EJB project deployment descriptor

```
EJB project
   ejbModule/
      com/ibm/commerce/...../objects/EJBNameHome.java
      com/ibm/commerce/...../objects/EJBNameHome.class
      com/ibm/commerce/...../objects/EJBNameRemote.java
      com/ibm/commerce/...../objects/EJBNameRemote.class
      com/ibm/commerce/...../objects/EJBNameBean.java
      com/ibm/commerce/...../objects/EJBNameBean.class
      com/ibm/commerce/...../objects/EJBNameKey.java
      com/ibm/commerce/...../objects/EJBNameKey.class
      com/ibm/commerce/...../objects/EJBNameAccessBean.java
      com/ibm/commerce/...../objects/EJBNameAccessBean.class
      com/ibm/commerce/...../objects/EJBNameAccessBeanData.java
      com/ibm/commerce/...../objects/EJBNameAccessBeanData.class
      META-INF/
         schema/
            *.schxmi
            *.tblxmi
         ejb-jar.xml
         ibm-ejb-access-bean.xmi
         ibm-ejb-jar.bnd.xmi
         ibm-ejb-ext.xmi
         map.mapxmi
         MANIFEST.MF
   .imported_classes.jar
   .imported_sources.jar
   .classpath
   .project
```

EJB projects enable you to organize your enterprise beans logically. As you develop EJB applications in the workbench, your source and output files are kept in the ejbModule folder of the EJB project by default. As you make changes and generate deployment code, the Java classes are compiled into the ejbModule folder.

- .classpath

  The WebSphere Studio Application Developer internally used build time classpath for the EJB project.

- .imported_classes.jar

  The binary JAR for the production version of byte code within the EJB project. No source files are found inside of it. On an EJB JAR export, the contents of the .imported_classes.jar are merged into the resulting EJB JAR. That is, the exported JAR file is a single archive that contains the merged contents of the Java output folder of the EJB project and the .imported_classes.jar. Here, in

the case of name collisions, the project contents take precedence over files inside the .imported_classes.jar.

The following four classes are used to compose a single entity EJB:

- EJBNameHome

  The home interface. This is a factory that is used to create and find instances of the EJB.

- EJBNameRemote

  The remote interface. This class determines which methods can be invoked remotely.

- EJBNameBean

  The bean class. This is where the logic is defined for the methods in the EJB.

- EJBNameKey

  The key class. Optional when performing top-down persistence with simple keys, this is used to represent the unique key for the entity.

Three additional classes are used for these implementations. However, these files are placed in a separate Java package and will only be shipped as binary format without source code:

- EJBNameHomeBase

  The implementation of the home interface

- EJBNameRemoteBase

  The implementation of the remote interface

- EJBNameBeanBase

  The implementation of the bean class

Each of these classes appears in the Navigator view as .java files in the package folder defined in the mapping wizard. Generated EJB metadata also shows that three additional XMI files are generated by the mapping wizard in our EJB project. These are as follows:

- ejb-jar.xml

  The deployment descriptor for this EJB module

- ibm-ejb-jar-bnd.xmi

  WebSphere bindings for the EJB module

- ibm-ejb-jar-ext.xmi

  WebSphere extensions for the EJB module

- map.mapxmi

  The mapping between the EJB and the database schema

EJB project: multiple database back-end support

Before you can run your enterprise beans successfully on a test or production server, you must generate deploy code for the enterprise beans. The EJB Deploy tool provides an interface that you can use to generate enterprise bean deploy code. The tool employs a command-line environment that also enables you to run a build process overnight and have the deployment tool automatically invoked to generate your deploy code in batch mode.

The EJB Deploy tool supports meet-in-the-middle mapping and EJB single and multiple table inheritance. However, mapping to multiple database back-end is only supported in EJB 2.0. For current EJB 1.1 implementations, a metadata conversion tool is needed to switch from one database vendor to another. EJB 1.1 project metadata can contain up to only one vendor schema definition. Refer to the Programmer's Guide for instructions for using this EJB metadata conversion tool.

Java project

The Java project structure is as follows:

```
Java project
   src/*.java
      META-INF/
         MANIFEST.MF
   .imported_classes.jar
   .imported_sources.jar
   .classpath
   .project
```

Utility JARs in the enterprise application are packaged as binary Java projects in the workspace. Because binary projects only exist in the workspace for reference during compilation and build, using binary projects can optimize your WebSphere Commerce Studio development environment.

The following rules define a binary project:

- Java build path has no source container
- Project has exactly one JAR in the project, on the build path, and exported.

Server project

A server project stores information about test and deployment servers and their configurations. The Application testing and publishing tools feature of WebSphere Studio uses servers and configurations to test your projects. Servers

identify where you can test your projects. Server configurations contain setup information.

A Server project has the following directory structure:

- The templates folder contains the source for server templates and configuration templates. Templates contain settings that may be used as a starting point when creating new servers or new configurations.
- WebSphere server configurations are created in folders that contain the settings for each particular server configuration.

WebSphere Commerce Studio plug-ins

In addition to the WebSphere Commerce workspace that is provided, WebSphere Commerce Studio provides additional tools and plug-ins, such as:

- WebSphere Commerce Studio Configuration Manager plug-in
- WebSphere Commerce Studio online help plug-in
- WebSphere Commerce API reference information plug-in

WebSphere Commerce Studio Configuration Manager plug-in

The Configuration Manager plug-in assists with managing WebSphere Commerce (and WebSphere Commerce Payments) instances. See Figure 7-5 on page 201.

Figure 7-5 WebSphere Commerce Studio Configuration Manager plug-in

WebSphere Commerce Studio online help plug-in

The WebSphere Commerce Studio online help plug-in enables access to WebSphere Commerce online help from withinWebSphere Studio Application Developer. Additionally, with this plug-in, WebSphere Commerce context-sensitive online help can be launched by pressing F1 when WebSphere Commerce tools (such as the Administration Console) are running. See Figure 7-6 on page 202.

Figure 7-6 WebSphere Commerce Studio online help plug-in

WebSphere Commerce API reference information plug-in

The WebSphere Commerce API reference information plug-in enables access to WebSphere Commerce API reference information from within WebSphere Studio Application Developer. See Figure 7-7 on page 203.

Figure 7-7 WebSphere Commerce API reference information plug-in

Custom code packaging and incremental deployment

After you have created customized code in WebSphere Commerce Studio and have tested it in the WebSphere Test Environment, you must deploy it to a WebSphere Commerce instance running outside of the WebSphere Test Environment. This WebSphere Commerce instance can run locally on your development machine, or it can be on another machine (using the same or a different operating system).

WebSphere Commerce has taken a step forward to help alleviate some of the pain in custom code deployment. A new method of deployment, called incremental deployment, has been introduced.

Custom code packaging

Before getting into the deployment topic, first you should understand how WebSphere Commerce has changed its packaging structure to implant the hooks for incremental deployment. An EJB project and a Java project for customization have been created and configured to run with the WebSphere Commerce Server. All customization code should be placed into one of these two modules, depending on the type of Java code being put in.

Incremental deployment

In an incremental deployment, you must already have a WebSphere Commerce enterprise application installed on the target WebSphere Commerce Server. Then in the deployment process you only deploy those assets (commands, data beans, enterprise beans, and so on) to the existing enterprise application.

The benefits of incremental deployment are:

- Fast

  A small migration window implies less downtime in the target server.

- Reliable

  Because you only add new code to the placeholder of the WebSphere Commerce instance, less configuration increases the chances of success of each deployment.

- Traceable

  The isolation between your assets and WebSphere Commerce enables you to keep a change history of your incremental deployment. This helps with tracking down specific issues that you have encountered during deployment or runtime and therefore is more service-friendly.

7.2.2 Team development environment overview

Application development teams are becoming even more distributed and more diverse, and are under more pressure to deliver solutions quickly. It is critical to have a development environment that can support these needs while also addressing personalized requirements. The team development environment for WebSphere Studio Application Developer includes pluggable repositories instead of a proprietary repository and is able to support an optimistic concurrency team model.

The move away from a proprietary repository to a file-based system offers the following improvements:

- Easier integration of favorite tools, because you can work directly in the file system
- More flexibility in source management and team development
- No duplication of data in the file system and the workbench

Team developers do all of their work in their individual workbenches, isolated from others, and then periodically submit changes to a *team stream*. This model enables individual developers to work on a team project, share their work with others as changes are made, and access the work of other developers as the project evolves. At any time, developers can update their workbenches by

retrieving the changes that have been made to the team stream or by submitting changes to the team stream.

Optimistic team model

An optimistic model is one where any member of the team can make changes to any resource that one has access to. Because two team members can release to the stream changes to the same resource, conflicts can occur and must be dealt with (Figure 7-8). In WebSphere Studio Application Developer, conflicting incoming and outgoing changes are detected automatically. This model is termed optimistic because it is assumed that conflicts are rare.

Figure 7-8 Optimistic team model

One of the key features in the team environment of WebSphere Studio Application Developer is the synchronization process. In an optimistic team

mode, conflicts are assumed to be at the lowest level. Resource owners have to follow a certain set of guidelines to ensure that this assumption holds. For instance, drastic changes such as changing resource names or removing resources should only be done at a certain time of a week and mostly needed to be coordinated.

When you make changes in the workbench, resources are saved locally. Eventually you will want to release your changes to the stream so that others can have access to them. Meanwhile, others may have released changes to the stream. You will want to catch up these resources in the workbench. It is preferable to catch up before releasing changes, in case there is a conflict with the resources in your workbench and the resources currently in the stream.

This model supports groups of highly collaborative developers who work on a common base of files and who frequently share their changes with each other. It also supports developers who work offline for long periods, connecting to their repository only occasionally to synchronize with the stream.

Ideal work flow

No resource is an island. Usually resources do not exist in isolation; they typically contain implicit or explicit dependencies on other resources. As resources are released to the stream, these dependencies can be affected. Ensuring the integrity of the dependencies is important because the stream represents the current project state: At any point a team member could take the stream contents as a basis for new work.

Therefore, the ideal workflow is one in which the stream integrity is preserved. Of course, under certain conditions you may be confident that the incoming changes do not affect you and choose to release without catching up. However, in general, team members should make an effort to follow a flow similar to the following in order to ensure that the stream integrity is not accidentally compromised.

Start fresh

Before starting work, get caught up with the current stream state. If you are sure that you have no local work that you care about, the fastest way to get caught up is to select the projects you are interested in from the stream or code server. This will blanket-overwrite your local resources with those from the stream.

Make changes

Work locally in your workbench, creating new resources, modifying existing ones, and saving locally as you go.

Synchronize

When you are ready to release your work, synchronize with the stream. There are two distinct processes involved in synchronizing resources: catch up and release.

When you make changes in the workbench, resources are saved locally. Eventually you will want to release your changes to the stream so that others can have access to them. Meanwhile, others may have released changes to the steam. You will want to catch up these resources in the workbench. It is preferable to catch up before releasing changes in case there is a conflict with the resources in your workbench and the resources currently in the stream.

Conflicts

Conflicts arise when you have locally modified a resource for which a more recent version is available in the stream. In this situation, you have three options:

- Catch up the resource from the stream.
- Release your version of the resource to the stream.
- Merge your work and the stream resource.

Typically you will want to merge, as the other two options result in loss of work.

Catch up

Examine incoming changes and add them to your local workbench. This enables you to determine whether there are changes that might affect the integrity of what you are about to release. Resolve conflicts, retest, and run integrity checkers to ensure that your code compiles and executes properly.

Release

Now that you are confident that your changes are well-integrated with the latest stream contents, release your changes to the stream. To be prudent, you may need to redo the synchronize process if there are again new incoming changes.

Source control management

Source control management (SCM) is the process of managing the source code for your applications. It is the method whereby you:

- Securely and safely store the source for your applications.
- Manage changes to this source code.
- Promote changes to the source code through the various stages of application development.
- Control the version, release, and modification level of the source code.

- Manage the build/compile step of creating executable applications from the source code.

Typically when we think of source control management, we think of the tools that provide this sort of function - the basic synchronization *check in-check out* library control systems that prevent the changes of one developer from overwriting the changes created by another developer. In many IT environments, SCM tooling is pervasive. If you have source code and you modify applications, it is assumed that you are using SCM tooling to manage your development process.

Version control systems provide two important features required for working in a team:

- A history of the work submitted by the team
- A way to coordinate and integrate this work

Maintaining history is important in that one can compare the current work against previous efforts or revert to older work that is better. Coordinating the work is critical so that there exists one definition of the current project state, containing the integrated work of the team. This coordination is provided through the stream model.

Concurrent Version System

Concurrent Version System (CVS) is a version control system. CVS can be used to record the history of your source files. WebSphere Studio Application Developer is shipped with a built-in client for the Concurrent Versions System. With this client you can access CVS repositories.

Of course, you could save every version of every file you have ever created, but this would waste an enormous amount of disk space. CVS stores all versions of a file in a single file in a clever way that only stores the differences between versions.

CVS also helps you if you are part of a group of people working on the same project. It is all too easy to overwrite each other's changes unless you are extremely careful. Some editors try to make sure that two people never modify the same file at the same time. Unfortunately, if someone is using another editor, that safeguard will not work. CVS solves this problem by insulating the different developers from each other. Every developer works in his own directory, and CVS merges the work when each developer is done.

Resources

Resources is a collective term for projects, packages, folders, and files that exist in the workbench. The Navigator view provides a hierarchical view of resources

and enables you to open them for editing. Other tools may display and handle these resources differently.

Three basic types of resources exist in the workbench:

- Files

  Comparable to files as you see them in the file system.

- Folders

  Comparable to directories on a file system. In the workbench, folders are contained in projects or other folders. Folders can contain files and other folders.

- Projects

  Contain folders and files. Projects are used for builds, version management, sharing, and resource organization. Similar to folders, projects map to directories in the file system.

Branches

In CVS, teams share and integrate their ongoing work in branches. Think of a branch as a shared work area that can be updated at any time by team members. In this way, individuals can work on a team project, share their work with others on the team, and access the work of others during all stages of the project. The branch effectively represents the current shared state of the project.

Resources can be changed in the workbench without affecting the branch. Individuals must explicitly provide their changed resources to the branch.

Versions

Resources are versioned in order to capture a snapshot of the current state of the resources at one specific point in time. Resources in CVS are versioned by tagging them with a version label. When a resource is versioned, it means that a non-modifiable copy of it can be retrieved from the repository.

Updating

While you are working on a project in the workbench, other members of your team may be committing changes to the copy of the project in the repository. To get these changes, you may *update* your workbench to match the state of the branch. The changes you see will be specific to the branch that your workbench project is configured to share. You control when you choose to update.

Committing

You can commit workbench resources that you have modified to the repository so that other team members can see your work. Only those changes committed on that branch will be visible to others working on that branch.

Resolving conflicts

When updating or committing, you may encounter conflicts. A conflict occurs when you have locally modified a resource for which a more recent revision is available in the branch in the repository. Specifically, the branch will contain a revision newer than the base revision of your resource.

In this situation you can choose to do one of the following:

- You can take the change from the branch, discarding your local work. This could occur if you have made unintended changes locally or if you realize that the revision in the repository is better than yours. Overwriting your local changes should be done with caution as you are in essence throwing work out.
- You can commit your change, include the revision in the repository. This should be done with great caution as you are in essence throwing away someone else's work. In particular, the change you are overwriting may have other dependencies in the branch (for example, there may be other incoming changes that depend on the conflict).
- You can merge your work and the repository resource, saving the merged resource locally. Later, you may decide whether to commit this merged result.

Typically, you will choose the third option, merging, because of the loss of work issues with the other two choices.

Defect tracking

Untracked defects can get lost for a while and then come back to bite you. Nobody likes bad surprises, so it is wise to keep everyone informed. Tracked defects are a great measure of quality; tracking helps to manage resources by focusing on the most important problems.

Defect tracking is a process for recording and tracking problems that are found in software development to ensure that problems get fixed. It is an important part of the overall software quality practices and it aids in measuring quality and minimizing number and cost of defects.

The point of creating a defect report is to get defects fixed. There are mainly eight components in an effective defect tracking system:

1. Defect repository
2. Defects described

3. Defects prioritized
4. Structured resolution (tracking status)
5. Communications
6. Continuous defect resolution
7. Defect evaluation and analysis
8. Defect reporting

Your tracking database should contain the following fields:

- Identifier or unique number
- Short description
- Date and time stamp
- Severity
- Priority
- Classification
- Status (state) of the defect: open, working, closed, returned, or cancelled
- Originator name and department of person recording the defect
- Detailed description of the problem, how the test was conducted, and how to reproduce the problem
- History of defect lifecycle

7.2.3 Build environment overview

If you want to create a simple computer program consisting of only one file, you merely need to compile and link that one file. However, on a typical team project involving dozens, hundreds, or even thousands of files, the process of creating an executable program becomes more complicated and time consuming. You must *build* the program from its various components.

A common practice is the *daily build and smoke test* process. Every file is compiled, linked, and combined into an executable program every day, and the program is then put through a *smoke test*, a relatively simple check to see whether the product “smokes” when it runs.

Benefits of daily build and smoke tests

There are many benefits of daily build and smoke tests:

- Minimize integration risk.

  One of the greatest risks that a team project faces when the different team members combine or *integrate* the code they have been working on separately is that the resulting composite code does not work well. Depending

on how late in the project the incompatibility is discovered, debugging might take longer than it would have if integration had occurred earlier, program interfaces might have to be changed, or major parts of the system might have to be redesigned and re-implemented. In extreme cases, integration errors have caused projects to be cancelled. A daily build and smoke test process keeps integration errors small and manageable, and it prevents runaway integration problems.

- Reduce the risk of low quality.

  Related to the risk of unsuccessful or problematic integration is the risk of low quality. By minimally smoke-testing all code daily, quality problems are prevented from taking control of the project. You bring the system to a known, good state, and then you keep it there. You simply do not allow it to deteriorate to the point where time-consuming quality problems can occur.

- Support for easier defect diagnosis.

  When the product is built and tested every day, it is easier to pinpoint why the product is broken on any given day. If the product worked on Day 17 and is broken on Day 18, something that happened between the two builds broke the product.

- Improve morale.

  Seeing a product work provides an incredible boost to morale. It almost matters less what the product does than for developers just to be able to see it display a rectangle! With daily builds, a bit more of the product works every day, and that helps keep morale high.

Concepts of daily build and smoke tests

The idea behind this process is simply to build the product and test it every day. Key concepts of this idea include:

- Build daily.

  The most fundamental part of the daily build is the *daily* part. Treat the daily build as the heartbeat of the project. If there is no heartbeat, the project is dead. Different developers' code is allowed to get a little out of sync between these pulses, but every time there is a sync pulse, the code has to come back into alignment. When you insist on keeping the pulses close together, you prevent developers from getting out of sync entirely.

  Some organizations build every week rather than every day. Unfortunately, if the build is broken one week, it might take several weeks for the next good build. When that happens, you lose virtually all of the benefit of frequent builds.

- Smoke test daily.

  The smoke test should exercise the entire system from end to end. It does not have to be exhaustive, but it should be capable of exposing major problems. The smoke test should be thorough enough that if the build passes, you can assume that it is stable enough to be tested more thoroughly.

  The daily build has little value without the smoke test. The smoke test is the sentry that guards against deteriorating product quality and creeping integration problems. Without it, the daily build becomes just a time-wasting exercise in ensuring that you have a clean compile every day.

- Establish a build group.

  On most projects, tending the daily build and keeping the smoke test up to date becomes a big enough task to be an explicit part of someone's job.

- Check for broken builds.

  For the daily-build process to work, the software that is built has to work. If the software is not usable, the build is considered to be broken and fixing it becomes top priority.

  Each project sets its own standard for what constitutes *breaking the build*. The standard must set a quality level that is strict enough to keep show-stopping defects out but lenient enough to disregard trivial defects, an undue attention to which could paralyze progress.

Here is a list of minimum criteria of a *good* build:

- Good builds should compile all files, libraries, and other components successfully.
- Good builds should not contain any show-stopper bugs that prevent the program from being launched or that make it hazardous to operate.
- Good builds should pass the smoke test.
- Create a penalty for breaking the build.

Most groups that use daily builds create a penalty for breaking the build. Make it clear from the beginning that keeping the build healthy is the project's top priority. A broken build should be the exception, not the rule. Insist that developers who have broken the build stop all other work until they have fixed it. If the build is broken too often, it is hard to take seriously the job of not breaking the build.

Build automation for daily builds and smoke tests

If there is to be engineering in construction, the process must be consistent and repeatable. Without consistency, it is hard, if not impossible, to know how to build, test, or ship someone else's software. Without repeatability, it is hard to guarantee the results of a build or a test.

The simple answer is discipline. The process of constructing software must be disciplined if it is to succeed. But people do not seem to come that way; in general, people find discipline hard to take, and even harder to maintain.

Fortunately, there is a pragmatic solution: automate everything you can, so that the development environment itself provides the kind of disciplined repeatability and consistency needed to make the process run smoothly and reliably. This approach leaves developers free to work on the more creative side of software construction, which makes the programmers happier. At the same time, it makes the accountants happier by creating a development organization that is more efficient and less prone to costly human-induced errors and omissions.

If you do nothing else, make sure that every developer on a project compiles their software the same way, using the same tools, and against the same set of dependencies. Make sure this compilation process is automated. This may seem to be obvious advice, but it is surprising how often it is ignored. We know teams in which some developers compile using the automatic dependencies calculated by their IDE, others use a second IDE, and still others use command-line build tools. The result can be hours wasted every week tracking down problems that are not really problems, as each developer tests against subtly different executables generated by their own personal compilation system.

Most automated build processes are performed on the computers of the build engineer or one of the developers. This approach is inherently flawed due to the lack of control over this environment.

Some common problems that can occur with this approach are:

- A virus on the build machine could be inadvertently included in a software build.
- Installation of new software or software updates on the build machine could change resources that are included in the software build.
- Uncontrolled access to the build machine could result in unauthorized changes to the software build, including potential malicious changes that could be difficult to detect.

Although an automated build process is an important step toward higher quality software, the only way to achieve complete control over the build quality is for the software to be built in a clean build environment.

We have barely scratched the surface of automation. Automation does not have to be restricted to the build, or even just to development. Perhaps your project has strict reporting requirements and review and approval processes, or other onerous secretarial chores. Where possible, try to automate these bits of

drudgery as well. There is more to constructing software than just constructing software, and we can leverage automation throughout the process.

7.2.4 Deployment overview

The complete application development lifecycle includes many different processes, such as the actual coding of the solution, the management of source control in a team development environment, the build process, the test process, the final packaging and staging, the deployment process, and often the upgrade of applications after they are installed in the production environment.

Development environment

A successful deployment relies on more than the development of the application and the final packaging process. For example, solutions of any substantial complexity must be tested in a controlled environment, and the deployment process often benefits from the use of staging servers. You must manage the deployment of your solutions between these environments, as well as to the final production environment.

The following list briefly describes the characteristics of each environment, and explains how to use them to ensure a successful deployment of your solution:

- Software dependencies

  Dependencies required by your solution are present on the developer computers, but they may not be included or installed successfully in other environments. Some of these dependencies are present on your development computers simply because they are provided by the development tools, so be aware of exactly what must be deployed to ensure successful installation into other environments.

- Repeatable deployment in different environments

  Application resources are created on developer workstations and servers, but they might not be re-created or configured successfully as part of the deployment to other environments. You must thoroughly understand your application's architecture and any external resources that it uses if you are to deploy your solution successfully.

- Application configuration updates

  Applications are configured to use resources while they are being developed. When they are deployed to another environment, these configuration settings must be updated so that they use the resources appropriate for that particular environment. Because many of these settings are stored in configuration files within the new framework, you must manage the process of updating or replacing these configuration files as you deploy your solution from one environment to another.

Test environment

This environment should be used to test the actual deployment process. You (or your test team) should verify that application files and resources are installed to the correct locations, and that all configuration requirements are met before testing the solution's functionality. After you are satisfied that the application installs correctly, you (or your test team) can then perform tests that verify the solution functions as expected.

To be certain that your tests have meaningful implications for how your solution will install and function in the live production environment, you should ensure that test computers resemble your production computers as closely as possible. They should not have the development tools installed that you used to produce the solution because that could mask potential problems that will become apparent only when you roll out your solution to the end users.

Staging environment

This environment should be used to house your solution after it has been fully tested in the test environment. It provides a convenient location from which to deploy to the final production environment. Because the staging environment is often used to perform final tests and checks on application functionality, it should resemble the production environment as closely as possible. For example, in addition to having the same operating systems and applications installed as the production computers, the staging environment should have a similar network topology (which your testing environment might not have). Usually, the staging network mimics the production environment in all respects except that it is a scaled-down version. For example, it may have fewer cluster members or fewer processors than your server computers.

Production environment

This is the *live* environment where your solutions are put to work to provide benefits and functionality for the enterprise that uses them. This environment undoubtedly is the most complex, usually with many installed productivity, line-of-business, and decision support systems used by different users in the organization. Consequently, it is the most difficult to manage and control; therefore, teams of administrators and IT professionals are employed to ensure that users can take advantage of your applications along with solutions from other vendors.

Practice deployment and create backup plan

Some of the biggest problems during the lifecycle of a distributed application occur when your solution is rolled out to the production environment. The lack of rehearsal and planning for this event often leads to all of the involved parties attempting to breathe air into a lifeless application that does not work in the

environment for which it was designed. Before your *going live* day, you must rehearse the deployment in a clean environment with all of the participants present. You should take this opportunity to work out the little problems in a controlled environment without the added pressure of affecting production users. You can avoid the turmoil and embarrassment of a failed deployment by planning and documenting the production installation process and the contingency plans.

You should create an environment on a clean system that does not know about your application and test deployment. Start from a well-known configuration, and begin to clearly document every step involved in the installation of the distributed application. Note the location of the application files and the installation points. Pretend that you and your developers will not be there to troubleshoot during this process. Ensure that you have included small test scenarios that the installers can use as checkpoints to verify that the installation is going well. Finally, document how to uninstall your application.

Production debug versus development debugging

Every developer or support engineer debugs applications at some stage of their career, yet debugging is often viewed as an arcane and difficult topic. While it is often difficult to determine why an application is hanging, leaking memory, or crashing, there are techniques you can apply to make the debugging process more productive and efficient.

The primary goal of debugging a system is to isolate and determine the root cause of a performance, configuration, or abnormal error condition that impedes normal system operation. Generally speaking, this goal holds true whether you are debugging in a development environment or in a production environment. However, there are crucial differences between the two environments.

When debugging in a production environment, determining the root cause may be less important than simply getting the system into an operational state. Time constraints and business cases also differ between development and production environments. Debugging within a production environment is usually done within much tighter time constraints, because the end user or customer may be losing revenue as a consequence of a non-operational system.

In a production environment, the system experiences live operational loads and timing situations, which may be difficult or impossible to reproduce in a development environment. In addition, scenarios can arise that have not been anticipated during system design. Timing-sensitive or load-sensitive scenarios that lead to abnormal behavior can be difficult to reproduce or debug successfully, even during live operation in a production environment. Because physical access to a production system is often restricted, offline or remote-access techniques are required.

In a development environment, you usually have access to an integrated development environment (IDE), source code, and debug versions of libraries and symbols. In a production environment, the IDE and source code often are not present, and you may have access only to release versions of libraries and symbols. Note that release versions of symbols are an invaluable resource, but are often not built during a normal product development lifecycle.

In a development environment, you often have the luxury of using a full range of techniques to debug the system. That is not the case in a production environment, where it is essential to keep the system functioning while performing debugging.

A production environment requires the following low-risk actions:

- Using non-intrusive debugging techniques, such as capturing performance information and saving hang or crash dumps.
- Restricting the use of code changes, except in the case of critical problems. This means that normally you cannot experiment using code modification to isolate root causes in production environments.
- Adjusting the testing level to the user's comfort level. This may mean passing a system through a full battery of tests in a development environment, or simply asking the question: Is the system still running?

Debugging a problem typically involves two phases. The initial discovery phase is used to gather information about the problem. This leads to a debugging phase, when you attempt to determine the cause of the problem.

- Discovery phase

  Most developers are familiar with the debugging phase, yet the discovery phase is equally important to production-level debugging. The goal is usually to capture the state of the server and then enable the server to continue functioning.

- Debug phase

  The debug phase may involve live or post-mortem debugging. Live debugging involves stepping through the code as it executes and looking for bugs or defects. Post-mortem debugging involves the analysis of data or program dumps produced by tools. One advantage of post-mortem debugging is that it uses data gathered from a real problem occurrence, instead of relying on a dedicated programmer to interactively step through the code and try to reproduce the problem. Choosing the right debugger depends on the environment and whether you are dealing with native or managed code.

7.3 Build and deploy process

7.3.1 Overview

This section describes the necessary steps for building and deploying an application for an e-commerce hosting solution environment.

Based on the previous section, 7.2, “Development environment” on page 189, we suggest the team working model shown in Figure 7-9 for an e-commerce hosting environment.

Figure 7-9 Build environment

This model works with two teams:

- The developers

  Responsible for customizations and committing changes to their branches.

- Build team

  Makes daily smoke tests on their local workstations, solves application conflicts, applies the changes to the main CVS branch, packages the application, and deploys it to the server.

7.3.2 Build procedure

Overview

To show how the build procedure works, we walk through one of the customizations defined in “Custom shopcart display” on page 129. Refer to that section for further details.

In our example, Developer 1 in Figure 7-9 on page 219 finished his customizations and applied then on Branch1. The next step is to let the build team test and package the application for staging and server testing.

The idea is get the files from the CVS server to replace the existing files in your workspace.

Prerequisites

This customization assumes that WebSphere Commerce Studio is installed and configured as defined in Appendix C, “WebSphere Commerce Studio implementation” on page 827. It also assumes that the eSite SAR file has been published successfully and that at least two B2C stores based on the eSite Store Front Asset store have been created using WebSphere Commerce Studio as defined in Chapter 8, “Publish the SAR and create stores” on page 225.

All steps are intended to enable a developer to re-create the customization within the local WebSphere Commerce Studio environment. A basic understanding of WebSphere Commerce Studio is assumed.

Steps

The files needed to get the customization working are:

- Stores/Web Content/WEB-INF/xml/tools/stores/eSiteFrontAssetStore/devtools/flow/repository/Features.xml
- Stores/Web Content/WEB-INF/xml/tools/stores/eSiteFrontAssetStore/devtools/flow/ui/ShoppingCart.xml
- WebSphereCommerceServer/properties/tools/stores/eSiteFrontAssetStore/devtools/flow/ui/config_en_US.properties
- Stores/Web Content/eSiteFrontAssetStore/ShoppingArea/ShopcartSection/OrderItemDisplay.jsp

- Stores/Web Content/WEB-INF/xml/tools/stores/eSiteFrontAssetStore/devtools/flow/fsf/fsf.xml
- Stores/WEB-INF/xml/tools/stores/eSiteFrontAssetStore/devtools/flow/scf/scf.xml

The steps are:

1. In the J2EE perspective, locate the Features.xml file (Figure 7-10).

Figure 7-10 Features.xml

2. Right-click **Features.xml** and select **Replace with**.
3. Choose **Branch or version**.
4. Expand **Branches**.
5. Select **Branch1**.

Figure 7-11 Choosing the branch

6. Repeat step 1 on page 221 through step 5 on page 221 for each customized file listed at the beginning of this section.
7. Confirm that the customizations are working. (Refer to figures in “Custom shopcart display” on page 129.)
8. Commit the changes in the main head of the CVS Server:
   a. In the J2EE Navigator perspective, locate the **Stores** project.
   b. Right-click and choose **Team**.
   c. Choose **Synchronize outgoing changes** to open the Synchronize perspective.
   d. Select the outgoing mode icon (Figure 7-12 on page 223).

Figure 7-12 Outgoing mode

e. Right-click **Stores**.

f. Choose **Team**.

g. Select **Commit**.

h. Type your comment.

Figure 7-13 Comment window

i. Click **OK**.

9. Package the files using the scripts provided in Appendix F, “Additional material” on page 923.

8

Publish the SAR and create stores

Before beginning the activities described in this chapter, you should have completely installed WebSphere Commerce V5.5 and successfully created a commerce instance and a payments instance. If this has not been done, follow the instructions in Appendix A, “WebSphere Commerce implementation” on page 773. Server backup before proceeding is advised.

This chapter describes the following:

- Publish procedure
- Administrative tasks
- Create organizations and users
- Create stores

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8.1 Publish procedure

The eSites model that is used in this book is not part of the standard WebSphere Commerce V5.5 Business Edition product. The files that are required to implement this model are included in this book's additional materials.

Important: The eSites.sar model that is provided with this book is a sample. It may be incorporated into future versions of WebSphere Commerce. IBM reserves the right to change this sample as needed in future releases. IBM provides no warranties for this sample, whether expressed or implied.

8.1.1 Loading the eSite model

Loading the eSites model has five steps that must be completed in order:

1. Stop the commerce and payments servers as found in "Starting and stopping servers" on page 810.
2. Publishing optimization.
3. Copy files.
4. Load access control files.
5. Restart the commerce and payments servers as found in "Starting and stopping servers" on page 810.

Publishing optimization

The eSites.sar file contains a large amount of data. In order for publishing to complete in a reasonable amount of time, several changes can be made to improve performance. While these are not mandatory changes, they are recommended.

1. Open a DB2 command window.
2. Enter the following commands:

```
db2 connect to dbname user dbuser using dbpassword
db2 alter table catentdesc volatile
db2 alter table attribute volatile
db2 alter table attrvalue volatile
```

   – *dbname* is the name of the WebSphere Commerce instance database.
   – *dbuser* is the owner of the schema.
   – *dbpassword* is the password for the schema owner.

3. Close the DB2 command window.

4. Disable the summary tables. (Leaving the summary tables enabled during publishing may result in a database transaction log overflow and affect publishing performance.) To disable the summary tables:
   a. Open Configuration Manager.
   b. Select **WebSphere Commerce** → **Node** → **Instance List** → *wc_instance_name* → **Search Configuration**.
   c. Click the **Schema Optimization** tab.
   d. Ensure that all check boxes are cleared.
   e. Click **Apply**.
   f. Close Configuration Manager.
5. Increase the amount of space available in the transaction log by doing one or more of the following:
   a. Create secondary transaction logs using the DB2 Control Center. For more information, see the *DB2 Administration Guide*.
   b. Increase the transaction log file size by doing one of the following:
      - In a DB2 command window, type:

        ```
        db2 get db cfg for dbname
        ```

        Then, look for the log file size (logfilsiz) and type:

        ```
        db2 update db cfg for dbname using LOGFILESIZE logfilsiz
        ```

        (*logfilesiz* is a larger number than the current value.)

        Restart DB2.
      - In a DB2 command window, type:

        ```
        db2 update db cfg for dbname using LOGPRIMARY 20
        ```

        The value 20 is the number of primary logs. (This may be different for your site.) Increasing the LOGPRIMARY increases your space requirement. For more information, see the *DB2 Administration Guide*.

Copy files

All of the files can be found in the subdirectory eSite in this book's additional materials. See Appendix F, "Additional material" on page 923 for information.

1. Open a command line window.
2. Change directories to the eSite subdirectory under the directory where the additional materials were unpacked.
3. Enter the following commands:

   ```
   copy SARRegistry.xml WC_installdir/xml/tools/devtools
   copy resources.xml WC_installdir/xml/tools/common
   ```

```
copy CommerceAcceleratorBPS.xml WC_installdir/xml/tools/common
copy CommerceAcceleratorBHS.xml WC_installdir/xml/tools/common
copy eSitePreReqUserGroups_en_US.xml WC_installdir/xml/policies/xml
copy eSitePreReqAccessControlPolicies_en_US.xml
WC_installdir/xml/policies/xml
copy eSitePreReqAccessControlPolicies.xml WC_installdir/xml/policies/xml
copy TemplateHostingContractBPS.xml WC_installdir/xml/trading/xml
copy DeploymentHostingContractBHS.xml WC_installdir/xml/trading/xml
```

(*WC_installdir* is the installation directory for WebSphere Commerce.)

4. Change to the directory where the eSite.sar file was downloaded and enter the command:

```
copy eSite.sar WC_installdir/SampleStores
```

5. Close the command line window.

Load access control files

1. Open a command line window.
2. Change to the following directory "*WC_installdir*/bin"
3. Enter the following commands:

```
acugload dbname dbuser dbpassword eSitePreReqUserGroups_en_US.xml
acpload dbname dbuser dbpassword eSitePreReqAccessControlPolicies.xml
acpnlsload dbname dbuser dbpassword
eSitePreReqAccessControlPolicies_en_US.xml
```

   – *dbname* is the name of the WebSphere Commerce instance database.
   – *dbuser* is the owner of the schema.
   – *dbpassword* is the password for the schema owner.

4. Close the command line window.

Edit the <wc_instance_name>.xml file

The eSites model adds two new store types. These store types must be added to the *wc_instance_name*.xml file. The file is located in:

```
WC_installdir\instances\wc_instance_name\xml\wc_instance_name.xml
```

1. Open the file in a text editor.
2. Search for the string `supportedStoreType`. You should find a section in the file that looks similar to Example 8-1.

Example 8-1 supportedStoreType

```
<supportedStoreType>
      <wca storeType="B2B" />
      <wca storeType="B2C" />
      <wca storeType="CPS" />
```

```
    <wca storeType="CHS" />
    <wca storeType="RHS" />
    <wca storeType="RPS" />
    <wca storeType="HCP" />
    <wca storeType="MHS" />
    <wca storeType="MPS" />
    <wca storeType="SCP" />
    <wca storeType="SHS" />
    <wca storeType="SPS" />
    <wca storeType="XHS" />
    <wca storeType="XPS" />
  </supportedStoreType>
```

The eSites model adds two additional store types:

```
BPS - B2B Asset Store
BHS - B2B Hosted Store
```

3. Somewhere within the supportedStoreType, add these two lines:

```
<wca storeType="BHS" />
<wca storeType="BPS" />
```

4. Save the file and close the text editor.

8.1.2 Publishing the eSite SAR

The eSite store archive file is used to package and deliver organization structures, predefined user roles, and access control policies necessary for creating the environment for your store or site, as well as collections of assets used to create a catalog or storefront. Publishing the eSite.sar file does not create a fully functional store; it creates the eSite Hub from which the stores are created and managed.

Important:

1. Only one store archive at a time can be published. Concurrent publishing is not supported and may cause the publishing of both store archives to fail.
2. It is not recommended that you publish more than one type of composite store archive or organization structure store archive in the same instance (for example, do not publish a ConsumerDirect.sar and BusinessIndirectReseller.sar in the same instance), or that you publish the same composite store archive or organization structure store archive more than once, as doing so may overwrite previously published data. For more information, see `Publishing a store archive` from the Administration Console - Advanced Options.
3. Store archives can only be published to a single clone.

To publish the eSite.sar:

1. Ensure that you have Site Administrator access.
2. Ensure that appropriate services and servers are running.
3. (Optional) Back up your WebSphere Commerce database so that you can restore your pre-published version if necessary.
4. Open the Administration Console, selecting the **Site** option.
5. From the Store Archives menu, select **Publish**. This opens the Store Archives page (Figure 8-1).

Figure 8-1 Publish Store Archives

6. Select the eSite.sar file.
7. Click **Next**. This opens a dialog box.

8. Click **OK** to display the Publish Status page (Figure 8-2). The time required to publish the SAR can vary, depending on the speed of your computer and the amount of memory that is installed on it. Our experience was that it should complete within 15 minutes.

Figure 8-2 Publish Status page

You can click the **Refresh** button periodically to determine whether the job has completed, as the page does not refresh automatically. When the job is complete, the End Time and Publish Status fields are updated (Figure 8-3).

Figure 8-3 Successful publishing

9. Select the check box next to the publish job. This enables the **Details** button.
10. Click the **Details** button. This opens the page shown in Figure 8-4 on page 232.

Figure 8-4 Publish details page

11. Click the **Launch Store** button. (This takes some time to load because the pages have to be compiled.) The eSite Hub is displayed, as in Figure 8-5 on page 233.

Figure 8-5 eSite Hub

8.2 Administrative tasks

Three tasks must be performed before you start creating stores:

- Configure Scheduler jobs
- Configure e-mail
- Code correction

8.2.1 Configure Scheduler jobs

Several scheduled jobs must be created at site level to take care of the order transition flow (or ATP fulfillment management) and to trigger several e-mail reports for the hosted stores. Scheduled jobs are created from the Administration Console.

The scheduled jobs that are recommended to be created for the site are:

- ExecuteSpecifiedCommandForHostedStores
  - BalancePayment
  - PayCleanup
  - ProcessBackorders
  - RAReallocate
  - ReleaseExpiredAllocations
  - ReleaseToFulfillment
- ReportsNotify

Here is a brief descriptions of the jobs:

ExecuteSpecifiedCommandForHostedStores

This job accepts a parameter called commandName. The purpose of this job is to execute the command that is specified for all of the hosted stores in the site. The actual command being passed in as commandName should be able to execute by only requiring the storeId parameter.

BalancePayment

This command calls the DoDepositCmd task command to capture payment when the order has been shipped. This command implements the automatic payment capture function for WebSphere Commerce.

PayCleanup

This command cancels WebSphere Commerce orders with payment authorization requests that were rejected by the respective financial institutions for longer than a store-configured period of time.

ProcessBackorders

This command allocates inventory to backorders that were created when inventory was not available.

RAReallocate

(Redistribute allocations against expected inventory)

This command redistributes open Expected Inventory Records (EIR) against existing backorders. This is required to be able to predict more accurately when backordered order items will be available as EIR information is added or modified, and as previously backordered items are deleted or allocated.

ReleaseExpiredAllocations

This command returns allocated inventory back into the receipt table from a previously allocated order line item that has exceeded its expiration time limit.

ReleaseToFulfillment

This command releases allocated items on an order to fulfillment.

ReportsNotify

This job triggers several e-mail messages for the hosted stores. The e-mail messages that it triggers are: order summary report, store commerce report, store usage report, and site commerce report.

> **Note:** E-mails can be received only if the corresponding transport and message types are configured correctly. See “Configure e-mail” on page 237 for configuration steps.

To configure the required scheduler jobs:

1. From the Site Administration Console, select **Configuration** → **Scheduler**. The Scheduler Status Display page opens (Figure 8-6).

Command	State	Status	Start date	Finished	Application Type
DynaCacheInvalidation	Complete	Successful	11/24/03 9:30 PM	11/24/03 9:30 PM	
SendTransactedMsg	Complete	Successful	11/24/03 9:30 PM	11/24/03 9:30 PM	
PaySynchronizePM	Complete	Successful	11/24/03 9:30 PM	11/24/03 9:30 PM	
SecurityCheck	Complete	Successful	11/24/03 9:30 PM	11/24/03 9:30 PM	
SchedCoupon	Complete	Successful	11/24/03 9:30 PM	11/24/03 9:30 PM	
PaySynchronizePM	Complete	Successful	11/24/03 9:35 PM	11/24/03 9:35 PM	
SendTransactedMsg	Complete	Successful	11/24/03 9:35 PM	11/24/03 9:35 PM	
PaySynchronizePM	Complete	Successful	11/24/03 9:40 PM	11/24/03 9:40 PM	
SendTransactedMsg	Complete	Successful	11/24/03 9:40 PM	11/24/03 9:40 PM	
DynaCacheInvalidation	Complete	Successful	11/24/03 9:40 PM	11/24/03 9:40 PM	
PaySynchronizePM	Complete	Successful	11/24/03 9:45 PM	11/24/03 9:45 PM	
SendTransactedMsg	Complete	Successful	11/24/03 9:45 PM	11/24/03 9:45 PM	
PaySynchronizePM	Complete	Successful	11/24/03 9:50 PM	11/24/03 9:50 PM	
SendTransactedMsg	Complete	Successful	11/24/03 9:50 PM	11/24/03 9:50 PM	
DynaCacheInvalidation	Complete	Successful	11/24/03 9:50 PM	11/24/03 9:50 PM	

Figure 8-6 Scheduler Status Display page

2. Click **New**. This opens the New Scheduled Job page (Figure 8-7).

Figure 8-7 New Scheduled Job page

3. Complete the required fields for the scheduled job as defined in Table 8-1 on page 237:
   a. Find the scheduled job name in the Job command pull-down list.
   b. Enter the Job parameters if included in the table.
   c. Enter the Start date in YYYY MM DD format, or click the calendar icon to choose the date.
   d. Enter the Start time. Entering 00:00 starts the job immediately.
   e. Enter the Schedule interval in seconds.
   f. Choose the Job priority.

Table 8-1 Recommended job scheduling parameters

Scheduled job name	Job parameters	Start time	Interval (seconds)	Job priority
ExecuteSpecifiedCommandForHostedStores	commandName=BalancePayment	00:00	86,400	1
ExecuteSpecifiedCommandForHostedStores	commandName=PayCleanup	00:00	86,400	1
ExecuteSpecifiedCommandForHostedStore	commandName=ProcessBackorders	00:00	86,400	8
ExecuteSpecifiedCommandForHostedStore	commandName=RAReallocate	00:00	86,400	1
ExecuteSpecifiedCommandForHostedStore	commandName=ReleaseExpiredAllocations	00:00	3,600	8
ExecuteSpecifiedCommandForHostedStore	commandName=ReleaseToFulfillment	00:00	3,600	10
ReportsNotify		00:00	86,400	1

4. Click **OK**.

8.2.2 Configure e-mail

This section describes the process for configuring e-mail notifications for the site. You must have a mail server set up in order to e-mail customers. Without a mail server, you cannot send e-mail notifications but the rest of the features will work.

Table 8-2 shows the e-mail notifications that must be configured for the site.

Table 8-2 E-mail notifications to be configured for the site

E-mail notifications supported	Message type
Password reset	Notification message for password reset
Authorized order	Message for an authorized order
Submission order	Message for a received order
Canceled order	Notification message for a canceled order
Shipping notification	Message for notifying the customer of an order release manifestation
Wish list	A broadcast message

E-mail notifications supported	Message type
Approved seller registration	Notification of approved reseller registration
Rejected seller registration	Notification of rejected reseller registration

Table 8-3 shows e-mail notifications that must be configured for the eSite Hub.

Table 8-3 E-mail notifications to be configured for the eSite Hub

E-mail notifications supported	Message type
Site commerce report	Message for site commerce report
Feedback/comments	Message submitted by customer

To enable e-mail notifications, do the following:

1. Configure the transport:
   a. Open the Administration Console using a Site Administrator ID.
   b. On the Administration Console Site/Store Selection page, select **Site** or **Store**.

   If you selected Store, the Select Store and Language section displays:

   – From the Name list, select the store.
   – From the Language pull-down list, select the language.
   – Click **OK**. The Store Administration Console home page displays.

   c. From the Configuration menu, click **Transports**. The Transport Configuration page displays.

      If the e-mail transport is not listed:

      i. Click **Add**. The Add Transport dialog opens.
      ii. Select the check box next to the transport you want to add to the store. (You can select all transports by selecting the check box at the top-left.) If there are no transports available, then you have already added all of the transports made available by the Site Administrator.
      iii. Click **Add** to add the transport, or click **Cancel** to return to the Transport Configuration page.

      If the e-mail transport is listed:

      i. Verify that the e-mail transport has a status of Active. If the e-mail status is inactive, select it and click **Change Status**.
      ii. Select **E-mail** and click **Configure**. The Transport Configuration Parameters page displays.

iii. In the Host field, type your fully qualified mail server name (for example, `myserver.ibm.com`).

iv. In the Protocol field, type `smtp` in lowercase letters, or the protocol of your choice. Click **OK**.

2. Configure or create the message types:

   a. Open the Administration Console using a Site Administrator ID.

   b. On the Administration Console Site/Store Selection page select **Site** or **Store**.

      If you selected Store, the Select Store and Language section displays.

      - From the Name list, select the store.
      - From the Language pull-down list, select the language.
      - Click **OK**. The Store Administration Console home page displays.

   c. From the Configuration menu, click **Message Types**. The Message Type Configuration page displays.

   d. Create the notification to be sent as follows:

      i. Click **New**. The Message Transport Assignment page displays.

      ii. Select the message type from the Message Type pull-down list. See Table 8-2 on page 237 for the message types to use in your site/store.

      iii. In the Message Severity field, type `0` to `0`.

      iv. From the Transport pull-down list, select **E-mail**.

      If E-mail is not available in the list, do the following:

      - From the Device Format pull-down list, select **Standard Device Format**.
      - Click **Next**. The Message Transport Assignment Parameters page displays.
      - Complete the fields as follows:

Host:	The fully qualified name of your mail server, such as `example.ibm.com`
Protocol Type:	`smtp` (you must use lowercase letters), or the protocol you are using.
Recipient:	Enter a valid e-mail address. This address will be replaced by the customer's e-mail address at run time if the message is intended for a shopper.
Sender:	Enter an e-mail address that you want to use as the sender of the message, such as orders@example.ibm.com. The address must be

an e-mail address for a valid user on the mail server.

Subject: Enter the text that you want to display as the subject line of the message, such as `Your order has been accepted.`

e. Click **Finish**. The Message Type Configuration page displays.

> **Note:** Repeat the steps for Create message type for each notification listed in the tables. Configure the transport for each of the hosted stores after they are created.

8.2.3 Code correction

There is a problem within the Manage Store functionality for a B2B store. The Approvals functionality under the Store menu option causes a 404 error. This problem exists in WebSphere Commerce V5.5.0.3. It has been reported and will be fixed in a future fix pack release. If you are using a fix pack after 5.5.0.3 then you should check to see if the correction is included. If you are using 5.5.0.3 and you will be creating a B2B store, perform the following actions:

1. Open a command line window.
2. Enter the following commands.

```
cd WAS_installdir\installedApps\node_name\server_name.ear\CommerceAccelerat
or.war\tools
MKDIR buyerconsole
cd WAS_installdir\installedApps\node_name\server_name.ear\OrganizationAdmin
istration.war\tools\buyerconsole
copy *.*
WAS_installdir\installedApps\node_name\server_name.ear\CommerceAccelerator.
war\tools\buyerconsole
```

   – *WAS_installdir* is the installation directory for WebSphere Application Server
   – *node_name* is the short name of the computer where WebSphere Application Server is installed
   – *server_name* is the name of the WebSphere Commerce server in WAS (in our case WC_demo)
3. Close the command line window.

8.3 Create organizations and users

Before any stores can be created, these organizational preparation steps must be fulfilled:

- Add the additional role of Seller to the Asset Store Organization.
- Create the eSite Hub organization administrator.
- Add roles to the newly created eSite Hub administrator.
- Create one or more new seller organizations.
- Create one or more new buyer organizations (B2B only).
- Approve the requests for new seller and buyer organizations.
- Add Roles to newly created administrative users.

8.3.1 Add the additional role of Seller to the Asset Store Organization

The Site Administrator must add the additional role of Seller to the Asset Store Organization. This must be done through the eSite Hub interface and *not* through the Site Administration Console.

To add a role to the Asset Store Organization:

1. From the **eSite Hub** menu, select **manage organization**. This displays the Organization Administration Console.
2. From the Access Management menu, select **Organizations**.
3. Select **Asset Store Organization** by clicking the associated check box.
4. Click **Roles** to display lists of selected and available roles for the organization.
5. Click **Seller** in the list of available roles.
6. Click **Add**.
7. Click **OK** to display the Organizations list.

8.3.2 Create the eSite Hub organization administrator

Create an administrator for the eSite Hub organization. This administrator creates the individual stores and grants administrative access at the store level.

To create an administrator for the eSite Hub organization:

1. Access the eSite Hub.
2. Log on with a Site Administrator ID.
3. From the eSite Hub menu, select **manage organization**.
4. From the Access Management menu, select **Users**.

5. Click **New**.
6. Enter the required information. Ensure that the logon ID is unique and that the password conforms to the site standards. (We created the account `hub-orgadmin`.)
7. From the Account policy pull-down list, select **Administrators**.
8. Click **Next**.
9. Fill out fields as needed.
10. Click the **Find** button next to the Parent Organization (required) field.

    This displays a list of currently defined organizations.
11. Select the check box next to Root Organization and click **Select**.
12. Click **Next**.
13. Complete the required address fields.
14. Click **Next**.
15. Complete the contact information. Ensure that a valid e-mail address is entered into **E-mail address 1**.
16. Click **Finish** to display the Users list with the newly added user account.

Note: Failure to create the Hub-Org administrator with the account policy of Administrators will render this user unable to access (see) stores' assets. The default account policy when creating a new user is Shoppers. Although the change-users feature appears to enable you to change users' account policies, when created with a Shoppers policy this user will *never* have access to all eSites Hub assets.

8.3.3 Add roles to the newly created eSite Hub administrator

Add three new roles to the eSite Hub administrator (hub-orgadmin)

- Seller - Asset Store Organization
- Seller - eSite Seller Organization
- Seller Administrator - eSite Seller Organization

To add the new roles to the eSite Hub administrator user account:

1. From the eSite Hub menu, select **manage organization**.
2. From the Access Management menu, select **Users**.
3. Select the check box next to the newly created hub administrator. (We created `hub-orgadmin`.)
4. Click **Roles** to access the page shown in Figure 8-8 on page 243.

5. From the Organization pull-down list, select **eSite Seller Organization**.
6. From the Role pull-down list select **Seller**.
7. Click **Add**.
8. Again, from the Organization pull-down list select **eSite Seller Organization**.
9. From the Role pull-down list select **Seller Administrator**.
10. Click **Add**.
11. From the Organization pull-down list, select **Asset Store Organization**.
12. From the Role pull-down list, select **Seller**.
13. Click **Add**.

Figure 8-8 New Roles added to the Hub-Org admin

14. After adding the roles click the **OK** button.

8.3.4 Create one or more new seller organizations

We created a separate seller organization for each store in our hub. Each of these organizations was set up as a child of the eSite Seller Organization. When the store is created, an organizational unit that owns the store is created within the seller organization.

To create a new seller organization:

1. Go to the eSite Hub menu.
2. Ensure that you are not currently logged on by clicking **logout**.
3. Click **registration**. The Organization Registration page is displayed.
4. Complete all required fields within the Organization information. Ensure that E-mail address 1 contains a valid e-mail address.
5. Complete all required fields within the Administrator information. Ensure that E-mail address 1 contains a valid e-mail address.
6. Ensure that **Seller** is selected under Specify the role of the organization.
7. Click **Submit Registration**.

   This creates an approval request for the new seller organization and the seller organization administrator. The organization will have a parent of eSite Seller Organization. The administrator will have the following roles defined:

   – Registered Customer - eSite Hub Organization
   – Registered Customer - new organization
   – Seller Administrator - new organization
   – Seller - new organization

Repeat this process for each of the new seller organizations that are to be created.

8.3.5 Create one or more new buyer organizations (B2B only)

You will need to create buyer organizations for use in a B2B store. This can be done by the site administrator or by providing a link the eSite Hub to your customers. In order to create a new buyer organization, do the following:

1. Go to the eSite Hub menu.
2. Ensure that you are not currently logged on by clicking **logout**.
3. Click **registration**. The Organization Registration page is displayed.
4. Complete all required fields within the Organization information. Ensure that E-mail address 1 contains a valid e-mail address.
5. Complete all required fields within the Administrator information. Ensure that E-mail address 1 contains a valid e-mail address.
6. Ensure that **Buyer** is selected under Specify the role of the organization.

7. Click Submit **Registration**.

   This creates an approval request for the new buyer organization and the buyer organization administrator. The organization will have a parent of root Organization. The administrator will have the following roles defined:

   – Registered Customer - eSite Seller Organization
   – Buyer (buy-side) - new organization
   – Buyer Administrator - new organization

Repeat this process for each of the new buyer organizations that are to be created.

8.3.6 Approve the requests for new seller and buyer organizations

The newly created organizations and their administrators cannot be used until you approve the requests. To approve any pending approval requests:

1. From the eSite Hub menu, select **manage organization**.
2. From the Approvals menu, select **Approval Request**.
3. Ensure that **Pending** has been selected in the View pull-down list. If not, select **Pending** and click **Find**.
4. Select the check box next to the approval request that you want to approve and click **Approve**.

Repeat this process for each organization that you have created.

> **Note:** You must grant approvals individually, by organization. (If you select the Select All check box and click Approve, only one organization will be approved.) Select each organization individually and approve them. Be sure to verify that all three organizations are approved.

8.3.7 Add Roles to newly created administrative users

For the newly created administrators to have all of the authorities that they need to complete their tasks, additional roles must be added to their user accounts.

The Site Administrator must add four roles to each of the seller organization administrators that were created in the previous step:

- Seller - Asset Store Organization
- Seller - eSite Seller Organization
- Seller Administrator - eSite Seller Organization
- Marketing Manager- Asset Store Organization

To add these roles to the new user account:

1. Log on to the eSite Hub as the site administrator.
2. From the eSite Hub menu, select **manage organization**.
3. From the Access Management menu, select **Users**.
4. Select the check box next to the user account to change, and click **Roles**.
5. Select the organization from the Organization pull-down list and the associated role from the Role pull-down list, then click **Add**. Repeat this process for each of the required roles to be added.
6. When you are finished, click **OK**.

The Site Administrator must add three roles to each of the two newly approved Buyer users. (buyer2admin and buyer3admin) These roles are:

- Registered Customer - eSite Seller Organization
- Buyer (buy-side) Buyer2Org (or Buyer3Org)
- Buyer Administrator - Buyer2Org (or Buyer3Org)

Follow the process outlined above for each of the defined buyer accounts, substituting the appropriate user account, organization, and role.

8.4 Create stores

Stores are created using the Store Creation Wizard accessed from the eSite Hub menu. To satisfy the requirements for Big Computer Company, LLC., we created three stores:

- One business-to-consumer (B2C) store called Store 1
- Two business-to-business (B2B) stores called Store 2 and Store 3

All three stores share the eSite catalog.

Store 1 (B2C) will price the products at retail. Retail means that the base wholesale price obtained from the shared catalog is marked up through the use of the Catalog Filter Tools. (For more information about Catalog Filter Tools, see “Catalog Filter” on page 394.)

Store 2 (B2B store without contracts) will price its products at wholesale (or par). No adjustments to price are required for this store. Store 2 simulates the normal wholesale (manufacturers) pricing without any discounts or special considerations.

Store 3 (B2B store with contracts) will price its inventory at wholesale the same as Store 2 but with the addition of contracts. Contracts enable special pricing (for

special customers) along with terms and conditions such as the ability to purchase a limited quantity at this special price.

> **Note:** All store creation must be done by the Hub-Org administrator using the eSite Hub.

Creating a store and getting it open for business involves several steps:

- Store Creation Wizard
- Setting up WebSphere Commerce Payments for your store
- Assigning WebSphere Commerce Payments access roles
- Open the store

8.4.1 Store Creation Wizard

The method for creating a store under the eSite model is through the use of the Store Creation Wizard. Do not attempt to create a store by any other means in a WebSphere Commerce instance after the eSite.sar has been published.

To create a store using the Store Creation Wizard:

1. Log on to the eSite Hub with the newly created hub-orgadmin account.

   The eSite Hub is accessible to Web browser clients (Microsoft Internet Explorer 5.5 or higher) by entering the following default Web address:

   `http://host_name/webapp/wcs/stores/servlet/eSiteHub/index.jsp`

2. Select **create store** to display the page shown in Figure 8-9 on page 248.
3. Choose the default language for the store. Click **OK**.

Figure 8-9 First page of Store Creation Wizard

4. On the General page (Figure 8-10), enter a unique identifier for the store. (This value cannot be changed later).
5. Enter a display name for the store that will be seen by customers.
6. Enter a store description.
7. Enter a valid e-mail address for the store. This will be used by the hub administrator to send e-mail notifications.
8. Select the default store currency.
9. Select the store organization. (Choose the newly created organization for the store. This cannot be changed later.)
10. Click **Next**.

Figure 8-10 Store Creation Wizard: General page

11. In the Store Type window (Figure 8-11), select the appropriate store type from the Store type pull-down menu.

    In the eSite hosting model, stores are created based on a store profile that is defined by an asset store. The eSite model provides two asset stores:

    – A B2C model called eSite Store Front Asset Store

    – A B2B model called B2B eSite Asset Store

    One of the most important features of eSite is having both B2C and B2B stores available in the same hosting model. With this feature you can host multiple B2C and B2B stores concurrently.

12. Click **Next**.

Figure 8-11 Store Creation Wizard: Store Type page

13. On the Catalog page (Figure 8-12), select **eSite Catalog** from the list box.

    With the eSite model, you may select an empty catalog or the shared, eSite catalog.

    Selecting Empty Catalog creates a private store catalog (for example, cat Id=10051). Do *not* select Empty Catalog when you want a shared catalog!

    The eSite Catalog was loaded with sample data. The catalog data was loaded with ATP (Available to Promise) enabled but inventory tracking disabled. When you are ready to load your own data into the shared catalog, follow the instructions in “Delete sample data” on page 814 to delete the existing catalog data. Use the instructions in “Load sample data” on page 815 as a guide for loading your own data. This example enables inventory tracking and loads inventory data into our three stores.

14. Click **Next**.

Figure 8-12 Store Creation Wizard: Catalog page

15. On the Fulfillment page (Figure 8-13), enter a name for your fulfillment center and click **Add**.

> **Note:** This creates an entry in the table at the bottom of the page. You must create a unique fulfillment center for each store. This can be changed later.

16. Click **Next**.

Figure 8-13 Store Creation Wizard: Fulfillment page

17. On the Payments page (Figure 8-14), select the check box next to the desired payment method or methods.
18. For *each* credit card to be used at the store, select the Brand and Currency and click **Add**.
19. Click **Next** when finished.

Figure 8-14 Store Creation Wizard payments page

20. The Store Creation Summary page opens. It is a good idea to print a hard copy of the store creation summary for later use.

Figure 8-15 Store Creation Wizard: Summary page

21. Click **Finish** if you are ready to create the store or **Cancel** to stop the process. If you click **Cancel**, you will be required to start the entire process over from the beginning.

    A page with a progress bar is displayed while the store is being created. Wait until the Confirmation page is displayed, as shown in Figure 8-15.

Figure 8-16 Store Creation Confirmation Screen

22. Bookmark the newly created store by clicking the Bookmark Store button.

> **Note:** Using this Bookmark button stores a smaller and more easily referred-to bookmark than simply launching the store and copying that Web address.

8.4.2 Setting up WebSphere Commerce Payments for your store

In order for the individual hosted-store administrators to have access to WebSphere Commerce Payments, the site administrator must define roles. You can complete the Payments setup for your store by using the Administration Console or the Payments user interface. If you use the Administration Console, menu items appear on the Payments menu. If you use the Payments user interface, these items appear under Administration in the navigation frame.

> **Note:** WebSphere Commerce Payments must be configured initially by the site administrator.

Authorizing cassettes for your store

WebSphere Commerce Payments offers several payment cassettes that you can use to implement electronic payment protocols. The merchant and cassette

relationship is a Payment System that buyers use when they shop online. WebSphere Commerce Payments offers the following cassettes:

- OfflineCard
- CustomOffline
- BankServACH
- VisaNet
- PaymentTech

Note: OfflineCard is installed and enabled by default.

To authorize a cassette for your store:

1. Select **Merchant Settings**.
2. Click your store name in the Merchant name column.
3. Select the cassettes that you wish to authorize for your store.
4. Click **Update**.

Important: If you created your store manually, you must add a new merchant (your store) to authorize cassettes for your store. When creating a new merchant, the merchant number that is specified must match the WebSphere Commerce store ID. You can create a new merchant by selecting Merchant Settings and clicking Add a Merchant.

To configure cassettes for your store:

1. Select **Merchant Settings**.
2. Select a cassette to configure by clicking the icon appearing in the row for your store and the column for the cassette you want to configure.
3. Click **Accounts** on the cassette's page for your store and do one of the following:
   - To change existing accounts, click the account name.
   - To create a new account, click Add an Account.

8.4.3 Assigning WebSphere Commerce Payments access roles

Four roles within the Payments framework have relative mappings to corresponding roles in WebSphere Commerce. When you create users within WebSphere Commerce, you must first assign the WebSphere Commerce roles to those users. Then the users will display in the Payments UI, where you can assign them their corresponding Payments roles. Table 8-4 on page 257 maps the Payments user roles to corresponding WebSphere Commerce roles.

Table 8-4 Role mapping

Payments role	WebSphere Commerce role
Payments Administrator	Site Administrator
Merchant Administrator	Seller Administrator
Supervisor	Operations Manager
Clerk	Operations Manager

Payments Administrators and Merchant Administrators can manage WebSphere Commerce Payments. Supervisors and Clerks are financial roles. They do not administer WebSphere Commerce Payments, but they do manage the payment processing functions. Table 8-5 describes the responsibilities for each Payments role.

Table 8-5 Role definitions

Role	Responsibilities
Payments Administrator	► Define Merchant Administrators, Supervisors, and Clerks ► Configure merchants and their cassettes ► Identify the Payments host name and status ► Configure any installed cassettes ► Add, delete, and update event listeners ► Settle payments ► Approve or sale orders ► Issue credits and reverse credits ► Deposit orders ► Search for orders and batches ► View daily batch totals
Merchant Administrator	► Define Merchant Administrators, Supervisors, and Clerks ► Configure payment cassette settings ► Add, delete, and update event listeners
Supervisor	► Settle payments ► Approve or sale orders ► Issue credits and reverse credits ► Deposit orders ► Search for orders and batches ► View daily batch totals

Role	Responsibilities
Clerk	► Settle payments ► Approve or sale orders ► Issue credits and reverse credits ► Deposit orders ► Search for orders and batches ► View daily batch totals

Note: When WebSphere Commerce is installed, the WebSphere Commerce Site Administrator is assigned the role of Payments Administrator automatically.

To assign a WebSphere Commerce Administrator to a Payments role:

1. Log on to the WebSphere Commerce Administration Console using the Site Administrator ID created during instance creation.
2. From the Administration Console Site/Store selection page, select **Site**.
3. From the Payments menu, select **Users**.
4. On the User Search page, enter selection criteria and click **Search**.

   This displays a list resembling Figure 8-17.

User name	Merchant	Role
seller1admin	Store1- B2C	Merchant Administrator
hub-orgadmin	Store1- B2C Store2- B2B	Merchant Administrator
seller2admin	Store2- B2B	Merchant Administrator
seller3admin	Store3- B2B	Merchant Administrator
hub-admin	-	Payments Administrator
walter	-	Payments Administrator
wcsadmin	-	Payments Administrator
channeladmin	-	No WebSphere Commerce Payments access
chris	-	No WebSphere Commerce Payments access
dave	-	No WebSphere Commerce Payments access
greg	-	No WebSphere Commerce Payments access
greg1	-	No WebSphere Commerce Payments access
greg2	-	No WebSphere Commerce Payments access
greg3	-	No WebSphere Commerce Payments access
khalyl	-	No WebSphere Commerce Payments access
sample	-	No WebSphere Commerce Payments access

Figure 8-17 Payments: Users list page

5. Select an appropriate user by clicking the user name.

6. From the Merchant list, select one or more stores that this user's role will cover.
7. Select a Payments role for the user by clicking the appropriate radio button.
8. Click **Update**.
9. Click the straight arrow on the right side of the page to return to the Users list. The selected merchants and roles are now displayed.

Important: If you assign a Payments role to a WebSphere Commerce user and later want to delete or rename the logon ID of this user, you must remove the user's Payments role before you delete or rename the WebSphere Commerce user's logon ID.

8.4.4 Open the store

Before customers can access a hosted store, the store must be opened:

1. Log on to the eSite Hub.
2. Select **manage store**.
3. Select the store eSiteHub.
4. Click **OK**.
5. From the Hosting menu, select **Hosted Stores**.
6. Select the check box next to the new store. The current store status is Suspended.
7. Click **Resume**. The store status changes to Closed.
8. Ensure that the store is still selected and select **Open** to change the store's status to Open.

Note: Only a Store with a status of Closed can be opened.

9

ITSO sample code

This chapter provides a cookbook for customizing an eSites installation. It acts as a step-by-step installation and user guide for implementing several different customizations. For each customization the following will be provided:

- An overview of the changes
- A list of prerequisites and assumptions required before deployment
- A detailed list of steps required to deploy the customization
- A guide to using the customization following successful deployment

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9.1 Overview

This chapter is aimed solely at administrators. Its purpose is to act as a step-by-step deployment and user guide to cover the following customizations:

- New storefront style and template
- New e-Marketing Spot
- Customized store directory
- Dynamic text messages
- New asset store
- Custom shopcart display
- New coupon promotion
- Custom accelerator menus
- Custom registration menus

9.2 New storefront style and template

This section lists the steps required to deploy and use a new store front style and template for stores created based on the eSite Store Front Asset store.

9.2.1 Prerequisites

In 6.2, “New storefront style and template” on page 76, we demonstrated how to develop a new style for hosted stores based on the eSite Store Front Asset store. A specific example was developed to add a new Custom B2C asset store based on the existing eSite Store Front Asset store. Deployment was carried out on a developer’s Windows 2000 PC using WebSphere Commerce Studio and a local DB2 database.

This section demonstrates how to deploy that customization to a Windows 2000 Server using WebSphere Commerce V5.5 Business Edition and a DB2 database. We then demonstrate how to use the customization by changing the actual storefront style for the new store created in 6.2, “New storefront style and template” on page 76.

All steps are intended to enable administrators to re-create the customization within their own WebSphere Commerce installation. A basic understanding of WebSphere Commerce administration is assumed.

9.2.2 Deployment

1. Copy the files **Master3_1.css** through **Master 3_6.css** from 7018samples\Customization 6.2 New Store Front Styles & Template to the

WAS_installdir\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\eSiteStoreFrontAssetStore\css directory.

2. Copy the **color13** through **color18** directories from 7018samples\Customization 6.2 New Store Front Styles & Template to the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\eSiteStoreFrontAssetStore\en_US\images\colors directory.
3. Copy the **Style3** directory from 7018samples\Customization 6.2 New Store Front Styles & Template to the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\eSiteStoreFrontAssetStore\include\styles directory.
4. Copy the image files **color3_1** through **color3_6** from 7018samples\Customization 6.2 New Store Front Styles & Template to the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\tools\stores\eSiteStoreFrontAssetStore\style\colors directory.
5. Copy the **style3.gif** file from 7018samples\Customization 6.2 New Store Front Styles & Template to the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\tools\stores\eSiteStoreFrontAssetStore\style\styles directory.
6. Copy the **StyleDir.xml** file from 7018samples\Customization 6.2 New Store Front Styles & Templates to the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\WEB-INF\xml\tools\stores\eSiteStoreFrontAssetStore\devtools\flow\repository\IncludePages directory.
7. Open the file **Modified piece of Features.xml** in 7018samples\Customization 6.2 New Store Front Styles\ and copy the following lines:

```
<feature id="Color.f.13" enables="vfile.style13.css vfile.color13.dir"/>
<feature id="Color.f.14" enables="vfile.style14.css vfile.color14.dir"/>
<feature id="Color.f.15" enables="vfile.style15.css vfile.color15.dir"/>
<feature id="Color.f.16" enables="vfile.style16.css vfile.color16.dir"/>
<feature id="Color.f.17" enables="vfile.style17.css vfile.color17.dir"/>
<feature id="Color.f.18" enables="vfile.style18.css vfile.color18.dir"/>
```

8. Open the **Features.xml** file in the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\WEB-INF\xml\tools\stores\eSiteStoreFrontAssetStore\devtools\flow\repository\ directory.

   Locate the following line of the code:

   ```
   <feature id="Color.f.14" enables="vfile.style12.css vfile.color12.dir"/>
   ```

   Create a new line after this line and paste the content that was copied in step 7.

9. Open the file **Modified piece of Features.xml** in the 7018samples\Customization 6.2 New Store Front Styles\ directory and copy the following lines:

```
<feature id="Banner.f.13" enables="vfile.selectedBanner13.img"/>
<feature id="Banner.f.14" enables="vfile.selectedBanner14.img"/>
<feature id="Banner.f.15" enables="vfile.selectedBanner15.img"/>
<feature id="Banner.f.16" enables="vfile.selectedBanner16.img"/>
<feature id="Banner.f.17" enables="vfile.selectedBanner17.img"/>
<feature id="Banner.f.18" enables="vfile.selectedBanner18.img"/>
```

10. Open the **Features.xml** file in the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\WEB-INF\xml\tools\stores\eSiteStoreFrontAssetStore\devtools\flow\repository\ directory.

11. Locate the following line of code:

```
<feature id="Banner.f.12" enables="vfile.selectedBanner12.img"/>
```

    Create a new line after this line and paste the content that you copied in step 9.

12. Copy the **VirtualPages.xml** file from 7018samples\Customization 6.2 New Store Front Styles & Template to the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\WEB-INF\xml\tools\stores\eSiteStoreFrontAssetStore\devtools\flow\repository directory.

13. Copy the **style.xml** file from 7018samples\Customization 6.2 New Store Front Styles & Template to the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\WEB-INF\xml\tools\stores\eSiteStoreFrontAssetStore\devtools\flow\style directory.

14. Restart the commerce and payment instances servers according to the instructions in “Starting and stopping servers” on page 810.

9.2.3 Usage

Scenario 1: Creating a light style

This case is to be utilized by store administrators. After the customization code has been deployed, the store administrator can register and choose the new storefront style utilizing the eSites Management Tool. This scenario requires that a new style (style3) has been created and deployed. The new style is created in

6.2.3, “Steps” on page 77. The deployment is described in 9.2.2, “Deployment” on page 262.

1. Access the eSite Hub Management Tools by entering the following address in a Web browser (Microsoft Internet Explorer 5.5 or higher):

   `http://host_name/webapp/wcs/stores/servlet/eSiteHub/index.jsp`

2. As shown in Figure 9-1, log on to the eSite Hub using the Seller’s ID and password. Select the language and click **Log On**.

Figure 9-1 eSite Hub Logon page

3. On the Welcome page, click **manage store** from the menu bar at the left.

4. On the Select Store and Language page (Figure 9-2), choose which store to apply the new style to. Select the store's default language (we choose United States English), and click **OK**.

Figure 9-2 Select Store and Language page

5. From the **Store** menu (Figure 9-3), select **Change Style**.

Figure 9-3 Change Style option

6. This opens the Style page (Figure 9-4), which displays one thumbnail image for each existing style. The style created with the style customization should appear in the third position. Click its radio button to select it, and click **Next**.

Figure 9-4 Style selection page

7. Next, the Color page (Figure 9-5), shows the color combinations for the selected style. We selected the last one, but may choose any one you like. Click **Next**.

Figure 9-5 Color selection page

8. To choose the store's banner (Figure 9-6), select its radio button and click **Finish**.

Figure 9-6 Banner selection page

This returns you to the **manage store** menu, and your style changes have been applied.

To compare the before and after styles, first see the predefined style in Figure 9-7 on page 271.

Figure 9-7 Store before applying the custom style

Reload your store's Web page to see the new style, as shown in Figure 9-8 on page 272.

Figure 9-8 Store with the new style

9.3 New e-Marketing Spot

This section lists the steps required to deploy and use the new e-Marketing Spot. Two B2C stores must be created as children of the eSite Seller Organization.

9.3.1 Overview

Customizations presented in 6.3, “New e-Marketing Spot” on page 89 require the e-Marketing Spot to be registered and scheduled. After the customization is deployed, the Marketing Manager role should register and schedule the e-Marketing Spot so that it will be displayed on the shopping cart page.

Find instructions for deploying the customization in a developer and production environment in 9.3.3, “Deployment” on page 273.

In 9.3.4, “Usage” on page 274, usage scenarios are presented to help the Marketing Manager properly utilize the new e-Marketing Spot.

9.3.2 Prerequisites

This section assumes that WebSphere Commerce is installed and configured as described in Appendix A, “WebSphere Commerce implementation” on page 773. It also assumes that the eSite SAR file has been published successfully. Two B2C stores must be created as children of the eSite Seller Organization per Chapter 8, “Publish the SAR and create stores” on page 225.

All steps are intended to enable an administrators to re-create the customization within their own WebSphere Commerce installations. A basic understanding of WebSphere Commerce administration is assumed.

9.3.3 Deployment

1. Copy the **ShopCartProductESpot.jsp** file in 7018Samples\Customization 6.3 New e-marketing spot\ to the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\eSiteFrontAssetStore\include directory.
2. Copy the **infashiontext.properties** file in 7018Samples\Customization 6.3 New e-marketing spot\ to the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\WEB-INF\classes\eSiteFrontAssetStore directory.
3. Copy the **infashiontext_en_US.properties** file in 7018Samples\Customization 6.3 New e-marketing spot\ to the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\WEB-INF\classes\eSiteFrontAssetStore directory.
4. Copy the **OrderItemDisplay.jsp** file in 7018Samples\Customization 6.3 New e-marketing spot\ to the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\eSiteFrontAssetStore\ShoppingArea\ShopcartSection directory.
5. Open the file with a text editor (Figure 9-9 on page 274). Locate and remove the comments (//) from the following lines:

```
//        <jsp:include page="../../include/ShopCartProductESpot.jsp"
//           flush="true">
//           <jsp:param name="emsName" value="ShopCartPage" />
//           <jsp:param name="catalogId" value="<%= catalogId %>" />
//        </jsp:include>
```

Figure 9-9 Editing the OrderItem.jsp file

> **Note:** OrderItemDisplay.jsp is also used in Customization 6.5, which is described in 9.5, “Dynamic text messages” on page 308, and in Customization 6.7, which is described in 9.7, “Custom shopcart display” on page 324.
>
> If you intend to use those three files you only have to copy the one described in this section. For the other two customizations, simply uncomment as described in the related sections.

6. Restart the commerce and the payment servers according to the instructions found in “Starting and stopping servers” on page 810.

9.3.4 Usage

Scenario 1: Product recommendation e-Marketing Spot

This scenario enables a marketing manager, using the eSite Hub Administration Interface, to define an e-Marketing Spot that will appear on the store being administered after the customization code has been deployed.

Assume that an e-Marketing Spot named ShopCartPage has not been registered and scheduled for the store being administered.

1. Have your page designer modify the text for the product recommendation e-Marketing Spot that will appear on the Shopping Cart store page. See 6.3, “New e-Marketing Spot” on page 89. The customization is already included on the shopping cart page, so the page designer does not have to modify the e-Marketing Spot name.
2. Access the eSite Hub Administration Interface:
   a. Enter the following address in a browser:

      `http://host_name/webapp/wcs/stores/servlet/eSiteHub/index.jsp`

   b. Click **logon** to access the eSite Hub Logon page.
   c. Log on to the eSite Hub as the Seller.
   d. Click **Log On**.
   e. Click **manage store**.
3. Register a campaign:
   a. From the Marketing menu, select **Campaigns**.

Figure 9-10 Register a campaign for an e-Marketing Spot

b. On the Campaigns page (Figure 9-11), click **New** to create a new marketing campaign.

Figure 9-11 Create a new campaign

c. On the General Definition page (Figure 9-12), enter information into the following fields:

Campaign Name (Required) Type the name of the campaign in this field. Campaign names are alphanumeric, may not contain special characters, and must start with a letter. This field may be no longer than 64 characters.

Description (Optional) Type a meaningful description of the campaign in this field. This description will appear in the Campaign List window, and it helps to identify the campaign. This field may be no longer than 254 characters.

d. Click **Next**.

Figure 9-12 Define a general definition for the marketing campaign

e. On the Business Objectives Definition page (Figure 9-13), fill out the following fields:

Campaign sponsor (Optional) Type the name of the sponsor of the campaign. This person does not have to be a user defined in the system. This field may be no longer than 64 characters.

Campaign objectives (Optional) Type the business objectives of the campaign. This field may be no longer than 254 characters.

f. Click **Finish**.

Figure 9-13 Define business objectives for marketing campaign

g. Click **OK** in the dialog box. Now the marketing campaign has been created.

4. Register a campaign initiative:

   a. From the Marketing menu, select **Campaign Initiatives**.

Figure 9-14 Create a campaign initiative for an e-Marketing Spot

b. Click **New** to create a new marketing campaign initiative.

Figure 9-15 Create a new campaign initiative

c. On the General Definition page, enter information for the following fields:

Campaign initiative name
(Required) Enter the name of the campaign initiative, up to 64 characters, in this field.

Description
(Optional) Enter a meaningful description, up to 254 characters, of the campaign initiative in this field. This description will appear in the Campaign Initiative List window.

Campaign
(Optional) From the pull-down menu, choose the campaign to which to assign the initiative. You can select No campaign to create an initiative that is not associated with a campaign.

Initiative classification
(Mandatory) Select the intended use of the initiative from among: General, Up-sell, Cross-sell, Discount, or Coupon. This classification provides additional reporting methods. For this example, select **Suggestive sell on products, categories, or awareness advertisements**.

d. Click **Next**.

Figure 9-16 General Definition for a campaign initiative

e. The Defining displayed dynamic content page specifies the dynamic content that should be displayed when the initiative's condition is evaluated as true:

   i. Because this scenario describes a product recommendation e-Marketing Spot, click **Suggest specific product(s)**.

   ii. Click **Browse**.

Figure 9-17 Selecting specific products to display for e-Marketing Spot

iii. On the Browse Catalog page, navigate to the specific product or item to be displayed as the product recommendation.

iv. Click **Add** on to add the product recommendation.

Figure 9-18 Selecting a product to recommend in e-Marketing Spot

f. Click **Next**.

Figure 9-19 Product recommendation for e-Marketing Spot

g. Click **Target all customers** on the Defining target customers page.

h. Click **Next**.

Figure 9-20 Defining target customers for campaign initiative

i. Click **Everyday** on the Defining dates for targeting customers page.

j. Click **Next**.

Figure 9-21 Defining when to target customers for campaign initiative

k. On the Defining target customer behaviors page, click **Add**.

Figure 9-22 Defining customer behaviors for campaign initiative

l. Specify a customer behavior by choosing **Current shopping cart total greater than** from the pull-down list.

m. Enter a monetary amount in the **Amount** text box. This amount must be in the store's default currency.

n. Click **OK**.

Figure 9-23 Defining customer behavior to trigger an e-Marketing Spot

o. Click **Finish**.

p. Click **OK** on the dialog box.

Now the marketing campaign initiative has been created.

5. Register an e-Marketing Spot:

   a. From the Marketing menu, select **E-Marketing Spots**.

Figure 9-24 Create an e-Marketing Spot

b. Click **New** to create a new e-Marketing Spot.

Figure 9-25 Creating a new e-Marketing Spot

c. On the E-Marketing Spot Definition page, fill out the following fields:

E-Marketing Spot name (Required) The name of the e-Marketing Spot. This field may be no longer than 64 characters. For this example, enter: `ShopCartPage`.

Description (Optional) The description of the e-Marketing Spot, up to 254 characters, as specified during creation.

Specify the supported display types (Optional) Check the **Products** check box. This option enables the e-Marketing Spot to display product recommendations.

d. Click **OK**. Now the marketing e-spot has been created.

Figure 9-26 e-Marketing Spot definition

6. Schedule the e-Marketing Spot to appear on the **Shopping Cart** page:
   a. Click the check box next to the ShopCartPage e-Marketing Spot name. This activates the following buttons on the page:
      - New
      - Change
      - Summary
      - Schedule
      - Delete

Figure 9-27 Select an e-Marketing Spot to schedule

   b. Click **Schedule**.
   c. Click **New** on the Campaign Initiative Scheduling page to open the window shown in Figure 9-28 on page 293.

Figure 9-28 Select the campaign initiative for the selected e-Marketing Spot

d. Select **--all campaigns--** in the Selected campaign pull-down list.

e. Select the appropriate Available Campaign Initiative and click **Add**.

f. Accept the default settings for the **Start Date** and **Run this campaign initiative indefinitely** fields.

g. Click **OK**.

Now the e-Marketing Spot has been coded, registered, and scheduled. When users access the store that was administered, the e-Marketing Spot will appear above the list of ordered items on the Shopping Cart page.

Scenario 2: Awareness Advertisement e-Marketing Spot

This scenario enables a marketing manager for a store, utilizing the eSite Hub Administration Interface, to define an e-Marketing Spot that will appear on the store being administered after the customization code has been deployed. Assume that an e-Marketing Spot named ShopCartPage has not been registered and scheduled for the store being administered.

1. Have your page designer modify text for the product recommendation e-Marketing Spot that will appear on the Shopping Cart store page. See 6.3, “New e-Marketing Spot” on page 89. The customization is already included

on the shopping cart page, so the page designer does not have to modify the e-Marketing Spot name.

2. Access the eSite Hub Administration Interface:
   a. Access the eSite Hub by entering the following address in a browser:

      `http://host_name/webapp/wcs/stores/servlet/eSiteHub/index.jsp`

   b. Click **logon** to access the eSite Hub Logon page.
   c. Log on to the eSite Hub as the Seller.
   d. Click **Log On**.
   e. Click **manage store**.
3. Register ad copy:
   a. Select **Marketing** → **Ad Copy** as shown in Figure 9-29.

Figure 9-29 Create ad copy

b. Click **New** to create new marketing ad copy.

Figure 9-30 Create new ad copy for an e-Marketing Spot

c. On the ad copy General Definition page, fill out the following fields:

Ad Copy name (Mandatory) Type the name of the ad copy in this field. This field may be no longer than 30 characters.

Type (Mandatory) Select the type of ad copy to define. Supported types include image and flash. For this example, select **Image** from the pull-down list.

Custom field 1 (Optional) Type any additional information in this field. This field may be no longer than 254 characters.

Custom field 2 (Optional) Type any additional information in this field. This field may be no longer than 254 characters.

Figure 9-31 Defining general ad copy information

d. Define a Web address to which the customer will be redirected when the e-Marketing Spot is clicked.

Specify URL as click action
(Mandatory) Select **Specify URL as click action** to specify a Web address.

URL
(Mandatory) Use this field to define the target Web address. This field may be no longer than 254 characters. In this example, type the following: `http://www.ibm.com`.

e. Click **Next**.

Figure 9-32 Define URL for ad copy

f. On the Ad Copy Description Definition page, fill out the following fields:

Location (Mandatory) Type the location of the file, up to 254 characters. For this example, type: `eSiteCatalogAssetStore\IBM_Monitor_full.gif`

Marketing Text (Mandatory) Type the supporting marketing text for the ad copy, up to 4000 characters. This text is locale dependent.

Custom Description Field 1 (Optional) Type any additional descriptive information in this field, up to 254 characters.

Custom Description Field 2 (Optional) Type any additional descriptive information in this field. This field may be no longer than 254 characters.

g. Click **Finish**.

Figure 9-33 Specify description definition for an ad copy

h. Click **OK** on the dialog box. Now the ad copy has been created.

4. Register a campaign:
   a. Select **Marketing** → **Campaigns** (Figure 9-34).
   b. Click **New** to create a new marketing campaign.

Figure 9-34 Register a campaign

   c. On the General Definition page, fill in the following fields:

      Campaign Name (Required) Type the name of the campaign in this field. Campaign names are alphanumeric, may not contain special characters, and must start with a letter. This field may be no longer than 64 characters.

      Description (Optional) Type a meaningful description of the campaign in this field. This description will appear in the Campaign List window to help identify the campaign. This field may be no longer than 254 characters.

   d. Click **Next**.
   e. On the Business Objectives Definition page enter information for the following fields:

      Campaign sponsor (Optional) Type the name of the sponsor of the campaign, up to 64 characters. This person does not have to be a user defined in the system.

      Campaign objectives (Optional) Type the business objectives of the campaign, up to 254 characters.

f. Click **Finish**.

g. Click **OK** on the dialog box. Now the marketing campaign has been created.

5. Register a campaign initiative:

   a. Select **Marketing** → **Campaign Initiatives** (Figure 9-35).

   b. Click **New** to create a new marketing campaign initiative.

Figure 9-35 Create campaign initiative for an awareness advertisement

   c. On the General Definition page, fill in the following fields:

Campaign initiative name
(Required) Enter the name of the campaign initiative, up to 64 characters, in this field.

Description
(Optional) Enter a meaningful description, 254 characters, of the campaign initiative in this field. This description will appear in the Campaign Initiative List window.

Campaign
(Optional) Select the campaign to which the initiative should be assigned. Optionally, you can select No campaign to create an initiative that is not associated with a campaign.

Initiative classification
(Mandatory) Select the intended usage of the initiative from among the following: General, Up-sell, Cross-sell, Discount, or Coupon. This classification provides additional reporting

methods. For this example, click **Suggestive sell on products, categories, or awareness advertisements**.

d. Click **Next**.

e. On the Defining displayed dynamic content page, specify the dynamic content that should be displayed when the initiative's condition is evaluated as true. This scenario describes an awareness advertisement e-Marketing Spot, so click **Show advertisement(s)**.

f. Select the appropriate Available ad copy, and click **Add**.

Figure 9-36 Selecting the ad copy that will appear on an e-Marketing Spot

g. Click **Next**.

h. Click **Target all customers** on the Defining target customers page.

i. Click **Next**.

j. Click **Everyday** on the Defining dates for targeting customers page.

k. Click **Next**.

l. On the Defining target customer behaviors page, Click **Add**.

m. Specify a customer behavior by choosing **Current shopping cart total greater than**.

n. Enter a monetary figure into the **Amount** text box. This amount must be in the store's default currency.

o. Click **OK**.

p. Click **Finish**.

q. Click **OK** on the dialog box. Now the marketing campaign initiative has been created.

6. Register an e-Marketing Spot:

   a. Select **Marketing** → **E-Marketing Spots** (Figure 9-37).

Figure 9-37 Create an e-Marketing Spot for the awareness advertisement

   b. Click **New** to create a new e-Marketing Spot.

   c. On the **E-Marketing Spot Definition** page, enter information for the following fields:

E-Marketing Spot name (Required) The name of the e-Marketing Spot, up to 64 characters. For this example, enter: `ShopCartPage`.

Description (Optional) The description of the e-Marketing Spot as specified during creation, up to 254 characters.

Specify the supported display types
(Optional) Check the **Products** check box. This option enables the e-Marketing Spot to display product recommendations.

d. Click **OK**. Now the marketing e-spot has been created.

7. Schedule the e-Marketing Spot to appear on the **Shopping Cart** page:
   a. Select the check box next to the ShopCartPage e-Marketing Spot name.
   b. Click **Schedule**.
   c. Click **New** on the Campaign Initiative Scheduling page.
   d. Select **--all campaigns--** in the Selected Campaign pull-down list.
   e. Click the appropriate **Available Campaign Initiatives**.
   f. Click **Add**.
   g. Accept default settings for **Start Date** and **Run this campaign initiative indefinitely**.
   h. Click **OK**. The e-Marketing Spot has been coded, registered, and scheduled. When users access the store that was administered, the e-Marketing Spot will appear above the list of ordered items on the **Shopping Cart** page.

Scenario 3: Defining an e-Marketing Spot across a store model

This case is to be utilized by eSite Hub administrators. After the customization code has been deployed, the eSite Hub administrator must register and schedule the e-Marketing Spot utilizing the eSite Hub Administration Interface. Assume that an e-Marketing Spot called ShopCartPage has not been registered and scheduled for the store model being administered.

> **Note:** This scenario enables the eSite Hub administrator to define an e-Marketing Spot that will appear on *all stores* with the same Asset Store store model.

1. Have the page designer modify text for the product recommendation e-Marketing Spot that will appear on the Shopping Cart store page. See 6.3, “New e-Marketing Spot” on page 89. (The customization is already included on the shopping cart page, so the page designer does not have to modify the e-Marketing Spot name.)
2. Access the eSite Hub Administration Interface.
   a. Access the eSite Hub by entering the following address in a Web browser:

      `http://host_name/webapp/wcs/stores/servlet/eSiteHub/index.jsp`

   b. Click **logon** to access the eSite Hub Logon page.
   c. Log onto the eSite Hub as the eSite Hub administrator.
   d. Click **Log On**.

e. Click **manage store** to display the Select Store and Language page. If the current user does not have access to multiple stores, this page will not be displayed and the user will taken directly to the **manage store** menu.

f. Select the store name and language:

   i. Name: the name of the store to be administered:

      If the e-Marketing Spot is to appear across all stores with the B2C store model, click **eSiteStoreFrontAssetStore** in the list box.

      If the e-Marketing Spot is to appear across all stores with the B2B store model, click **B2BESiteAssetStore** in the list box.

   ii. Accept defaults for **Language** and **Fulfillment Center**.

   iii. Click **OK**.

g. Follow the appropriate steps in the previous scenarios to create a product recommendation or an awareness advertisement e-Marketing Spot.

9.4 Customized store directory

This section lists the steps required to deploy and use the customized store directory.

9.4.1 Overview

WebSphere Commerce provides a MallDirectory.sar file. We have just modified the MallDirectory (in 9.4, “Customized store directory” on page 304), and now we deploy and use this customization. Appendix F, “Additional material” on page 923 also has a MallDirectory.sar file.

9.4.2 Prerequisites

This section assumes that WebSphere Commerce is installed and configured as per Appendix A, “WebSphere Commerce implementation” on page 773. It also assumes that the eSite SAR file has been published successfully and that at least one B2C store based on the eSite Store Front Asset store has been created as per Chapter 8, “Publish the SAR and create stores” on page 225.

All steps are intended to enable an administrator to re-create the customization within their own WebSphere Commerce installation. A basic understanding of WebSphere Commerce administration is assumed.

9.4.3 Deployment

1. Copy **StoreDirectory.sar** in 7018Samples\Customization 6.4 Customized Store Directory\ to the *WC_installdir*\samplestores\Hosting\ directory. Overwrite the existing StoreDirectory.sar file.
2. Paste the SAR definition from 7018Samples\Customization 6.6 New Store Profile**ContentForSARRegister.txt** to the file *WC_installdir*\xml\tools\devtools\SARRegister.xml. Do *not* remove any of the declarations inside of the SARRegister.xml file. By default the file is Read-Only, so remember to set the file attribute back to Read-Only after you make the changes.
3. Open a command window and change directories to `WAS_installdir\bin`.
4. Restart the commerce and the payment servers as described in “Starting and stopping servers” on page 810.
5. Publish the SAR file:
   a. Open a Web browser and go to http://host_name:8002/adminconsole.
   b. Log on as a site administrator.
   c. Select **Site** and click **OK**.
   d. Select **Store Archives** → **Publish**.
   e. In the View pull-down list, select **Hosting**. A new Store Archive called StoreDirectoryFile.sar will now be displayed.
   f. Select the check box next to **StoreDirectoryFile.sar** and click **Next**.
   g. Select the appropriate Organization and click **Next**.
   h. Verify that you have the rights before you proceed to the next page. Use `public` as the value for the Store Directory, use `PublicStore` as the Store Identifier value and select **Root Organization** from the Organization pull-down list. Click **Next**.
   i. Click **Finish**.
   j. Click **OK**.
   k. Click **Refresh**. When the publish status of StoreDirectoryFile.sar is Successful, the customized store directory can be used.

9.4.4 Usage

After the customization has been deployed successfully, the Mall Directory page can be used. It shows all stores that were created based on the eSite Store Front Asset store.

Figure 9-38 on page 306 shows the main page of the Mall Directory Page.

Figure 9-38 Mall Directory Main Page

The available stores are listed in the column called Store Directory, with the corresponding home page shown in the left column and the Store Description in the right-side column. You can change your store description using the **manage store** menu on the eSite Hub.

An open store has a clickable link to its home page in the Store Directory column. A closed store is listed but does not have a link to its home page.

Moving the mouse over the open store name displays a change in the image to the left.

Figure 9-39 Displaying B2C store text by hovering over it

Each image is associated with a store using the store ID as part of the image name.

Figure 9-40 Click over the B2B Store

If you do not see an image, check at /public/images/en_US, which should have an image for each store that you defined.

Click the store name to open the store.

9.5 Dynamic text messages

This section lists the steps required to deploy and use custom dynamic text messages for stores that were created based on the eSite Store Front Asset store.

9.5.1 Overview

In 6.5, “Dynamic text messages” on page 95, we demonstrated how to develop dynamic text messages that could be used both for individual stores and shared across all stores. A specific example was developed to add a dynamic text message to the Shopping Cart page that could be customized on a store-by-store basis. It also developed a specific example to add a dynamic text message to the store home page that could be shared across all stores. Deployment was carried out on a Windows 2000 PC using WebSphere Commerce Studio and a local DB2 database.

This section demonstrates how to deploy that customization to a Windows 2000 Server using WebSphere Commerce V5.5 Business Edition and a DB2 database. We then demonstrate how to use the customization by setting the text of the message via the Change Pages store administration page.

9.5.2 Prerequisites

This section assumes that WebSphere Commerce is installed and configured as per Appendix A, “WebSphere Commerce implementation” on page 773. It also assumes that the eSite SAR file has been published successfully and that at least two B2C stores based on the eSite Store Front Asset store have been created as per Chapter 8, “Publish the SAR and create stores” on page 225.

All steps are intended to enable an administrator to re-create the customization within the WebSphere Commerce installation. A basic understanding of WebSphere Commerce administration is assumed.

9.5.3 Deployment

1. Copy **infashiontext_dynamic_en_US.properties** from 7018Samples\Customization 6.5 Dynamic Text Messages\ to the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\WEB-INF\classes\eSiteFrontAssetStore\ directory.
2. Copy **infashiontext_dynamic_labels_en_US.properties** from 7018Samples\Customization 6.5 Dynamic Text Messages\ to the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\WEB-INF\classes\eSiteFrontAssetStore\ directory.
3. Copy **Preview_ShopCart.html** from 7018Samples\Customization 6.5 Dynamic Text Messages\ to the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\tools\stores\eSiteFrontAssetStore\text\preview\en_US directory.
4. Copy **StoreFront.xml** from 7018Samples\Customization 6.5 Dynamic Text Messages\ to the

WAS_installdir\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\WEB-INF\xml\tools\stores\eSiteFrontAssetStore\devtools\storefront directory.

5. Open the **OrderItemDisplay.jsp** file in the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\eSiteFrontStoreFrontAssetStore\ShoppingArea\ShopcartSection\ directory.
6. Locate the line that displays the current static message. This appears as:

   ```
   <%=infashiontext.getString("CART_CONTAINS")%>
   ```

   Change this line as follows to use the dynamic text message:

   ```
   <%=infashionDynamictext.getString("ShoppingCart_Text")%>
   ```
7. Save and close the file.
8. Open a command window and change directories to *WAS_installdir*\bin.
9. Restart the commerce and the payment servers according to the instructions in “Starting and stopping servers” on page 810.
10. Use the procedures described in 9.5.4, “Usage” on page 311 to verify that this part of the customization is working.
11. Install the fix pack for Commerce Accelerator:
    a. Stop the commerce and the payment servers according to the instructions found in “Starting and stopping servers” on page 810.
    b. Copy 7018Samples\Customization 6.5 Dynamic Text Messages\.imported_classes.jar, renaming it to *WC_installdir*\xml\tools\common\Enablement-BaseComponentsLogic.jar
    c. Open a command line window and change directories to *WC_installdir*\bin.
    d. Start the commerce and payment servers according to the instructions in “Starting and stopping servers” on page 810.
12. Copy **CommerceAcceleratorMPS.xml** from 7018Samples\Customization 6.5 Dynamic Text Messages\ to *WC_installdir*\xml\tools\common.
13. Copy **resources.xml** from 7018Samples\Customization 6.5 Dynamic Text Messages\ to *WC_installdir*\xml\tools\devtools.
14. Copy **StoreTextDialogMPS.xml** from 7018Samples\Customization 6.5 Dynamic Text Messages\ to *WC_installdir*\xml\tools\devtools.
15. Copy **StoreFrontMPS.xml** from 7018Samples\Customization 6.5 Dynamic Text Messages\ to *WAS_installdir*\installedApps*node_name*\WC_*wc_instance_name*.ear\Stores.war\WEB-INF\xml\tools\stores\eSiteFrontAssetStore\devtools\storefront.

16. Copy **Dialog.jsp** from 7018Samples\Customization 6.5 Dynamic Text Messages\ to *WAS_installdir*\installedApps*node_name**CommerceAccelerator.war*\tools\devtools\text.
17. Copy **sitetext_dynamic_en_US.properties** from 7018Samples\Customization 6.5 Dynamic Text Messages\ to *WAS_installdir*\installedApps*node_name*\WC_*wc_instance_name*.ear\Stores.war\WEB-INF\classes\eSiteFrontAssetStore.
18. Copy **sitetext_dynamic_labels_en_US.properties** from 7018Samples\Customization 6.5 Dynamic Text Messages\ to *WAS_installdir*\installedApps*node_name*\WC_*wc_instance_name*.ear\Stores.war\WEB-INF\classes\eSiteFrontAssetStore.
19. Copy **Preview_HomePagePromo.html** from 7018Samples\Customization 6.5 Dynamic Text Messages\ to *WAS_installdir*\installedApps*node_name*\WC_*wc_instance_name*.ear\Stores.war\tools\stores\eSiteFrontAssetStore\text\preview\en_US.
20. Copy **EnvironmentSetup.jsp** from 7018Samples\Customization 6.5 Dynamic Text Messages\ to *WAS_installdir*\installedApps*node_name*\WC_*wc_instance_name*.ear\Stores.war\eSiteFrontAssetStore\include.
21. Copy **StoreCatalogDisplay.jsp** from 7018Samples\Customization 6.5 Dynamic Text Messages\ to *WAS_installdir*\installedApps*node_name*\WC_*wc_instance_name*.ear\Stores.war\eSiteFrontAssetStore\ShoppingArea\CatalogSection\CategorySubsection.
22. Restart the commerce and the payment servers according to the instructions in “Starting and stopping servers” on page 810.

9.5.4 Usage

After the customization has been deployed successfully, the shopping cart for all stores that were created based on the eSite Store Front Asset store displays a dynamic text message at the top of the items list. The text reads `Your cart contains`. To modify the text via the Change Pages store administration page, follow these steps:

1. Modify the dynamic text:
   a. Log onto the eSite Hub as the Seller.
   b. Select **manage store**.
   c. Select **Store** → **Change Pages**. This displays a new Shopping Cart option.

d. Select **Shopping Cart**.

e. If the **View Location** button is clicked, a preview page is displayed (Figure 9-41).

Figure 9-41 Preview page for the Shopping Cart dynamic text message

f. Modify the text to read `You have selected` (Figure 9-42).

g. Click **OK**.

Figure 9-42 Change Pages for modifying dynamic text on the Shopping Cart

The shopping cart for the selected store now displays `You have selected` at the top of the items list. This can be verified by browsing to the store and adding an item to the shopping cart (Figure 9-43 on page 314). This completes the procedures for setting a dynamic text message for a specific store.

Figure 9-43 Verifying that the Shopping Cart page displays the updated dynamic text

The following procedures demonstrate how to set a dynamic text message that is shared across all stores. Once again, the dynamic text is updated via the Change Pages store administration page, but this procedure must be performed by the site administrator and the selected store must be the eSite Store Front Asset store.

After the customization has been deployed successfully, the home page for all stores that were created based on the eSite Store Front Asset store will display the same dynamic text message at the top of the page. Because the message was not set to contain any text, it currently is blank. To modify the text via the Change Pages store administration page, follow these steps:

2. Modify the dynamic text:
   a. Log onto the eSite Hub as the site administrator.
   b. Select **manage store**. This displays a new menu option for Store.

c. Select **Store** → **Change Pages**. This displays a new option for Home Page Promotion.

d. Select **Home Page Promotion**. You can click the **View Location** button to display the preview page (Figure 9-44).

Figure 9-44 Preview page for the Home Page promotion dynamic text message

e. Modify the text to read `Christmas Catalog Sale on now. Save up to 50% on selected items!` (Figure 9-45).

f. Click **OK**.

Figure 9-45 Change Pages page to modify the dynamic text

At this stage the home page for all stores that are based on the eSite Store Front Asset store display `Christmas Catalog Sale on now. Save up to 50% on selected items!` at the top of the page. This can be verified by browsing to any store (Figure 9-46 on page 317).

Figure 9-46 Verifying the home page displays the updated dynamic text

9.6 New asset store

This section lists the steps required to deploy and use a new asset store to the eSite Hub.

9.6.1 Overview

In 6.6, “New asset store” on page 119, we demonstrated how to develop a new asset store. A specific example was developed to add a new Custom B2C asset store based on the existing eSite Store Front Asset store. Deployment was carried out on a Windows 2000 PC using WebSphere Commerce Studio and a local DB2 database.

In this section, we demonstrate how to deploy that customization to a Windows 2000 Server using WebSphere Commerce Version 5.5 Business Edition and a DB2 database. We then demonstrate how to use the customization by creating a store based on the new asset store through the Store Creation wizard.

9.6.2 Prerequisites

This section assumes that WebSphere Commerce is installed and configured as per Appendix A, “WebSphere Commerce implementation” on page 773. It also assumes the eSite SAR file has been published successfully and that at least one B2C store based on the eSite Store Front Asset store has been created as per Chapter 8, “Publish the SAR and create stores” on page 225.

All steps are intended to enable an administrator to re-create the customization within the WebSphere Commerce installation. A basic understanding of WebSphere Commerce administration is assumed.

9.6.3 Deployment

1. Copy **CustomB2CStore.sar** from 7018Samples\Customization 6.6 New Store Profile\ to *WC_installdir*\samplestores.
2. Open the file Modified piece of SARRegistry.xml file in 7018Samples\Customization 6.6 New Store Profile\ and copy the content.
3. Change to the *WC_installdir*\xml\tools\devtools directory.
4. Open **SARRegistry file.xml** and paste the content that you copied in step 2.

   Note: This is a read-only file. Before editing the file, you may have to change the file properties.

5. Save and close the file.
6. Open a command window and change directories to *WAS_installdir*\bin.
7. Restart the commerce and the payment servers according to the instructions in “Starting and stopping servers” on page 810.
8. Publish the SAR file:
   a. Open a browser and go to http://*host_name*:8002/adminconsole.
   b. Log on as the site administrator.
   c. Select **Site** and click **OK**.

d. Select **Store Archives** → **Publish**. This displays a new Store Archive called CustomB2CStore.sar.

e. Select the **CustomB2CStore.sar** check box and click **Next**.

f. Select the appropriate Organization and click **Next**.

g. Click **Finish**.

h. Click **OK**.

i. Wait until the publish status of CustomB2CStore.sar has changed to Successful. To refresh the status, click **Refresh**.

9. Copy **DeploymentHostingContractXHS.xml** from 7018Samples\Customization 6.6 New Store Profile\ to the *WC_installdir*\xml\trading\xml directory.

10. Copy **TemplateHostingContractXPS.xml** from 7018Samples\Customization 6.6 New Store Profile\ to the *WC_installdir*\xml\trading\xml directory.

11. Copy **CreateStore.jsp** from 7018Samples\Customization 6.6 New Store Profile\ to the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\eSiteHub directory.

12. Open **CreateStore.jsp** in a text editor and uncomment the following lines:

```
//scwURL.append(":");
//scwURL.append(toolsPort);
```

13. Copy **CommerceAcceratorXHS.xml** from 7018Samples\Customization 6.6 New Store Profile\ to the *WC_installdir*\xml\tools\common directory.

14. Copy **CommerceAcceratorXPS.xml** from 7018Samples\Customization 6.6 New Store Profile\ to the *WC_installdir*xml\tools\common directory.

15. Copy **CustomB2CStorePreReqUserGroups_en_US.xml** from 7018Samples\Customization 6.6 New Store Profile\ to the *WC_installdir*\xml\policies\xml directory.

16. Copy **CustomB2CStorePreReqAccessControlPolicies.xml** from 7018Samples\Customization 6.6 New Store Profile\ to the *WC_installdir*\xml\policies\xml directory.

17. Copy **CustomB2CStorePreReqAccessControlPolicies_en_US.xml** from 7018Samples\Customization 6.6 New Store Profile\ to the *WC_installdir*\xml\policies\xml directory.

18. Open a command window and change directories to *WC_installdir*\bin.

19. Run the following commands:

```
acugload dbname dbuser dbpassword CustomB2CStorePreReqUserGroups_en_US.xml
acpload dbname dbuser dbpassword
CustomB2CStorePreReqAccessControlPolicies.xml
```

```
acpnlsload dbname dbuser dbpassword
CustomB2CStorePreReqAccessControlPolicies_en_US.xml
```

- *dbname* is the name of the database.
- *dbuser* is the name of the database schema owner.
- *dbpassword* is the password for the database user.

20. Register the new store types.

    In order for the new store types to be recognized, they must be registered in the specific WebSphere Commerce instance XML file. The instance XML file contains all of the configuration parameters for a particular WebSphere Commerce instance. To register the new stores in the instance XML file:

    a. In the local file system, locate the WebSphere Commerce installation directory.

    b. Browse to the /Commerce/instances/*wc_instance_name*/xml folder.

    c. Open the *wc_instance_name*.xml file in a text editor (where *wc_instance_name* is the name of the WebSphere Commerce instance).

    d. Locate the list of supported store types are that defined within the tag <supportedStoreType>.

    e. Add the new store types to the list of supported store types (as shown in Figure 9-47 on page 321):

```
<supportedStoreType>
      <wca storeType="B2B" />
      <wca storeType="B2C" />
      <wca storeType="BHS" />
      <wca storeType="BPS" />
      <wca storeType="CPS" />
      <wca storeType="CHS" />
      <wca storeType="RHS" />
      <wca storeType="RPS" />
      <wca storeType="HCP" />
      <wca storeType="MHS" />
      <wca storeType="MPS" />
      <wca storeType="SCP" />
      <wca storeType="SHS" />
      <wca storeType="SPS" />
      <wca storeType="XHS" />
      <wca storeType="XPS" />
    </supportedStoreType>
```

    f. Save and close the file.

Figure 9-47 Registering the new store types in wc_instance_name*.xml*

21. Restart the commerce and the payment servers according to the instructions in “Starting and stopping servers” on page 810.

9.6.4 Usage

After the customization has been deployed successfully, a store can be created based on the new asset store. To create a new store using the Store Creation wizard, follow these steps:

1. Create and load a new store.
   a. Log onto the eSite Hub as the Seller.
   b. Select **create store**.
   c. Enter `Custom B2C Store` for Store unique identifier, Store display name, and Store description (Figure 9-48 on page 322).
   d. Enter a valid e-mail address for Notification recipient e-mail address.
   e. Select **US Dollar** for Default store currency.
   f. For Store organization, select the same Seller organization that was used to create the existing stores.

Figure 9-48 Entering general store details in the Store Creation wizard

g. Click **Next**.

h. Select **Consumer Direct Hosting Profile** for Store type.

i. Click **Next**.

j. Select the existing eSite catalog for Catalog.

k. Click **Next**.

l. Enter Custom Fulfillment Center for Fulfillment center name.

m. Click **Add**.

n. Click **Next**.

o. Select **Cash on Delivery (COD)** for Payment method.

p. Click **Next**.

q. Click **Finish**.

When the store is created successfully, the Store Creation Confirmation page is displayed.

Figure 9-49 Successful store creation on the Store Creation Confirmation page

r. Click **Bookmark Store** to add the store to your browser favorites.

s. Click **Launch Store** to view the new store.

Figure 9-50 Verifying that the store was created successfully

9.7 Custom shopcart display

This section lists the steps required to deploy and use the custom shopping cart for stores created based on the eSite Store Front Asset store.

9.7.1 Overview

In 6.7, “Custom shopcart display” on page 129, we demonstrated how to develop a custom shopping cart page. A specific example was developed to add thumbnail images to the shopping cart page for stores based on the eSite Store Front Asset store. We also demonstrated how to add the feature to the Change Pages store administration page to enable and disable the images. Deployment was carried out on a Windows 2000 PC using WebSphere Commerce Studio and a local DB2 database.

This section demonstrates how to deploy that customization to a Windows 2000 Server using WebSphere Commerce Version 5.5 Business Edition and a DB2 database. We then demonstrate how to use the customization by enabling or disabling the feature via the Change Pages store administration page.

9.7.2 Prerequisites

This section assumes that WebSphere Commerce is installed and configured as per Appendix A, “WebSphere Commerce implementation” on page 773. It also assumes that the eSite SAR file has been published successfully and that at least one B2C store based on the eSite Store Front Asset store has been created as per Chapter 8, “Publish the SAR and create stores” on page 225.

All steps are intended to enable an administrator to re-create the customization within the WebSphere Commerce installation. A basic understanding of WebSphere Commerce administration is assumed.

9.7.3 Deployment

1. Open the file **Modified piece of Features.xml** in 7018Samples\Customization 6.7 Custom Shopcart Display\ and copy the contents.
2. Open the **Features.xml** file in *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\eSiteFrontAssetStore\devtools\flow\repository\ and paste the contents selected in step 1.
3. Copy **ShoppingCart.xml** from 7018Samples\Customization Custom Shopcart Display\ to the *WAS_installdir*\installedApps*node_name**WC_wc_instance_name*.ear\Stores.war\eSiteFrontAssetStore\devtools\flow\ui\ directory.
4. Copy **config_en_US.properties** from 7018Samples\Customization 6.7 Custom Shopcart Display\ to the *WAS_installdir*\installedApps\<commerce_instance>.war\WCDemo.ear\properties\tools\stores\eSiteFrontassetStore\devtools\flow\ui directory.

   Note: OrderItemDisplay.jsp is also used for two other customizations: 6.3 and 5.6. If you are already using one of those, you do not have to copy the file again. Instead just skip to step 6 on page 326.

5. Copy **OrderItemDisplay.jsp** from 7018Samples\Customization 6.7 Custom Shopcart Display\ to the

WAS_installdir\installedApps*node_name*\<WC_instance>.ear\Stores.war\eSiteFrontAssetStore\ShoppingArea\ShopcartSection\ directory.

6. Using a text editor, locate and uncomment the following lines:

```
//              <flow:ifEnabled feature="ShoppingCartImages">
//                  <img border="0" width="50" height="50"
//
src="<%=orderItem.getCatalogEntryDataBean().getObjectPath()%><%=orderItem.g
etCatalogEntry().getDescription(cmdcontext.getLanguageId()).getThumbNail()%
>" /><br>
//              </flow:ifEnabled>
```

7. Restart the commerce and the payment servers according to the instructions in “Starting and stopping servers” on page 810.
8. Copy **fsf.xml** from 7018Samples\Customization 6.7 Custom Shopcart Display\ to the *WAS_installdir*\installedApps*node_name*\<WC_instance>.ear\Stores.war\eSiteFrontAssetStore\WEB-INF\xml\tools\stores\eSiteFrontAssetStore\devtools\flow\fsf directory.
9. Copy **scf.xml** from 7018Samples\Customization 6.7 Custom Shopcart Display\ to the *WAS_installdir*\installedApps*node_name*\<WC_instance>.ear\Stores.war\eSiteFrontAssetStore\WEB-INF\xml\tools\stores\eSiteFrontAssetStore\devtools\flow\scf directory.

9.7.4 Usage

After the customization has been deployed successfully, thumbnail images will be displayed on the shopping cart page for all stores that are based on the eSite Store Front Asset store. To enable or disable the thumbnail images via the Change Flow store administration page, follow these steps:

1. Enable or disable the feature:
   a. Log onto the eSite Hub as the Seller.
   b. Select **manage store**.
   c. Select **Store** → **Change Flow**. This displays a new option, Shopping Cart.
   d. Select **Shopping Cart** (Figure 9-51 on page 327).
   e. Select the check box to enable the thumbnail images for shopping cart items. To disable the thumbnail images, deselect the check box.
   f. Click **OK**.

Figure 9-51 Configuring the Shopping Cart thumbnails feature

At this stage the shopping cart for the selected store will have this feature enabled or disabled (depending on whether the check box was selected or not). To verify this, browse to the store and add an item to the shopping cart. If enabled, thumbnail images will be displayed in the Item column for each item in the shopping cart. If disabled, only a textual description will be displayed in the Item column for each item.

Figure 9-52 Verifying that thumbnail images are displayed on the Shopping Cart

9.8 New coupon promotion

The coupon promotion for stores that were created based on the eSite Store Front Asset store was covered in 6.8, “New coupon promotion” on page 139.

9.8.1 Prerequisites

See 6.8.2, “Prerequisites” on page 148.

9.8.2 Deployment

See 6.8.3, “Steps” on page 149

9.8.3 Usage

Customers can redeem eCoupon promotions as follows:

- A registered or guest customer clicks on the banner advertisement to accept the offered eCoupon promotion. WebSphere Commerce creates an instance of the coupon and adds it to the customer's coupon wallet.
- The customer clicks the eCoupons link. All valid eCoupons display.
- The customer checks for the applicable eCoupons against the contents of the current shopping cart. The customer purchases an applicable product and applies the corresponding eCoupon. The discount is shown on the Order Checkout page.

In this exercise, you must buy merchandise totaling more than $150. When you enter the store, you notice that if you register, you will receive coupons so you decide to register in order to use a coupon for 15% off your order.

To start shopping, do the following:

1. In the store with the newly created coupon promotion, click **My Account** or **Register**. The Register or Login page displays.
2. Click **Register**.
3. Enter the information in the registration fields. Click **Submit**. The My account page displays.
4. The My account page enables you to administer your account information. Click **Create or update profile** to set up a quick checkout profile. That way you can go through the checkout process quickly.
5. In the Quick Checkout Profile page, enter your billing and shipping addresses, as well as your preferred method of shipping and payment information. For the purposes of this example, enter the following credit card information:
   a. From the Credit card type pull-down list, select **Visa**.
   b. In the Card number field, type `4111111111111111`.
   c. From the Expiration month pull-down list, select **10**.
   d. From the Expiration year pull-down list, select **2003**.
6. Click **Submit**. The My account page displays.
7. Click **Home**. The Home page displays.

8. In the banner, click the **15% off** image to receive the coupon. The My coupons page displays, stating that the coupon is good for the entire order and does not have an expiration date.

   Now, you must buy an Item from the store. (Choose any product.) In order to be able to use the previously created coupon, your order must be greater than $150. Browse the store and select the product.

9. Add the product to the shopping cart. Click **Add to shopping cart**. The Shopping Cart displays. Review the items in your shopping cart.
10. Click **Quick checkout**. The Quick Checkout Order Summary page displays.
11. To redeem your coupons, click Redeem coupons. The applicable coupons page displays.
12. The entire order coupon is applicable to your order so select it, then click **Apply coupons**. The Checkout - Order summary page redisplays. Notice that your coupon discount has now been applied.
13. Review your billing and shipping information.
14. Enter your credit card information. For the purposes of this example, repeat the credit card information detailed in step 5 on page 329.
15. When you are satisfied that your order is correct, click **Order now**. The Order confirmation page displays, stating the details of your order.

9.9 Custom accelerator menus

This section lists the steps required to deploy and use custom accelerator menus for stores that were created based on the eSite Store Front Asset store.

9.9.1 Overview

In “Custom accelerator menu” on page 156, we demonstrated how to develop custom accelerator menus for stores that were created based on the eSite Store Front Asset store. A specific example was developed to add a new custom menu to display a custom JSP page. The custom JSP page presents the user with the number of registered customers who logged onto the site within the past seven days. Deployment was carried out on a Windows 2000 PC using WebSphere Commerce Studio and a local DB2 database.

This section demonstrates how to deploy that customization to a Windows 2000 Server using WebSphere Commerce version 5.5 Business Edition and a DB2 database. We then demonstrate how to use the customization by selecting the custom menu and thus loading the custom JSP page.

9.9.2 Prerequisites

This section assumes that WebSphere Commerce is installed and configured as per Appendix A, “WebSphere Commerce implementation” on page 773. It also assumes that the eSite SAR file has been published successfully and that at least one B2C store based on the eSite Store Front Asset store has been created as per Chapter 8, “Publish the SAR and create stores” on page 225.

All steps are intended to enable an administrator to re-create the customization within the WebSphere Commerce installation. A basic understanding of WebSphere Commerce administration is assumed.

9.9.3 Deployment

1. Copy **mccNLS_en_US.properties** from 7018Samples\Customization 6.9 Custom Accelerator Menus\ to the *WC_installdir*\properties\com\ibm\commerce\tools\properties\ directory.
2. Copy **CommerceAcceleratorMHS.xml** from 7018Samples\Customization 6.9 Custom Accelerator Menus\ to *WC_installdir*\xml\tools\common.
3. Copy **RegisteredCustomers.jsp** from 7018Samples\Customization 6.9 Custom Accelerator Menus\ to the *WAS_installdir*\installedApps\<WC_instance.ear>\CommerceAccelerator.war\tools\catalog directory.
4. In order for the JSP page to be loaded it must be requested through a View command. To register a View command to load the JSP page:
   a. Open a DB2 Command Line window by selecting **Start** → **Programs** → **IBM DB2** → **Command Line Tools** → **Command Line Processor**.
   b. Connect to the database using:

      ```
      connect to dbname user dbuser using dbpassword
      ```

      - *dbname* is the database name.
      - *dbuser* is the database user.
      - *dbpassword* is the password for the database user.

   c. Register a new View command by entering the following statement:

      ```
      insert into viewreg(VIEWNAME, DEVICEFMT_ID, STOREENT_ID, INTERFACENAME,
      CLASSNAME, PROPERTIES, DESCRIPTION, HTTPS, LASTUPDATE) values
      ('RegisteredCustomersView', -1, 0,
      'com.ibm.commerce.tools.command.ToolsForwardViewCommand',
      'com.ibm.commerce.tools.command.ToolsForwardViewCommandImpl',
      'docname=tools/catalog/RegisteredCustomers.jsp', 'Used to display
      statistics for Registered Customers', 0, null)
      ```

d. Commit the changes by entering the following statement:

```
commit
```

Figure 9-53 Registering the View Command in the database

e. Close the Command Line Processor window.

5. Copy **RegisteredCustomersViewPolicy.xml** from 018Samples\Customization 6.9 Custom Accelerator Menus\ to the *WC_installdir*\xml\policies\xml directory.
6. Change to folder *WC_installdir*\bin.
7. Run the following command:

```
acpload db_name db_user db_user_password RegisteredCustomersViewPolicy.xml
```

8. Restart the commerce and the payment servers according to the instructions in “Starting and stopping servers” on page 810.

9.9.4 Usage

After the customization has been deployed successfully, the custom menu option will be displayed when the Seller manages a store based on the eSite Store Front Asset store. If the Seller selects this menu option, the number of registered customers who logged onto the site during the past seven days will be displayed on the Registered Customers page. To verify this, follow these steps:

1. Log onto the eSite Hub as the Seller.
2. Select **manage store**. This displays a new menu option called Custom.
3. Select **Custom** → **Registered Customers**.

4. The new Registered Customers page is displayed containing a message indicating the number of registered customers who logged onto the site during the past seven days (Figure 9-54).

Figure 9-54 Verifying that the custom menu and page are displayed

9.10 Custom registration menus

This section lists the steps required to deploy and use custom registration menus for the eSite Hub.

9.10.1 Overview

In “Custom registration menus” on page 163, we demonstrated how to develop custom registration menus for the eSite Hub. A specific example was developed to modify the User and Organization registration menus and the pages that they link to. Deployment was carried out on a Windows 2000 PC using WebSphere Commerce Studio and a local DB2 database.

This section demonstrates how to deploy that customization to a Windows 2000 Server using WebSphere Commerce Version 5.5 Business Edition and a DB2 database. We then demonstrate how to use the customization by loading the new eSite Hub logon page.

9.10.2 Prerequisites

This section assumes that WebSphere Commerce is installed and configured as per Appendix A, “WebSphere Commerce implementation” on page 773. It also assumes that the eSite SAR file has been published successfully as per Chapter 8, “Publish the SAR and create stores” on page 225.

All steps are intended to enable an administrator to re-create the customization within the WebSphere Commerce installation. A basic understanding of WebSphere Commerce administration is assumed.

9.10.3 Deployment

1. Copy **b2cHostingChannel_en_US.properties** from 7018Samples\Customization 6.10 Custom Registration Menus\ to the *WAS_installdir*\installedApps*node_name*\<WC_instance>.ear\Stores.war\WEB-INF\classes\eSiteHub\ directory.
2. Copy **CachedNavigation.jsp** from 7018Samples\Customization 6.10 Custom Registration Menus\ to the *WAS_installdir*\installedApps*node_name*\<WC_instance>.ear\Stores.war\eSiteHub\include directory.
3. Open the file **CachedNavigation.jsp** and uncomment the following lines:

```
//acceleratorURL.append(":");
//acceleratorURL.append(toolsPort);
//orgAdminConsoleURL.append(":");
//orgAdminConsoleURL.append(orgadminPort);
```

4. Copy **OrgRegistrationAddForm.jsp** from 7018Samples\Customization 6.10 Custom Registration Menus\ to the *WAS_installdir*\installedApps*node_name*\<WC_instance>.ear\Stores.war\eSiteHub directory.
5. Restart the commerce and the payment servers according to the instructions in “Starting and stopping servers” on page 810.
6. Copy **UserRegistrationAddForm.jsp** from 7018Samples\Customization 6.10 Custom Registration Menus\ to the *WAS_installdir*\installedApps*node_name*\<WC_instance>.ear\Stores.war\eSiteHub directory.

9.10.4 Usage

After the customization has been deployed successfully, the custom menus will be available on the eSite Hub logon page. To verify this, browse to the page.

Figure 9-55 Verifying the new menus on the eSite Hub Logon page

After the customization has been deployed successfully, the User Registration page will contain a pull-down list of organizations instead of a text entry field. To verify this, browse to the page.

Figure 9-56 Verifying that the User Registration page displays a pull-down list

After the customization has been deployed successfully, the Organization Registration page will no longer contain a User Registration button. To verify this, browse to the page.

Figure 9-57 Verify that the page does not contain a User Registration button

10

Manage the site

In this chapter, we have highlighted the tasks commonly performed by the site administrator. The site administrator role discussed in this book is synonymous with the system administrator role found in many companies.

The site administrator has access to all menus and can perform all related actions. This chapter focuses on the responsibilities that are unique to the site administrator role. While much of what the site administrator does is not unique to a hosting environment, we have attempted to identify those activities that are specific to hosting. Some functions of the typical site administrator, such as creating stores, has been separated into the role of hub administrator for the purposes of this book. A discussion of the hub administrator role can be found in Chapter 11, “Manage the hub” on page 417.

This chapter contains two major sections:

- Tools
- Tasks

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10.1 Tools

This section describes several of the major tools that are provided to the site administrator in order to do the job. While this is not an all-inclusive list, it is an attempt to fill the gaps found in other documentation. For additional information, see the *IBM WebSphere Commerce Administration Guide V5.5* that is shipped with the product. This section discusses the administration functionality provided in the following tools:

- Configuration Manager
- Administration Console
- eSite Hub

10.1.1 Configuration Manager

In this section, we discuss what the Configuration Manager is, how to get to it, and what it enables you to do.

To launch the Configuration Manager on Windows:

1. Ensure that the IBM WC Configuration Manager server process is running by selecting **Start** → **Settings** → **Control Panel** → **Administrative Tools** → **Services**. The IBM WC Configuration Manager service status should be Started.

   If it is not, right-click it and select **Start** from the context menu.

2. Select **Start** → **Programs** → **IBM WebSphere Commerce** → **Configuration** to display the Configuration manager logon page.

To create, configure, or delete a WebSphere Commerce instance, you should use the Configuration Manager. This tool is designed to enable you to configure your instance while preventing you from entering invalid values.

The Configuration Manager should be used to modify most WebSphere Commerce configuration parameters, but some parameters must be changed through the WebSphere Commerce Configuration File (*wc_instance_name*.xml). Refer to an individual component's documentation in the online help to determine whether it should be configured through the Configuration Manager or through the WebSphere Commerce configuration file (*wc_instance_name*.xml).

Database update tool

The database update tool updates the merchant key. Updating the merchant key re-encrypts all encrypted data (for example, passwords and credit card numbers) with the new merchant key in a WebSphere Commerce database for a given WebSphere Commerce instance.

Review the *WebSphere Commerce Security Guide* before changing the merchant key.

To start the database update tool:

1. Open the Configuration Manager.
2. Expand the host name.
3. Expand **Commerce**.
4. Expand **Instance List**.
5. Expand the instance name for which you want to run the database update tool.
6. Expand **Instance Properties**.
7. Right-click **Database** and select **Run Database Update Tool**.
8. After the database tool is complete, close the Configuration Manager.

Enabling auctions

Before you can run auctions on your store or run the auctions reference application, you must first enable auctions with WebSphere Commerce.

To enable auctions:

1. Open the Configuration Manager.
2. On the left side of the Configuration Manager screen, expand **WebSphere Commerce**, then **hostname**, **Instance List**, and your **instance name**.
3. Click the **Auctions** component.
4. On the right side of the Configuration Manager screen, check **Enable**.
5. In the SMTP Server field, enter the name of your SMTP server.
6. In the Reply Email field, enter the e-mail address of the person who will be sending auction notification messages and receiving responses to them. Typically, this person will be a Site Administrator.
7. Click **Apply**.

   A message displays, explaining that the Auctions component was configured successfully.
8. Close the Configuration Manager.
9. Start and stop the application servers according to the instructions in “Starting and stopping servers” on page 810.

10.1.2 Administration Console

In this section, we discuss what the Administration Console is, how to get to it, and what it enables you to do.

Access

Start the Administration Console by doing the following:

1. Access the following URL in your browser:

   `https://host_name:8002/adminconsole`

   – *host_name* is the fully qualified TCP/IP name of your WebSphere Commerce Server.

2. From the Logon page, type your Administration Console logon user name and password and click **Log On**.

   If you are authorized to work with more than one store or language, the Administration Console Site/Store Selection page displays. If you are authorized to work with a single store and language, the Administration Console home page displays. Tasks that you are authorized to perform display in the Administration Console home page.

3. From the Administration Console Site/Store selection page, select the site radio button and click **OK**.

   The Site Administration Console home page displays.

> **Note:** We do not recommend using the Store Administration page in an eSite implementation. The functionality provided on this page is best performed using the **manage store** function from the eSite Hub menu. This is discussed in later chapters.

Figure 10-1 Site Administration Console

The Site Administration Console provides several menus that contain the bulk of the functionality required to perform the site administrator role:

- Security
  - Account policy
  - Password policy
  - Account lockout policy
  - Security checker
- Configuration
  - Transports
  - Message types
  - Component configuration
  - Scheduler
  - Registry
  - View unsent messages
  - View archived messages
  - Product information
- Payments
  - Payments: Users
  - Payments: Merchant settings
  - Payments: Payment settings
  - Payments: Cassettes

- Store Archives
  - Store Archives: Publish
  - Store Archives: Publish Status

Account policy

This page enables you to set up an account policy. An account policy is used to define the password and account lockout policies for a particular type of user account. The default account policies include:

- Shoppers
- Administrators

Figure 10-2 depicts the Account policy list.

Figure 10-2 Account policy

> **Note:** When adding a new account policy, you must first add any required password and account lockout policies.

To create a new account policy:

1. From the **Security** menu, select **Account Policy**.
2. Click **New**.
3. Enter a unique name for the new account policy.
4. Select an existing Password policy from the pull-down list.
5. Select an existing Account lockout policy from the pull-down list.
6. Click **OK**.

To change an existing account policy:

1. From the **Security** menu, select **Account Policy**.
2. Select the check box next to the account policy to be changed.
3. Click **Change**.

4. Make the required changes.
5. Click **OK**.

To delete an existing account policy:

1. From the **Security** menu, select **Account Policy**.
2. Select the check box next to the account policy to be deleted.
3. Click **Delete**.

> **Note:** You cannot delete an account policy that is in use. You must first change all of the user accounts to use a new account policy and then delete the old account policy.

Password policy

This page enables you to control a user's password selection in order to define the characteristics of the password to ensure that it complies with the security policy of your site. It lists all existing password policies including the ones supplied by default:

- Shoppers
- Administrators

A password policy defines the attributes to which an entered password must comply. The password policy enforces the following conditions:

- Whether the user ID and password can match.
- Maximum occurrence of consecutive characters.
- Maximum instances of any character.
- Maximum lifetime of the password.
- Minimum number of alphabetic characters.
- Minimum number of numeric characters.
- Minimum length of a password.
- Whether the user's previous password can be reused.

Figure 10-3 depicts the Password Policy list.

Figure 10-3 Password policy

To add a new password policy:

1. From the **Security** menu, select **Password Policy**.
2. Click **New**.
3. Enter a unique name for the new password policy.
4. Make any required changes to the default values supplied on the page.
5. Click **OK**.

To change an existing password policy:

1. From the **Security** menu, select **Password Policy**.
2. Select the check box next to the password policy to be changed.
3. Click **Change**.
4. Make any required changes.
5. Click **OK**.

To delete an existing password policy:

1. From the **Security** menu, select **Password Policy**.
2. Select the check box next to the password policy to be deleted.
3. Click **Delete**.

> **Note:** You cannot delete a password policy that is in use.

Account lockout policy

This page enables you to set up an account lockout policy for different user roles within WebSphere Commerce. An account lockout policy disables a user account if malicious actions are launched against it, in order to reduce possible compromising of the account. The page lists all existing account lockout policies, including the ones supplied by default:

- Shoppers
- Administrators

The account lockout policy enforces the following items:

- The account lockout threshold. This is the number of invalid logon attempts before the account is disabled.
- Consecutive unsuccessful login delay. This is the time period for which the user is not allowed to log on, after two failed logon attempts. The delay gets incremented by the configured time delay value (for example, 10 seconds) with every consecutive logon failure.

Figure 10-4 depicts the Account Lockout Policy list.

Figure 10-4 Account lockout policy

To add a new account lockout policy:

1. From the **Security** menu, select **Account Lockout Policy**.
2. Click **New**.
3. Enter a unique name for the new account lockout policy.
4. Make any required changes to the default values supplied on the page.
5. Click **OK**.

To change an existing account lockout policy:

1. From the **Security** menu, select **Account Lockout Policy**.
2. Select the check box next to the account lockout policy to be changed.
3. Click **Change**.
4. Make any desired changes.
5. Click **OK**.

To delete an existing account lockout policy:

1. From the **Security** menu, select **Account Lockout Policy**.
2. Select the check box next to the account lockout policy to be deleted.
3. Click **Delete**.

Note: You cannot delete an account lockout policy that is in use.

Security checker

This page (Figure 10-5 on page 348) enables you to manually launch a security program that checks and deletes temporary WebSphere Commerce files that may contain potential security exposures. Normally the security check program runs as a scheduled job and is set to run once a month by default.

Figure 10-5 Security checker

To invoke the security check program:

1. From the **Security** menu, select **Security Checker**.
2. Click the **Launch** button.
3. After the program has run, click **OK** to close the page. You can view the results of the security check program in the file:

   `WC_installdir/instance/wc_instance_name/logs/sec_check.log`

Transports

This page displays the name, description and status of each configured transport method for the site.

> **Note:** Although there is an Add button, you cannot add a transport because all supported transports are already listed by default.

Figure 10-6 depicts the transport configuration page.

Figure 10-6 Transport Configuration

To configure an existing transport adapter:

1. From the **Configuration** menu, select **Transports**.
2. Select the check box next to the transport to be configured.
3. Click **Configure**.
4. Type the values to be used by the transport method.
5. Click **OK** to accept the changes, or click **Cancel** to return to the Transport Configuration page.

This list shows the parameters used for each of the available transport adapters:

- E-mail Adapter

Host Specify the fully qualified host name. This field accepts up to 50 alphanumeric characters. This field is empty by default. To enable the transport, it must be filled in with an active SMTP server. This can be the host name or IP address.

Port Specify the port number of the server. The default value is `25`.

Protocol Specify the protocol to use. The default value is `smtp`. This field accepts up to 50 alphanumeric characters.

SendPartial Specify true or false. The default value is `false`. If true, the e-mail is sent to valid addresses in the Recipient field, even if the SMTP server detected problems with certain addresses in the same field. If false, the e-mail is not sent until all errors detected by the SMTP server are resolved. If member IDs are included as the target recipient list by the command, those without primary e-mail addresses will be ignored.

Retry Duration Specify the period in hours in which you wish to retry the connection to the server without decrementing the retry count. If the connection to the server is lost temporarily, this enables the system to retry the connection within a specified time period. After the period is expired, the retries count will be decremented as usual.

- File Adapter

Location Specify the full path, local to the WebSphere Commerce Server. This field accepts up to 50 single-byte alphanumeric characters.

File Name Specify the full file name, local to the WebSphere Commerce Server. This field accepts up to 50 single-byte alphanumeric characters.

Mode Specify either 0 for append or 1 for overwrite.

- Adapter for WebSphere MQ

Factory Specify the JMS name of the queue connection factory. This name must be the same as a connection factory defined using the WebSphere Application Server V5.0 Administrative Console. The default name is JMSQueueConnectionFactory.

Inbound Queue Specify the JMS name of the inbound queue that is used to receive responses from outbound messages. This name must be the same as an inbound queue defined using the WebSphere Application Server V5.0 Administrative Console. The default name is JMSInboundQueue.

Error Queue Specify the JMS name of the error queue in which messages that could not be processed are placed. This name must be the same as a queue defined using the WebSphere Application Server V5.0 Administrative Console. The default name is JMSErrorQueue.

Outbound Queue Specify the JMS name of the outbound queue, in which the outbound messages are placed. This name must be the same as an outbound queue defined using the WebSphere Application Server V5.0 Administrative Console. The default name is JMSOutboundQueue.

- Adapter for CrossWorlds®

User Name	Specify the user name for the system.
Ior File	Specify the name and location of the .ior file.

- Sample Adapter

User Name	Specify the user name for the connector. By default, this is userName.
Password	Specify the password for the connector. By default, this is password.

To activate a transport currently in Inactive status:

1. From the **Configuration** menu, select **Transports**.
2. Select the check box next to the inactive transport.
3. Click **Change Status**.

To deactivate a transport currently in Active status:

1. From the **Configuration** menu, select **Transports**.
2. Select the check box next to the active transport.
3. Click **Change Status**.

Message types

This page displays messages that have been configured for the site. Messages are displayed by message type, message severity, and transportation method.

Figure 10-7 on page 352 depicts the Message Configuration page.

Message Type Configuration

Page Number 1 Go

20 items

First 1 of 2 Next Last

Message Type	Message Severity	Transport To Use
Description of an error condition occuring in WebSphere Commerce	0 - 0	E-mail
Message for a authorized order	0 - 0	E-mail
Message for a received order	0 - 0	E-mail
Message for a rejected order	0 - 0	E-mail
Notification message for a canceled order	0 - 0	E-mail
Notification message for password reset	0 - 0	E-mail
A broadcast message	0 - 0	E-mail
Outbound message for WebSphere Commerce Legacy Order Create	0 - 0	WebSphere MQ
Message for notifying the customer of an order release manifestation	0 - 0	E-mail
Message to notify approvers	0 - 0	E-mail
An Invoice Message	0 - 0	E-mail
Notification message of the order status	0 - 0	E-mail
Outbound message for WebSphere Commerce XML Order Create	0 - 0	WebSphere MQ
Notification message for saving coupons	0 - 0	E-mail
RFQ Submit Message	0 - 0	E-mail

New
Change
Delete

Figure 10-7 Message type configuration

To add a new message type to the site:

1. From the **Configuration** menu, select **Message Types**.
2. Click **New**.
3. Complete the Message Transport Assignment page:
   a. Select the Message Type from the pull-down list.
   b. Enter 0, 0 in Message Severity.
   c. Select **Transport** from the pull-down list.
   d. Select **Device Format** from the pull-down list. (Most of the time, you will use **Standard Device Format**).
   e. Click the check box next to **Archive Message after sent** if you want to save the sent messages.
4. Click **Next**.
5. Complete the required fields on the page.

> **Note:** For e-mails, you must enter an actual e-mail address in the Sender and Recipient fields. The CC, BCC, and Reply To fields are optional. If an e-mail address is entered, it must be valid.

6. Click **Finish**.

To change an existing message type on the site:

1. From the **Configuration** menu, select **Message Types**.
2. Select the check box next to the message type to change.
3. Click **Change**.
4. Make any needed changes and click **Next**.
5. Make any needed changes and click **Finish**.

To delete an existing message type from the site:

1. From the **Configuration** menu, select **Message Types**.
2. Select the check box next to the message type to change.
3. Click **Delete**. A confirmation dialog box will be displayed.
4. Click **OK** to confirm.

Component configuration

This page enables you to enable or disable WebSphere Commerce components. The page consists of a list of currently enabled components, a list of currently disabled components, and several control buttons.

Figure 10-8 on page 354 depicts the Component Configuration page.

Figure 10-8 Component configuration

To enable a currently disabled component:

1. From the **Configuration** menu, select **Component Configuration**.
2. Select the component to be enabled from the Available Components list.
3. Click **Add**.
4. When you have made all of your changes, click **OK**.

To disable a currently enabled component:

1. From the **Configuration** menu, select **Component Configuration**.
2. Select the component to be disabled from the Selected Components list.
3. Click **Remove**.
4. When you have made all of your changes, click **OK**.

Note: Selecting **Add All** moves all entries from the Available Components list to the Selected Components list. **Remove All** moves all entries from the Selected Components list to the Available Components list.

Scheduler

This page lists the status of jobs currently scheduled to run for your site. By default, the rows are sorted alphabetically by command name. The sort sequence can be changed by clicking on the desired column in the list header. The available columns include:

Command The name of the command that executes for this job.

State The current status of the job: running, completed, or inactive.

Status The result of the job: successful or failed.

Start Date The date and time the job started running. If the job has not yet run, this field is empty.

Finished The date and time the job finished running. If the job has not yet run, this field is empty.

Application Type The type of application used to run the job.

Scheduler Status Display

Page Number 1 Go

1553 items

First 1 of 104 Next Last

Date range: 1/2/04 12:00 AM

Command	State	Status	Start date	Finished	Application Type
ExecuteSpecifiedCommandForHostedStores	Complete	Successful	1/2/04 12:00 AM	1/2/04 12:00 AM	
ExecuteSpecifiedCommandForHostedStores	Complete	Successful	1/2/04 12:00 AM	1/2/04 12:00 AM	
ExecuteSpecifiedCommandForHostedStores	Complete	Successful	1/2/04 12:00 AM	1/2/04 12:00 AM	
ExecuteSpecifiedCommandForHostedStores	Complete	Successful	1/2/04 12:00 AM	1/2/04 12:00 AM	
ExecuteSpecifiedCommandForHostedStores	Complete	Successful	1/2/04 12:00 AM	1/2/04 12:00 AM	
ExecuteSpecifiedCommandForHostedStores	Failed	Failed	1/2/04 12:00 AM	1/2/04 12:00 AM	
ReportsNotify	Complete	Successful	1/2/04 12:00 AM	1/2/04 12:00 AM	
CheckForBouncedEmail	Complete	Successful	1/2/04 12:00 AM	1/2/04 12:00 AM	
PaySynchronizePM	Complete	Successful	1/2/04 12:04 AM	1/2/04 12:04 AM	
SendTransactedMsg	Complete	Successful	1/2/04 12:04 AM	1/2/04 12:04 AM	
CloseAllExpiredRFQs	Complete	Successful	1/2/04 12:04 AM	1/2/04 12:04 AM	
RFQMarkForDelete	Complete	Successful	1/2/04 12:04 AM	1/2/04 12:04 AM	
RFQNotificationClosedMonitor	Complete	Successful	1/2/04 12:04 AM	1/2/04 12:04 AM	
RFQActivateAllDue	Complete	Successful	1/2/04 12:04 AM	1/2/04 12:04 AM	
RFQNotificationSubmittedMonitor	Complete	Successful	1/2/04 12:04 AM	1/2/04 12:04 AM	

Date Range
New
New Broadcast
Change
Delete
Remove Record
Remove All Records
Refresh

Figure 10-9 Scheduler status display

To change the date range for the Scheduler Status Display:

1. From the **Configuration** Menu, select **Scheduler**.
2. Click **Date Range**.
3. Enter a start date and, optionally, enter a start time. If a start time is not entered, 12:00 AM will be used.

4. Enter an end date and, optionally, enter an end time. If an end time is not entered, 12:00 PM will be used.
5. Click **Display Results**.

To refresh the current display, click **Refresh** on the Scheduler Status display page.

Create a new scheduled job

1. From the **Configuration** menu, select **Scheduler**.
2. Click **New**.
3. Complete the job parameters based on the following definitions:

Job Command	Select the URL-based command that you want to run.
Job Parameters	The queryString of the command that is to be run. All special characters, such as &, =, /, and ?, must be encoded using standard HTML coding. If you use the form provided, encoding will be done for you.
Start date	The date this job should start running.
Start time	The time this job should start running. The time must be entered in the 24-hour-clock format.
Associated user	The user on whose behalf this job is run. By default, the user ID of the current user is entered in this field. It may be replaced by typing in another user ID. This parameter is stored in the LOGONID column of the USERREG table.
Allowed host	The name of the host that is allowed to run this job. If this parameter is omitted, the job can be run by any host. This parameter is needed only if the scheduler is running on multiple hosts. The host name should be in the form: name.domain.
Schedule interval	The number of seconds between successive runs of this job. If this parameter is omitted, the job is run only once.
Job attempts	The number of times the scheduler retries the job if it fails. Use this parameter together with the Seconds to retry parameter. Both parameters must be present to re-try the job.
Seconds to retry	The number of seconds before a failed job is retried. Use this parameter together with the Job Attempts parameter. Both parameters must be present to re-try a job.

Scheduler policy Specifies the policy to be used by the scheduler when the job has failed to run. Two possible values are defined: 0 - The job is run only once and the next run is scheduled for the future; this is the default. 1 - The job is run as many times as necessary to recover all missed runs.

Job priority The number associated with the priority of the job. This value is inserted into the SCCPRIORITY column of the SCHCONFIG table. A greater number indicates a higher-priority job.

Application type The application schedule pool that the job will be part of. The purpose of this parameter is to constrain resource-intensive jobs to a limited number of threads. The default application type is null.

4. Click **OK**.

Create a new broadcast job

1. From the **Configuration** menu, select **Scheduler**.
2. Click **New Broadcast**.
3. Complete the job parameters based on the following definitions.

Job Command Select the URL-based command that you want to run.

Job Parameters The queryString of the command that is to be run. All special characters, such as &, =, /, and ?, must be encoded using standard HTML coding. If you use the form provided, encoding will be done for you.

Associated user The user on whose behalf this job is run. By default, the user ID of the current user is entered in this field. It may be replaced by typing in another user ID. This parameter is stored in the LOGONID column of the USERREG table.

4. Click **OK**.

Change a selected job

To change a selected job, the job state must be Inactive and the Status must be empty.

1. From the **Configuration** menu, select **Scheduler**.
2. Select the check box next to the job record to change.
3. Click **Change**.
4. Make any needed changes.

5. Click **OK**.

Delete a selected job

To delete a selected job, the job state must be Inactive and the Status must be empty.

1. From the **Configuration** menu, select **Scheduler**.
1. Select the check box next to the job record to delete.
2. Click **Delete**.
3. Click **OK** on the displayed dialog box.

Remove a record

Remove a selected job status record from the displayed list and the SCHSTATUS table. To record a job status record, the Status field must contain either Successful or Failed.

1. Select the check box next to the job status record to be removed.
2. Click **Remove Record**.
3. Click **OK** on the displayed dialog box.

Remove all records

Remove all job status records displayed in the list and the SCHSTATUS table.

1. Click **Remove All Records**.
2. Click **OK** on the displayed dialog box

> **Note:** This will take some time to complete.

Registry

The Registry Manager maintains a set of registries for caching WebSphere Commerce run-time data. If the data in the tables that are associated with a registry is changed, you will have to refresh that registry for the change to take effect. For example, if a new entry is added to the URLREG table, the UrlRegistry has to be refreshed. Otherwise, the WebSphere Commerce run-time environment will not recognize the new URL.

The Registry Manager can manage any registries registered to it, including customer-created registries. You can register a registry with the Registry Manager by defining a new registry under the registries node in the *wc_instance_name*.xml file.

To update registry components:

1. From the **Configuration** menu, click **Registry**. This displays a list of registry components for the site.
2. Do one of the following:
   - Select the check box for the registry component to update and click **Update**. The Registry window reloads, listing the status for the selected components as `Updating`.
   - Click **Update All** to update all of the listed Registry components. The Registry window reloads, listing the status for all components as `Updating`.
3. Click **Refresh** to reload the Registry window and check on the status of the components that you are updating. When updating is complete, the status column reads `Updated`.

Figure 10-10 Registry

View unsent messages

This page enables you to list unsent messages.

To display a list of unsent messages:

1. From the **Configuration** menu, select **View Unsent Messages**.

   The page shown in Figure 10-11 is displayed.

Figure 10-11 View unsent messages

2. Select a transport from the pull-down list.
3. Select the delivery status from the pull-down list.
4. Click **Search**.

   The Search Results - Unsent Messages list is displayed.

Message ID	Transport	Store ID	Retries
10538	E-mail	10051	0
10539	E-mail	10051	0
10570	E-mail	10051	0
10571	E-mail	10051	0
10576	E-mail	10051	0
10588	E-mail	10051	0
10590	E-mail	10051	0
11010	E-mail	10051	0
11013	E-mail	10051	0
11015	E-mail	10051	0
11019	E-mail	10051	0
11020	E-mail	10051	0
11025	E-mail	10051	0
11026	E-mail	10051	0
11027	E-mail	10051	0

Figure 10-12 Unsent messages search results

From this page, you have the following options:

To view the contents of a message listed on the page, simply click the Message ID of the message to be viewed.

Send

Select a message and click **Send** to send the selected message immediately.

Increment Retries

Select a message and click **Increment Retries** to increase the number of retries by 1. After incrementing it by 1, the job scheduler will attempt to send the messages when the next scheduled job, SendTransactedMsg, is invoked.

Delete

Select a message and click **Delete** to remove the selected message from the MSGSTORE table.

Search Again

Click **Search Again** to search again.

View archived messages

This page (Figure 10-13) enables you to view and resend messages that have been sent previously. In order for messages to be displayed here, you must have selected the **Archive Message** check box when defining the message type.

Figure 10-13 View archived messages

To view sent messages:

1. From the **Configuration** menu, select **View Archived Messages**.
2. Select the desired transport type from the pull-down list.
3. Click **Search**.

   The search results page is displayed as depicted in Figure 10-14 on page 362.

Figure 10-14 Archived messages search results

From this page, you have the following options:

To view the contents of a message listed on the page, simply click the Message ID of the message to be viewed.

Send

Select a message and click **Send** to send the selected message immediately.

Delete

Select a message and click **Delete** to remove the selected message from the MSGSTORE table.

Search Again

Click **Search Again** to search again.

Product information

The purpose of this function is to display the current revision levels of the major components of the WebSphere Commerce implementation:

- IBM WebSphere Commerce Server
- Database
- Application Server

It reads this information from a database table that should be updated at product installation and whenever a fix pack is installed. It was our experience that the information displayed on this page is not accurate. We installed Fix Pack 5.5.0.3 of WebSphere Commerce and this was not reflected in the display.

Do not rely on the information displayed on this page.

Note: Optionally, you can access all of the Payments functions from the WebSphere Commerce Payments User Interface by accessing this URL from a browser:

```
https://host_name:5433/webapp/PaymentManager/PaymentServerUI/Start
```

The descriptions in this book utilize the Administration Console.

The payments pages include three navigation icons (Figure 10-15).

Figure 10-15 Payments UI navigation

The first icon, from left to right, is used to refresh the existing page. The second icon enables you to return to the previous page, and the third icon displays help for the current page.

Payments: Users

To define Payments roles to existing WebSphere Commerce user accounts:

1. From the **Payments** menu, select **Users**. This opens the page shown in Figure 10-16.

Figure 10-16 User search

2. Enter search criteria.
3. Click **Search**.
4. The Users list page is displayed.

User name	Merchant	Role
seller1admin	Store1- B2C	Merchant Administrator
chris	Store1- B2C Store2- B2B	Merchant Administrator
hub-orgadmin	Store1- B2C Store2- B2B	Merchant Administrator
seller2admin	Store2- B2B	Merchant Administrator
seller3admin	Store3- B2B	Merchant Administrator
hub-admin	-	Payments Administrator
walter	-	Payments Administrator
wcsadmin	-	Payments Administrator
channeladmin	-	No WebSphere Commerce Payments access
dave	-	No WebSphere Commerce Payments access
greg	-	No WebSphere Commerce Payments access
greg1	-	No WebSphere Commerce Payments access
greg2	-	No WebSphere Commerce Payments access
greg3	-	No WebSphere Commerce Payments access
khalyl	-	No WebSphere Commerce Payments access
sample	-	No WebSphere Commerce Payments access

Figure 10-17 Payments users

5. Click the link for the selected user to change their role.
6. If the user will be assigned to the Payments Administrator role, do not select any merchants; otherwise, select one or more merchants from the pull-down list.
7. Select the appropriate Payments role for the user by clicking on a radio button.
8. Click **Update**.

Payments: Merchant settings

To maintain Payments Merchant settings:

1. From the **Payments** menu, select **Merchant Settings**.

   The page shown in Figure 10-18 is displayed.

Figure 10-18 Merchant settings

2. Click your Merchant name to edit the available settings for that merchant.

   The Merchant Settings page for your selected merchant displays. Use this page to change the authorized cassettes.

3. Select **Update** to accept the change. A message appears, indicating whether the update was successful. Select **Disable Merchant** to stop the merchant from accepting any more payments.

4. Click the **arrow** to return to the Merchant Settings page that contains all of the merchants.

To edit the merchant settings for the cassette:

1. Click the cassette icon in the OfflineCard column. The OfflineCard Cassette page displays.

2. Click **Merchant Cassette Settings** to start or stop the merchant cassette.

3. Click **Accounts** to create, update, or delete accounts.

4. Click the **arrow** to return to the desired page.

Payments: Payment settings

This page enables you to change the WebSphere Commerce Payments hostname or disable WebSphere Commerce Payments.

Payments: Cassettes

Use the Cassettes page to view which cassettes are installed and configured for WebSphere Commerce Payments.

Click a cassette icon to go to the cassette's settings page where you can do the following:

- Start or stop the cassette.
- Update the cassette's settings.

Store Archives: Publish

The main focus of this book is the utilization of the eSite SAR that is included with the Additional Materials. Instructions for publishing the eSite.sar file are included in "Publishing the eSite SAR" on page 229.

The only other SAR files that should be published in this environment are discussed in the customizations in "Customized store directory" on page 304 and "New asset store" on page 317.

Store Archives: Publish Status

See "Publishing the eSite SAR" on page 229 for details about the Publish Status functionality.

10.1.3 eSite Hub

In this section, we discuss what the eSite Hub is, how to get to it, and what it enables you to do.

Access

The eSite Hub is accessible by accessing the following default address in a browser:

```
http://host_name/webapp/wcs/stores/servlet/eSiteHub/index.jsp
```

Initially, only the site administrator that was defined during instance creation will be able to log onto the eSite Hub. Figure 10-19 on page 367 is a representation of the eSite Hub Logon page.

Figure 10-19 eSite Hub logon

registration

This option is provided for the self-registration process for buyer and seller organizations and administrators. Registrations must be approved by an authorized approver through the **manage organization** menu.

manage organization

This menu provides functionality to maintain users and organizations within a hosting environment. The functionality that is provided depends on the role of the user.

- Site Administrator
  - Access Management
    - Users
    - Organizations
    - Roles
    - Access Groups
    - Policies
    - Resource Groups
    - Action Groups
  - Approvals
    - Approval Requests
    - Find Approval Requests
- Seller Administrator (B2C or B2B)
  - Access Management
    - Users
    - Organizations

- Approvals
  - Approval Requests
  - Find Approval Requests

Figure 10-20 is an image of the manage organization menu after a user with the role of site administrator has logged on.

Figure 10-20 manage organization menu

Users

Use this list to view all users that belong to an organization within the site. User information provided on this page includes:

Logon ID	The user's store logon ID
Last Name	The user's last name
First Name	The user's first name
Organization	The name of the organization or organizational unit to which the user belongs

Role	The user roles assigned to the user, such as Buyer Administrator or Buyer Approver

To create a user:

1. From the **Access Management** menu, click **Users**.

   This displays a list of users for the site.
2. From the list, click **New** to add a new user.
3. The New User wizard launches, displaying the Details page first. Provide appropriate information for the fields and click **Next** to save each page. Click **Back** to return to the previous page, if necessary.
4. When you have completed all pages, click **Finish** on the Member Groups page to create the user and return to the list of users.

After you have created a user, you can select a role and member group for the user, as follows:

To select a role for the user:

1. From the list of users for the site, select the check box next to the user that you want to work with and click **Roles**. The Roles dialog opens.
2. From the Organization pull-down list, select the organization for which this user will play a role.
3. From the Role pull-down list, select the role for the user.
4. Click **Add**.

   The role and organization combination displays in the Selected roles list. If you make an error or want to remove a role, from the Selected roles list, select the role and organization combination that you want to remove and click **Remove**. The role and organization combination moves from the Selected roles list and the user is no longer assigned this role.
5. Click **OK** after you have defined all roles for the user.

To select a member group for the user:

1. From the list of users for the site, select the check box next to the organization that you want to work with and click **Member Groups**. The Member Groups dialog opens.
2. Select member groups for the user as follows:

   a. To assign the user a single member group, from the Available member groups list, select the group that you want to assign to the user and click **Add**. The group moves from the Available member groups list to the Selected member groups list. Repeat this step for all member groups that you want to assign to the user.

b. To assign to the user all member groups in the Available member groups list, click **Add All**. The roles move from the Available member groups list to the Selected member groups list.

c. If you make an error or want to remove a member group, select the role that you want to remove from the Selected member groups list and click **Remove**. The group moves to the Available member groups list. Repeat this step for all member groups that you want to remove from the user.

d. To remove all member groups in the Selected member groups list, click **Remove All**. The groups move from the Selected member groups list to the Available member groups list.

3. Click **OK** to define member groups for the user.

To find a user:

1. From the **Access Management** menu, click **Users**. This displays a list of users for the site.
2. Click **Find**. A search dialog opens.
3. Provide any of the following user information. At least one field must be specified.

   a. In the Last name field, type all or part of the user's last name.

   b. In the Roles pull-down list, select the user's role.

   c. In the Parent organization field, type all or part of the user's last name.

4. Click **Find**. The system performs a fuzzy search and displays a list of users that match the search criteria.

To change information about a user:

1. From the **Access Management** menu, click **Users**. This displays a list of users for the site.
2. Select the check box next to the user that you want to work with and click **Change**. The Change User notebook opens.
3. Update the fields as required and use the links on the left side to switch between each organization page.
4. Click **OK** to save the changes and close the page.

Organizations

Use this list to view all organizations and organizational units. The information that is displayed for each organization or organizational unit includes:

Name	The name of the organization or organizational unit. You can enter the name of any organization that you are authorized to manage.

Parent	The parent or top-level organization for this organization or organizational unit.
Status	Indicates whether the organization is in a locked or unlocked state.
Organization Type	Indicates whether this is an organization or organizational unit. An organization can include several organizational units.

Note: Locking an organization prevents only the users who belong to that organization from logging into the system. To prevent other users such as registered customers from accessing the resources owned by a locked organization, you should close or suspend the store before you lock the organization. In addition, the Logon command only checks the ancestors of a user, not the ancestors of the store to which the customer logs on. For information about closing or suspending stores, see “Hosted stores” on page 427.

Note: It is not recommended that you delete an organization. Deleting an organization will invalidate all things owned by that organization.

To create an organization or organizational unit for the site:

1. From the **Access Management** menu, click **Organizations**. This displays a list of organizations and organizational units for the site.
2. From the list, click **New** to add a new organization or organizational unit to the site.
3. The New Organization wizard launches, displaying the Details page first. Provide appropriate information for the fields and click **Next** to save each page. Click **Back** to return to the previous page, if necessary.
4. When you have completed all pages, click **Finish** on the Contact Information page to create the organization.

After you have created an organization or organizational unit, you can select approval types and roles for the organization or organizational unit.

To select approval types for the organization or organizational unit:

1. From the list of organizations for the site, select the check box next to the organization that you want to work with and click **Approvals**. The Select Approve Types dialog opens.
2. From the Approval types list, select the types of approval required for the organization, and click **Add**.

3. Click **OK** to define the approval types for the organization.

To select roles for the organization or organizational unit:

1. From the list of organizations for the site, select the check box next to the organization that you want to work with and click **Roles**. The Select Roles dialog opens.
2. Select roles for the organization as follows:
   a. To assign a single role: From the Available roles list, select the role that you want to assign to the organization and click **Add**. The role moves to the Selected roles list. Repeat this step for all roles that you want to assign to the organization.
   b. To assign all roles in the Available roles list, click **Add All**. The roles move from the Available roles list to the Selected roles list.
   c. If you make an error or want to remove a role, select the role that you want to remove from the Selected roles list and click **Remove**. The role moves to the Available roles list. Repeat this step for all roles that you want to remove from the organization.
   d. To remove all roles in the Selected roles list, click **Remove All**. The roles move from the Selected roles list to the Available roles list.
3. Click **OK** to define user roles for the organization.

To change the details of an organization, such as the name, description, business category, organization type, address, or contact information, do the following:

1. From the **Access Management** menu, click **Organizations**. This displays a list of organizations for the site.
2. Select the check box next to the organization that you want to work with and click **Change**. The Change Organization notebook opens.
3. Update the fields as required and use the links on the left side to switch between each organization page.
4. Click **OK** to save the changes and close the page.

To find an organization:

1. From the **Access Management** menu, select **Organizations**.
2. Click **Find** to open the Find Organizations page.
3. Type the name of the organization in the Name field.
4. Type the name of the parent organization in the Parent Organization field. You can enter a partial name and then click Find to get the full name of the parent organization.

5. Click **Find** at the bottom of the page. The Organizations page displays with a list of organizations that meet the search criteria.

Roles

This page lists all of the roles that are currently defined at the site. To create a site-level user role:

1. From the **Access Management** menu, click **Roles**. This displays a list of site-level user roles.
2. From the list, click **New** to add a new role to the site. The Define Role dialog opens.
3. In the Name field, type the name of the role, such as Site Administrator or Marketing Manager.
4. In the Description field, type a description of the duties of the role. For example, for the Site Administrator role, this may be `Site-wide administration and maintenance`.
5. Click **OK** to create the new role.

Access Groups

Use this list to view all access groups within the site. An access group is a group of members defined specifically for access control purposes.

Policies

You must have Site Administrator authority to view this page.

From this page you can create a new policy, change an existing policy, or delete policies. You can view the detailed information for a policy from this page.

Resource Groups

You must have Site Administrator authority to view this page.

From this page you can create a new resource group, change an existing resource group or delete resource groups.

A resource group identifies a set of related resources. A resource group can include business objects such as a contract or set of related commands. In access control, resource groups specify the resources to which the access control policy authorizes access.

Action Groups

You must have Site Administrator authority to view this page.

From this page you can create a new action group, change an existing action group, or delete action groups.

Actions are sets of operations that users can perform on resources. Actions typically map to WebSphere Commerce commands. Action groups are groups of related actions.

Approval Requests

Approvers and administrators with the appropriate access can view approval requests and make approval decisions.

To view approval requests:

1. From the **Approvals** menu, click **Approval Requests**.

   Restriction: If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

   This page contains the following information for each request:

ID	A unique identification code for the request
Submitter	The logon ID or other unique identifier for the user who initiated the approval request
Process	The name of the business process for which approval has been requested
Status	Column that indicates whether an approval request is pending, has been approved, or has been rejected
Submitted on	The date and time of submission

Approvers and administrators with the appropriate access can make approval decisions on two different pages: Approval Requests or Summary. If you prefer to have the request details in front of you before indicating your decision, you may prefer to work from the Summary page.

To make a decision from the Approval Requests page:

1. From the **Approvals** menu, click **Approval Requests**.

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

2. Select the check box for the request you are working on.

3. Click **Approve** to approve the request or **Reject** to reject it. The requests that have been approved or rejected will no longer appear on the list. A message box indicates whether the approval or rejection attempt was successful.

To make a decision from the Summary page:

1. From the **Approvals** menu, click Approval Requests.

   The Approval Requests page displays. If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.
2. Select the check box for the request you are working on.
3. Click **Summary**. The Summary page displays.
4. After reviewing the details, click **Approve** to approve the request or **Reject** to reject it.

   A message box indicates whether the approval or rejection attempt was successful. The Approval Requests page displays, showing the updated status for the request you are working on.

Find Approval Requests

To search for a specific request or group of requests:

1. From the **Approvals** menu, click **Find Approval Requests**.

   The Find Approval Requests dialog displays. If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.
2. Specify the criteria appropriate to your search:

Request Number	If you are searching for a specific request, type its ID number, if known.
Process	If you want to retrieve all requests for a specific process, select it here.
Submitter	To retrieve all requests received from a specific submitter, select the submitter.
Approvers	(Displays to Site Administrators only) To retrieve all requests being reviewed by a specific approver, select the approver here.
Status	To retrieve all requests currently in a specific status, select the status.
Date	To retrieve all requests submitted on a specific date or within a specific period, indicate your criteria here.

3. Click **Find**. This displays the Search Results - Approval Requests page.

If only pending requests are retrieved, the page will be identical in appearance to the Approval Requests page, except that the View field will be disabled. If the search retrieves requests in an approved or rejected status, the page will include two additional columns: Approved On or Rejected On and Remarks. In addition, neither the Approve nor Reject buttons will be enabled.

create store

This option is used to create hosted stores based on one of the previously defined asset stores. For a complete description of the process see “Create stores” on page 246.

manage store

This function is used to manage hosted stores and asset stores as well as the hub itself.

For details on managing the hub as well as asset stores using the manage store option, see Chapter 11, “Manage the hub” on page 417.

For details on managing a B2C hosted store using the manage store option, see Chapter 12, “Manage a B2C store” on page 453.

For details on managing a B2B hosted store using the manage store option, see Chapter 13, “Manage a B2B store” on page 725.

10.2 Tasks

The previous section of this chapter provided an overview of several tools available to the site administrator. This section focuses on some specific tasks that a site administrator performs. The discussion of each task includes an overview of the task and then provides the steps required to complete the task.

This is not meant to be a complete list of all tasks that a site administrator is required to perform but merely a guide to completing some of the major tasks. The tasks discussed in this section include:

- Getting started
- Organization administration
- Payments administration
- Catalog Administration
- Monitor performance
- Dynamic Caching
- Database cleanup
- Logging and tracing

10.2.1 Getting started

Getting started consists of installing and configuring the product, publishing a SAR file and creating stores. In Appendix A, “WebSphere Commerce implementation” on page 773, we provide a detailed description of how we installed WebSphere Commerce V5.5 in order to write this book. The steps required to publish the SAR file and create stores is documented in Chapter 8, “Publish the SAR and create stores” on page 225.

10.2.2 Organization administration

This section starts with an overview of access control concepts within WebSphere Commerce and then provides a step-by-step process for completing several tasks that must be performed by a site administrator.

Access control concepts

WebSphere Commerce views access control as the process of verifying that users or applications have sufficient authority to access a resource. This section describes the details of several aspects of WebSphere Commerce access control.

Access control in WebSphere Commerce is accomplished using access control policies. An access control policy is a rule that describes which group of users can perform a set of actions on a set of resources. WebSphere Commerce provides a set of default access control policies. These default access control policies are specified in XML format and are designed to address many of the typical access control requirements that an e-commerce site needs. In order to understand the access control component of WebSphere Commerce, you must first understand the typical organizational hierarchy of an e-commerce site.

Organizational hierarchy

Users and organizational entities within the WebSphere Commerce member subsystem are organized into a hierarchy. This hierarchy emulates a typical organizational hierarchy, with entries for organizations and organizational units, and entries for users in the leaf nodes. The hierarchy includes an artificial organizational entity called a root organization at the top. All other organizational entities and users are descendants of this root organization. Under the root organization there can be one seller organization and several buyer organizations; all of these organizations can have one or more suborganizations under them. A Buyer Administrator or Seller Administrator is the head of an organization, and they are responsible for maintaining their organizations. On the seller organization side, each suborganization can have one or more stores within it. Store Administrators are responsible for maintaining the stores.

Root organization

The root organization is at the top of the organizational hierarchy. A Site Administrator has superuser access to perform any operation within WebSphere Commerce. The Site Administrator installs, configures, and maintains WebSphere Commerce and its associated software and hardware. This role typically controls access and authorization (that is, creating and assigning members to the appropriate role) and manages the Web site. The Site Administrator can assign roles to users and specify the organizations for which the user plays the role. The Site Administrator must assign a password to each administrator to ensure that only authorized parties can access confidential information. This provides a way to control key responsibilities, such as updating a catalog or approving a request for quotation (RFQ).

> **Note:** Users can play roles in organizations other than their parent organization.

In a WebSphere Commerce site, there is one seller organization. In a B2B site, there are also one or more buyer organizations. The Site Administrator may define both the access control policies of the seller organization (that owns the store) as well as the access control policies of each organization that buys from the store. In a B2C site, there are no buyer organizations. Business-to-consumer customers are modeled as members of the default organization.

Organizations (seller)

Both in B2B and B2C sites, the Site Administrator creates one top-level seller. Underneath this seller organization, other suborganizations or organization units can be created. Any of these sell-side organizational entities can own one or more stores. The Site Administrator then defines any special access control policies for a seller organization and assigns a Seller Administrator to manage that organization. The Seller Administrator registers users and assigns them different roles to fit the organization's business needs according to the access control policies pertaining to that organization.

The Seller Administrator's responsibilities are summarized as follows:

- Create suborganizations that can own stores. Optionally, define which processes within the organization require approval. (This step is only required in a B2B site.)
- Assign roles to the suborganizations.
- Create users.
- Assign roles to users.

Organizations (buyer)

In a B2B site, the Site Administrator creates one or more buyer organizations, depending on the business needs. The Site Administrator then defines any special access control policies for a buyer organization and assigns a Buyer Administrator to manage the buyer organization. The Buyer Administrator registers users and assigns them different roles to fit the organization's business needs, according to the access control policies pertaining to that organization.

The Buyer Administrator's responsibilities are summarized as follows:

- Create and administer the suborganizations within the buyer organization. Optionally, define which processes within the organization require approval. (This step is only required in a B2B site.)
- Assign roles to the suborganizations.
- Create users.
- Assign roles to users.

Note: The Site Administrator can modify and manage the access control policies of the buyer organization if appropriate.

Roles

As mentioned above, WebSphere Commerce provides default sets of roles. The Site Administrator must assign specific roles to every organization before assigning users to those roles. An organization can only take on roles that have been assigned to its parent organization. Similarly, a user can only take on roles that have been assigned to their parent organization.

All roles in WebSphere Commerce are tied to an organization. For example, a user plays the Product Manager role for Organization X. The parent organization of this user must also be assigned the Product Manger role for itself. The access control policies could then be set up such that this user can only perform product management operations within the context of Organization X and its suborganizations.

The default roles that come with WebSphere Commerce can be grouped into the following categories:

- Site operations
- Site and content development
- Marketing management
- Product management
- Sales management
- Logistics and operations management
- Organizational management

Site operations

The following technical operations roles are supported by WebSphere Commerce:

- Site Administrator

  The Site Administrator installs, configures, and maintains WebSphere Commerce and the associated software and hardware. The Administrator responds to system warnings, alerts, and errors, and diagnoses and resolves system problems. This role typically controls access and authorization (creating and assigning members to the appropriate role), manages the Web site, monitors performance, and manages load balancing tasks. The Site Administrator may also be responsible for establishing and maintaining several server configurations for different stages of development such as testing, staging, and production. This role also handles critical system backups and resolves performance problems.

- Store Administrator

  The Store Administrator manages the store assets, and updates and publishes changes to taxes, shipping, and store information. The Store Administrator can also manage the access control policies for the organization. The Store Administrator, usually the lead on the store development team, is the only role on the team with the authority to publish a store archive (the Site Administrator can also publish a store archive). The Store Administrator is usually Web-literate and has a thorough knowledge of the store's business procedures.

Site and content development

WebSphere Commerce supports the Store Developer site and content development role.

- Store Developer

  Store Developers create JavaServer Page (JSP) files and any necessary customized code, and can modify any of the standard functionality included with WebSphere Commerce. After a store archive has been created, Store Developers have the authority to make changes to it manually or by using the Store Profile notebook and Tax and Shipping notebooks. They do not have the authority to publish the store archive to the WebSphere Commerce Server.

Logistics and operations

WebSphere Commerce supports the following logistics and operations management roles:

- Logistics Manager

  (B2B) The Logistics Manager, sometimes called the Shipping Manager, manages and negotiates bulk freight or shipping from carriers to warehouse, and to individual customers. This role is responsible for ensuring that the company uses the best shippers at the best costs to meet company strategy. Shipping is an important aspect of customer service and may be a key success factor for the online business.

- Operations Manager

  (B2C) This role manages order processing, ensuring that orders are properly fulfilled, payment is received, and orders are shipped. The Operations Manager can search for customer orders, view details, manage order information, and create and edit returns.

- Receiver

  The Receiver receives inventory at the fulfillment center, tracks expected inventory records and ad hoc receipts for ordered products, and receives returned products as a result of customer returns.

- Returns Administrator

  The Returns Administrator manages the disposition of returned products:

  - Lists returns
  - Lists returned products
  - Dispositions returned products

- Pick Packer

  The Pick Packer picks products from fulfillment centers and packs the products for shipping to customers. The Pick Packer also manages pick tickets and packing slips, which are used to confirm shipment of products during order fulfillment.

Product management

The following product management roles are supported by WebSphere Commerce:

- Buyer (seller-side)

  The buyer purchases merchandise for sale. The buyer handles relations with vendors and suppliers, and negotiates to obtain the desired product with favorable terms for such things as delivery and payment options. The buyer

may set prices. Inventory is managed by the buyer in order to determine the quantities to buy and ensure that stock is properly replenished.

- Category Manager

  The category manager manages the category hierarchy by creating, modifying, and deleting categories. The category hierarchy organizes products or services offered by the store. The Category Manager also manages products, expected inventory records, vendor information, inventory, and return reasons.

- Product Manager/Merchandising Manager

  The Business Merchandising or B2C Product Manager traces customer purchases, suggests discounts, and determines the best way to display, price, and sell products in the online store This manager performs all Category manager tasks and all Marketing manager tasks.

Sales management

The following business relationship management roles are supported by WebSphere Commerce:

- Sales Manager

  Sales managers acquire and retain customers, meet sales forecasts, provide incentives for increased customer business, contract management, set pricing terms, work with the Product Manager to establish inventory forecasts, and work with the Marketing Manager for promotions.

- Account Representative

  Account representatives work with individual accounts to build relationships and manage customer service issues. They may be authorized to change contract pricing, negotiate contracts, and analyze profitability by account category.

- Customer Service Supervisor

  This role has access to all customer service tasks. The Customer Service Supervisor manages customer inquiries (such as customer registration, orders, returns, and auctions) and has authority to complete tasks that cannot be accessed by a Customer Service Representative, such as approving system-denied returns records, and contacting customers regarding payment exceptions (such as credit card authorization failures).

- Customer Service Representative

  No matter how well an online business is designed to provide a customer with self-service features, there will be some types of customers or occasions that require personal contact. Most online businesses provide an e-mail address, fax, or telephone number for the customer to obtain direct service. It is the

responsibility of the customer service representative to handle all inquiries from the customer.

Marketing management

WebSphere Commerce supports the marketing management role of Marketing Manager.

The Marketing Manager communicates the market strategy and brand messages to the customers. This role monitors, analyzes, and understands customer behavior. In addition, the marketing manager creates or modifies customer profiles for targeted selling, and creates and manages campaigns and promotions. Campaign event planning can be handled by a team comprising the Merchant, Marketing Manager, and Merchandising Manager.

Organizational management

WebSphere Commerce supports the following organizational management roles:

- Seller Administrator

  The Seller Administrator manages the information for the selling organization. Seller administrators create and administer the suborganizations within the selling organization and the various users in the selling organization, including the assignment of the appropriate business roles.

- Buyer Administrator

  The Buyer Administrator manages the information for the buying organization. They create and administer the suborganizations within the buying organization and manage the various users including approving users as buyers. Other buy-side roles such as buyer approvers and additional buyer organization administrators may be created and managed.

- Buyer Approver

  A Buyer Approver is an individual in the buying organization who approves orders made by buyers before the order is submitted for purchase with the seller.

Access control policy

An access control policy authorizes a group of users to perform a set of actions on a set of resources within WebSphere Commerce. Unless authorized through one or more access control policies, users have no access to any functions of the system. To understand access control policies you must understand four main concepts: users, actions, resources, and relationships. Users are the people who use the system. Resources are objects in the system that are to be protected. Actions are the activities that users can perform on the resources. Relationships are optional conditions that exist between users and resources.

Elements of an access control policy

An access control policy consists of four elements:

Access group The group of users to which the policy applies.

Action Group A group of actions performed by the user on resources.

Resource group The resources controlled by the policy. A resource group may include business objects like contract or order, or a set of related commands such as all of the commands that users of a particular role can perform.

Relationship (Optional) Each resource class can have a set of relationships associated with it. Each resource can have a set of users that fulfill each relationship. For example, a policy could specify that only the creator of an order can modify it. In this case, the relationship would be creator, and it is between the user and the order resource.

Access control policy concepts

Access control policies grant users access to your site. Unless they are authorized to perform their responsibilities through one or more access control policies, users have no access to any of your site's functions.

Each access control policy takes the following form:

```
AccessControlPolicy [AccessGroup,ActionGroup,ResourceGroup,Relationship]
```

The elements in the access control policy specify that a user belonging to a specific access group is permitted to perform actions in the specified action group on resources belonging to the specified resource group, as long as the user satisfies a particular relationship with respect to the resource. The relationship is only specified when needed. For example, [AllUsers,UpdateDoc,doc,creator] specifies that all users can update a document if they are the creator of the document.

The following sections describe conceptual information and terminology associated with access control.

Member groups

The Member subsystem in WebSphere Commerce enables you to create member groups, which are groups of users categorized for various business reasons. The groupings can be used for many purposes, such as access control purposes, approval purposes, and marketing purposes such as calculating discounts and prices, and displaying products. A member group of type Access Group (-2) is for access control purposes, while a member group of type User

Group (-1) is for general use. A member group is associated with member group types in the MBRGRPUSG table.

Access groups: A member group of type Access Group (-2) is for grouping users for access control purposes. An access group is one element of an access control policy and is defined as a group of users defined specifically for access control purposes. The criteria for membership in an access group is usually based on roles, the organization to which the user belongs, or the user's registration status. For example, the access group called Buyer Administrators is a group whose users each play the role of Buyer Administrator.

WebSphere Commerce includes several default roles, and corresponding to each role is a default access group that implicitly references that role. Roles can be used as attributes to add users to an access group based on the type of activities they perform in the site. For example, by default there is a role called Seller Administrator and a corresponding access group called Seller Administrators. A Site Administrator uses the WebSphere Commerce Administration Console to create, maintain, and delete access groups for a site. A Buyer Administrator or a Seller Administrator uses the WebSphere Commerce Organization Administration Console to assign roles to users or to explicitly assign users to access groups. Access groups can be implicit, explicit, or both.

An *implicit access group* is defined by a set of criteria. Anyone who satisfies the criteria is a member of the group. The criteria are usually based on a user's roles, parent organization, or registration status. The implicit conditions that define membership in a member group are in the CONDITIONS column of the MBRGRP table. Using implicit access groups that specify the attributes of users makes it easy to authorize access to similar users without having to explicitly assign and unassign individual users. It also eliminates the need to update the members of a group when a user's attributes change. A simple criterion for an access group is to include everyone who has been assigned a specific role, regardless for which organization the user plays the role. A more complex criterion would be to specify that only users that play one of a possible set of roles for a particular organization would belong to the access group.

It is possible to explicitly add or remove a user from a member group. Both of these explicit specifications can be done using the MBRGRPMBR table. An *explicit access group* contains explicitly assigned users who may or may not share common attributes. This also enables you to exclude individuals who you want to exclude from an implicitly defined group, even though they satisfy the conditions for inclusion.

User groups: A member group of type User Group (-1) is a collection of users, defined by the merchant, who share a common interest. User groups are similar to clubs that are offered by large stores for their frequent or preferred customers. Being part of a user group can entitle customers to discounts or other bonuses

for purchasing products. For example, if market research shows that senior customers repeatedly purchase travel books and luggage, you can assign these customers to a member group called Seniors' Travel Club. Likewise, you can create a user group to reward frequent customers for their business.

Actions

Generally, an action is an operation that is performed on a resource. In role-based policies for controller commands, the action is Execute and the resource is the command being executed. In role-based policies for Views, the action is the name of the view, and the resource is com.ibm.commerce.commands.ViewCommand. For resource-level access control, actions typically map to WebSphere Commerce commands, and the resource is usually the remote interface of a protected EJB (Enterprise Java Bean). For example, the controller command com.ibm.commerce.order.commands.OrderCancelCmd operates on the com.ibm.commerce.order.objects.Order resource. The Display action is used to activate databean resources.

The WebSphere Commerce Administration Console can be used by a Site Administrator to associate existing actions with action groups but not for creating new actions. New actions can be created by defining them in an XML file and then loading them to the database. Actions are stored in the ACACTION table.

Action groups

Action groups are groups of related actions. An example of an action group is the AccountManage group that includes the following commands:

- com.ibm.commerce.account.commands.AccountDeleteCmd
- com.ibm.commerce.account.commands.AccountSaveCmd

Only the Site Administrator can create, update, and delete action groups. This can be done from the WebSphere Commerce Administration Console and through XML. Action groups are stored in the ACACTGRP table. Actions are associated with action groups in the ACACTACTGP table.

Resource category

Resource category refers to a class of resources that need to be protected by access control. Resources must implement the Protectable interface information. Resource categories are Java classes such as order, RFQ, and auction. Resources are the instances of these classes. For example, Auction1 created by Auction Administrator A is one resource; Auction2 created by Auction Administrator B is another resource. These two resources belong to the resource category: auction.

Resource categories are defined in the ACRESCGRY table and for convenience are sometimes referred to as resources. A Site Administrator can associate existing resource categories with resource groups using the WebSphere Commerce Administration Console. New resource categories can be created using XML.

Resources

Resources are any objects in the system that need to be protected. For example, RFQs, auctions, users, and orders are some of the resources in WebSphere Commerce that need to be protected. Each resource has an owner. The ownership of the resource is used to determine which access control policies apply to it. Access control policies have an owner, which is an organizational entity. A policy is only applied to resources that are owned by the same organizational entity that owns the policy. Policies that are owned by ancestor organizational entities are also applied to the resource.

Controller command resources: For role-based access control for controller commands, the policy is structured such that the Execute action is being performed on the controller command resource. These policies are intended to restrict the execution of controller commands to users with a specified role. The access group for these policies is usually those with a single role, such as Product Managers (those with the Product Manager role). The resource group would be the set of controller commands that a product manager can execute.

While enforcing role-based access control on a controller command, the owner of the command must be determined. This is done by calling the getOwner() method on the command if it has been implemented. Usually this method is not implemented, so WebSphere Commerce Runtime will evaluate it by doing one of the following:

- Use the organization that owns the store that is currently in the command context.
- If there is no store in the command context, use the Root Organization as the owner.

Data bean resources: Not all data beans require protection. Within the existing WebSphere Commerce application, data beans that require protection already implement the required access control. The question of what to protect comes into play when you create new data beans. Deciding which resources to protect depends on your application. A data bean should be protected (directly or indirectly) if the information to be displayed is not sufficiently protected by the role-based access control on the view that corresponds to the JSP that contains the data bean. If a data bean should be protected and can exist on its own, it should be directly protected. If the existence of a data bean depends on the existence of another data bean, then it should delegate to the other data bean for

protection. An example of a data bean that would be directly protected is the Order data bean. An example of a data bean that would be indirectly protected is the OrderItem data bean, as it cannot exist without an data bean. Refer to the WebSphere Commerce 5.5 Programmer's Guide for more information about how to protect the data bean resource.

Data resources: Data resources refer to business objects that can be manipulated, such as auctions, orders, RFQs, and users. These are usually protected at the enterprise bean level, but it is possible to protect any class, as long as it implements the Protectable interface. Data resources are protected using resource-level access control checks. The common way of doing this is by returning data resources in the getResources() method of a controller or task command. For more information, see the WebSphere Commerce 5.5 Programmer's Guide.

Resource groups

A resource group identifies a set of related resources. A resource group can include business objects such as a contract or a set of related commands. In access control, resource groups specify the resources to which the access control policy authorizes access.

Resource groups are defined in the ACRESGRP table. Site Administrators can manage resource groups and associate resources with resource groups using the WebSphere Commerce Administration Console, or by using XML.

Implicit resource groups: Implicit resource groups define resources that match a certain set of attributes. One of these attributes must be the Java class name. Other attributes may include status, store ID, price, and so on. For example, you could create an implicit resource group that includes all orders that have pending status (ORDERS.STATUS=P). Implicit resource groups are usually used for grouping resources that will be used in resource-level policies when the resources share a common attribute beyond the Java class name.

Implicit resource groups are defined using the CONDITIONS column of the ACRESGRP table. Simple implicit resource groups can be created using the WebSphere Commerce Administration Console. Increasingly complex groups can be created using XML.

Explicit resource groups: Explicit resource groups are specified by associating one or more resource categories to a resource group. This association is done in the ACRESGPRES table. Adding a resource category to a group explicitly, by listing its Java class name, enables you to group individual resources that might not necessarily share common attributes.

Relationships

Each resource may have some kind of relationship associated with it, and a set of members that fulfill each relationship. For example, all resources have a relationship of owner, which is fulfilled by the owner of the resource. Other relationships can include recipients of documents and the creator of an order. These resource relationships are important in determining who can perform certain actions on a particular instance of a resource. For example, the creator of a document may not be able to delete it, but perhaps an auditor may. Similarly, a reviewer may only be able to read and approve a document, but not forward it or perform other operations.

Relationships are stored in the ACRELATION table, and, optionally, are specified in an access control policy using the ACRELATION_ID column of the ACPOLICY table. When evaluating a policy that requires the fulfillment of a relationship between the user and the resource, the fulfills(Long Member, String relationship) method on the resource will be called to evaluate it. When comparing these relationships to relationship groups, these relationships are sometimes referred to as simple relationships.

Relationship groups: Access control policies can specify that a user must fulfill a particular relationship with respect to the resource being accessed, or they can specify that a user must fulfill the conditions specified in a relationship group. In most cases, a relationship is sufficient. However, if more complex relationships are needed, a relationship group can be used instead. A relationship group enables you to specify multiple relationships and also a chain of relationships. Both of these are done using a relationship chain construct. A relationship chain is a construct that can express a simple relationship (directly between a user and the resource), but can also be used to express a series of relationships between the user and the resource. For example, in order to express that a user must have a role in an organization that has a relationship (other than the owner relationship) with the resource, one must use a relationship group. In this example, there is a role relationship between the user and the organization, and a relationship between the organization and the resource.

Types of access control policies

There are two types of access control policies:

- Standard policies
- Template policies

Standard policies have a fixed owner. For example, if a standard policy is owned by Seller Organization, it will only apply to resources that are owned by Seller Organization and to resources that are owned by its descendant organizational entities, if they exist. The Root Organization is the ancestor organization of all

other organizations in WebSphere Commerce, so any policy that is owned by Root Organization (member ID = -2001), by definition applies to all resources in the site. Thus, standard policies that are owned by the Root Organization are sometimes referred to as Site-level policies.

Standard policies that are not owned by Root Organization are referred to as organizational level policies, because they do not apply site-wide but only to the resources that are owned by the policy owner or by any of its descendant organizational entities. A store administrator can manage the policies for his own organizational entity and its descendant organizational entities. Site administrators can modify all policies.

Template policies have a dynamic owner. Template policies apply dynamically to the organizational entity that owns the resource and its ancestor organizational entities. For example, consider that there are 10 organizations under Root Organization, and that each one wants to ensure that Store Administrators can modify only resources that are owned by the Organization for which they play their role.

There are two ways to set this up:

1. Have one template policy that will dynamically apply to any of the 10 organizations, depending on the resource that is being accessed. The criteria for the access group in the template policy can also be dynamic. For example, if a user is trying to access a resource owned by Organization 3, the owner of the template policy will dynamically change to Organization 3, and the access group will also dynamically scope itself to Organization 3 (that is, the user must play the role of Store Administrator for Organization 3).
2. Have 10 policies, each one owned by one of the 10 organizations. The access group for Organization 1 would specify that the user must play the Store Administrator role for Organization 1. The access group for Organization 2 would specify that the user must play the Store Administrator role for Organization 2, and so on.

The advantage of the first solution is that there is only one physical copy of the policy, but 10 logical copies. Template policies can be managed by a site administrator.

Overriding Template Policies: Another feature of template policies is that they can be overridden for specified organizational entities. Going back to the example above, if an eleventh organization entity is added to the WebSphere Commerce site, but this newest organizational entity does not want the above template policy to apply to it, there is a way of specifying this. An entry must be added to the ACORGPOL table, specifying the policy ID of the template policy, and the organizational entity ID of the eleventh organization. This can also be done through the WebSphere Commerce Administration Console, when a Store

Administrator deletes or updates a template policy in the context of particular organization.

When overriding a template policy for a descendant organization of Root Organization, the template policy will still apply at the Root Organization level. If the template policy is being overriden with a more restrictive policy at the descendant organization level, you should override the template policy at the Root Organization level as well. The only way to override a template policy for the Root Organization is through the database, by running the following SQL:

```
insert into ACORGPOL (acpolicy_id, member_id) values ( (select acpolicy_id
from ACPOLICY where policyname = 'policyToOverride'), -2001)
```

Levels of access control

There are two broad levels of access control in WebSphere Commerce: command level (also know as role-based) and resource level (also known as instance-level).

Command-level or role-based access control

Command-level or role-based access control is coarse access control. It determines "who can do what." With role-based access control, you can specify that all users of a particular role can execute certain commands. Consider this access control policy: Sellers can execute sellers commands, in which one of the sellers commands is the ModifyAuction command. Role-based access control is used for controller commands and views. This type of access control does not consider the data resource that the command acts on. It only determines whether the user is allowed to execute a particular controller command or view. This level of access control is mandatory and is enforced by the Runtime. All controller commands must be protected by command-level access control. In addition, any view that can be called directly, or that can be launched by a redirect from another command (in contrast to being launched by forwarding to the view) must be protected by command-level access control.

Command-level access control for controller commands: Whenever you run a controller command, an access control policy must exist that grants users the right to perform the Execute action on the command resource. The resource is the interface name of the controller command. The access group is usually geared to a single role. For example, you can specify that users with the Account Representative role can execute any command in the AccountRepresentativesCmdResourceGroup resource group.

Command Level Access Control for Views: When a view is called directly from the URL, or is the result of a redirect from a command, it must have an access control policy. Such a policy must have the viewname specified as an action, in the ACACTION table. This action must then be associated with an action group,

using the ACACTACTGP table. This action group must then be referenced in the appropriate command-level policy, in the ACPOLICY table.

Instance-level or resource-level access control

Instance-level or resource-level access control policies provide granular access control, determining who can do what command on which resources. Resource-level access control applies to commands and databeans.

Resource-level access control for commands: After the command-level access control checking has been completed, if access has been granted, then resource level checking is done in one of the following two cases:

- The command implements getResources(). This method specifies the instances of resources that need to be checked against the current action; where the command is now the action. The WebSphere Commerce Runtime will enforce that the current user has access to all of the resources specified by getResources(). By default, getResources() returns null, that is, it does not perform any resource-level checking.
- The command calls checkIsAllowed(Object Resource, String Action). In cases where the command writer does not know which resources need to be checked at the time that getResources() is called by the Runtime, the command can call this checkIsAllowed() method, as needed, to determine whether the current action and resource pair are authorized. The action is usually the interface name of the current command. When this method is called, if access is denied, an exception will be thrown:

```
ECApplicationException( ECMessage._ERR_USER_AUTHORITY, ..)
```

Resource-level access control for databeans: As explained above, views are protected by command-level policies, which are usually based on roles. For example, the command-level policy may specify that a Seller Administrator has access to a specific view. It is often necessary to further ensure that the databeans on the JSP are all related to the organization for which the user plays the Seller Administrator role. This is done by having all databeans that need protection (directly or indirectly) implement the Delegator interface. These databeans delegate to a primary (independent) databean, which in turn implements the Protectable interface. A primary databean would delegate to itself, and therefore implement both interfaces. Then, whenever a databean is invoked using the Databean Manager's activate() method, the WebSphere Commerce Runtime will ensure that there is a policy that grants the current user the authority to perform the Display action on the primary databean resource.

Tasks

For more about creating organizations and users and assigning roles, see "Create organizations and users" on page 241.

10.2.3 Payments administration

When the WebSphere Commerce instance is created, you define a site administrator. This site administrator is automatically granted the role of Payments Administrator. The functions of the Payments Administrator role are available on the Site Administration console. The specific menu options are discussed in previous sections of this chapter:

- Payments: Users
- Payments: Merchant settings
- Payments: Payment settings
- Payments: Cassettes

Additional information can be found in 8.4.2, “Setting up WebSphere Commerce Payments for your store” on page 255 and 8.4.3, “Assigning WebSphere Commerce Payments access roles” on page 256.

10.2.4 Catalog Administration

This section describes several tools that are available for maintaining catalogs that are used by online stores.

Catalog import

This feature enables individual stores to load catalog data in a CSV (comma-separated value) format. While the under-the-covers workings are really the Catalog Loader Tools in this tool, they are well-hidden from the end user.

- For B2C stores, select the **Merchandise** menu, click **Catalog Import**.
- For B2B stores select the **Products** menu, click **Catalog Import**.

To upload catalog data

The Catalog Upload and Import page displays.

1. Click **Upload Catalog**.

   Note: You can create the catalog data (in CSV format) using the provided catalog CSV worksheet and image.zip file as a guide. Normally located in ...\CommerceStudio55\Commerce\samples\catalogimport\catalog.csv and ...\CommerceStudio55\Commerce\samples\catalogimport\images.zip

   The Catalog Upload page displays.

2. Select the file encoding for the catalog data. The default is UTF-8.
3. Select the catalog file name.
4. Click **Upload File**.

5. After you receive a confirmation that the file has been uploaded successfully, click **OK** to return to the Catalog Upload and Import list.

To upload new images

1. Click **Upload Images**.

   The Upload Catalog Images page displays.
2. From the tree structure, select the folder to which you want to upload catalog images.
3. In the Upload field, type the file path for the image or ZIP file, or click **Browse** and navigate to the file on your system.

   The file must be in ZIP (.zip), JPG (.jpg), or GIF (.gif) format to be uploaded correctly.
4. Click **Upload**.
5. Click **Close** to save your settings.

Reorganizing catalog images

- For B2C stores: from the **Merchandise** menu, click **Catalog Import**.
- For B2B stores: from the **Products** menu, click **Catalog Import**.

The Catalog Upload and Import page opens. To move, rename, or delete images in your catalog:

1. Click **Upload Images**. This displays the Upload Catalog Images page.
2. From the tree structure, right-click the folder or image that you want to move, rename, or delete.
3. From the context menu, choose the desired action.
4. Click **Close** to save your settings.

Note: For more about the Catalog Import tool and the modifications we had to make to the tool, see 12.5.8, “Merchandise: Catalog Import” on page 572.

Catalog Filter

The Catalog Filter presents the master catalog as an aggregated tree view of all products and categories available for sale from a store. Use the Catalog Filter to exclude any of the products or categories in the master catalog that you do not want to sell at your specific store.

You can also use the Catalog Filter to apply a markup or markdown price by percentage (versus a fixed price) on the catalog, products, categories, products, and SKUs within the master catalog. To adjust a fixed price already defined in a

catalog, or to adjust the price of kits and bundles, use the Product Management tools instead.

The catalog filter tool is available from the manage store option on the eSite Hub menu. For B2C stores, the catalog filter option is accessed by clicking **manage store** → **Merchandise**. For B2B stores, the catalog filter option is accessed through **manage store** → **Products**.

For details about how the catalog filter option works, see “Merchandise: Catalog Filter” on page 568.

Catalog Loader

The WebSphere Commerce Loader package consists primarily of command utilities for preparing and loading data into a WebSphere Commerce database. You can use the Loader package to load large amounts of data and to update data in your WebSphere Commerce database.

The Loader command utility in this package uses valid and well-formed XML as input to load data into the database. Elements of the XML document map to table names in the database, and element attributes map to columns.

The Loader command utilities enable you to perform the following six functions:

- Transform data between a character-delimited variable format and an XML data format.
- Transform XML data into alternate XML formats.
- Generate a DTD based on the target database.
- Generate identifiers for XML elements.
- Load data into the WebSphere Commerce database.
- Extract data from a database as an XML document.

An example of using the loader package can be found in “Load sample data” on page 815.

Loader package command utilities

The Loader package consists of the following command utilities:

- Text Transformer

  The Text Transformer transforms data between a character-delimited variable format and an XML data format.

- XML Transformer

  The XML Transformer changes, aggregates, and remaps the data in an XML document to alternate XML formats for use by other users or systems as needed.

- The DTD Generator

  The DTD Generator generates a document type definition (DTD) based on the target database to which your data must conform. This DTD will be used throughout the load process. The DTD Generator has to be run only once.

  The DTD specifies structural elements and markup definitions that can be used within the XML data document. For example, a DTD can list elements to be used in a document and specify the attributes that each element can take.

  The DTD Generator is a Loader package command utility that creates a DTD for the Loader to use based on the database schema. This DTD describes the tables and columns into which the Loader imports data.

  > **Note:** The wcs.dtd file, typically located in C:\WebSphere\CommerceStudio55\Commerce\schema\xml, is provided with WebSphere Commerce. This file is designed to work with the Loader.

- ID Resolver

  The ID Resolver is a Loader package command utility that generates identifiers for XML elements with their associated identifiers. This step is essential because Loader package XML files map directly to the target database schema. As such, they must have identifiers.

  > **Note:** If your XML content already supplies identifiers, you do not have to run the ID Resolver.

  The ID Resolver includes an error reporter that generates an exception document if there is an error.

  Situations in which you may want to use the ID Resolver include:

  – Loading new content in XML format when identifiers for the data are required

  – Updating content when identifiers already exist for an object in the database

The ID Resolver can supply actual identifiers, or identifiers can be resolved using the following techniques:

- Internal-alias resolution

  To use internal-alias resolution with the ID Resolver, an alias is placed in the primary-key attribute (identifier) in the XML file. The alias can then be used throughout the XML file to refer to that element. This process eliminates the need for a program to determine the unique indexes necessary to build the XML file.

- Properties-file specification

  The ID Resolver in the Loader package can use a Java properties file to determine which columns of a primary table should be used as lookups for tables that require the identifier of a primary table. A table is primary if it is listed in the KEYS or SUBKEYS table.

- Unique-index resolution

  In the ID Resolver, unique-index resolution uses any specified unique indexes on a table as a means of determining an identifier. For example, MEMBER_ID plus IDENTIFIER is a unique index on the CATALOG table and can therefore be used as a resolution point to the primary key CATALOG_ID of the CATALOGDSC table.

  The ID Resolver can analyze the database schema to determine whether there is a unique index that fulfills its requirements. The ID Resolver looks for a unique index only when there is no entry in the properties file for the table being analyzed or when there is no properties file. If these conditions are true, a unique-index check is performed. The unique index is considered valid if it exists and does not include the primary key for the table.

► Loader

The Loader is responsible for populating and updating the WebSphere Commerce database. The Loader enables column-level updates to a table. It also enables you to delete data from a database.

The Loader loads valid and *well-formed XML* input to the database. In this input, element names correspond to table names and attributes of the element correspond to column names in the table. The following example shows an excerpt from well-formed and valid XML input to the Loader:

Note: While the loader package is the most common means of loading catalog data, there is another tool called the *CSV catalog import tool* available for loading the individual store catalog. For more information about this tool, refer to “Merchandise: Catalog Import” on page 572.

10.2.5 Monitor performance

This section is comprised of an overview of the features and process, followed by an example performed on our test server.

Overview

You can monitor the performance of your WebSphere Commerce system by using the WebSphere Application Server Performance Monitoring Infrastructure (PMI).

The function of the previous WebSphere Commerce performance monitor is now transferred to the WebSphere Commerce PMI module. Performance data can then be monitored and analyzed with a variety of tools available from WebSphere Application Server. Site Administrators can use the information gathered from the tools to detect performance problems and analyze performance trends. The tools can be used for measuring the performance of a WebSphere Commerce application server from a local or remote machine.

The WebSphere Commerce application server gathers statistics for URLs, tasks, and JSPs. Each data key has an associated set of counters that provide the following information:

- Average response time
- Last response time
- Minimum response time
- Maximum response time
- Hits
- Total response time
- Standard Deviation

To set up PMI, see the section “Monitoring performance” in the WebSphere Application Server Information Center

http://www.ibm.com/software/webservers/appserv/infocenter.html

1. Enable performance monitoring services in the *application server* through the administrative console. Enable performance monitoring services in the *node agent* through the administrative console if running WebSphere Application Server Network Deployment. To monitor performance data through the PMI interfaces, you must first enable the performance monitoring service through the administrative console and restart the server. If running in Network Deployment, enable PMI services on both the server and on the node agent, then restart the server and the node agent.
2. Enable performance monitoring services in the NodeAgent through the administrative console. To monitor performance data through the PMI interfaces, you must first enable the performance monitoring services through

the administrative console and restart the server. If running Network Deployment product, enable PMI service on both the server and on the node agent and restart the server and the node agent.

3. Collect the data. The monitoring levels that determine which data counters are enabled can be set dynamically, without restarting the server. This can be done in one of the following ways:
   - Enable data collection through the administrative console.
   - Enable performance monitoring services through Tivoli Performance Viewer (formerly Resource Analyzer).
   - Enable performance monitoring services using the command line.
4. Monitor and analyze performance data. You can monitor and analyze data with several tools:
   - Monitor performance data with Tivoli Performance Viewer. This tool is included with WebSphere Application Server.
   - Monitor performance data with other Tivoli monitoring tools.
   - Monitor performance data with user-developed monitoring tools. Write your own applications to monitor performance data.
   - Monitor performance data with third-party monitoring tools.

Example

1. Start the WebSphere server by opening a command line window, changing to the directory *WAS_installdir*/bin, and entering the following command:

   ```
   startServer server1
   ```

2. Start the WebSphere Administrative Console by clicking **Start** → **Programs** → **IBM WebSphere** → **Application Server V5.0** → **Administrative Console**.
3. Enter a user ID and click **OK**.
4. Click **Servers** → **Application Servers** in the console navigation tree.
5. Click the WebSphere Commerce server (in our case, **WC_demo**).
6. Click the **Configuration** tab.
7. When in the Configuration tab, settings will apply when the server is restarted. When in the Runtime Tab, settings will apply immediately. Note that enablement of Performance Monitoring Service can only be done in the Configuration tab.
8. Click **Performance Monitoring Service** under Additional Properties. You will have to scroll down to see this.
9. Select the check box **Startup**.

10. Select the radio button **Standard** to set the initial specification level field.
11. Click **Apply**.
12. Click **Save** on the top menu bar.
13. Click the **Save** button to save the Master Configuration.
14. Log out of the Administrative Console.
15. Close the Administrative Console.
16. Restart the WebSphere Commerce server as described in “Starting and stopping servers” on page 810.
17. Start the WebSphere server by opening a command line window, changing to the directory *WAS_installdir*/bin, and entering the following command:

    ```
    startServer server1
    ```

18. Start the Tivoli Performance Viewer by opening a command line window, changing to the directory *WAS_installdir*/bin, and entering the following command:

    ```
    tperfviewer.bat localhost 8881 SOAP
    ```

    Note: When the Tivoli Performance Viewer (TPV) starts, you will see an error message indicating that one or more servers cannot be viewed. TPV can only look at a single application server at a time. If you want to look at server1, use the default port of `8879` in the above command.

19. Set monitoring levels.

    Figure 10-21 on page 401 depicts the Current Activity Settings. To change them, select the appropriate radio button (**Standard**) and click **Apply**.

Figure 10-21 Tivoli Performance View: Current Activity Settings

20. To view summary reports (Figure 10-22 on page 402), double-click the server name (in our case **WC_demo**). You can click any of the other tabs to view additional information or expand the individual items in the navigation tree to see detailed information.

Figure 10-22 Tivoli Performance Viewer: Summary Reports

Note: To stop performance monitoring, repeat steps 1 on page 399 through 16 on page 400. This time, uncheck the Startup check box described in step 9.

10.2.6 Dynamic Caching

This section describes the dynamic caching of WebSphere Commerce servlet or JSP results.

WebSphere Commerce servlet or JSP result caching

When a customer clicks a link to view a product or category page, most of the response time is spent parsing the HTTP request, accessing the database, and dynamically creating the page. Heavy site traffic and many product and category entries in the database can further increase the time it takes for servlets or JSP files to load.

Most HTTP requests on the server will be for catalog information. The WebSphere Commerce commands **CategoryDisplay**, **ProductDisplay**, **TopCategoriesDisplay**, and **StoreCatalogDisplay** retrieve information from your database and display the result as a JSP page. If the catalog information has not changed since it was last viewed, the servlet or JSP file does not have to be re-executed the next time a customer requests it. Serving an equivalent static servlet or JSP file stored in a cache would be faster. Caching of the servlet or JSP can be constructed by defining cache-entry elements in the cachespec.xml file located in the WEB-INF directory of the Web module.

If the cache entry corresponding to the page being accessed is not in memory, it will be generated dynamically. The page is then stored to memory and will not have to be regenerated until the data it is based on is modified.

Note: WebSphere Commerce dynamic caching and URL rewriting cannot interoperate. With URL rewriting turned on, disable WebSphere Commerce dynamic caching and you should not cache your servlet or JSP files. For more information about URL rewriting, see the chapter on session management in the *WebSphere Commerce Security Guide*.

WebSphere Application Server dynamic cache

WebSphere Commerce utilizes the WebSphere Application Server dynamic cache service for caching servlets or JSP files and commands that extend from the WebSphere Application Server CacheableCommand interface. The dynamic cache service, servlet caching, and disk offload are enabled by default, during the creation of a WebSphere Commerce instance.

For more information about the WebSphere Application Server dynamic cache, search for the topic “Improving performance through the dynamic cache service” in the WebSphere Application Server Information Center at:

http://www.ibm.com/software/webservers/appserv/infocenter.html

Dynamic cache

Caching the servlet or JSP file results improves application performance. WebSphere Application Server consolidates several caching activities, including servlets, Web services, and WebSphere commands into one service called the dynamic cache. These caching activities work together to improve application performance, and they share many configuration parameters, which are set in an application server’s dynamic cache service.

You can use the dynamic cache to improve the performance of servlet and JSP files by serving requests from an in-memory cache. Cache entries contain servlet output, results of servlet execution, and metadata.

Enabling the dynamic cache service and servlet caching

To enable caching, you should enable the dynamic cache service and configure servlet caching. For information about performing these steps, see the topics “Enabling globally the dynamic cache service” and “Configuring servlet caching” in the document at:

http://www-1.ibm.com/support/docview.wss?uid=swg1PQ77061

Enabling the Dynamic Cache Monitor

WebSphere Application Server provides a Dynamic Cache Monitor application for displaying cache statistics, Edge Side and disk statistics, cache entries, dependency IDs, and cache policy information. To inspect the contents and behavior of the WebSphere Application Server dynamic cache, you should install the WebSphere Application Server Dynamic Cache Monitor. To use the Dynamic Cache Monitor, install the CacheMonitor.ear file, located in the installableApps subdirectory under the WAS_installdir directory, on each application server that uses dynamic caching.

For WebSphere Commerce, it is recommended that you use the virtual host VH_instance_name_admin (for example, VH_demo_admin) instead of VH_instance_name for the Dynamic Cache Monitor, for security reasons. You can add or change virtual host names from the WebSphere Application Server Administrative Console. You can access the Web application using a Web browser with the following address:

`http://`*`host_name`*`:`*`port`*`/cachemonitor`

However, for a more secure access, it is recommended that you access the Administration host machine:

`https://`*`admin_host_name`*`:`*`port`*`/cachemonitor`

For example, if the virtual host VH_instance_name_admin is used for installing the Cache Monitor, then the Cache Monitor can be accessed as:

`https://`*`admin_host_name`*`:8002/cachemonitor`

Notes:

1. You must launch one dynamic cache monitor for every WebSphere Commerce instance.
2. Whenever you want to use the Cache Monitor and you have WebSphere Application Server EJB security enabled, you will have to perform some additional setup, as documented in the section “Security configuration for the Dynamic Cache Monitor” in the *WebSphere Commerce Security Guide*.

For more information about installing the Dynamic Cache Monitor search for the topic “Displaying cache information” in the WebSphere Application Server Information Center at:

http://www.ibm.com/software/webservers/appserv/infocenter.html

Configuring cacheable objects

Cacheable objects are defined inside the cachespec.xml file, found inside the Web application archive (WAR) WEB-INF or enterprise bean WEB-INF directory. You can place a global cachespec.xml file into the application server properties directory, but the recommended method is to place the cache configuration file with the deployment module. The root element of the cachespec.xml file is <cache>, which contains <cache-entry> elements.

To specify the cache entry for servlet or JSP result caching, add the following section to the cachespec.xml file:

```
<cache-entry>
<class>servlet</clas>
<name>name</name>
...
</cache-entry>
```

– `name` is the relative Web path or servlet mapping of the servlet or JSP

To specify the cache entry for command caching, add the following section to the cachespec.xml file:

```
<cache-entry>
<class>command</clas>
<name>name</name>
...
</cache-entry>
```

– `name` is the complete path to the command class; for example, com.ibm.commerce.dynacache.commands.MemberGroupsCacheCmdImpl

Note: For this release, only command invalidation is supported.

Within a <cache-entry>...</cache-entry> element, you can develop cache-ID, dependency-ID, and invalidation rules. To cache an object, WebSphere Application Server has to be able to generate unique IDs for different invocations of that object. The <cache-id> element performs this task. Each cache entry can have multiple cache-ID rules that execute in order until either a rule returns a non-empty cache-ID or no more rules remain to execute. If none of the cache-ID generation rules produces a valid cache ID, then the object is not cached.

The dynamic cache responds to changes in this file. When new versions of cachespec.xml are detected, the old policies are replaced. Objects cached through the old policy file are not automatically invalidated from the cache. They are either reused with the new policy or eliminated from the cache through its replacement algorithm. For more information about the cachespec.xml file, see the topic “Cachespec.xml file” in the WebSphere Application Server Information Center. In addition, see the *IBM WebSphere Commerce Store Development Guide* for additional considerations when developing your store.

Caching defaults

During installation, WebSphere Commerce sets up the caching system with the following defaults:

- Dynamic caching is enabled.
- Disk offload is enabled.
- Servlet caching is enabled.
- Default cache policies (supplied as samples) for each business model caches the JSP files for the following display commands:
  - CategoryDisplay
  - ProductDisplay
  - StoreCatalogDisplay
  - TopCategoriesDisplay

Manually merge the cache entry from:

```
WC_installdir\samples\dynacache\business_model\cachespec.xml
```

to:

```
WAS_installdir\installedApps\cell_name\WC_instance_name.ear\Stores.war\
WEB-INF\cachespec.xml
```

Refer to the *IBM WebSphere Commerce Sample Store Guide* or *IBM WebSphere Commerce Store Development Guide* for more about enabling the cache policies in a store.

eSite Example

This section describes the steps that we took to implement caching on our test site.

Update the cachespec.xml file

1. Back up the existing cachespec.xml file located at:

   `WAS_installdir\installedApps\node_name\WC_instance_name.ear\Stores.war\WEB-INF\cachespec.xml`

2. Copy the cachespec.xml file located in Additional Materials → eSite directory over the existing file backed up in the previous step. For more information about the additional materials provided with this redbook, see Appendix F, “Additional material” on page 923.

3. Open the file in a text editor.

4. Insert the contents of the following file into the edited file.

   `WC_Installdir\samples\dynacache\invalidation\store\hosting\cachespec.xml`

   These are invalidation entries. They go at the bottom of the file, just above the line containing:

   `</cache>`

5. Save and close the file.

6. Stop and start the commerce server as described in “Starting and stopping servers” on page 810.

Starting the cache monitor

1. Start the WebSphere Application Server Administrative Console and log on.

2. Expand **node_name** → **Applications** in the left navigation menu.

3. Click **Install New Application**.

4. Click **Browse** to select the path to CacheMonitor.ear. (In our case the path is C:\WebSphere\AppServer\installableApps\CacheMonitor.ear).

5. Click **Next** on the Preparing for the application installation page.

6. Click **Next** on the Provide options to perform the installation page.

7. On the Map virtual hosts for Web modules page, select the Dynamic Cache Monitor checkbox and choose the virtual host that you want the Cache Monitor to run on, **VH_demo_Admin**, and click **Next.**

8. On the Map modules to application servers page, select the **Dynamic Cache Monitor** check box and choose which Application Server you want the monitor to run on (in our case, **WC_demo**). Click **Apply**.

9. Click **Next** to go to the Summary page.

10. On the Summary page, take the default settings and click **Finish**.

11. When the application has been installed successfully, click **Save** on the top menu.

12. Click **Save** on the confirmation page.
13. Click **Environment** → **Update WebSphere Plugin**.
14. Click **OK** to regenerate the plugin config file.
15. Close the Administrative Console.
16. Stop and start the Web server and Web administration server.
17. Stop and start the commerce server as described in “Starting and stopping servers” on page 810.
18. Open a browser window and enter the following URL:

    `https://host_name:8002/cachemonitor`

    This opens the page shown in Figure 10-23.

Figure 10-23 Cache monitor

The initial display shows the current cache statistics. Use the links on the left of the page to display other information concerning the cache.

10.2.7 Database cleanup

The Database Cleanup utility enables you to delete many objects from the database at the same time while maintaining referential integrity. You may want to do this if you have changed a great deal of information in your database and have unused tables or rows. There are several objects that you can delete from the database.

When the Database Cleanup utility deletes an object, the records in the object's tables are deleted to preserve the referential integrity of the database. The Database Cleanup utility command cleans the database in one of two ways: top-down or bottom-up. Top-down deletes all rows from the child tables with a delete cascade. If a delete restrict is specified in the referential integrity, the delete cascade will fail and you will have to use the bottom-up method. To use the bottom-up method, specify `yes` for the (Windows, AIX, Solaris, or 400) FORCE parameter in the command syntax, which first deletes the child tables, followed by the parent table.

Another way to trigger the bottom-up method is to specify the (Windows, AIX, Solaris, or 400) LOGLEVEL parameter as `2` in the command syntax. Specifying `0` logs nothing, and 1 only logs the delete statements from the top table. The (Windows, AIX, Solaris, or 400) LOGLEVEL 2 logs the delete statements from each deleted child table until the top table. Although selecting 2 triggers the bottom-up method, it cannot guarantee a successful deletion if there is a delete restrict in the referential integrity. To delete records with a delete restrict, specify the (Windows, AIX, Solaris, or 400) FORCE parameter as `yes`.

You can expect a longer response time with the bottom-up method if the table contains many child tables. For example, the MEMBER table contains more than 500 child tables. For performance reasons, we recommend using the top-down method.

> Note: Only use Loglevel 2 and or the FORCE parameter as yes if specifying the FORCE parameter as no and Loglevel 0 or 1 fails.

The Database Cleanup utility is configurable, extensible, and adaptable. Aside from the preset cleanup configurations, you can add new objects to the database table to define which tables and rows to clean. Refer to adding a new configuration to the Database Cleanup utility.

If you have extended your database schema by creating new tables, you can use the Database Cleanup utility to clean your new tables. If you have changed your database schema (such as adding new columns to one table, changing the foreign key primary key relationship, or adding a new child table to the referential integrity path), the Database Cleanup utility will automatically adapt to the

changes. If you change the column names, update the configuration data in the CLEANCONF table.

The Database Cleanup utility deletes records in child tables based on the delete rule of the referential integrity definition in the database schema. You can set the delete rule to on delete cascade, on delete set null, or delete restrict. If you add new tables, ensure that the referential integrity and delete rule is properly defined. Otherwise, the Database Cleanup utility cannot work with your new tables.

Note: You should only run the Database Cleanup utility on a staging server to clean the staglog object. The staging database is different from the production database. The staging database only has configuration data without the operation data. Deleting configuration data might cause a delete cascade on the operation data. When the Stage Propagate utility propagates the deletion to the production database, this might cause a cascade delete to the operation data (which you want to keep). To clean configuration data, run the Database Cleanup utility on the production database.

10.2.8 Logging and tracing

This section of the redbook provides an overview of the logging and tracing facilities provided with WebSphere Commerce V5.5 Business Edition.

Overview

The purpose of logging messages in the WebSphere Commerce server is to notify the administrator if unexpected errors or abnormal conditions occur in the WebSphere Commerce application. Message logs and traces are important diagnostic tools that aid the Site Administrator in determining the source of problems. Tracing is a problem-determination mechanism. Tracing assists developers in debugging the code during the development stage and assists the technical support team in solving customer problems.

WebSphere Commerce provides multiple facilities for logging. For existing customers, ECTrace and ECMessage are still supported. You can no longer modify parameters for ECTrace and ECMessage from the Configuration Manager. This must be done manually in the *wc_instance_name*.xml file. For new implementations, it is recommend that JRAS, which is provided by WebSphere Application Server, be used. The Log Analyzer is a graphical utility that facilitates viewing and analyzing log files. For more information about the Log Analyzer, consult the WebSphere Application Server InfoCenter at:

http://www.ibm.com/software/webservers/appserv/infocenter.html

The default location for the log files is:

WAS_installdir/logs/*WC_wc_instance_name*/

The default output files are:

native_stderr.log Process log that contains text written to the stderr stream
native_stdout.log Process log that contains text written to the stdout stream
startServer.log The log when starting the server
stopServer.log The log when stopping the server
SystemErr.log Logs any system error while the server is running
SystemOut.log Logs the system output file while the server is running.
activity.log (in the *WAS_installdir*/logs directory) Logs continuous activity

JRas

JRas consists of multiple Java packages that provide message logging and diagnostic trace primitives. These primitives are not tied to any particular product or platform. JRas is basically composed of several components:

Loggers A logger is the primary object with which the user code interacts. There are two types of loggers: message loggers and trace loggers. Message loggers create only message records, and trace loggers create trace records. A logger contains one or more Handlers to which it forwards events for further processing.

Handlers A handler receives events from a logger, and provides an abstraction over an output device or event consumer. An example is a file handler, which knows how to write an event to a file.

Formatters Handlers are configured with Formatters, which know how to format events of certain types.

Event Types Messages and traces have their own pre-defined event types.

Event Classes The standalone JRas logging toolkit defines both message and trace event classes.

Note: For more information about the JRas logging toolkit, see the WebSphere Application Server JRas documentation in the WebSphere Application Server Information Center.

WebSphere JRas extensions

In order to integrate into the WebSphere Application Server run time or for usage in a J2EE environment, WebSphere provides a set of extension classes. Logging from WebSphere Commerce makes use of the WebSphere Application Server

logging facility, and these extension classes provide a better correlation of messages and traces generated from different WebSphere products. This collection of extension classes is referred to as WebSphere JRas extensions. WebSphere JRas extensions provide appropriate logger implementation classes. Instances of these message and trace logger classes are obtained directly and exclusively from the WebSphere Manager class, which is located in the com.ibm.websphere.ras package. Other components, such as Payments and the JCA messaging framework, also make use of WebSphere JRas extensions. For a list of the WebSphere JRas extensions associated with WebSphere Commerce and Payments tracing components, see “Enabling tracing components” in the *IBM WebSphere Commerce Administration Guide V5.5*.

Note: WebSphere Commerce provides a wrapper for ECMessage and ECTrace that calls the WebSphere JRas extension APIs. However, it is recommended that Site Administrators call the JRas APIs directly.

WebSphere Commerce Payments Problem determination

As you start to use WebSphere Commerce Payments, you may need to diagnose problems that you encounter while actually using the application. The WebSphere Log Analyzer provides an interface with which you can analyze the error and trace logs to determine a course of action. All of the Payments error and trace logs are available through the Log Analyzer except for the following messages:

- Third-party cassettes
- Standalone Payments UI
- SampleCheckout
- Cashier

ECMessage

Diagnostic logs are used for problem determination. ECMessageLog logs diagnostic messages, and ECMessages are localized. ECMessages are split into the following categories:

- System messages
- User messages

System and user messages

System messages appear in the logs and are for the benefit of debugging problems. System messages provide diagnostic information for Site Administrators. These messages may follow a system malfunction or indicate some other significant event.

System messages are assigned a product-specific message ID, *CMNnnnn's* where *nnnn's* is the key number used to identify the severity of the message. For a listing of the major error messages, see "WebSphere Commerce messages" on page 865.

User messages are frequently shown on the browser, and are for the benefit of a customer visiting the site. User messages give details about a problem; for example, they indicate that a specified parameter is invalid, which indicates to the customer what value to fix when they resubmit the request. Site Administrators can use the message ID to look up more details associated with that message, and customers can report the message to support personnel for troubleshooting.

Logging levels

There are five logging levels, or severities, in the WebSphere Commerce logging system. The system message severities are:

Error Logged at all times by default. Error messages expose an error condition that can lead to system malfunction. An error message can be sent as an e-mail, WebSphere MQ message, or by another form of notification to a Site Administrator registered with messaging.

Status Indicate certain states reached by WebSphere Commerce. For example, each component should persist a message when loaded or when the message has moved to a specific state. Status messages assist technical support in understanding the state of the components and application.

Warning Reveal a potential problem.

Information Follow events that occur within the WebSphere Commerce system. Information messages are related to events that trigger changes in the system state. For example, an information message is persisted when an order has been submitted.

Debug Overlap with the trace component. However, debug messages enable Site Administrators to investigate a problem themselves, without involving technical support.

Because WebSphere Commerce uses the WebSphere Application Server logging facility, and the WebSphere Application Server only has three types of logging levels, the WebSphere Commerce logging levels are mapped to the WebSphere Application Server as shown in Table 10-1 on page 414.

Table 10-1 WebSphere Commerce logging levels mapped to WAS Logging Levels

Logging levels in WebSphere Commerce	Logging levels in WebSphere Application Server
ERROR/ERR	TYPE_ERROR/TYPE_ERR
INFORMATION/INFO	TYPE_INFORMATION/TYPE_INFO
DEBUG	TYPE_INFORMATION/TYPE_INFO
WARNING/WARN	TYPE_WARNING/TYPE_WARN
STATUS	TYPE_INFORMATION/TYPE_INFO

The WebSphere Application GUI is used to control the enablement of the logging level or severity type. Site Administrators can specify which logging severities to record in the WebSphere Application Server Administration Console. For more information about enabling logging levels, see the information in the WebSphere Application Server InfoCenter.

ECTrace

Tracing is used for problem determination. Tracing assists developers in debugging code during the development stage and assists the technical support team in solving customer problems.

Tracing data is persisted for future reference in a trace file. A data structure consists of context information, such as a class name, a method name, and a text message. Multiple data structures describe the data flow within a software application. By analyzing the data structure sequence, a developer can understand the path that was executed, which can help determine the cause of malfunctions.

Configuring logging

All logging and tracing configuration is now done in the WebSphere Application Server Administrator's Console. The following sections cover stand-alone tools only:

- Modifying ECMessage startup options
- Modifying ECTrace startup options

Modifying ECMessage startup options

This functionality is retained from previous versions of WebSphere Commerce. ECMessage configuration is performed by editing the *wc_instance_name*.xml configuration file. After changes are made, you must stop and start the servers as defined in "Starting and stopping servers" on page 810.

ECMessage writes all output to the following file:

```
WC_installdir\instances\wc_instance_name\logs\ecmsg.log
```

The following is a sample of the messageLog element in the *wc_instance_name*.xml file used to configure ECMessage logging:

```
<messageLog
fileSize="40"
messageFile="e:\wcs_wsad\instances\demo\logs\ecmsg.log"
notification="false"
notificationClassName="com.ibm.commerce.messaging.ras.ErrorNotificationHand
ler">
<logSeverity type="ERROR"/>
<logSeverity type="WARNING"/>
<logSeverity type="STATUS"/>
<logSeverity type="DEBUG"/>
<logSeverity type="INFO"/>
</messageLog>
</LogSystem>
```

If the notification attribute is set to false, all of the message severities except for ERROR are disabled. To disable a severity, remove the line from the list of severities. If the notification attribute is set to false, no error notification will be sent. If error notification is required, the notification attribute must be set to true. The messaging component must be configured properly before the error notification can function.

The fileSize attribute specifies the maximum file size in megabytes for the log file. If the actual file size exceeds the specified amount, a new file opens. The file names are re-created based on the following naming convention:

```
fileName_node_name_timeStamp.ext
```

For example, the ecmsg.log file produces system files with names such as ecmsg_m23vnx78_2000.08.08_18.17.47.768.log, with m23vnx78 being the *node_name* and the embedded time stamp being a variable factor.

Message and trace data can be captured into the same file. To configure this, their fileSize attributes must have the same value, and the XML configuration files must point to the same file location.

Modifying ECTrace startup options

The Site Administrator can configure ECTrace startup options in a stand-alone tool by editing the XML file directly:

```
WC_installdir\instances\wc_instance_name\xml\wc_instance_name.xml
```

The output of the trace is written to the following file:

WC_installdir\instances*wc_instance_name*\logs\ecmsg.log

The following is a sample of the trace element in the instance_name.xml file used to configure ECTrace tracing:

```
<trace>
fileSize="40"
traceFile="e:/wcs_wsad\instances\demo\logs\ecmsg.log"
<component name="ACCESSCONTROL"/>
<component name="APPROVAL"/>
<component name="BI"/>
<component name="CATALOG"/>
<component name="COLLABORATION"/>
<component name="COMMAND"/>
<component name="CONTRACT"/>
<component name="CURRENCY"/>
<component name="DATASOURCE"/>
<component name="DB"/>
<component name="DEVTOOLS"/>
<component name="EVENT"/>
<component name="EXCHANGE"/>
<component name="EJB"/>
<component name="INVENTORY"/>
<component name="MARKETING"/>
<component name="MERCHANDISING"/>
<component name="MESSAGING"/>
<component name="METAPHOR"/>
<component name="NEGOTIATION"/>
<component name="ORDER"/>
<component name="PERFMONITOR"/>
<component name="PVC"/>
<component name="RAS"/>
<component name="REPORTING"/>
<component name="RFQ"/>
<component name="SCHEDULER"/>
<component name="SERVER"/>
</trace>
```

11

Manage the hub

This chapter describes the functions available to the hub administrator or channel manager when managing a hosting hub. All of the functions described in this chapter are accessed through the *manage store* link on the eSite Hub menu. A different menu is displayed depending on which store is selected to manage.

This chapter describes the functionality provided within manage store when each of this following has been selected to manage:

- eSite Hub
- eSite Catalog Asset Store
- B2B eSite Asset Store
- eSite Store Front Asset Store

Note: You can create multiple hubs or groupings of stores within a single instance. In our example, we created a single hub, eSite Hub, and three stores.

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11.1 Overview

This chapter covers administrative functions that are required at the Hub level. These functions affect all stores that are created under an eSite Hub.

11.1.1 Roles

In WebSphere Commerce, a user can be either an administrator or a customer. Specifically, WebSphere Commerce supports a RegisterType attribute for a user. This attribute takes on one of three valid values (A, R, or G) and indicates the type of role that the user plays with WebSphere Commerce. Note that the attribute itself does not give the user any authority within WebSphere Commerce. If the user is an administrator, the registration type is A to denote an Administrator role within WebSphere Commerce. For example, an approvals administrator may be specifically in charge of processing approvals.

For the administrator registration type, WebSphere Commerce provides a default set of roles:

- Business relationship roles
- Customer service roles
- Marketing roles
- Operational roles
- Organizational management roles
- Product management and merchandising roles
- Technical operations roles

We performed all of our hub administrative functions with our hub administrator. The hub administrator has access to all of the functions in the menus discussed in the following sections. See “Create the eSite Hub organization administrator” on page 241 for details on how we created this account.

For more information concerning other available roles, see the section called “User authorities” in the WebSphere Commerce online help.

11.1.2 Access

To access the manage store menu:

1. Open a browser and type
   `http://`*`host_name`*`/webapp/wcs/stores/servlet/eSiteHub/index.jsp`
2. Enter the user ID and password of a user account that has the role of site administrator or channel manager of the eSite Hub Organization.
3. Click **Log on**.

4. Click **manage store**.
5. Select the appropriate store.
6. Select the Language. (Our site only supports US English.)

   There will be no fulfillment center defined for any of the stores described in this chapter.
7. Click the **OK** button.
8. The manage store menu is displayed.

11.2 eSite Hub

The channel manager or site administrator can access the eSite Hub store to perform several functions at the Hub level. This chapter describes the processes involved in completing each of these functions. The available menu options are:

- Hub
  - Open/Close
  - Change Profile
- Hosting
  - Hosted Stores
  - New Hosted Store
  - Find Hosted Stores
  - Broadcast E-Mail
  - Report Delivery Settings
- Reports
  - Store-level Reports
  - Site-level Reports

11.2.1 Hub menu

The Hub menu has the following options:

- Open/Close
- Change Profile

Open/Close

Select **Hub** → **Open/Close**.

- If the hub is currently open, the page shown in Figure 11-1 is displayed.
  - Clicking **Launch Store** opens the Hub Welcome Page in a separate browser window.
  - If you intend to close the hub, click **Close Store**. Click **OK** in the dialog box that pops up.

Figure 11-1 Open/Close: hub is open

- If the hub is closed when you select **Open/Close**, the page shown in Figure 11-2 is displayed.

  If you intend to open the hub, click the **Open Store** button. Click **OK** in the dialog box that pops up.

Figure 11-2 Open/Close: hub is closed

Change Profile

This option enables you to change default information about the hub.

Select **Hub** → **Change profile**. This displays the first page of the change profile notebook, as shown in Figure 11-3. On this page, you can modify the Store name and description.

Click **OK** to save your changes or **Cancel** to cancel all of your changes.

Figure 11-3 Change Profile: General page

Click the Contact link on the left side of the page to modify the contact-information fields (Figure 11-4). If you change the e-mail address, ensure that the new value is in the proper form (for example, address@ibm.com).

Click **OK** to save your changes or **Cancel** to cancel all your changes.

Figure 11-4 Change Profile: Contact page

To review and change location information in the hub profile, click the **Location** link on the left side of the page (Figure 11-5).

Click **OK** to save your changes or **Cancel** to cancel all of your changes.

Figure 11-5 Change Profile: Location page

To review and change the language for the store pages, click the **Languages** link on the left side of the page (Figure 11-6). You can add or remove languages supported on the hub. If you add a supported language, make sure that all of the supporting XML files have been loaded to the site before making this change.

Click **OK** to save your changes or **Cancel** to cancel all of your changes.

Figure 11-6 Change Profile: Language page

To add or remove supported currencies, click the **Currency** link in the left-side navigation bar. Changing the supported currencies at the hub will not change the currencies for any stores on the hub. That must be done at each individual store.

Click **OK** to save your changes or **Cancel** to cancel all of your changes.

Figure 11-7 Change Profile: currency link

11.2.2 Hosting menu

The **Hosting** menu has the following options:

- Hosted stores
- New hosted store
- Find hosted store
- Broadcast e-mail
- Report delivery settings

Hosted stores

From the **Hosting** menu, select **Hosted Stores**. This displays the page shown in Figure 11-8, on which you can perform certain functions on hosted stores.

Figure 11-8 Hosted Stores

Descriptions of the options that are available on this page follow.

New

Note: The New function is not used in the eSites model.

Do *not* use this function. In order to create a new store in the eSites model, use the Store Creation Wizard (by clicking **create store** on the eSite Hub menu). For more information about how to create a store, see “Create stores” on page 246.

Suspend

Click this button to suspend a hosted store. Suspending a hosted store closes the store and prevents customers from having access to it. Suspending a hosted store also prevents the seller from opening it.

A store must be in Open status in order for it to be suspended. Simply select the store to be suspended by selecting the associated check box and click **Suspend**. The page will be refreshed with the status changed.

Resume

Click this button to resume a hosted store. Resuming a hosted store enables the seller to access it, but it will remain closed to customers until it is opened.

A store must be in Suspended status in order for it to be resumed. Select the check box for the store that is to be resumed and click **Resume**. The page will be refreshed, showing the changed status (Closed).

Open

Click this button to open a hosted store. Opening a hosted store enables both the seller and customers to access it.

A store must be in **Closed** status in order for it to be opened. Select the check box for the store that is to be opened and click **Open**. The page will be refreshed with the status changed.

Close

Click this button to close a hosted store. This prevents customers from accessing the hosted store, but the seller continues to have access to it.

A store must be in **Open** status in order for it to be closed. Select the check box for the store that is to be closed and click **Close**. The page will be refreshed with the status changed to **Closed**.

Deploy

Note: The Deploy function is not used in the eSites model.

Summary

Note: The Summary function is not used in the eSites model.

Export

Note: The Export function is not used in the eSites model.

Find

Clicking this button opens a search page for finding a hosted store. It does the same thing as is discussed in “Find hosted store” on page 430.

Refresh

The Refresh button is enabled regardless of whether a store in the list is selected. Clicking this button simply refreshes the current page.

Reports

Select a store for reporting by choosing its associated check box and clicking **Reports**. Figure 11-14 on page 436 shows a sample Reports page. Refer to “Store level reports” on page 434 for further details.

If you click **Reports** without first selecting a store, a Find page (shown in Figure 11-12 on page 434) opens. Refer to “Store level reports” on page 434 for further details.

Change Store Category

Note: Store categories are used in the standard hosting model when creating a store directory. The store category tables is not populated in the eSites model so this function is not used.

Delete

Note: This function is not used in the eSites model.

New hosted store

Note: This function is not used in the eSites model.

Find hosted store

1. From the **Hosting** menu, click **Find hosted store**. The page shown in Figure 11-9 opens.

Figure 11-9 Find hosted store

2. Enter store name and select the search criteria from the pull-down menu.
3. Optionally, select the store status.
4. Click **Find**. This displays the search on a page similar to the one shown in Figure 11-8 on page 427.

Broadcast e-mail

The Channel Manager or Site Administrator may want to send out a broadcast e-mail to a certain category of stores, such as all open stores or all closed stores, rather than sending a message to individual stores.

1. Select **Hosting** → **Broadcast e-mail** to open the Broadcast page.

   If you do not see this menu, then your logon ID does not have the authority to perform this task. Contact your site administrator.

Figure 11-10 Broadcast e-mail

2. Type the e-mail address of the sender.
3. Select the recipients of this e-mail (open, closed, or suspended stores).
4. Type any additional recipients, using a comma to separate the addresses.
5. Type the subject of the broadcast e-mail.
6. Type the message that you would like to send in the e-mail.
7. Click **Send**, and the e-mail will be scheduled to run whenever the system has available resources.

Report delivery settings

Use this page to select the frequency and format for receiving the site or store commerce report.

1. Select **Hosting** → **Report Delivery Settings** to open the Report Delivery Settings page. If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

Figure 11-11 Report Delivery Settings

To receive this commerce report through e-mail notification, you must also configure the “message for store commerce report” message type from the Message Type Configuration page (step 2c on page 238).

2. Select the frequency with which you want to receive the commerce reports: Monthly or Quarterly. Monthly reports are sent out at the end of the month. Quarterly reports are sent out every fiscal quarter. If Quarterly is selected, enter the month and day on which your fiscal year begins.
3. Select the format for the reports. You can select either text or comma separated. The text reports are formatted and useful for reviewing all of the

information. Comma-separated reports delineate data with commas, and they can be extracted and imported easily to many spreadsheet and database programs for further analysis.

4. Click **OK** to save the new parameters. If you click **Cancel**, your changes will not be made.

11.2.3 Reports menu

The Reports menu has two options:

- Store level reports
- Site level reports

Several of the reports contain information about store and site activity such as:

- Pages viewed
- Number of visitors
- Shopping carts created
- Products viewed

In order for this data to be populated in the reports, two event listeners must be enabled and started in the Configuration Manager. If your reports show zeroes in these or related values, follow the instructions in “Configure for reporting” on page 824.

Store level reports

1. Select **Reports** → **Store level reports** to open the page shown in Figure 11-12.

Figure 11-12 Store Level Reports - Find

2. To search for a hosted store for reporting, type information into one or more of the fields:
   - Seller Name
   - Hosted Store Short Description
   - Store Name
   - Status

   Select the search criteria for the each selected field using the pull-down menus.

3. Click **Find**. This displays the page shown in Figure 11-13.

Figure 11-13 Store level reports - search results

4. Select the store for reporting by clicking the appropriate check box.
5. Click **Reports**. This displays the page shown in Figure 11-14 on page 436.

> **Note:** Clicking **Summary** displays information about the selected store's hosting agreement. This is not applicable to the eSites model. The hosting agreement is generated automatically when the store is created and is of no importance.

Figure 11-14 Store level reports

6. Click each report to open the following windows.

Storefront Usage Report

Clicking **Storefront Usage Report** opens the Storefront Usage window shown in Figure 11-15.

Figure 11-15 Storefront Usage report: date selection

Fill in the start and end dates and specify the currency for the report. Click **OK**. Figure 11-16 on page 437 shows the resulting summary page, which lists clickable links to various store front usage data.

manage store

eSite Hub - United States English

Home > Reports > Report Content

Hub Hosting Reports Help

Storefront Usage Summary

This report shows key data (orders, order status, customers, visits) which provides a snapshot of the store's operations and performance.

Selected date range: December 1, 2002 **to** December 21, 2002
Storefront Usage Summary: December 6, 2003 19:23

Total Orders	0
Gross Sales	$0.00
Total Pages Viewed	0
Total unique visitors that came to the store	0
Total visits to the store	0
Total Orders Shipped	0
Total Orders in Pending state	0
Total Orders being rewiewed.	0
Total orders affected by low inventory	0
Total orders requiring payment authorization review	0
Total cancelled orders	0
Total shopping carts created	0
Total number of categories in the store's catalog	19
Total number of categories viewed	0
Total number of products in the store catalog	221
Total number of products viewed	0

Print OK

Figure 11-16 Storefront Usage Summary sample

Order Status Report

Clicking **Order Item Status Report** opens the Order Status Report window shown in Figure 11-17.

Figure 11-17 Order Status Report selection

Fill in the start and end dates and specify the currency for the report. Choose the state that the orders in the report should be in. Click **OK**.

Figure 11-18 shows the resulting report page, which lists clickable links to various order status data. You can see an Order Item Status report for an individual order by clicking the **Order ID** link for any order on the report.

Order ID	Order Status	Last Update timestamp	Product Charges	Adjustments	Tax on Products	Shipping Charges	Tax
10,032	M	December 4, 2003	$45.00	$0.00	$0.00	$45.00	
10,004	M	December 6, 2003	$1,594.99	$0.00	$0.00	$0.00	
10,038	M	December 6, 2003	$2,498.85	$0.00	$0.00	$45.00	

Figure 11-18 Order Status Report sample

Order Item Status Report

Clicking **Order Item Status Report** opens the Order Item Status Report window shown in Figure 11-19.

Figure 11-19 Order item status report selection

For a description of Fulfillment Status codes and Inventory Status codes, see the Glossary on page 931.

Order ID	Product Ordered	Status	Quantity	Sales	Fulfillment Center	Fulfillment Status	Inv
10004	Toner Cartridge	M	1.0	$45.99	Store1-fc	INT	
10004	X41 1.6G 256 128/20 XP HOME	M	1.0	$1,549.00	Store1-fc	INT	
10032	WebSphere Commerce V5.5 Handbook	M	1.0	$45.00	Store1-fc	INT	
10038	TP X24 1.13 512 256/30 12.1	M	1.0	$2,374.00	Store1-fc	INT	
10038	WebSphere Application Server V4.0 Handbook	M	10.0	$104.90	Store1-fc	INT	
10038	WebSphere Commerce V5.1 Handbook	M	1.0	$19.95	Store1-fc	INT	

Figure 11-20 Order Item Details Report sample

Site level reports

Three site level reports are available:

- Store performance report
- Site Overview Report
- Region Report

To view each report, complete the steps in the following sections.

Store Performance Report

This report ranks hosted stores by the amount of gross sales they generate. It ranks the stores in descending order.

1. From the **Reports** menu, click **Site Level Reports**. The Site Level reports page displays.
2. Click **Store Performance Report**.
3. Specify a reporting period and click **OK**. The selected report displays (Figure 11-21).

Figure 11-21 Store Performance Report sample

Click **Print** to print the report from your browser. Click **OK** to return to the **Site Level Reports** menu.

Site Overview Report

This report provides key criteria for the site such as orders, customer visits, and total sales. It is designed to help you assess the load on the site as a whole.

1. From the **Reports** menu, click **Site Level Reports**. The Site Level reports page displays.
2. Click **Site Overview Report**.
3. Specify a reporting period and click **OK**. The selected report displays (Figure 11-22).

Figure 11-22 Site Overview Report sample

Click **Print** to print the report from your browser. Click **OK** to return to the **Site Level Reports** menu.

Region Report

This report shows data about sales and shopper activity for the countries that shoppers provide when they register.

1. From the **Reports** menu, click **Site Level Reports**. The Site Level reports page displays.
2. Click **Region Report**.
3. Specify a reporting period and click **OK**. The selected report displays, in the style of the report shown in Figure 11-23.

Region	Revenue Totals	Number of Orders	Pages Viewed	Number of Customers	Number of Visits	Quantity Purchased
USA	$1,549.00	1	0	1	0	1
	$21,833.84	6	52	6	4	20

Figure 11-23 Region Report sample

Click **Print** to print the report from your browser. Click **OK** to return to the **Site Level Reports** menu.

11.3 eSite Catalog Asset Store

Several options are available for the Channel administrator to use to manage products across all eSite stores, using the shared catalog. Changes made to products in the shared catalog are reflected across all stores (assuming the store has not set up catalog filters to exclude the product).

> **Note:** The product management options listed below are the only options available when managing the eSite Catalog Asset Store, so these are the only ways that the shared catalog can be modified. That is, products in the shared catalog cannot be modified at the individual store level. Individual stores can choose to set a new price for a catalog item or add a new merchandising association, but these will not be reflected in the shared catalog. Individual stores can also choose to exclude products from the shared catalog (via catalog filters) and can import and manage additional products. Any additional products added at the store level will not be reflected in the shared catalog.

The following options are available from the Products menu:

- Product Management
- Categories
- Find Catalog Entries
- Find Categories
- Find Bundles or Kits
- Find Merchandising Associations

11.3.1 Product Management

The Product Management dynamic table provides the capability to directly manage the contents of the catalog, including:

- Products: groups of SKUs with common attributes.
- SKU: Stock Keeping Unit. SKUs represent the actual units of stock that are available for sale.
- Bundles and Kits: Groupings of catalog entries used for promotional purposes to attract customers.
- Marketing Associations: Suggested combinations of different catalog entries for promotional purposes. As product recommendation strategies designed to increase store sales, merchandising associations define relationships between selected catalog entries for the purposes of cross-selling, up-selling, and suggesting accessories, for example.
- Price: The amount charged for a product.

- All associated defining and descriptive attributes for catalog entries such as color, size, description, images, and so on.

Using the menu option **Products** → **Product Management**, catalog entries can be created and managed and shared across all eSite stores. The process of managing catalog entries at the Hub level is the same as at the store level. For more information about managing catalog entries, refer to “Merchandise: product management” on page 554.

11.3.2 Categories

A category, also known as a catalog group, is used to logically group products and services offered by a store.

Using the menu option **Products** → **Categories**, categories can be created, managed and shared across all eSite stores. The process of managing categories at the Hub level is the same as at the store level. For more information about managing categories refer to “Merchandise: Categories” on page 560.

11.3.3 Find Catalog Entries

Used to locate catalog entries (such as products, SKUs, and bundles and kits).

Using the menu option **Products** → **Find Catalog Entries**, catalog entries can be located in the shared catalog. The process of finding catalog entries at the Hub level is the same as at the store level. For more information about finding catalog entries refer to “Merchandise: Find Catalog Entries” on page 563.

11.3.4 Find Categories

Used to locate categories.

Using the menu option **Products** → **Find Categories**, categories can be located in the shared catalog. The process of finding categories at the Hub level is the same as at the store level. For more information about finding categories refer to “Merchandise: Find Categories” on page 565.

11.3.5 Find Bundles or Kits

Used to locate bundles and kits.

Using the menu option **Products** → **Find Bundles or Kits**, bundles and kits can be located in the shared catalog. The process of finding bundles and kits at the Hub level is the same as at the store level. For more information about finding bundles and kits, refer to “Merchandise: Find Bundles or Kits” on page 566.

11.3.6 Find Merchandising Associations

Used to locate merchandising associations.

Using the menu option **Products** → **Find Merchandising Associations**, merchandising associations can be located in the shared catalog. The process of finding merchandising associations at the Hub level is the same as at the store level. For more information about finding merchandising associations, refer to “Merchandise: Find Merchandising Associations” on page 567.

11.4 B2B eSite Asset Store

Several options are available for the Hub administrator to use to manage marketing features across all stores that are based on the B2B eSite Asset Store (that is, all B2B stores).

> **Note:** Unless customized menus have been implemented as per 6.5, “Dynamic text messages” on page 95, the marketing management options listed below are the only options available when managing the B2B eSite Asset Store.

The following marketing management options are available:

- Customer Profiles
- Campaigns
- Campaign Initiatives
- e-Marketing Spots
- Ad Copy

11.4.1 Customer Profiles

A customer profile incorporates registration information, demographics, address information, customer culture, purchase history, and other miscellaneous attributes that define a dynamic group of customers or accounts. Customer profiles serve as targets for advertising, promotions, suggestive selling, and discounts.

Using the menu option **Marketing** → **Customer Profiles**, customer profiles can be created and managed that exist across all stores that are based on the B2B eSite Asset Store. The process of managing customer profiles at the Hub level is the same as at the store level. For more information about managing customer profiles, refer to “Marketing: Customer Profiles” on page 493.

11.4.2 Campaigns

Campaigns serve to organize marketing efforts. They are often associated with a certain set of objectives. For instance, a Back to School campaign may have an objective of increasing sales of children's clothes during the campaign.

Using the menu option **Marketing** → **Campaigns**, campaigns can be created and managed that exist across all stores that are based on the B2B eSite Asset Store. The process of managing campaigns at the Hub level is the same as at the store level. For more information about managing campaigns, refer to "Marketing: Campaigns" on page 528.

11.4.3 Campaign Initiatives

Campaign initiatives serve to generate targeted marketing content. They can be associated with a campaign that contains a collection of initiatives. As an example of this relationship, if a store had a Back to School campaign, the initiatives would be responsible for lower-level actions such as advertising a discount on pens or suggesting lined paper to any customer who has registered and listed their occupation as a student.

Using the menu option **Marketing** → **Campaign Initiatives**, campaign initiatives can be created and managed that exist across all stores that are based on the B2B eSite Asset Store. The process of managing campaign initiatives at the Hub level is the same as at the store level. For more information about managing campaign initiatives, refer to "Marketing: Campaign Initiatives" on page 533.

11.4.4 e-Marketing Spots

e-Marketing Spots reserve space on store pages in which personalized marketing content displays. The e-Marketing Spots are used during page creation to reserve space for the dynamic content that will be shown to customers. When a page is requested by a customer, any e-Marketing Spots present on that page communicate with the rule server to process the rule-based code associated with the spot and generate the Web page content.

Using the menu option **Marketing** → **E-Marketing Spots**, e-Marketing Spots can be created and managed that exist across all stores that are based on the B2B eSite Asset Store. The process of managing e-Marketing Spots at the Hub level is the same as at the store level. For more information about managing e-Marketing Spots, refer to "Marketing: E-Marketing Spots" on page 544.

11.4.5 Ad Copy

Ad copy refers to all of the support material created for campaigns. This material typically is created by a team of writers or graphic artists, depending on the content. Ad copy must include display content, whether that is product pictures, graphics used in advertising, or marketing text supporting products. After the ad copy is defined, it can be referenced when creating campaigns, and it will be displayed appropriately.

Using the menu option **Marketing** → **Ad Copy**, ad copy can be created and managed that exists across all stores that are based on the B2B eSite Asset Store. The process of managing ad copy at the Hub level is the same as at the store level. For more information about managing ad copy, refer to “Marketing: Ad Copy” on page 549.

11.5 eSite Store Front Asset Store

Several options are available for the Hub administrator to manage marketing features across all stores that are based on the eSite Store Front Asset Store (that is, all B2C stores).

> **Note:** Unless customized menus have been implemented as per 6.5, “Dynamic text messages” on page 95, the marketing management options listed below are the only options available when managing the eSite Store Front Asset Store.

The following marketing management options are available:

- Customer Profiles
- Campaigns
- Campaign Initiatives
- e-Marketing Spots
- Ad Copy

11.5.1 Customer Profiles

A customer profile incorporates registration information, demographics, address information, customer culture, purchase history, and other miscellaneous attributes that define a dynamic group of customers or accounts. Customer profiles serve as targets for advertising, promotions, suggestive selling, and discounts.

Using the menu option **Marketing** → **Customer Profiles**, customer profiles can be created and managed that exist across all stores that are based on the eSite

Store Front Asset Store. The process of managing customer profiles at the Hub level is the same as at the store level. For more information about managing customer profiles, refer to “Marketing: Customer Profiles” on page 493.

11.5.2 Campaigns

Campaigns serve to organize marketing efforts. They are often associated with a certain set of objectives. For instance, a Back to School campaign may have an objective of increasing sales of children’s clothes during the campaign.

Using the menu option **Marketing** → **Campaigns**, campaigns can be created and managed that exist across all stores that are based on the eSite Store Front Asset Store. The process of managing campaigns at the Hub level is the same as at the store level. For more information about managing campaigns, refer to “Marketing: Campaigns” on page 528.

11.5.3 Campaign Initiatives

Campaign initiatives serve to generate targeted marketing content. They can be associated with a campaign that contains a collection of initiatives. As an example of this relationship, if a store had a Back to School campaign, the initiatives would be responsible for lower-level actions, such as advertising a discount on pens, or suggesting lined paper to any customer who has registered and listed their occupation as a student.

Using the menu option **Marketing** → **Campaign Initiatives**, campaign initiatives can be created and managed that exist across all stores that are based on the eSite Store Front Asset Store. The process of managing campaign initiatives at the Hub level is the same as at the store level. For more information about managing campaign initiatives, refer to “Marketing: Campaign Initiatives” on page 533.

11.5.4 e-Marketing Spots

E-Marketing spots reserve space on store pages in which personalized marketing content displays. The e-Marketing Spots are used during page creation to reserve space for the dynamic content that will be shown to customers. When a page is requested by a customer, any e-Marketing Spots present on that page will communicate with the rule server to process the rule-based code associated with the spot and generate the Web page content.

Using the menu option **Marketing** → **E-Marketing Spots**, e-Marketing Spots can be created and managed that exist across all stores that are based on the eSite Store Front Asset Store. The process of managing e-Marketing Spots at

the Hub level is the same as at the store level. For more information about managing e-Marketing Spots refer to “Marketing: E-Marketing Spots” on page 544.

11.5.5 Ad Copy

Ad copy refers to all of the support material created for campaigns. This material typically is created by a team of writers or graphic artists, depending on the content. Ad copy must include display content, whether that be product pictures, graphics used in advertising, or marketing text supporting products. After the ad copy is defined, it can be referenced when creating campaigns, and will be displayed appropriately.

Using the menu option **Marketing** → **Ad Copy**, ad copy can be created and managed that exists across all stores that are based on the eSite Store Front Asset Store. The process of managing ad copy at the Hub level is the same as at the store level. For more information about managing ad copy, refer to “Marketing: Ad Copy” on page 549.

12

Manage a B2C store

This chapter of the e-Commerce Hosting Solutions Guide provides the most common aspects of managing a Business to Consumer (B2C) store within the eSite Hub hosting model.

In this chapter, we describe the eSite Hub, B2C store administration tasks. This includes a cookbook approach to the typical tasks performed to customize or change the store information and administer the store using the eSite Hub tools.

Store administrator topics that are covered include:

- Creating the seller store organization and administrator
- Logging on as the eSite Hub store administrator
- Reviewing the major store administrator and other role-related tasks

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12.1 Create the seller organization and administrator

For additional information, see “Create organizations and users” on page 241.

To register your B2C Store seller organization:

1. Open a browser and enter this address:

   `http://host_name/webapp/wcs/stores/servlet/eSiteHub/index.jsp`

   You can also obtain the URL from the eSite Hub Administrator, whom we call Hub-Orgadmin in our examples.

   Bookmark the address as the eSite Hub home page.
2. Click **Registration**.
3. Click **Organization** to open the Organization Registration page.
4. Enter the required organization name. We use `Seller1Org`.
5. Fill in all of the required store information fields.

> **Note:** Save the seller organization ID exactly the way you entered it as you will need it later. Remember that this information is case-sensitive.

Continue down this Web page to fill in the required administrator information:

6. Enter the seller store administrator logon ID. We use `seller1admin`.
7. Enter `passw0rd` as the seller store administrator password.

> **Note:** In these examples, enter passw(zero)rd (passw0rd) whenever a password is needed. Save your logon ID (seller1admin) and password (passw0rd) in a safe place as it will be needed later.

8. Re-enter the password `<passw0rd>` for confirmation.
9. Fill in all of the required seller administrator information.
10. Select **Seller** to specify the role of the organization.
11. Click **Submit Registration**. This approval pending message appears: `Your registration request has been submitted for approval. You will be notified via e-mail within 72 hours whether your registration is approved.`

12.2 Log on as the eSite Hub store administrator

> **Note:** The B2C or B2B store organization (Seller1Org) and the store administrator (seller1admin) must be created before the eSite Hub administrator (Hub-Orgadmin) can approve the Seller1Org, approve the store administrator seller1admin, and then create and accomplish the store administrator functions.

Now the store administrator (seller1admin) can use the WebSphere Commerce eSite Hub to log on:

1. Open a browser and enter this address:

   `http://host_name/webapp/wcs/stores/servlet/eSiteHub/index.jsp`

   You can also get the URL from your eSite Hub administrator.

2. This opens the Logon page (Figure 12-1). Enter `seller1admin` as the user ID and `passw0rd` for the password.

3. Click **Log on**.

Figure 12-1 Logon page

4. The Welcome to eSite Hub page opens (Figure 12-2). From the left navigation menu, click **manage store**.

Figure 12-2 Welcome to eSite Hub

5. This opens the manage store page (Figure 12-3). The menus display tasks that you are authorized to perform based on user roles, authority levels, and the business model and type of store.

Figure 12-3 Manage store options

Note: In the ITSO example, a separate organization was created underneath the eSite Seller organization for use in the B2C store. While we have this organization owning a single store, it is possible to have multiple stores. We also created a single fulfillment center for this store when the store was created. Multiple fulfillment centers can be created and shared among stores.

12.3 Store administrator tasks

This part of the book introduces the main tasks involved in the day-to-day operation of your storefront. To perform the tasks described in this section, use the eSite Hub, which is a browser-based tool.

The eSite Hub enables you to maintain your online store. You can filter the shared catalog, create and update the store catalog, change the look and feel of the store, manage orders, and track store activities.

Use the eSite Hub *manage store* page for the following:

- *Store* administration and configuration
- *Marketing* and sales to target your customers
- *Merchandise* to present and manage your products
- *Operations* and logistics for providing quality customer service
- *Reports* to track and manage your business

Optional: These areas from the tool-bar menu can also be assigned as roles for individuals to manage particular areas.

1. On the Roles window, click the **Help** menu.
2. Click **Concepts**.
3. Click **Roles**. Its topics include background on roles and how they can be assigned.

Figure 12-4 Help menus

4. Minimize the Help screen to keep it handy for later use.

   If you keep the Help screen open and click **Help** when you need information about a subject, Help auto-cycles to the information that is needed.

12.3.1 Store: Open/Close

Note: In our examples, we assume that the Store1 organization has been created and that the site administrator has approved, created, and opened the store for your access.

1. Make sure you are logged on as seller administrator (seller1admin).
2. From the **Store** menu, select **Open/Close** (Figure 12-5).
   - When the store is open, click **Close Store** to close it.
   - When the store is closed, click **Open Store** to open it.

Figure 12-5 Open / Close store

12.3.2 Store: Replacing the eSite Hub store default information

When the site administrator published your store, it included the default text and logo that all eSite Hub stores receive at creation. Of course, you can customize your store to make it reflect your business and your business practices.

The WebSphere Commerce eSite Hub offers several tools that enable you to customize your store. You can use these tools to:

- Change store information:
  - Change the store contact information.
  - Change the store location information.
  - Change the language support for your store.
  - Change the currency support for your store.
- Change text on store pages and in notification messages.
- Upload the store logo.
- Change store style, the look and feel of your store:
  - Change the store layout.
  - Change the store color scheme.
  - Change the store banner.
- Manage store files.
- Change the store flow.
- Change the store shipping.
- Change the store tax.

12.3.3 Store: Changing store profile information

Use the Change Profile wizard in the WebSphere Commerce eSite Hub to change the store name, store description, store contact information, store location information, language, and currency. Do the following:

1. From the **Store** menu, select **Change Profile**. The Store Profile notebook opens.

Figure 12-6 Change Profile options

2. Change information as appropriate:
   - To change the store name or store description, select **General**.
   - To change the store contact information, select **Contact**. This is the contact information that is displayed when a customer clicks Contact Us from any store page.
   - To change the location of store, select **Location**.
   - To change the languages available in the store, select **Languages**. The languages that you choose here display on the Select a Language list on the navigation frame of all store pages. Note that if only one language is available, the Select a Language list does not appear.
   - To change the currencies available in the store select **Currency**. The currencies that you choose here display on the Select a Currency list on the navigation frame of all store pages. Note that if only one currency is available, the Select a Currency list does not appear.
3. Click **OK** to save your changes and exit the Store Profile page.
4. To see the changes in the store, launch the store's home page.

12.3.4 Store: Changing text on store pages & notification messages

In the eSite Hub you can change all text displayed on store pages. Most text can be changed by using **Store** → **Change Pages**; however, some text can only be changed by modifying properties files.

The method that you use to change text on the store pages depends on the text:

- For text on store pages, such as the privacy policy, location, and text in notification messages, use the Change Page dialog in eSite Hub. The process for changing pages using this feature is described in this section.
- To change all other text (including error messages, labels for fields, and the text in the header, footer or sidebar), modify the properties file.

Do the following:

1. From the **Store** menu, select **Change Pages**. The Change Pages page opens (Figure 12-7).

Figure 12-7 Change Pages

To change the text, edit or replace the existing text in the corresponding scroll box. The text displayed in the scroll box may contain HTML tagging, and placeholders for variables that are retrieved from the database.

– **HTML tagging**

  An example of HTML tagging is Personal information, which means that the words “Personal Information” opens in bold when rendered by a browser. If you want to change the way the font displays in the page, you will need an understanding of HTML.

– **Database placeholders**

  A digit displayed inside curly brackets is a database variable, such as {0}. Database variables hold information such as the name of the store. If you want to maintain these placeholders, do not change them.

– **Links**

  To link to other pages, add the prefix /wcsstore to the file path in the style:

  ```
  <img src="/wcsstore/store_directory/upload/folder_name/image_name.jpg">
  ```

  - *store_directory* is the name of the store directory you specified when creating your store.

2. Click **OK** to save your settings and return to the eSite Hub home page. To see the changes in the store, launch the store’s home page.

12.3.5 Store: Uploading the store logo

Use the Upload Logo wizard in the WebSphere Commerce eSite Hub to upload and replace the store logo:

1. From the **Store** menu, select **Upload Logo** (Figure 12-8 on page 464) to open the Logo page.

   If you do not see this option, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

Figure 12-8 Store menu

2. In the **Logo** file field, type the file path for the logo, or click **Browse** and navigate to the file on your system. The file must be in .jpg or .gif format to be uploaded correctly.

> **Note:** Size of logo: 70 x 44 pixels.

3. Click **Upload** and **Apply**.
4. To see the new logo in your store, click **View Store.**
5. Click **Close** to save your settings and return to the WebSphere Commerce eSite Hub home page.

12.3.6 Store: Changing store style

Using the Change Style wizard in the WebSphere Commerce eSite Hub, you can change the style of your store, including layout, color, and banner:

1. From the **Store** menu, select **Change Style**. The Style page displays (Figure 12-9 on page 465). If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

Figure 12-9 Style options

2. Select a layout and click **Apply**.
3. To view the new layout in your store, click **View Store**. Your store opens displaying the new layout.
4. When you have decided on a layout, click **Next**. The Color page displays.
5. Select a color scheme and click **Apply**.
6. To view the new color scheme in your store, click **View Store**. Your store opens displaying the new colors.
7. Click **Next**. The Banner page displays, enabling you to select a new banner from several available banners, or to upload a banner of your own.
   - To upload your own banner:
     - Select **Use your own banner**.
     - In the **Banner image** field, type the file path for the banner, or click **Browse** and navigate to the file on your system.
     - Click **Upload**.
   - Select **Select a banner**. The available banners display for your choosing.
8. Click **Apply**.

9. To view the new banner in your store, click **View Store**. Your store opens displaying the new banner. To view the other available banners in your store, return to the Banner page, select another banner and repeat.
10. Click **Finish**.
11. To see the changes in the store, launch the store's home page.

> **Note:** For information about how to create a new style and template, see "New storefront style and template" on page 76.

12.3.7 Store: Manage Files

Use the Manage Files page to upload new catalog files for your store or to reorganize (including renaming or moving) existing files.

> **Note:** To upload new files or reorganize existing ones, first select the folder to which you want to upload or move the file, then upload the file. The folders are displayed on the Manage Files page in a tree structure.

1. From the **Store** menu, select **Manage Files**. The Manage Files page opens.

Figure 12-10 Manage Files page

2. To manage files in your store, including adding new files:
   a. From the tree structure, select the folder to which you want to upload the new file.
   b. In the **Upload** field, type the file path for the file, or click **Browse** and navigate to the file on your system.
   c. Click **Upload**.
3. To move, rename, or delete files or folders:
   a. From the tree structure, right-click the folder or image that you want to move, rename or delete.
   b. From the context menu, select the corresponding action.
   c. Click **Close** to save your settings and return to the WebSphere Commerce Accelerator home page.
4. To upload new HTML or image files to your store, first select the folder to which you want to upload the file.
   d. Click **Upload**.
   e. Click **Close** to save your settings and return to the WebSphere Commerce eSite Hub home page.

12.3.8 Store: Change Flow

This section describes how to enable or disable optional store features by using the Change flow feature in the eSite Hub. When a B2C or B2B store is published, many store features are enabled. For example, there is a field on the store's Registration page that asks customers to provide their gender. You may not want this field to be displayed in your store, so you can remove it easily by using the Change flow page. The aspects of your store that you can configure by using Change flow are as follows:

- Customer Care
- Auctions
- Catalog
- Checkout
- Quick Checkout
- Order status
- Registration
- Coupons

Attention: Before you begin, you may want to back up the store's JSP files. The JSP files are located in this directory:

`WAS_installdir/installedApps/WC_wc_instance_name.ear/wcstores.war/storedir`

To configure the options for your eSite Hub store:

1. From the **Store** menu, select **Change Flow**.
2. From the pane's navigation frame, select the feature you want to configure. Figure 12-11 shows the first option, Customer Care.

Figure 12-11 Change Flow

3. Select the appropriate check boxes or radio buttons for the changes you wish to make.
4. Select **Apply** to apply the changes.
5. Click **Launch Store** to view the changes in your store.

> **Tip:** If you do not see the changes, refresh your browser.

6. Click **OK** to return to the eSite Hub home page.

12.3.9 Store: Change Shipping

This section describes how to use the eSite Hub to add shipping charges to orders. Using the eSite Hub, you can create shipping charges based on the weight of the order or the number of items in the order, or use fixed-rate charges. You can apply any combination of the three types of charges to an order.

Note: (Optional) If necessary, an application developer can customize the shipping implementation. For information about customizing shipping, refer to the *IBM WebSphere Commerce Store Development Guide Version 5.5*.

Shipping charges are based on the following factors:

- Jurisdiction to which you are shipping the order.

  Jurisdictions are geographical regions or zones representing a country, region, province, territory, or zip code range, to which you sell goods.

- Shipping mode you are using to ship the order.

  A shipping mode is the combination of the shipping carrier (the company that provides shipping services) and the shipping service offered by that carrier. For example, XYZ Courier, Overnight service is a shipping mode.

- Shipping code used to calculate the shipping charge.

  A shipping code indicates which shipping charges are applied to which products in the order. Shipping codes are assigned to products or categories. When a customer purchases a product, the codes assigned to it determine the shipping charges that are added to the order.

Before you set up shipping charges using the Shipping notebook in the WebSphere Commerce eSite Hub you should have the following company-specific data available:

- Country or region in which the store is located
- The names of all countries or regions to which the store provides shipping
- The names of all supported shipping providers
- The names of all shipping services offered by each shipping provider, such as Overnight, 3-day, or 7-day.

Defining jurisdictions

1. From the **Store** menu, select **Change Shipping**. The Shipping overview page opens (Figure 12-12 on page 470).

Figure 12-12 Change Shipping

2. Click **Shipping Jurisdictions**. The Jurisdictions page opens (Figure 12-13 on page 471).
3. To define a jurisdiction, click **New**. The New Jurisdiction page displays.
4. In the **Name** field, type a name for the jurisdiction.

Figure 12-13 Jurisdictions page

5. Define *at least one* of the following fields:
   - Use the **Country/Region** pull-down list to select a country or region.
   - If the shipping rate applies to a specific state or province, type the name of the state or province in the **State/Province** field. If the shipping rate applies to the entire country or region (or if the country or region does not have states or provinces), leave this field blank.
   - In the **City** field, type the name of the city.
   - For **ZIP code range**, type the first and last ZIP codes in the range in the **Start** field and **End** field, respectively.

   f. Click **OK** to save your settings and return to the Jurisdictions page. A confirmation dialog displays. Click **OK**. The new jurisdiction now displays in the list.

   g. Repeat steps 1g through 1j to define another jurisdiction.

Defining shipping modes

1. From the **Store** menu, select **Change Shipping**. The Shipping overview page displays.
2. Click **Shipping modes**. The Shipping Modes page displays.

3. To define a shipping mode, click **New**. The Create New Shipping Mode page displays (Figure 12-14).

Figure 12-14 Shipping Mode

4. To define a new carrier, select **Create new**. Type the name of the new carrier in the Name field, for example XYZ Carrier.
5. To define a new service, select **Create New**, then type the name of the service in the **Name** field, for example Overnight.
6. Define the following optional attributes as necessary:
   - Description: Type a short phrase that describes the shipping mode, such as XYZ Carrier, Overnight shipping mode.
   - Additional description: Add more information about the shipping mode, such as $15.00 for Overnight shipping.
   - Estimated delivery time description: Type a phrase that describes the delivery time, such as 2-3 days or 24 hours.
   - Carrier tracking URL: Type the Web address that customers can use to find out more about the status of their shipment, such as `http://www.xyzcarrier.com`.
7. Click **OK** to save your settings and return to the Shipping Modes page. A confirmation dialog displays.

8. Click **OK**. The new shipping mode now displays in the list.
9. Repeat step 2 on page 471 through step 7 on page 472 to define another shipping mode.

Defining shipping codes

1. From the **Store** menu click **Change Shipping** → **Shipping codes**. The Shipping Codes page displays.
2. To define a new shipping code, click **New**. The Define Shipping Code Details page displays.

Figure 12-15 Define Shipping Code Details page

3. In the **Name** field, type the name of the shipping code. In the **Description** field, type a description of the new shipping code.
4. Click **Next**. The Assign Shipping Codes to Products or Categories page displays.
5. Select the products or categories that will be associated with this shipping code:
   - All products: All products in the catalog will be associated with this code.
   - Specific product(s): Either find the products or browse the catalog to select specific products to be associated with this code.

– Categories: Click **List** to view the categories in the catalog. The Category List page displays.

  Select the category you want to associate with the shipping code, and click **Add**. The category displays in the Category field on the Assign Shipping Codes to Products or Categories page.

6. Click **Finish** to save your settings and return to the Shipping Codes page.
7. A confirmation dialog displays. Click **OK**. The new shipping code displays in the list.
8. A second dialog box opens, informing you that you must create shipping charges associated with this shipping code. Click **OK**.

   For additional shipping codes repeat step 3 on page 473 through step 7.

Defining shipping charges

After you have created the shipping codes in the previous steps:

1. From the **Store** menu select **Change Shipping** → **Shipping codes**. The Shipping Codes page opens (Figure 12-16).

Figure 12-16 Shipping Codes page

2. Select the shipping code to which the shipping charge will apply.
3. Click **Charges**.

4. The Shipping Charges page displays the codes you have defined (Figure 12-17). To define a shipping charge, click **New**.

Figure 12-17 Shipping Charges page

5. The Define Charge Details page opens (Figure 12-18).
   - Fill in the defined **Name** field with the name of the shipping charge (2 Day Air).
   - In the **Description** field, type a description of the new shipping charge.
   - Select the time period that the products or categories will be associated with this shipping code.

Figure 12-18 Define Charge Details page

6. Click **Next**.

7. The Define Charge Type page opens with three charge types (Figure 12-19).

Figure 12-19 Define Charge Type page

8. Choose By quantity, By weight, or Fixed:

   By quantity: Charges are based on the number of items shipped.

   – From the **Currency** pull-down list, select the currency for the charge.

   – In the Ranges table:

     - To add a range, click **Add**. In the **Start of range** field, type the number that starts the range.
     - To add another range, repeat the previous step. If you enter a second range, the end number of the first range is entered automatically. For example, if your first range is 0 to 5, your second range starts with 6.
     - In the **Charge** column, type the amount to be charged for that range. For example, the amount to ship an order that contains 0 to 5 items might be $5.00. Note that this amount is in the currency you selected from the pull-down list. If you want to define amounts in one or more additional currencies, select them the Currency list.

   By weight: Charges are based on the weight of the order shipped.

   – From the **Unit of measure** pull-down list, select a weight unit.

   – From the **Currency** pull-down list, select the currency for the charge.

– In the Ranges table:

  - To add a range, click **Add**. In the **Start of range** field, type the number that starts the range.
  - To add another range, repeat the previous step. If you enter a second range, the end number of the first range is entered automatically. For example, if the second range begins with 6, the first range ends with 5.
  - In the **Charge** column, type the amount to be charged for that range. Note that this amount is in the currency you selected from the pull-down list. If you want to define amounts in a second currency, select a new currency from the Currency list.

Fixed: Charges that are independent of quantity or weight (Figure 12-20).

  - From the Currency pull-down list, select the currency for the charge.
  - In the Amount field, type the amount of the fixed charge in the currency you just selected. To define amounts in one or more additional currencies, select them from the Currency list.

Figure 12-20 Define Fixed Charge

h. Click **Finish** to save your settings and return to the Shipping Charges page (Figure 12-21 on page 479). The new shipping charge has been added to the list.

Figure 12-21 Shipping Charges

Activating shipping codes

1. From the **Store** menu, click **Change Shipping** → **Shipping codes**. The Shipping Codes page displays.
2. Select the shipping code to be activated. Click **Activate**. The value in the Status column changes to Activated.

Update registry components

To reflect changes to shipping on the site, the registry components must be updated. This is performed by the site administrator using the Site Administration Console:

1. Open a browser and enter this address to open the Administration Console:

   `http://host_name:8002/adminconsole`

2. Click **Log on**.
3. Enter `Hub-Orgadmin` for the user ID as and `passwOrd` for the password.
4. Click **Log on**.
5. Select **Site** on the Administration Console Site/Store Selection page.
6. From the **Configuration** menu, choose **Registry** to display a list of registry components for the site.

7. Click **Update All** to update all of the listed Registry components. The Registry window reloads, listing the status for all components as Updating.
8. Click **Refresh** to reload the Registry window and check on the status of components that you are updating. When updating is complete, the status column reads Updated.

12.3.10 Store: Change Tax

This section describes how to use the WebSphere Commerce eSite Hub to add taxes to orders. A functional store must include data on taxes. Taxation is about charging and collecting taxes on the goods and services of the store. The combination of tax categories, calculation codes, jurisdiction, and jurisdiction groups create the tax charges for the store.

Specify tax settings for your store using the Tax notebook. This notebook enables you to set up or change tax information so that taxes are displayed on each order. Before you specify tax rates for your store, ensure that you contact your taxation agency to determine the types and rates you should charge.

Note: If the tax implementation supported by the Tax notebook is not appropriate for the store, WebSphere Commerce supports integrating with a third-party tax system. WebSphere Commerce also supports customizing the tax implementation. For information about customizing the tax implementation refer to the Taxes topic in the WebSphere Commerce Studio development environment online help.

Use the Tax notebook to specify the following tax information:

- Tax jurisdictions: The tax jurisdictions to which you deliver orders. The jurisdictions are geographical regions, made up of a country or region and state or province combination. For example, CANADA, Ontario is a jurisdiction. WebSphere Commerce creates a default tax jurisdiction, WORLD, for every store. The WORLD jurisdiction cannot be deleted.
- Tax categories: The tax categories for your store. Create a category for each type of tax you must collect for your store. For example, create a GST category for the GST, or a State category for the state tax. You can create as many categories as necessary for your store. In the Tax notebook, sales tax categories are applied to the total price of the order, while shipping tax is applied to the total shipping charge for the order. The Tax notebook does not apply taxes on top of other taxes.
- Display name of the tax category: The tax category name that displays to your customers. If your store displays in multiple languages, you can define a

display name for each language. For example, the name of the tax category may be translated into Japanese or German, or any language in your store.

- Tax rates: The tax rates (as percentage values) charged to customers. Each rate is associated with a tax jurisdiction and tax category. For example, you can specify a 10% shipping tax for all orders shipped to Canada and a 12% shipping tax for orders shipped outside of Canada.
- Tax calculation codes: The sales and shipping tax calculation codes that specify how sales and shipping taxes are calculated. For example, all sales taxes applicable to groceries could be grouped under a single sales tax code called groceries. A store typically only supports a single tax code scheme. WebSphere Commerce creates a default code that applies to any product that is not assigned to a tax code. After creating tax codes for your store, you assign the applicable tax categories to each code.

Setting up taxes

1. Open the Tax notebook by choosing **Change Tax** from the **Store** menu.
2. Change tax jurisdictions:
   a. From the pane's navigation frame, click **Jurisdictions** (Figure 12-22).

Figure 12-22 Change tax jurisdictions

b. To add a jurisdiction, select a country or region from the **Country/Region** pull-down list, and use the **State/Province** pull-down list or field as follows:

- If you selected Canada, United States, or Japan as your country or region, either select a state or province for the chosen country or region from the pull-down list, or if one tax rate applies to the entire country or region, from the bottom of the list, select **All**.
- If you selected a country or region other than Canada, United States, or Japan, either type the name of the state or province for the chosen country or region, or leave the field blank if the tax rate applies to the entire country or region or if the country or region does not have states or provinces.

c. Click **Add** to add the combination of country or region and state to the **Defined jurisdictions** list.

d. Repeat step b and step c to add more tax jurisdictions.

> **Note:** You can create an unlimited number of tax jurisdictions, but with more than 50 jurisdictions, the Rates page will take a long time to open.

e. Click **OK** to save your settings and exit.

3. Change sales tax codes:

a. From the Store menu, click **Change Tax**.

b. From the left navigation frame, click **Sales Tax** (Figure 12-23 on page 483).

Figure 12-23 Sales Tax Codes page

c. To add a code:

   i. In the **New sales tax code** field, type the name of the sales tax code.

   ii. Click **Add**. The tax category displays in the Defined sales tax **codes** list.

d. Set the default tax code:

   From the **Define sales tax codes** list, select the code, then click **Set as Default**. The default sales tax code is applied to all products that are not currently assigned to a sales tax code.

e. To delete a code, select it in the **Defined sales tax codes** list and click **Remove**.

f. Click **OK** to save your settings and exit.

4. Change the shipping tax codes:

   a. From the Store menu, click **Change Tax.**

   b. From the left navigation frame, click **Shipping Tax**.

   c. To add a code:

      i. In the **New shipping tax code** field, type the name of the shipping tax code.

ii. Click **Add** to display the tax category in the Defined shipping tax codes list.

d. To set a default shipping tax code, select a tax code from the **Defined shipping tax codes** list; then click **Set as Default**. Default shipping tax codes will be assigned to all products that are not currently assigned to a tax code.

e. To delete a code, select the code in the **Defined shipping tax codes** list and click **Remove**.

f. Click **OK** to save your settings and exit.

5. Change the tax categories:

   a. From the **Store** menu, click **Change Tax.**

   b. From the left navigation frame, click **Categories**.

   c. To add a category:

      1) In the **New tax category** field, type the name of the tax category.

      2) Select the tax type of the category. Each category must be either a sales tax or a shipping tax type. Sales tax is charged on the total amount of the order. Shipping tax is charged on the shipping charges for the total order.

      3) Select **Include tax as display price** if you want to include the tax amount in the price that displays for the product. If you do not select this option, the tax amount displays separately.

      > **Important:** To display the tax as a display price on your store page, your site administrator or store developer will have to make some changes to the store page. For more information, see “Displaying tax as part of the display price” in the WebSphere Commerce development environment online help.

      4) Click **Add**. The tax category displays in the Defined tax categories list.

      5) Repeat step 4 on page 483 to add more tax categories.

   d. To delete a category, select the category, then click **Remove**.

   e. Click **OK** to save your settings and exit.

6. Change the tax category display name:

   a. From the **Store** menu, click **Change Tax.**

   b. From the left navigation frame, click **Display Name**.

   c. From the **Language** pull-down list, select the language.

d. In the **Display Name** fields, type the name for the tax category that opens to the customers, in the language you selected in step 4 on page 483.

e. Repeat steps b on page 484 and c on page 484 for each language your store supports.

f. Click **OK** to save your settings and exit.

7. Change tax rates:

   a. From the **Store** menu, click **Change Tax**.

   b. From the left navigation frame, click **Rates**.

   c. The tax rates table contains a default tax, Shipping, which has an initial value of `0.00`. In the **Shipping** column, type the tax rate charged for shipping for each jurisdiction within the table. Leave the value as zero if you do not charge a shipping tax.

   d. In the rest of the cells, type the tax rate for each combination of tax jurisdiction and tax category. Specify the rate as a percentage value.

   e. Click **OK** to save your settings and exit.

8. Assign categories to codes:

   a. From the **Store** menu, click **Change Tax.**

   b. From the left navigation frame, click **Category Assignment**.

   > **Note:** The table contains a default tax code, `GST`, and a default tax.

   c. Shipping. Assign tax categories to the appropriate tax codes by selecting the corresponding check box.

   d. Click **OK** to save your settings and exit.

9. Update registry components:

   In order for changes to tax to be reflected in the site, the registry components must be updated. This is performed by the site administrator using the Site Administration Console:

   a. Open a browser an enter this address to open the Administration Console:

      `http://`*`host_name`*`:8002/adminconsole`

   b. Click the **Log on**.

   c. Enter `Hub-Orgadmin` as the user ID and `passwOrd` for the password.

   d. Click **Log on**.

   e. Select **Site** on the Administration Console Site/Store Selection page.

f. From the Configuration menu, click **Registry**. This displays a list of registry components for the site.

g. Click **Update All** to update all of the listed Registry components. As the Registry window reloads, the status for all components is listed as Updating.

h. Click **Refresh** to reload the Registry window and check on the status of components you are updating. When updating is complete, the status column reads Updated.

12.3.11 Store: Payment Settings

This table displays the cassettes the merchant is authorized to use.

1. From the **Store** menu, select **Payment Settings**.
2. Click the green icon under OfflineCard (Figure 12-24).
   - Click **Merchant Cassette Settings** to start or stop the available merchant cassettes.
   - Click **Accounts** to create, update, or delete accounts.

Figure 12-24 Store payments: Merchant Settings

3. Use the Back arrow to return to Merchant Settings.

   For more information, see “Payments: Merchant settings” on page 365.

12.3.12 Store: Message Type Configuration

Use these instructions to configure the message types for your store. You cannot add new message types to the system or delete existing ones; instead, there is a predefined set of message types using the e-mail transport that can be configured.

> **Note:** You must have a mail server set up and configured. If not, contact the site administrator.

Open this page by selecting **Store** → **Message Type Configuration**. The following actions are initiated from the Message Type listing (Figure 12-25).

Figure 12-25 Message Type Configuration

- Notifying the merchant of an order

  To configure e-mail messaging to notify the merchant of a new order:

  On the Message Type Configuration page, select **Message for notifying the merchant of an order** and click **Configure** to display the Configuration Parameters page (Figure 12-26 on page 488).

  Fill in the fields as follows:

  Recipient Type the e-mail address of the merchant store that is to receive the new orders.

Sender	Must be a valid e-mail address.
Subject	Type `New merchant order`.
Reply To	Must be a valid e-mail address.

Click **Finish** to save.

> **Note:** You must fill in the required e-mail addresses with valid addresses that actually exist. Failure to supply working e-mail addresses will cause the messages to fail.

Figure 12-26 Configuration Parameters

- Daily new orders summary report

  On the Message Type Configuration page, select **Message for daily new orders summary report** and click **Configure**.

Recipient	Fill in a valid e-mail address of the merchant store that is to receive the new orders.
Sender	Must be a valid e-mail address.
Subject	Type `Daily new orders summary report`
Reply To	Must be a valid e-mail address.

Click **Finish** to save.

- Monthly store front usage report

  On the Message Type Configuration page, select **Message for monthly store front usage report** and click **Configure**.

Recipient	Fill in a valid e-mail address for the merchant store that is to receive the new orders.
Sender	Must be a valid e-mail address.
Subject	Type `Monthly store front usage report`
Reply To	Must be a valid e-mail.

  Click **Finish** to save.

- Store commerce reports

  On the Message Type Configuration page, select **Message for store commerce reports** and click **Configure**.

Recipient	Fill in a valid e-mail address for the merchant store that is to receive the new orders.
Sender	Must be a valid e-mail address.
Subject	Type `Store commerce reports`
Reply To	Must be a valid e-mail.

  Click **Finish** to save.

12.3.13 Store: Reports Delivery Settings

These settings are for the delivery of site or store commerce reports by e-mail and to select the frequency and format for receiving them:

1. From the **Store** menu, select **Report Delivery Settings** to open the Report Delivery Settings window (Figure 12-27). Make these selections:
   - Frequency: Select whether you want to receive reports on a monthly or quarterly basis.

     Monthly reports are sent out at the end of the month. Quarterly reports are sent out by the fiscal quarter, beginning on the dates you select.
   - Format: Select whether you want to receive reports in formatted text or separated by commas.

     Comma-separated reports delineate data with commas.
     Comma-separated data can be easily extracted and exported to many spreadsheet and database programs for further analysis.
2. Click **OK**. A message box opens stating: `The report delivery settings are saved successfully.` Click **OK** to close it.

Figure 12-27 Report Delivery Settings page

12.3.14 Store: Fulfillment Centers

Fulfillment centers are used by stores as both inventory warehouses and shipping and receiving centers. One store may have one or many fulfillment centers associated with it.

To add a new fulfillment center:

1. From the **Store** menu, select **Fulfillment Centers**.
2. This opens the Fulfillment Centers page (Figure 12-28). To change or update information about a fulfillment center:
   a. Select the name of the desired center.

Figure 12-28 Fulfillment Center list

   b. Click **Change** to open the Change Fulfillment Center page (Figure 12-29 on page 492).

> **Note:** In our example, each store has a single, unique fulfillment center.

   c. Update information for Name, Display name, Description, Street address, City, State/Province, Country/Region, and Zip/Postal code.
   d. Click **OK** to save the changes.

Figure 12-29 Change Fulfillment Center page

3. To add an additional, new fulfillment center:
   a. Click **New** on the Fulfillment Center page to open the Change Fulfillment Center page.
   b. Fill in information for Name, Display name, Description, Street address, City, State/Province, Country/Region, and Zip/Postal code.
   c. Click **OK** to save.
   d. Click **Logout**.

12.4 Marketing

You can create a variety of marketing strategies for your store by using the tasks in the Marketing menu:

- Work with customer profiles, including viewing a summary of each profile.
- Manage campaigns and campaign initiatives, including viewing campaign initiative statistics.
- Create, change, and remove campaign initiative conditions.
- Work with and schedule campaign initiatives on e-Marketing Spots
- Manage awareness ads.

12.4.1 Marketing: Customer Profiles

A customer profile incorporates registration information, demographics, address information, customer culture, purchase history, and other miscellaneous attributes that define a dynamic group of customers or accounts. Customer profiles serve as targets for advertising, promotions, suggestive selling, and discounts.

Note: You must create customer profiles before creating campaign initiatives.

Profiles are considered dynamic because customers belong to them based on their personal data and purchase history, both of which may change. For example, you might create profiles based on a customer's registration status. If you create a profile that requires customers to be registered to qualify, an unregistered customer will be excluded. If that same customer registers at a later date, they would then become a member of that target profile, and would continue to be a member until the profile is deleted.

Customer profiles also support static criteria. You can explicitly include or exclude particular customers or accounts, which overrides any defined dynamic criteria. In this way, for example, you can include a customer in a profile that would otherwise not match or exclude an account from a profile that it would otherwise match.

Customer profiles are created and edited using the Customer Profile notebook in the eSite Hub interface. To access the Customer Profile notebook (Figure 12-30 on page 494), open the **Marketing** menu and select **Customer Profiles**.

Create a new customer profile

1. Click **New** (Figure 12-30 on page 494) to access the navigation column for new customer profile selections.

Figure 12-30 Customer Profiles

1. Click **General**. Fill in the fields for customer profile name and description (Figure 12-31). Click **OK**.

Figure 12-31 Customer Profiles: General pane

1. Click **Registration** to expand this category in the left navigation column.
   a. Click **Registration status** (Figure 12-32 on page 495).

Figure 12-32 Customer Profiles: Registration Status

b. Select the desired registration status from the following options:

- Ignore registration status: Includes all customers, independent of their registration status.
- Registered: Includes only registered customers.
- Unregistered: Includes only unregistered customers.

c. Click **Registration date** from the navigation column (Figure 12-33).

Figure 12-33 Customer Profiles: Registration Date

d. Select the desired registration date from the following options:
   - Ignore registration date: Includes all customers, regardless of their registration date.
   - Registered within the number of days specified below: Includes only customers who have registered in a certain time frame.
   - Registered prior to the number of days ago specified below: Includes only customers who registered before a certain time frame.
   - Registered before the date specified below: Includes only customers who registered before a particular date.
   - Registered after the date specified below: Includes only customers who registered after a particular date.
   - Registered between the dates specified below: Includes only customers who registered between two dates.

e. To specify the registration date requirements for the customer profile, enter a Number of days during which customers were registered and are to be included in customer profile.

   Note: The specified registration date and time are based on the current system time for the machine where WebSphere Commerce Server is installed.

f. Click **Last registration update** in the navigation pane.

Figure 12-34 Customer Profiles: Last Registration Update

g. Select the desired registration date from the following options:

- Ignore date of last update to registration information: Includes all customers, regardless of the date of their last registration update.
- The last update to registration information must have occurred within the number of days specified below: Includes only customers who have updated registration information within a certain time frame.
- The last update to registration information must have occurred earlier than the number of days ago specified below: Includes only customers who have updated their registration information before a certain time frame.
- The last update to registration information must have occurred before the date specified below: Includes only customers who have updated their registration information before a particular date.
- The last update to registration information must have occurred after the date specified below: Includes only customers who updated their registration information after a particular date.
- The last update to registration information must have occurred between the dates specified below: Includes only customers who updated their registration information between two dates.

h. Specify the last registration update requirements for the customer profile. Enter a number of days during which customers updated their registration information and are to be included in customer profile.

> **Note:** The specified last registration date and time are based on the current system time for the machine on which WebSphere Commerce Server is installed.

2. Click **Demographics** to expand the navigation list.

   a. Click **Gender** (Figure 12-35).

Figure 12-35 Customer Profiles: Gender

   b. Define customer gender criteria from the following options:

      - Ignore gender: Includes all customers, regardless of their gender.
      - Target the following genders: Enables the administrator to select from the list of gender options.

   c. Define target genders from the following choices:

      - Not Provided: Includes only customers who have not provided their gender in their registration information.
      - Female: Includes only female customers in the profile.
      - Male: Includes only male customers in the profile.

> **Note:** Target gender options may appear differently on different implementations. The target gender options may be customized.

d. Click **Age** (Figure 12-36).

Figure 12-36 Customer Profiles: Age

e. Define customer age criteria from the following choices:

- Ignore age: Includes all customers, regardless of their age.
- Target the following age groups: Includes only customers who have registered and indicated an age range. Choose from the list of age groups:

  Not Provided: Includes only customers who have not provided their age in their registration information.

  The other options define age groups of customers to be included in the profile. The customer must have provided their age range in registration information.

> **Note:** Customer age options may appear differently on different implementations. The customer age options may be customized.

f. Click **Income** (Figure 12-37).

Figure 12-37 Customer Profiles: Income

g. Define customer income criteria from the following choices:

- Ignore income: Includes all customers, independent of their income.
- Target the following income groups: Includes only customers who have registered and indicated an income range.

  Not Provided: Includes only customers who have not provided their income in their registration information.

  The other options define income ranges of customers to be included in the profile. The customer must have provided an income range in registration information.

> **Note:** Target income options may appear differently on different implementations. The target income options may be customized.

h. Click **Marital status** (Figure 12-38).

Figure 12-38 Customer Profiles: Marital Status

i. Define customer marital status criteria from the following choices:

- Ignore marital status: Includes all customers, regardless of their marital status.
- Target the following marital statuses: Includes only customers who have registered and indicated a marital status.

  Not Provided: Includes only customers who have not provided their marital status in their registration information.

  The other options define marital states of customers to be included in the profile. The customer must have provided marital status in registration information.

> **Note:** Marital status options may appear differently on different implementations. The marital status options may be customized.

j. Click **Children** (Figure 12-39).

Figure 12-39 Customer Profiles: Children

k. Define customer's number of children criteria from the following choices:

- Ignore number of children: Includes all customers, regardless of their number of children.
- The other options define criteria ranges for the profile. The customer must have provided the number of children in registration information.

l. Specify the number of children from the pull-down list. To be included in this profile, the customer must have provided the number of children in registration information.

m. Click **Household** (Figure 12-40).

Figure 12-40 Customer Profiles: Household

n. Define customer household size from the following choices:

- Ignore household size: Includes all customers, regardless of their household size.
- The other options define ranges for household size to be included in the profile. The customer must have provided household size in registration information.

o. Specify the household size for the customer profile from the pull-down list.

3. Click **Address** to expand its list.
   a. Click **City** (Figure 12-41).

Figure 12-41 Customer Profiles: City

   b. Choose one of the following city-of-residence criteria from the following choices:
      - Ignore city of residence: Includes all customers, regardless of their city of residence.
      - Customer resides in one of the cities specified below: Includes only customers who live in specific cities in the profile.
      - Customer does not reside in any of the cities specified below: Excludes customers who live in the cities specified in the profile.
   c. To *a*dd a city to the customer profile:
      i. Enter a city name in the **Specify one or more cities** text box.
      ii. Click **Add** The new city appears in the Specified cities text box.

d. Click **State** (Figure 12-42).

Figure 12-42 Customer Profiles: State

e. Specify one of the following state or province of residence criteria from the following choices:

- Ignore state or province of residence: Includes all customers, regardless of their state or province of residence.
- Customer resides in one of the states or provinces specified below: Includes only customers who live in specific states or provinces.
- Customer does not reside in any of the states or provinces specified below: Excludes customers who live in specific states or provinces.

f. To add a state to the customer profile:

i. Click an entry from the **Available states and provinces** text box.

ii. Click **Add**. The state or province appears in the Selected states and provinces text box.

g. Click **Country/Region** (Figure 12-43).

Figure 12-43 Customer Profiles: Country/Region

h. Specify country or region of residence criteria from the following choices:

- Ignore country or region of residence: Includes all customers, regardless of their country or region of residence.
- Customer resides in one of the countries or regions specified below: Includes only customers who live in specific countries or regions.
- Customer does not reside in any of the countries or regions specified below: Excludes customers who live in specific countries or regions.

i. To add a country or region to the customer profile:

   i. Click an entry in the **Available countries and regions** text box.

   ii. Click **Add**. The entry appears in the Selected countries and regions box.

j. Click **ZIP code** (Figure 12-44).

Figure 12-44 Customer Profiles: ZIP Code

k. Specify one of the following ZIP or postal code criteria:

- Ignore ZIP code or postal code: Includes all customers, regardless of their ZIP or postal code.
- ZIP code or postal code must start with one of the values specified below: Includes only customers who have specific ZIP codes or postal codes.
- ZIP code or postal code must not start with one of the values specified below: Excludes customers who have ZIP codes or postal codes in specific regions.

l. To add a ZIP or postal code to the customer profile:

i. Enter a ZIP or postal code in the **Specify one or more ZIP code or postal code prefixes** text box.

ii. Click **Add**.

m. Click **phone number** (Figure 12-45).

Figure 12-45 Customer Profiles: Phone Number

4. Specify one of the following phone number criteria:
   - Ignore phone number: Includes all customers, regardless of their phone number.
   - Phone number must start with one of the values specified below: Includes only customers who have specific phone number prefixes.
   - Phone number must not start with any of the values specified below: Excludes customers who have specific phone number prefixes.
5. To add a phone number prefix to the customer profile:
   a. Enter a phone number prefix in the **Specify one or more phone number prefixes** text box.
   b. Click **Add**.

6. Click **E-mail** (Figure 12-46).

Figure 12-46 Customer Profiles: E-mail

c. Specify one of the following e-mail criteria:

- Ignore e-mail address: Includes all customers, regardless of their e-mail address domains.
- E-mail address domain must match one of the values specified below: Includes only customers who have specific e-mail address domains.
- E-mail address domain must not match any of the values specified below: Excludes customers who have specific e-mail address domains.

d. To add an e-mail domain to the customer profile:

i. Enter an e-mail domain in the **Specify one or more e-mail domains** text box.

ii. Click **Add**.

7. Click **Culture** to expand list.

   e. Click **Currency** (Figure 12-47).

Figure 12-47 Customer Profiles: Currency

   f. Specify one of the following currency criteria:

   - Ignore currency: Includes all customers, regardless of their preferred currency.
   - Target the following currencies: Includes only customers who have registered and indicated a preferred currency. When this button is selected, select any number of available currencies from the list of the store's defined currencies.

g. Click **Language** (Figure 12-48).

Figure 12-48 Customer Profiles: Language

h. Specify one of the following language criteria:

- Ignore language: Includes all customers, regardless of their preferred language.
- Target the following languages: Includes only customers who have registered and indicated a preferred language. When this button is selected, choose any number of available languages from the list of the store's defined languages.

8. Click **Purchase history** to expand its list.
   a. Click **Amount spent** (Figure 12-49).

Figure 12-49 Customer Profiles: Amount Spent

   b. Specify one of the following criteria:
      - Ignore amount spent: Includes all customers, regardless of the amount spent at the store.
      - Amount spent must be zero: Includes customers who have not spent any money at your site.
      - Amount spent must be greater than the value specified below: Includes customers who have spent a total amount that is greater than the value specified in the Amount spent field.
      - Amount spent must be less than the value specified below: Includes customers who have spent a total amount that is less than the value specified in the Amount spent field.
      - Amount spent must be within the range specified below: Includes only customers who have spent an amount that falls between two numbers specified in the Amount spent field.
   c. Specify an amount spent in the **Amount spent** text box.

> **Note:** If you have selected an option that requires a range, the text box below it adapts to accept both a minimum and maximum number.

d. Click **Number of orders** (Figure 12-50).

Figure 12-50 Customer Profiles: Number of Orders

e. Specify one of the following currency criteria from the following choices:

- Ignore number of orders: Includes all customers, regardless of the number of orders placed.
- Number of orders fulfilled must be equal to the value specified below: Includes customers who have placed exactly the number of orders specified in the Orders fulfilled box.
- Number of orders fulfilled must be greater than or equal to the value specified below: Includes customers who have placed either the number of orders specified in the Orders fulfilled box, or more.
- Number of orders fulfilled must be less than or equal to the value specified below: Includes customers who have placed either the number of orders specified in the Orders fulfilled box, or fewer.
- Number of orders fulfilled must be within the range specified below: Includes only customers who have placed several orders that falls between two numbers specified in the Orders fulfilled box.

f. Specify the appropriate order information for the option selected in the **Orders fulfilled** text box.

g. Click **Last purchase date** (Figure 12-51).

Figure 12-51 Customer Profiles: Last Purchase Date

h. Specify one of the following criteria for most recent purchase date:

- Ignore last purchase date orders: Includes all customers, regardless of the date of their last purchase.
- Last purchase must have occurred within the number of days specified below orders: Includes include only customers who have placed an order within a certain time frame.
- Last purchase must have occurred earlier than the number of days ago specified below orders: Includes include only customers who placed an order before a certain time frame.
- Last purchase must have occurred before the date specified below orders: Includes only customers who placed an order before a particular date.
- Last purchase must have occurred after the date specified below orders: Includes only customers who placed an order after a particular date.
- Last purchase must have occurred between the dates specified below orders: Includes only customers who placed an order between two dates.

i. Type the appropriate date information for the option selected into the **Number of days** text box.

> **Note:** The eSites Administration Tool changes according to the option selected. It acts as an entry field unless you have selected an option where a specific date is required, in which case three fields display, one each for the year, month, and day. You can also click the calendar icon to launch a calendar control to select the date.
>
> Also, the specified last purchase date and time are based on the current system time for the machine where WebSphere Commerce Server is installed.

j. Click **Last visit date** (Figure 12-52).

Figure 12-52 Customer Profiles: Last Visit Date

k. Specify one of the following customer visit date criteria:

- Ignore last visit date: Includes all customers, regardless of the date of their last visit date.
- Last visit must have occurred within the number of days specified below: Includes only customers whose most recent visit date occurred within a certain time frame.

- Last visit must have occurred earlier than the number of days ago specified below: Includes only customers whose most recent visit occurred before a certain time frame.
- Last visit must have occurred before the date specified below: Includes only customers whose most recent visit occurred before a particular date.
- Last visit must have occurred after the date specified below: Includes only customers whose most recent visit occurred after a particular date.
- Last visit must have occurred between the dates specified below: Includes only customers whose most recent visit occurred between two dates.

l. Specify the appropriate date information for the option selected in the **Number of days** text box.

> **Note:** The eSites Administration Tool changes according to the option selected. It acts as an entry field unless you have selected an option that requires a specific date, in which case three fields display: one each for the year, month, and day. You can also click the calendar icon to launch a calendar control to select the date.
>
> Also, the specified last visit date and time are based on the current system time for the machine where WebSphere Commerce Server is installed.

9. Click **Customers** to expand list.

   a. Click **Included Customers** (Figure 12-53).

Figure 12-53 Customer Profiles: Include Customer

   b. Click **Add** to open the Find Customers pane (Figure 12-54).

Figure 12-54 Customer Profiles: Find Customer

c. Enter search criteria. See *IBM WebSphere Commerce On-line Help* for more information about how to search for customers.

d. Click **Find**. The pane shown in Figure 12-55 displays the results.

> **Note:** Before a customer can be included in a profile, the storefront customer or an operations manager must register the customer.

Figure 12-55 Customer Profiles: Add Customers

e. Select the check box next to the desired Logon ID.

f. Click **Add**. Now a customer has been included in the customer profile. You may add more customers by repeating these steps as needed.

g. Click **Excluded customers**. Repeat step b on page 517 through f on page 518 to exclude customers from the profile.

> **Note:** Before a customer can be excluded from a profile, the storefront customer or an Operations Manager must register the customer.

10. Click **Miscellaneous** to expand its list.

    a. Click **Company** (Figure 12-56).

Figure 12-56 Customer Profiles: Company

    b. Specify one of the following company criteria for the profile:

    - Ignore company: Includes all customers, regardless of the company that they work for.
    - Company name must match one of the names specified below: Includes customers who are employed by a particular company.
    - Company name must not match any of the names specified below: Excludes customers who are employed by a particular company.

    c. To add a company name to the customer profile:

    i. Enter a company name in the **Specify one or more company names** text box.

    ii. Click **Add**.

d. Click **Interests** (Figure 12-57).

Figure 12-57 Customer Profiles: Interests

e. Specify one of the following company criteria from the following choices:

- Ignore interests: Includes all customers, regardless of their interests.
- Interests must include one of the values specified below: Includes customers who have one or more of the specified interests.
- Interests must include all of the values specified below: Includes all customers who have all of the specified interests.
- Interests must not include any of the values specified below: Excludes customers who have any of the specified interests.

f. Add an interest to the customer profile:

i. Enter an interest in the **Specify one or more interests** text box.

ii. Click **Add**.

g. Click **Customer Profiles** (Figure 12-58).

Figure 12-58 Customer Profiles: Add Customer Profiles

h. Specify one of the following company criteria from the following choices:

- Ignore customer profiles: Ignore customer profiles for this profile.
- Customer must belong to one of the selected customer profiles: Includes only customers who belong to specific customer profiles.
- Customer must belong to all of the selected customer profiles: Includes customers who belong to all of the specified customer profiles.
- Customer must not belong to any of the selected customer profiles: Excludes customers who belong to any of the specified customer profiles.

i. To add an available customer profile, select an option that enables the Add button. Highlight the appropriate customer profile name under **Available customer profiles**. Click **Add**.

j. Click **Preferred method of communication** (Figure 12-59).

Figure 12-59 Customer Profiles: Preferred method of communication

k. Specify a preferred method of communication criteria from the following criteria:

- Ignore preferred method of communication: Includes all customers, regardless of their preferred method of communication.
- Target the following methods of communication: Select from the list of communication methods:

  Select the Phone check box to include customers who prefer to be contacted using a telephone.

  Select the E-mail check box to include customers who prefer to be contacted using e-mail.

11. Click **OK**. You have created a customized customer profile.

Note: The **job function** leaf category has no meaning in a B2C store setting. The default setting to Ignore job function should always be chosen.

Change an existing customer profile

Be sure you are logged on to the eSite Hub as `seller1admin`.

1. Select the check box next to the profile you wish to modify. In this case the name is Young Adults.
2. Click **Change** (Figure 12-60).

Figure 12-60 Changing a customer profile

3. Click **Registration** to expand its list.
4. Click **Registration status**.
5. Modify the registration status as desired.
6. Click **OK**.

> **Note:** The functionality of changing customer profile information in the eSite Hub is very similar to creating a new customer profile. Information may be modified across all customer profile categories by expanding a top-level division and clicking each desired category. After all profile information is modified, click **OK** to save the changes.

View a summary of an existing customer profile

Be sure you are logged on to the eSite Hub as `seller1admin`.

1. Select the check box next to the profile you wish to summarize. In this case, the name is Young Adults.

Figure 12-61 Customer Profiles Summary

Note: In profile listings such as shown in Figure 12-61, notice the arrow in the upper-left corner of each column header. Click the arrow to sort the customers by ascending or descending order, using the selected column as the sort-by field. This feature is available across the eSite Hub.

2. Click **Summary**. Figure 12-62 on page 525 shows an example of a customer profile summary.

Figure 12-62 Customer Profiles: Summary Report

3. Click **OK** to close the summary window.

Duplicate an existing customer profile

Be sure you are logged on to the eSite Hub as `seller1admin`.

1. Select the check box next to the profile you wish to duplicate. In this case, the name is Young Adults.
2. Click **Duplicate** (Figure 12-63).

Figure 12-63 Customer Profiles

3. Provide a name and a description for this new customer profile (Figure 12-64).

Figure 12-64 Customer Profiles: Duplicate information

4. Click **OK**.

View customers who belong to a customer profile

Be sure you are logged onto the eSite Hub as `seller1admin`.

1. Select the check box next to the name of the profile you want to view. In this case, the name is Young Adults.

Figure 12-65 Customer Profiles

2. Click **Preview**. The pane shown in Figure 12-66 appears.

Figure 12-66 Customer Profiles: Preview Customers

3. Click **OK**.

Delete a customer profile

Be sure you are still logged onto the eSite Hub as `seller1admin`.

1. Select the check box next to the name of the profile you want to view. In this case, the name is Young Adults.
2. Click **Delete**.

Figure 12-67 Customer Profiles: Delete

3. Click **OK** to confirm the delete.

> **Note:** Customer profiles that are associated with an active campaign initiative cannot be deleted.

12.4.2 Marketing: Campaigns

Campaigns serve to organize your marketing efforts. Campaigns typically are created by either a marketing manager or a merchant. They are often associated with a certain set of objectives. For instance, a Back to School campaign may have an objective of increasing sales of children's clothes during the campaign.

Within WebSphere Commerce, campaigns contain any number of campaign initiatives, which define a condition. The campaign initiatives generate targeted content for the customers when the defined condition is evaluated to be true. The result is that a campaign is the high-level marketing element that organizes the initiatives.

Campaigns are created using the Campaign wizard in the WebSphere Commerce Accelerator.

To create a new campaign:

1. From the **Marketing** menu, select **Campaigns**.
2. Click **New** (Figure 12-68).

Figure 12-68 Create a new campaign

3. Follow the instructions for creating a new campaign as outlined in 9.3, “New e-Marketing Spot” on page 272.

Modify a campaign

You should still be logged onto the eSite Hub as `sellerladmin`.

1. Select the check box next to the campaign you want to modify. In this case, the name is Printer Campaign.
2. Click **Change** (Figure 12-69).

Figure 12-69 Modify a campaign

3. Click **Objectives**.
4. Modify the **Campaign objectives** as desired.
5. Click **OK**.

View a summary of an existing campaign

You should still be logged onto the eSite Hub as `seller1admin`.

1. Select the check box next to the campaign you want to summarize. In this case, the name is Printer Campaign (Figure 12-70).

Figure 12-70 Campaigns

2. Click **Summary**. The result is a pane similar to Figure 12-71.

Figure 12-71 Campaigns Summary report

3. Click **OK**.

Duplicate an existing campaign

You should still be logged onto the eSite Hub as `seller1admin`.

1. Select the check box next to the campaign you want to work with. In this case, the name is Printer Campaign.
2. Click **Duplicate** (Figure 12-72).

Figure 12-72 Campaigns: Duplicate

3. Click **General**.
4. Type a new campaign name and description for the duplicate campaign.
5. Click **Objectives**.
6. Modify the campaign sponsor and campaign objectives.
7. Click **OK**.

Delete a campaign

You should still be logged onto the eSite Hub as `sellerladmin`.

1. Select the check box next to the campaign you want to delete. In this case, the name is Printer Campaign.
2. Click **Delete** (Figure 12-73).

Figure 12-73 Campaigns: Delete

3. Click **OK** to confirm the delete.

> **Note:** When a campaign is deleted, all campaign initiatives associated with the campaign are deleted. Because e-Marketing Spots schedule campaign initiatives to appear on B2C store pages, the e-Marketing Spot schedule will be deleted as a side effect of deleting a campaign. This action removes the e-Marketing Spots defined by the campaign initiative from B2C store pages.

12.4.3 Marketing: Campaign Initiatives

Campaign initiatives generate targeted content for customers when the defined condition is evaluated to true.

Campaign initiatives can display four types of dynamic content:

- Suggestive selling initiative

  Suggestive selling content provides rule-based category and product recommendations that are targeted at a specific customer audience and based on a customer's profile and other customers' behaviors. The targeted customer behaviors include the total value of the shopping cart, the contents of the shopping cart, and the contents of the customer's purchase history.

- Collaborative filtering-based recommendation

  Collaborative filtering-based recommendations also create product recommendations, but they use a different recommendation algorithm, which targets items based on customers' overall behavior rather than predefined rules.

- Awareness advertisement

  Awareness advertisements provide advertising content targeted at a specific customer audience that is based on the same criteria as those used for suggestive selling, but they are intended to be used to increase a customer's awareness about activities at the online store, highlight special offers, and to increase brand awareness.

- Merchandising association

  Merchandising associations create up-sell and cross-sell opportunities, based on the static associations defined in the catalog. To create an initiative of this type, a method of selecting the source product in the association must be defined so that the proper source is used when the e-Marketing Spot is invoked, in order to return the target products. The method can select the source based on the content of the current page, the contents of the shopping cart, or the contents of the shopper's purchase history as sources of the association.

Initiatives can be incorporated into any page on the site. When the site is designed, special placeholders called e-Marketing Spots are placed on the site. When the site displayed to a customer, these placeholders are replaced by the specific targeted content. Target locations are assigned by scheduling initiatives to display in e-Marketing Spots in the desired locations.

Campaign initiatives contain a condition that determines when and to whom they are displayed. This condition is defined when the initiative is created and can be changed during the lifetime of the initiative to adjust the initiative's visibility and the displayed content.

Campaign initiatives generate statistics about their use. These statistics can be viewed by merchants, marketing managers, and merchandising managers using the WebSphere Commerce Accelerator. The statistics illustrate an initiative's clickthrough rate for each e-Marketing Spot where it is implemented. These statistics provide feedback on the effectiveness of the initiative as well as comparative success rates among the various locations in which it displays.

To create a new campaign initiative:

1. From the **Marketing** menu, select **Campaign Initiatives** to open the Campaign Initiatives pane.

2. Click **New** (Figure 12-74).

Figure 12-74 Campaign Initiatives: New

3. Follow the instructions for creating a new campaign initiative as outlined in 9.3, “New e-Marketing Spot” on page 272.

Modify a campaign initiative

Be sure you are logged on to the eSite Hub as `sellerladmin`.

1. Select check box next to the campaign you want to modify. In this case, the name is WorkgroupLaserPrinterInitiative.
2. Click **Change** (Figure 12-75).

Figure 12-75 Campaign Initiatives: Change

3. Click **When**.
4. Modify the dates defined for targeting customers as desired.
5. Click **OK**.

View a summary of an existing campaign initiative

Be sure you are logged on to the eSite Hub as `sellerladmin`.

1. Select the check box next to the campaign you want to summarize. In our case, the name is WorkgroupLaserPrinterInitiative (Figure 12-76).

Figure 12-76 Campaign Initiatives: Summary

2. Click **Summary**. An example of the result is shown in Figure 12-77. Click **OK** to close the summary.

Figure 12-77 Campaign Initiatives: Summary Report

Duplicate an existing campaign initiative

Be sure you are logged on to the eSite Hub as `seller1admin`.

1. Select the check box next to the campaign you want to work with. In our case, the name is WorkgroupLaserPrinterInitiative.
2. Click **Duplicate** (Figure 12-78).

Figure 12-78 Campaign Initiatives: Duplicate

3. Click **General**.
4. Modify the campaign initiative name, description, and campaign for the new campaign.

> **Note:** When duplicating a campaign initiative, the user is not allowed to select an initiative classification.

5. Click **What**.
6. Select specific products to appear as dynamic content for the e-Marketing Spot.
7. Click **OK**.

Resume an existing campaign initiative

Be sure you are still logged onto the eSite Hub as `seller1admin`.

1. Select the check box next to the campaign you want to work with. In our case, the name is WorkgroupLaserPrinterInitiative.
2. Click **Resume**.

Figure 12-79 Campaign Initiatives: Resume

3. The eSite Hub interface returns to the window where the user may manage campaign initiatives.

> **Note:** The resume feature is used when a campaign initiative has been suspended and the user wants to restart it. A campaign initiative might be suspended and resumed if its content was incorrect (suspend while fixing the error) and corrected (resumed after the error is fixed).
>
> The campaign initiative that is resumed should initially be in a suspended state.

Suspend an existing campaign initiative

Be sure you are logged on to the eSite Hub as `sellerladmin`.

1. Select the check box next to the campaign you want to work with. In our case, the name is WorkgroupLaserPrinterInitiative.
2. Click **Suspend**.

Figure 12-80 Campaign Initiatives: Suspend

3. The eSite Hub interface returns to the window where the user may manage campaign initiatives.

Note: After a campaign initiative has been suspended, the user may resume the campaign initiative to re-enable the display of dynamic campaign initiative content.

View statistics for an existing campaign initiative

Be sure you are logged on to the eSite Hub as `sellerladmin`.

1. Select the check box next to the campaign you want to work with. In our case, the name is WorkgroupLaserPrinterInitiative.
2. Click **Statistics**.

Figure 12-81 Campaign Initiatives: Statistics

3. Click **OK**.

Figure 12-82 Campaign Initiatives report

The following campaign statistics are provided:

e-Marketing Spot The name of the e-Marketing Spot that is associated with the campaign initiative.

Visits The number of times the e-Marketing Spot has been displayed.

Clicks The number of times the e-Marketing Spot has been clicked.

Click Ratio (%) The percentage of times that an e-Marketing Spot is clicked compared to the total times that it has been displayed.

Note: Note the arrow in the upper-left corner of each column header. Click the arrow to sort customers by ascending or descending order using the selected column as the sort-by field. This feature is available across the eSite Hub.

Delete a campaign initiative

Be sure you are logged on to the eSite Hub as `sellerladmin`.

1. Select the check box next to the campaign you want to work with. In our case, the name is WorkgroupLaserPrinterInitiative.
2. Click **Delete**.

Figure 12-83 Campaign Initiatives: Delete

3. Click **OK** to confirm the delete.

> **Note:** Because e-Marketing Spots schedule campaign initiatives to appear on B2C store pages, the e-Marketing Spot schedule is deleted as a side effect of deleting a campaign initiative. This action removes e-Marketing Spots defined by the campaign initiative from appearing on B2C store pages.

12.4.4 Marketing: E-Marketing Spots

e-Marketing Spots reserve space on your store pages for displaying personalized marketing content. The e-Marketing Spots are used during page creation to reserve space for the dynamic content that will be shown to your customers. When a page is requested by a customer, any e-Marketing Spots present on the page communicate with the rule server to process the rule-based code associated with the spot. Each e-Marketing Spot has one or more campaign initiatives associated with it. e-Marketing Spots generate Web page content using the WebSphere Commerce rule processing system.

e-Marketing Spots are created using the e-Marketing Spot wizard in the eSite Hub. Placement and creation of e-Marketing Spots must be created as a collaboration among the merchant responsible for the content, the page designer responsible for creating JavaServer Page (JSP) files, and the media designer assigned to create any graphics or text displayed in the spot. This ensures that the spots are implemented in a way that provides adequate space and retains site design aesthetics. e-Marketing Spots should be named descriptively so as to include their location, such as StoreHomePage, or StoreHomePageAd. This helps to reduce confusion about where it will appear and what content it should contain. If necessary, numbers can be added to the name to differentiate between two e-Marketing Spots appearing on the same page.

To create a new e-Marketing Spot:

1. From the **Marketing** menu, select **E-Marketing Spots**.
2. Click **New** (Figure 12-84).

Figure 12-84 New e-Marketing Spot

3. Follow the instructions for creating a new e-Marketing Spot that are outlined in 9.3, “New e-Marketing Spot” on page 272.

Modify an e-Marketing Spot

Be sure you are logged on to the eSite Hub as `sellerladmin`.

1. Select the check box next to the campaign you want to work with.
2. Click **Change**.

Figure 12-85 E-Marketing Spot: Change

3. Click **Description** and modify the description as desired.
4. Click **OK**.

View a summary of an existing e-Marketing Spot

Be sure you are logged on to the eSite Hub as `sellerladmin`.

1. Select the check box next to the campaign you want to work with.

Figure 12-86 E-Marketing Spot Summary

2. Click **Summary** to produce a summary similar to Figure 12-87.

Figure 12-87 E-Marketing Spot: Summary Report

Schedule an e-Marketing Spot

Be sure you are logged on to the eSite Hub as `seller1admin`.

1. Select the check box next to the campaign you want to work with.
2. Click **Schedule**.

Figure 12-88 E-Marketing Spot: Schedule

3. Follow the instructions for scheduling an e-Marketing Spot that are outlined in 9.3 “New e-Marketing Spot.

Delete an e-Marketing Spot

> **Note:** This action removes the e-Marketing Spot from appearing on B2C store pages.

Be sure you are logged on to the eSite Hub as `sellerladmin`.

1. Select the check box next to the campaign you want to work with.
2. Click **Delete**.

Figure 12-89 E-Marketing Spot: Delete

3. Click **OK** to confirm the delete.

12.4.5 Marketing: Ad Copy

Ad copy refers to all of the support material created for your campaigns. This material is typically created by a team of writers, graphic artists, or both, depending on the content. Ad copy must include display content, such as product pictures, graphics used in advertising, or marketing text supporting products.

All awareness advertisements require ad copy to be defined in the WebSphere Commerce database prior to its use on the site. Therefore, communication must take place between the marketing and creative departments prior to a campaign to establish requirements. After the ad copy is defined, it can be referenced when creating campaigns and will be displayed as appropriate.

Ad copy, and any other campaign assets, are created using the eSite Hub interface.

To create a new ad copy:

1. From the **Marketing** menu, select **Ad Copy**.
2. Click **New**.

Figure 12-90 Ad Copy New

3. Follow the instructions for creating a new e-Marketing Spot that are outlined in 9.3, “New e-Marketing Spot” on page 272.

Modify existing ad copy

Be sure you are logged on to the eSite Hub as `sellerladmin`.

1. Select the check box next to the campaign you want to work with.
2. Click **Change**.

Figure 12-91 Ad Copy: Change

3. Click **General**.
4. Modify the custom fields as desired.
5. Click **OK**.

View a summary of existing ad copy

Be sure you are logged on to the eSite Hub as `sellerladmin`.

1. Select the check box next to the campaign you want to work with.

Figure 12-92 Ad Copy: Summary

2. Click **Summary**. This produces a summary similar to Figure 12-93.

Figure 12-93 Ad Copy: Summary Report

Delete existing ad copy

Be sure you are logged on to the eSite Hub as `sellerladmin`.

1. Select the check box next to the campaign you want to work with. In our case, the name is ShopCartPage.
2. Click **Delete**.

Figure 12-94 Ad Copy: Delete

3. Click **OK** to confirm the delete.

> **Note:** Removing ad copy does not remove the associated campaign initiative and e-Marketing Spot schedule.
>
> When ad copy for an existing e-Marketing Spot is removed, the dynamic content for the deleted ad copy will not be displayed on the store page.

12.5 Merchandise

Present and manage your store catalog of products with the eSite Hub.

- Work with products, categories, bundles, and kits for your individual store catalog.
- Manage your online shared catalog by filtering the products you want to sell and adjusting prices.
- Find and list expected inventory records of your store and product vendors.
- Manage merchandising associations (such as up-sells or cross-sells) and other special offers such as discounts and coupons for promotional purposes.

12.5.1 Merchandise: product management

Product management refers to the process of managing catalog entries. Using the WebSphere Commerce eSite Hub, there are two types of catalogs the shared or master catalog and the individual store catalog:

- A shared or master catalog is loaded and maintained by the site administrator. Access the shared catalog by using the Catalog Filter tool.
- An individual store catalog is loaded by the store administrator (seller1admin) and could be maintained by the same.

General terms and areas that you should be familiar with include:

Products: Templates for SKUs, the individual pieces of merchandise that are ultimately sold to a customer. The eSite Hub product wizard enables you to create new products for your catalog. Use the product notebook to view or change product details, such as names, descriptions, and images, or to delete products from your catalog. You can update product taxes, discounts, and shipping categories, and add shipping measurements for each product. You can also customize fulfillment options for your product, such as tracking inventory or back-ordering a product for an order.

SKUs: After you have created your product, you must create SKUs to represent each orderable item of merchandise for sale. All SKUs that are related to a particular product have the same set of attributes and are distinguished by their attribute values. Create SKUs using the SKU wizard, or generate them automatically for a product after you have created all required product attributes.

Categories: Also known as a catalog group, categories are used to group products and services offered by the store. You can create, find, list, change, and delete categories. You can classify products and SKUs under different parent categories.

Attributes: There are two types of attributes:

- *Defining attributes* are properties of SKUs in an online store, such as color or size. Attribute values are the property of an attribute such as a specific color (blue or yellow) or size (medium). You must predefine attribute values before assigning them to SKUs. Attribute values are implicitly related to their attributes. Each possible combination of attributes and attribute values equals a new SKU. After creating attributes and their values, you can update information such as name, description, and type (text, whole numbers, or decimal numbers). Defining attributes are also used for SKU resolution.
- *Descriptive attributes* are simply additional descriptions. For example, a descriptive attribute can specify dry-clean-only for pieces of clothing that should never be washed, or whether electronics equipment uses AA or AAA batteries. Descriptive attributes are not used for SKU resolution.

Pricing for a product or SKU, in one or more currencies, along with a set of conditions such as setting a price for different quantities (for example, 1 to 5, 6 or more), which must be satisfied in order to use the price. You can create, list, and change pricing associated with a product or SKU.

Bundles and kits are groupings of catalog entries. Used for promotional purposes, catalog entries in bundles and kits are grouped to attract customers.

The eSite Hub product management tool is used to manage your product information and view details about your products

Add a new product to the individual store catalog

1. From the **Merchandise** menu, select **Product Management.**

Figure 12-95 Merchandise: Product Management page

2. From the **Actions** menu, select **New Product**. This opens the General page.

Figure 12-96 Merchandise: General page

To add a new product, provide the following information:

- In the **Code** field, type the product code, which uniquely identifies the product within the WebSphere Commerce system.
- In the **Name** field, type the name of the product, such as `Leather coat`.
- In the **Announcement Date** field, add the year, month, and day that the product becomes available to customers. This field is for your information only.
- In the **Withdrawal Date** field, add the year, month, and day that the product is removed from the catalog and is unavailable for customers to purchase. This field is for your information only.
- Select the **Display to customers** check box to ensure that your product is available for viewing in the catalog. Note that this check box is only applicable to products that do not have attributes, such as a CD.
- Select the **For purchase** check box to specify that customers can include the product in their shopping carts and order the product. If the product is on auction, this check box will be read-only and cannot be cleared.

3. Click **Next**. The Description page displays. Add the following information:
   - In the **Short description** field, type a brief description of the product, such as `Women's long leather coat.`
   - In the **Long description 1** scroll box, type a detailed description of the product, such as `Women's long leather coat. This black, genuine leather trench has a removable lining so that it can be worn throughout the year. Matching buttons, a sleek belt, and tapered seams gives this coat a classic look.`
   - In the **Long description 2** scroll box, type a second detailed description of the product, if applicable.
   - In the **Long description 3** scroll box, type a third detailed description of the product, if applicable.
4. Click **Next**. The Category page displays. Select the appropriate parent category for your product.
5. Click **Next**. The Images page displays. Add the following information:
   - In the **Full size image file and location** field, type the path to the full-sized image, including the image name. Whether you need an absolute or relative path depends on your store's configuration. Ask a store developer who has site-administrator authority for the correct format.
   - In the **Thumbnail image file and location field**, type the path to the smaller image, using the same procedure as for the full-sized image.

     As an example, the WebSphere Commerce sample store images use a relative path to the default installation path: \images\leathercoat_thumb.gif
6. Click **Next.** The Manufacturer Information page displays.

   Add the following information:
   - In the **Manufacturer Part Number** field, type the part number that the manufacturer uses to uniquely identify the product.
   - In the **Manufacturer Name** field, type the name of the manufacturer or company that offers the product.
7. Click **Next**. The Discounts page displays. Select the discount name from the **Available discounts list**, and click **Add**.

   Note: This page is not available if you have enabled rules-based discounts.

8. Click **Next.** The Sales Tax page displays. Select the tax name from the **Available taxes** list, and click **Add**.
9. Click **Next**. The Shipping Tax page displays. Select the tax name from the **Available taxes** list, and click **Add**.
10. Click **Next**. The Units of Measure for Shipping page displays:
    - In the Weight field, type the product weight.
    - In the **Weight Measure** field, select a unit of measure for the weight.
    - In the **Sold in multiples of this amount** field, type the multiple that the product is sold in, if applicable.
    - In the **Number of items per package** field, type the number of items per shipping package, if applicable.
    - In the **Unit of Measure** field, select the unit of measure used for the product.
11. Click **Next**. The Fulfillment page displays:
    - Select **Track Inventory** to track the product inventory for your fulfillment center.
    - Select **Allow Back Order** to enable a product to be back-ordered, if the customer chooses to accept a backorder.
    - Select **Force Back Order** to temporarily suspend allocation of a product. When a customer places an order for this product, the product is placed on backorder, even if there is inventory available.
    - Select **Release Separately** to specify that the product should be packaged and delivered separately from the other products within the order. For example, fragile items, such as a chandelier, should be boxed separately from other items to avoid potential damage to the product.
    - Select **Returnable** to indicate whether the fulfillment center should accept a return for the product.
    - Select **Creditable** to indicate whether the fulfillment center can provide a credit for the product.
    - In the **Enter the smallest amount that can be measured** field, type the smallest quantity that can be measured or tracked by the inventory system. Inventory amounts are tracked in integral units. This number, along with the unit of measure you specify, indicates how much each integral unit represents. For example, if a textile product is measured and cut to the nearest inch, specify `1 inch`.

> **Note:** After you have defined specified items for this product, you cannot change this amount because it will affect the meaning of all amounts of this product recorded in the database.

– From the **Unit of Measure** pull-down list, select the unit of measure used for the product.

12. Click **Next**. The Advanced page displays. In the **URL** field, type the URL where customers can download the product (in the case of software) or more information about the product. Ensure that the URL does not contain blank spaces.
13. Click **Finish** to save the product.

12.5.2 Merchandise: Categories

This section steps through procedures for working with categories.

Add a category

To add a category to the existing catalog:

1. From the **Merchandise** menu, select **Categories**.

Figure 12-97 Merchandise: Categories

2. Click **New** to display the General page (Figure 12-98 on page 561).

Figure 12-98 Categories: General

3. Add the following information:
   - In the **Category Code** field, type the category code, such as `Summer`.
   - In the **Name** field, type the name of the category, such as `Summer fashions`.
   - In the **Description** field, type a brief description of the category.
   - Select the **Display to customers** check box to ensure that your category is available for viewing in the catalog.
4. Click **Next**. The Parent page displays. Choose the parent category by selecting one from the tree. If you do not want a parent category, select the catalog instead.
5. Click **Next**. The Images page displays. Add the following information:
   - In the **Thumbnail image file and location** field, type the path to the image, including the image name. Whether you need an absolute or relative path depends on your store's configuration. Ask a store developer with Site Administrator authority for the correct format. For example, the WebSphere Commerce sample store images use a relative path to the default installation path:\images\summerfashion_thumb.gif
   - Fill out the **Full size image file and location** field using the same conventions as for the full-sized image.

6. Click **Finish** to save the category.

> **Note:** If the changes do not display, the site administrator may have to disable caching or remove the currently cached JSP pages.

Change a category

To change an existing category, including information about the name, description, images, and parent category:

1. From the **Merchandise** menu, click **Categories** to display a category tree for the catalog (Figure 12-99).

Figure 12-99 Store catalog category tree

If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

2. Open the Change Category notebook by highlighting the category that you want to change, and click **Change**.
3. Update the fields as required and use the links on the left side to switch between each category page.
4. Click **OK** to save the changes and close the notebook.

   If the changes to the catalog data do not display, the site administrator may have to disable caching or remove the currently cached JSP pages.

Delete a category

To delete a category from the existing catalog:

1. From the **Merchandise** menu, click **Categories** to display a category tree for the catalog.
2. Locate and click the category that you want to delete.
3. Click **Delete**.
4. Click **OK** to save the changes and close the notebook.

12.5.3 Merchandise: Find Catalog Entries

To find a catalog entry.

1. From the **Merchandise** menu, select **Find Catalog Entries** to display the Catalog Entry Search page.

Figure 12-100 Merchandise: Find Catalog Entries

2. You can search for a catalog entry by using one of more of the fields on the page. To use the Code, Name, Manufacturer part number, Manufacturer, or Category fields, follow this example for the Code field:
   a. Type the relevant search term and select the search method from the pull-down list beside this field:
      - If you know the code, select **Exact phrase** in the Code list to search for a catalog entry that is an exact match with the code provided. The system performs an exact search. If you type more than one word, such as `SKU 12345`, then the system only returns search results that match the combination and order of the given text.
      - If you only know part of the code, select **Matches containing** to search for catalog entries that have codes that contain your search criteria. The system performs a fuzzy search. If you type more than one word, such as `SKU 12345`, then the system returns all matches that contain SKU, 12345, or both. Only one word is needed for a search result.

      Note: For all fields, ensure that the search criteria does not contain any of the following characters: % \ " _ #

   b. Select the **Short description** check box, and use the field to include the short description of the catalog entry in your search.
   c. In the **Catalog** field, select the store catalog that contains your catalog entry. If you have more than one catalog for your store, and you do not select a catalog, the store's master catalog is used as the default.
   d. Select **Published** if your catalog entry description has been published, or **Not Published** if the description has not been published. If you do not select one, the search will ignore the publish flag from the database.
   e. Select the **Type** of catalog entry. The default selection is All Except SKUs. To narrow your search to a specific type of catalog entry, select **Specify Type** and the appropriate type.
   f. Select the **Number of Search Results** to display per page: 25, 50, 100, 250, or 500.
   g. In the **Sort by** field, select whether you want to display your search results by Code or by Name. Code is the default.
3. Click **Find**. This displays a list of catalog entries in the Product Management dynamic table that match the search criteria.

12.5.4 Merchandise: Find Categories

To find a category:

1. From the **Merchandise** menu, select **Find Categories** to display the Find Categories search page (Figure 12-101).

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

Figure 12-101 Merchandise: Find Categories

2. Provide any of the following category information:

   a. In the **Name** field, type the category name and select the search method from the pull-down list beside this field, as follows:

      - If you know the category's name, select **Exact phrase** to search for a category that is an exact match with the category name provided. The system performs an exact search. If you type more than one word, such as `science fiction`, then the system only returns search results that match the combination and order of the given text.
      - If you only know part of the category's name, select **Matches containing** to search for categories that have names which contain your search criteria. The system performs a fuzzy search. If you type

more than one word, such as `science fiction`, then the system returns all matches that contain science, fiction, or both. Only one word is needed for a search result.

> **Note:** For all fields, ensure that the search criteria does not contain any of the following characters: % \ " _ #

b. Use the **Description** field in the same way as the Name field.

3. Click **Find**. This displays a list of categories that match the search criteria.

12.5.5 Merchandise: Find Bundles or Kits

To find a bundle, prebuilt kit, or dynamic kit:

1. From the **Merchandise** menu, select **Find Bundles or Kits** to display the Bundle and Kit Search page (Figure 12-102).

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

Figure 12-102 Merchandise: Bundle and Kit Search page

2. Follow step 2 on page 564 in 12.5.3, “Merchandise: Find Catalog Entries” on page 563 for information about how to use any of the criteria fields in your search.
3. Click **Find**. This displays a list of bundles or kits that match the search criteria.

12.5.6 Merchandise: Find Merchandising Associations

To find a catalog entry belonging to a merchandising association:

From the **Merchandise** menu, select **Find Merchandising Associations** to display the Catalog Entry Search page (Figure 12-103).

If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

Figure 12-103 Merchandise: Find Merchandising Associations

4. Follow step 2 on page 564 in 12.5.3, “Merchandise: Find Catalog Entries” on page 563 for information about how to use any of the criteria fields in your search.
5. Click **Find** to display a list of catalog entries belonging to a merchandising association and that match the search criteria.

6. For the complete list of available catalog entries belonging to a merchandising association, click **Find** without providing any information in the search fields.

12.5.7 Merchandise: Catalog Filter

The Catalog Filter presents the master catalog as an aggregated tree view of all products and categories that are available for sale from a store. Use the Catalog Filter to exclude any of the products or categories in the master catalog that you do not want to sell at your specific store.

You can also use the Catalog Filter to apply a markup or markdown price by percentage (versus a fixed price) on the catalog, products, categories, products, or SKUs within the master catalog. To adjust a fixed price already defined in catalog, or to adjust the price of kits and bundles, use the Product Management tools instead.

You can use the Catalog Filter to do the following:

- Include categories for sale in the hosted store.
- Exclude categories and products (including SKUs, packages, and bundles) from being sold in the hosted store. The category or product you want to exclude must belong to a category that has already been included for sale in the hosted store.
- Apply a percentage price adjustment (markup or markdown) on the master catalog price for categories.
- View the price customers of the hosted store will be charged for products based on price adjustments that are applied to the products.
- Change a percentage price adjustment on a category.

You cannot use the Catalog Filter to set a fixed price for products or to change the price for products with a fixed price. To perform these tasks, use the Product Management tools in the eSite Hub.

1. From the **Merchandise** menu, select **Catalog Filter** to display an aggregated tree view of the master or shared catalog that includes all products and categories available for sale in the store (Figure 12-104 on page 569).

Figure 12-104 Merchandise: Catalog Filter

The Catalog Filter consists of three parts:

Catalog Tree Used to include the catalog, categories, and products; exclude categories and products; apply percentage price adjustments to the entire catalog; and view the actual price (using the Calculate Price option) that customers will see for a product.

Include Dialog Displays when you include either the entire catalog, category, or product, enabling you to set the percentage price adjustment for the catalog, category, or product that you are including for sale in the store.

Set Price Adjustment dialog
Displays when you choose to change the percentage price adjustment for the catalog, a category, or a product.

Percentage price adjustment can only be changed on categories that already have a percentage price adjustment applied to them. To apply a percentage price adjustment to a category that does not a have one, you must select the category to sell in the eSite Hub hosted store.

To change the percentage price adjustment on a category:

1. From the **Merchandise** menu, click **Catalog Filter** (Figure 12-102 on page 566).

   The Catalog Filter page displays. If this is the first time you are accessing the Catalog Filter, there may be a delay before the catalog tree displays on the page.

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

Figure 12-105 Merchandise: Catalog Filter 2

2. Navigate to the category for which you want to change the price.
3. Right-click the category and select **Set Price Adjustment** from the pop-up menu. The Set Price Adjustment dialog opens.
4. Enter the new value for the percentage price adjustment.
5. Select either **Markup** or **Markdown**.
6. Click **OK** to change the percentage price adjustment on the category. This dismisses the Set Price Adjustment dialog.

7. Click **Save** to save the new percentage price adjustment.

Note: If a category's location has been changed in the catalog asset store, resellers must cancel the category's settings, save the changes, then set the product and SKU adjustment again using the Catalog Filter to ensure that there is no change in price or availability in reseller products or SKUs. Resellers must do the same for any subcategories within the changed category.

Changing a percentage price adjustment

1. The Catalog Filter page displays. If you are accessing the Catalog Filter for the first time, there may be a delay before the catalog tree opens on the page.

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.
2. Navigate to the product for which you want to see the store front price.
3. Right-click the product and select **Calculate Price** from the pop-up menu. The store front price displays in a dialog box.
4. Click **OK** to close the dialog.

Note: The store front price may not be accurate if you applied a percentage adjustment to a category immediately before viewing the store front price. To ensure that you are viewing accurate store front prices, always save any changes made to the Catalog Filter before viewing store front prices.

Viewing the individual store price for a product

The store front price is the price that a customer sees for a product at an eSite Hub seller store. This price takes into account any changes the reseller may have made to the price using the Product Management tools by the site administrator or any percentage price adjustments applied using the eSite Hub Catalog Filter.

1. From the **Merchandise** menu, click **Catalog Filter**. The Catalog Filter page displays.
2. Navigate to the product for which you want to see the store front price.
3. Right-click the product and select **Calculate Price** from the pop-up menu. The store front price displays in a dialog box.
4. Click **OK** to close the dialog.

Note: The store front price may not be accurate if you applied a percentage adjustment to a category immediately before viewing the store front price. To ensure that you are viewing accurate store front prices, always save any changes made to the Catalog Filter before viewing store front prices.

12.5.8 Merchandise: Catalog Import

Use this page to view your catalog data files.

File	The file name.
File Size	The size of the file.
Upload Time	The timestamp when the file was uploaded to the WebSphere Commerce Server.
Status	The status of the file: New, Processing, Processed, Failed, or Cancelled.
Upload Catalog	Uploads the catalog when clicked.
Upload Images	Uploads the catalog images when clicked.
Publish Catalog	Publishes the catalog when clicked.
View Logs	Accesses the logs when clicked.
Refresh	Refresh the Status field when clicked.

After creating a hosted store, a merchant loads catalog data into the database. However, in a hosting scenario, a merchant is outside of the Internet Service Provider's (ISP) firewall and cannot connect directly to the database machine.

In WebSphere Commerce, you can load the catalog data in one of two ways:

- Use the Product Management tools in the eSites Hub interface to create products one at a time.
- Use the Loader package to load the catalog data manually from an XML file.

As an alternative in a hosting scenario, you can create a simple catalog file in Comma Separated Value (CSV) format, which enables a merchant to upload the catalog data through the eSites Hub interface.

WebSphere Commerce provides sample catalog CSV worksheets to use as a guide when creating your own catalog CSV data. These sample worksheets may be found in the *WC_installdir/*samples/catalogimport directory. Also, this folder contains a ZIP file with thumbnail and full-size images for the catalog.

Note: Note that bundles and kits are not supported for the CSV catalog import method.

1. Follow instructions in “Sample CSV Load” on page 928. Make sure to note where files were extracted from media. The files required for catalog import are in the Sample CSV Load subdirectory.
2. WebSphere Commerce Configuration:

   As installed, WebSphere Commerce sets limitations on the file size of the CSV format simple catalog file and ZIP images file. These limitations may be increased to a maximum file size of 1048576000 bytes, as defined in the *WC_installdir*/instances/*wc_instance_name*/xml/*wc_instance_name*.xml file. By default, the maximum upload file size for a CSV and a ZIP file is 100000000 bytes.

   a. Navigate to the *WC_installdir*/instances/*wc_instance_name*/xml directory on the WebSphere Commerce Server machine.

   b. Open the wc_instance_name.xml file.

   c. Search for CatalogUploadFile, which is found in the area of the XML file shown in Example 12-1.

Example 12-1 CatalogUploadFile property in wc_instance_name*.xml file*

```
<Command  maxuploadsize="100000000"
          name="CatalogFileUpload"
          supportedFileExtension="csv,zip"
          uploadReturnURL_enabled="true"
          viruscheck="no" />
```

   d. Modify the maxuploadsize property to the maximum value: `1048576000`.

   Note: The size of simple catalog CSV and images ZIP files must be less than 1048576000 bytes. If this limit is exceeded, the files cannot be uploaded.

3. Locate sample catalog.csv and images.zip files on WebSphere Commerce Server:

   a. Navigate to the *WC_installdir*/samples/catalogimport directory on the WebSphere Commerce Server machine.

   b. This directory contains a catalog.csv file and an images.zip file that may be modified to create a simple catalog for the store that seller1admin is managing.

4. Modify the sample catalog.csv file:

   WebSphere Commerce provides a sample worksheet with nine sections for loading catalog data in CSV format:

   – category
   – categoryDescription
   – categoryRelation
   – product
   – productDescription
   – price
   – categoryProductRelation
   – attribute
   – attributeValue

   Contact your site administrator to access the sample worksheets.

   Note: The first column in each row of a section must contain the name of the section. For example, each cell in the first column of the category section must contain the value `category`.

   a. category

      The category section information maps to the CATGROUP database table and contains the fields shown in Table 12-1.

Table 12-1 Simple catalog CSV category section columns

Column name	Description
categoryName	(Required) The unique identifier of the category.
markForDelete	(Required) Use this field to mark a category for deletion: 0 = No (default). 1 = Yes.
field1	(Optional) A customizable string field.
field2	(Optional) A customizable string field.

   b. categoryDescription

      The categoryDescription worksheet information maps to the CATGRPDESC database table and contains the fields shown in Table 12-2.

Table 12-2 Simple catalog CSV categoryDescription columns

Column name	Description
categoryName	(Required) The unique identifier of the category.

Column name	Description
languageId	(Required) The language that this category description pertains to. Available language components are: -1 = US English, -2 = French, -3 = German, -4 = Italian, -5 = Spanish, -6 = Brazilian Portuguese, -7 = Simplified Chinese, -8 = Traditional Chinese, -9 = Korean, and -10 = Japanese.
displayName	(Required) The displayed name of the category.
shortDescription	(Required) A short description of the category.
longDescription	(Required) A longer description of the category, if necessary.
published	(Required) Use this field to display the category in the language indicated by the languageId: 0 = no. 1 = Yes (default).
thumbnail	(Required) The relative or absolute path to the thumbnail image of the category.
fullImage	(Required) The relative or absolute path to the large image of the category.

c. categoryRelation

The categoryRelation worksheet information maps to the CATGRPREL database table and contains the fields shown in Table 12-3.

Table 12-3 Simple catalog CSV categoryDescription columns

Column name	Description
parent	(Mandatory) The name of the parent category. If this is a top category, the field is empty.
parentMemberId	(Optional) The owner ID of the category (default is the store owner ID). If your merchant is not using a shared master catalog, then this field should be empty.
child	(Required) The child category name.
sequence	(Required) The display sequence of the products in the category.

d. product

The product worksheet information maps to the CATENTRY and CATENTDESC database tables and contains the fields shown in Table 12-4 on page 576.

Table 12-4 Simple catalog CSV product columns

Column name	Description
partNumber	(Required) The unique identifier of the product.
parentPartNumber	(Mandatory) The parent product, if this is an item (also known as SKU). If this is a product, the field is empty.
type	(Required) The type of catalog entry: ProductBean or ItemBean.
inventory	(Optional) The number of items in inventory for a particular item (SKU). For catalog entries with type of ProductBean, this field must not be filled.
markForDelete	(Required) Use this field to mark a product for deletion: 0 = No (default). 1 = Yes.
height	(Optional) A nominal height associated with the catalog entry.
length	(Optional) A nominal length associated with the catalog entry.
width	(Optional) A nominal width associated with the catalog entry.
sizeMeasure	(Optional) The unit of measurement used for the height, length, and width fields.
weight	(Optional) A nominal weight associated with the catalog entry.
weightMeasure	(Optional) The unit of measurement used for the weight field.
field1	(Optional) A customizable integer field.
field2	(Optional) A customizable integer field.
field3	(Optional) A customizable decimal field.
field4	(Optional) A customizable string field.
field5	(Optional) A customizable string field.

e. productDescription

The productDescription worksheet information maps to the CATENTDESC database table and contains the fields shown in Table 12-5 on page 577.

Table 12-5 Simple catalog CSV productDescription columns

Column name	Description
partNumber	(Required) The foreign key to the product's part number.
languageId	(Required) The language that this product description pertains to. Available language components are: -1 = US English, -2 = French, -3 = German, -4 = Italian, -5 = Spanish, -6 = Brazilian Portuguese, -7 = Simplified Chinese, -8 = Traditional Chinese, -9 = Korean, and -10 = Japanese.
displayName	(Required) The displayed name of the product.
shortDescription	(Required) A short description of the product.
longDescription	(Required) A longer description of the product, if necessary.
published	(Required) Use this field to display the product in the language indicated by the languageId: 0 = no. 1 = Yes (default).
thumbnail	(Required) The relative or absolute path to the thumbnail image of the product.
fullimage	(Required) The relative or absolute path to the large image of the product.
type	(Mandatory) The type of catalog entry: ProductBean. If the catalog entry is of ItemBean type, the field must not be filled.

f. price

The price worksheet information maps to the OFFER and OFFERPRICE database tables and contains the fields shown in Table 12-6.

Table 12-6 Simple catalog CSV price columns

Column name	Description
partNumber	(Required) The foreign key to the product's part number.
memberId	(Optional) The owner ID of the catalog entry. (Default is the store owner ID.) If your merchant is not using a shared master catalog, then this field should be empty.
price	(Required) The price of the catalog entry.

Column name	Description
currency	(Required) The currency of the price.
precedence	(Optional) The precedence that determines the price of a catalog entry.
startDate	(Required) The date that the price becomes available.
endDate	(Required) The date that the price is withdrawn.
field1	(Optional) A customizable string field.
field2	(Optional) A customizable character field.

g. categoryProductRelation

The categoryProductRelation worksheet information maps to the CATGRPREL database table and contains the fields shown in Table 12-7.

Table 12-7 Simple catalog CSV categoryProductRelation columns

Column Name	Description
categoryName	(Required) The parent name of the category.
categoryMemberId	(Optional) The owner ID of the category. (Default is the store owner ID.) If your merchant is not using a shared master catalog, then this field should be empty.
partNumber	(Required) The child product's part number.
sequence	(Required) The display sequence of the category.

h. attribute

The attribute worksheet information maps to the ATTRIBUTE database table and contains the fields shown in Table 12-8.

Table 12-8 Simple catalog CSV attribute columns

Column name	Description
parentPartNumber	(Required) The foreign key to the product's part number.
languageId	(Required) The language that this attribute pertains to. Available language components are: -1 = US English, -2 = French, -3 = German, -4 = Italian, -5 = Spanish, -6 = Brazilian Portuguese, -7 = Simplified Chinese, -8 = Traditional Chinese, -9 = Korean, and -10 = Japanese.

Column name	Description
attributeType	(Required) The type of attribute: FLOAT, INTEGER, or STRING.
attributeName	(Required) The name of the attribute.
description	(Required) A description of the attribute.
description2	(Optional) An additional description of the attribute, if necessary.
sequence	(Required) The display sequence of the attribute.
field1	(Optional) A customizable string field.

i. attributeValue

The attributeValue worksheet information maps to the ATTRVALUE database table and contains the fields shown in Table 12-9.

Table 12-9 Simple catalog CSV attributeValue columns

Column name	Description
itemPartNumber	The foreign key to the product's part number.
parentPartNumber	(Required) The foreign key to the product's part number.
languageId	(Required) The language that this attribute value pertains to. Available language components are: -1 = US English, -2 = French, -3 = German, -4 = Italian, -5 = Spanish, -6 = Brazilian Portuguese, -7 = Simplified Chinese, -8 = Traditional Chinese, -9 = Korean, and -10 = Japanese.
attributeType	(Required) The type of attribute: FLOAT, INTEGER, or STRING.
attributeName	(Required) The name of the attribute.
attributeValue	(Required) The attribute value.
sequence	(Required) The display sequence of the attribute value.
field1	(Optional) A customizable integer field.
field2	(Optional) A customizable string field.
field3	(Optional) A customizable string field.

5. Compress the image files into an images.zip file.

> **Note:**
> - The images.zip file may be no larger than 1048576000 bytes.
> - Images included in the zip file must be in JPG or GIF format.
> - The Web page designer should be careful to inspect HTML and JSP files to make sure that the resolution of image files is properly sized for the location they appear on storefront pages.

To import a simple catalog into your store:

1. From the **Merchandise** menu, select **Catalog Import**.
2. Click **Upload catalog**.

Figure 12-106 Merchandise: Catalog Upload and Import

3. Select `UTF-8` from the catalog file encoding pull-down list (Figure 12-107 on page 581).
4. Click **Browse**.
5. Select the **Sample CSV Load/catalog.csv** file on the machine.
6. Click **Upload File**.
7. Click **OK** to confirm that the CSV file has been uploaded successfully.

Figure 12-107 Catalog Import: Upload CSV File

8. Select the check box next to the **catalog.csv** file (Figure 12-108).
9. Click **Upload Images**.

Figure 12-108 Catalog Import: Upload Images

10. Click **Browse** (Figure 12-109).
11. Select the **Sample CSV Load/images.zip** file on the machine.
12. Click the top-level folder, making sure the folder plus associated text is highlighted.

> **Note:** Images cannot be uploaded unless a folder is chosen before the Upload button is clicked.

13. Click **Upload**.

Figure 12-109 Catalog Import: Upload Images File

14. The eSite Hub interface provides a summary of image files that were extracted from the images.zip file to the target store (Figure 12-111 on page 584).

15. Click **Catalog Import** in the upper-right corner of the window (under the manage store banner).

Figure 12-110 Catalog Import: Upload Images File Summary

16. Select the check box next to the **catalog.csv** file.
17. Click **Publish Catalog**.

Figure 12-111 Catalog Import: Publish Catalog

18. To update the publishing status, select the check box next to the **catalog.csv** file and click **Refresh**. Eventually the status will change to `Published`. This signifies that the catalog was loaded to the target store successfully.
19. Select the check box next to the **catalog.csv** file.
20. The View Logs button is grayed-out because the publish was successful and no error logs are available to view.

    Error logs that help identify issues with catalog publishing issues may be found in this directory on the WebSphere Commerce Server machine:

    `WC_installdir/instances/wc_instance_name/temp/catalogimport/<store_id>`

Figure 12-112 shows the storefront before catalog import.

Figure 12-112 B2C storefront before catalog import

Figure 12-113 shows the storefront after catalog import.

Figure 12-113 B2C storefront after catalog import

Location of store catalog images on server

The store catalog images may be found at the following location on the WebSphere Commerce Server machine:

WAS_installdir/`installedApps`/*host_name*/*server_name*`.ear/Stores.war/<store_name>/images`

12.5.9 Merchandise: Expected Inventory

Expected inventory is received from a vendor and typically is paid for with a purchase order. The WebSphere Commerce eSite Hub tracks expected inventory with expected inventory records, and it enables you to record an

external identifier, usually a purchase order number from an external system. In this way, you can easily keep track of the inventory you have ordered, as well as what has and has not arrived. Expected inventory details are the specifics about products in an expected inventory record, such as the fulfillment center expecting the product, the expected receipt date, quantity expected, and comments.

An expected inventory record cannot be deleted after inventory has been received against it, and expected inventory details cannot be changed or deleted after any of that inventory has been received.

When orders are placed for inventory that is available in a fulfillment center, the Order Management subsystem allocates inventory to those orders. Allocating inventory to an order makes it unavailable to the order management system. If the order is canceled, the inventory becomes available again.

If an order is placed for inventory that is not available, a backorder can be created. If there is expected inventory that could be used to fulfill the backorder, then the expected inventory is allocated to the backorder and the customer can be given an expected ship date.

Before inventory for a product can be received, the product must be defined in the WebSphere Commerce system, regardless of whether the inventory receipt is expected or ad hoc.

Note: Vendors must be created before the store can create any expected inventory records.

1. From the **Merchandise** menu, choose **Expected Inventory** (Figure 12-114 on page 588).

Figure 12-114 Merchandise: Expected Inventory

12.5.10 Merchandise: Vendors

A vendor is any organization from which a store purchases merchandise. The vendor record includes information about the vendor, such as name, address, and contact information. Vendors must be created before the store can create expected inventory records.

- From the **Merchandise** menu, select **Vendors**.The Vendors list displays.

  If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

Figure 12-115 Merchandise: Vendors

Create a vendor

1. Click **New**. The New Vendor wizard launches, displaying the Name and Address page first.
2. Provide appropriate information for the fields and click **Next**.
3. Click **Previous** to return to the previous page, if necessary. All fields on the Contact Information page are optional.
4. When you have completed all required fields, click **Finish** on either page to create the vendor.

Delete a vendor

1. Select the check boxes next to the vendors that you want to delete.
2. Click **Delete**. A message confirming the deletion displays.
3. Click **OK** to delete the vendors.

Important: The vendor is marked for deletion from the database when you click OK. To completely delete the vendor, the site administrator must run the Database Cleanup utility.

12.5.11 Merchandise: Auctions

WebSphere Commerce provides an auctioning component that lets you sell products to the highest bidder. This component provides an ideal environment for implementing small to moderate-scale auctioning as part of your e-commerce solution, and for conducting auctions simultaneously. In addition, auctions offer special advantages in these situations:

- When you are uncertain about the size of the market and the willingness of buyers to purchase a product; for example, when selling used or reconditioned products
- When a product's price has been set too high initially, and you want to determine a price based on market demand
- When you want to promote new product lines or liquidate inventory

WebSphere Commerce supports three types of auctions:

- Open Cry auctions: All bids are available for public viewing; each participant knows the other bids submitted.
- Sealed Bid auctions: Enable participants to submit a bid that is seen only by the auction administrator. You set a submission deadline, and no bid received after that time is accepted. The bidder does not know the other bids submitted.
- Dutch auctions: Bidders are not required to set the initial bid price. Instead, the user creating the auction announces a price and asks whether any participants will accept it. Usually the auction starts with a high bid price that is reduced over time until bidders have cleared the inventory.

To create an auction:

From the **Merchandise** menu, select **Auctions**. The Auctions page displays (Figure 12-116 on page 591).

If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

Figure 12-116 Merchandise: Auctions

4. Click **New** to start the Auction wizard.
5. Complete each page and click **Next** until you are finished.
6. Click **Finish**. The auction is created and an acknowledgement message opens, showing the auction ID.

Here are some general tips to consider when creating auctions:

- For Dutch auctions, use the Auction wizard to create an auction. If you expect to use the same template for several auctions, consider creating an auction style first.
- If you are creating an Open Cry or Sealed Bid auction, you may want to specify bid rules when you create the auction. In such cases, you must create bid rules before you create the auction.
- In general, if you know you will be using the same style for several auctions, create an auction style first, then create an auction with the Auction wizard, using the auction style you just created.

12.5.12 Merchandise: Find Auctions

Use this page to search for auctions using any of the following.

- Auction Id: Type the ID of the auction you are searching for. The Auctions page displays the located auction.
- SKU: Type the SKU of the product you are searching for. The Auctions page displays auctions matching the SKU.
- Auction Type: Select an auction type (All, Open Cry, Sealed Bid, or Dutch). The Auctions page displays auctions matching the type.

To find an auction:

1. From the **Merchandise** menu, select **Find Auctions** to open a search page (Figure 12-117).

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

Figure 12-117 Merchandise: Auction Search page

2. Specify the **Auction ID** or **SKU**, or select an **Auction type**.
3. Click **OK** to display a list of auctions that match the criteria you specified.

12.5.13 Merchandise: Auction Styles

You may find that using auction styles saves you time when creating auctions. Auction styles are templates that automatically complete fields for you. For example, perhaps you schedule Open Cry auctions and always use non-discriminative pricing. An auction style can complete the appropriate fields for the auction type and pricing mechanism, saving you the trouble of selecting these fields for each auction.

If some auction specifications, such as the product display template and the auction rule template, do not vary between your auctions, you can create an auction style that includes these values.

The Auction Style wizard makes it easy to create new auction styles. You can use this wizard to populate any field that displays during the process of creating an auction.

1. From the **Merchandise** menu, select **Auction Styles**.

   If you do not see this menu (Figure 12-118), then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

Figure 12-118 Merchandise: Auction Styles

2. Click **New** to open the Auction Style wizard.
3. To create a style, complete each page and click **Next** until you are finished.
4. Click **Finish**. A message displays.

12.5.14 Merchandise: Bid Rules

Use this page to create, change, and delete bid rules.

Rule Name	The name of the bid rule.
Description	Text describing the bid rule.
Minimum value	The minimum bid amount that will be accepted.
Minimum quantity	The minimum quantity that may be bid on.
New	Creates a new style with the Bid Rule wizard when clicked.
Change	Updates an existing style with the Bid Rule notebook when clicked.
Delete	Deletes the selected bid rules when clicked.

From the **Merchandise** menu, select **Bid Rules** to open the Bid Rule page. If you do not see this menu (Figure 12-119), then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

Figure 12-119 Merchandise: Bid Rules

Create bid rules

1. Click **New**. The Bid Rule wizard starts.
2. To create a bid rule, complete each page and click **Next** until you are finished.
3. Click **Finish** to save.

Change existing bid rules

1. Select a bid rule and click **Change**. The first page of the Bid Rule notebook displays.
2. Complete each page and click **Nex**t until you are finished.
3. Click **Finish**.

12.5.15 Merchandise: Coupon Promotions

This page lists all existing coupon promotions and enables you to create and delete coupon promotions. Existing coupon promotions are displayed in a table with the following information:

Coupon Promotion Name	The name of the coupon promotion
Status	The current status of the coupon promotion (active or deleted)
Start date	The date that the coupon promotion becomes applicable (the associated coupons become redeemable)
End date	The date that the coupon promotion stops being applicable (the associated coupons stop being redeemable)
Description	The description of the coupon promotion as specified during creation

Tip: For additional information about creating a new coupon promotion, see “New coupon promotion” on page 139.

The following functions are available from this page:

- New Coupon Promotions
- Delete Coupon Promotions

To access this page: From the **Merchandise** menu, select **Coupon Promotions**. The Coupon Promotions window displays, containing a list of the currently defined coupon promotions (Figure 12-120 on page 596).

If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

Figure 12-120 Merchandise: Coupon Promotions

Create a coupon promotion

1. Click **New**. The coupon promotion wizard opens.
2. Complete each page as required by selecting the values appropriate for the coupon promotion you want to create.
3. Click **Finish** to save the coupon promotion. The coupon promotion is displayed in the Coupon Promotions page list and automatically set as active.

Delete a coupon promotion

1. Select the check box next to the coupon promotion that you want to delete.
2. Click **Delete**. The coupon promotion will be removed from the coupon promotion list and marked for deletion in the database.

> **Note:** You must propagate coupon promotion data from the development server to the production WebSphere Commerce Server before customer orders can make use of it. Contact your site administrator for assistance.
>
> **Note:** You cannot create a coupon promotion that has the same name as one marked for deletion because the database record corresponding to the one marked for deletion is not physically removed until the Database Cleanup utility is run. If you must create a coupon promotion with the same name, contact your system administrator.

12.5.16 Merchandise: Product Promotions

This page lists all current product-level discounts. It enables you to create and delete existing discounts and to activate and deactivate previously created discounts. Existing discounts display in a table with the following information:

Promotion name The name of the discount.

Status The current status of the discount (active or inactive).

Start date The date that the discount becomes applicable to customer orders.

End date The date that the discount stops being applicable to customer orders.

Description The description of the discount as specified during creation.

The following functions are available from this page:

- New product promotions
- Modify product promotions
- Activate product promotions
- Deactivate product promotions
- Summary of product promotions
- Delete product promotions

To access this page: From the **Merchandise** menu, select **Product Promotions**. The Product Promotions window displays, containing a list of the currently defined coupon promotions. (Figure 12-121 on page 598)

If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

Figure 12-121 Merchandise: Product Promotions

Create a product promotion

1. Click **New**. The product promotion wizard opens.
2. Complete each page as required by selecting the values appropriate for the coupon promotion you want to create.
3. Click **Finish** to save the coupon promotion, display it in the Product Promotions page list, and automatically set it as active.

Delete a product promotion

1. Select the check box next to product promotion that you want to delete.
2. Click **Delete**. This removes the product promotion from the Product Promotions page list and marks it for deletion in the database.
3. Click **Finish**.

> **Note:** You must propagate product promotion data from the development server to the production WebSphere Commerce Server before customer orders can make use of it. Contact your site administrator for assistance.
>
> **Note:** You cannot create a product promotion that has the same name as one marked for deletion because the database record for the one marked for deletion is not physically removed until the Database Cleanup utility is run. If you must create a product promotion with the same name, contact your system administrator.

12.5.17 Merchandise: Order Promotions

This page lists all current rule-based discounts. It enables you to create and delete existing discounts and to activate and deactivate previously created discounts. Existing discounts display in a table with the following information:

Promotion name The name of the discount.

Status The current status of the discount (active or inactive).

Start date The date that the discount becomes applicable to customer orders.

End date The date that the discount stops being applicable to customer orders.

Description The description of the discount specified during creation.

To access this page: From the **Merchandise** menu, select **Order Promotions**. The Order Promotions window opens, displaying a list of defined order promotions (Figure 12-122).

If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

Figure 12-122 Merchandise: Order Promotions

Create an order promotion

1. Click **New**. The order promotions wizard opens.
2. Complete each page as required by selecting the values appropriate for the order promotion you want to create.

3. Click **Finish** to save the order promotion, display it in the Order Promotions page list, and automatically set it as active.

Delete an order promotion

1. Select the check box next to order promotion that you want to delete.
2. Click **Delete**. This removes the order promotion from the Order Promotions page list and marks it for deletion in the database.
3. Click **Finish**.

> **Note:** You must propagate order promotion data from the development server to the production WebSphere Commerce Server before customer orders can make use of it. Contact your site administrator for assistance.
>
> **Note:** You cannot create an order promotion that has the same name as one marked for deletion because the database record for the one marked for deletion is not physically removed until the Database Cleanup utility is run. If you must create an order promotion with the same name, contact your system administrator.

12.6 Operations

The Operations menu enables an administrator:

- Find and manage customers
- Find and manage orders (including packaging, shipping, and payments)

12.6.1 Operations: Create New Customer

To create a new registered customer for the store:

1. From the **Operations** menu, select **Create New Customer**. This displays the Create New Customer - General page (Figure 12-123 on page 601).

Figure 12-123 Create New Customer: General page

2. Enter the following customer details:
   a. Unique Logon ID. This is used by the customer to log onto the store.
   b. Password (entered twice for confirmation).
   c. Title, First name, Middle name, and Last name.
   d. A challenge question and answer used by the administrator to verify the customer's identity in the event that the customer forgets their password and requires it to be reset. The idea is to enter a question that only the customer can answer (for example, what was your first pet's name?).
   e. Select **Enable** for the Account status. If the account is not enabled, the customer will be unable to log onto the store.
   f. Selected a Preferred language and Preferred currency.
3. Click **Next** to display the Create New Customer - Address page (Figure 12-124 on page 602).

Figure 12-124 Create New Customer: Address page

4. Enter the following customer address details:
   a. Country/Region
   b. Street address
   c. City
   d. State/Province
   e. ZIP/Postal Code
5. Click **Next** to display the Create New Customer - Contact page.

Figure 12-125 Create New Customer: Contact page

6. Enter the following customer contact details:
   a. Preferred method of communication.
   b. E-mail address.
   c. Phone numbers, including the type of phone number if known. Select the **Listed** check box if the phone number is publicly listed.
   d. Fax number.
   e. Best time to call.
   f. Select the **Include promotional material with shipments** check box if the customer is willing to receive promotional material in packages they order from the store.
7. Click **Next** to display the Create New Customer - Demographics details page (Figure 12-126 on page 604).

Figure 12-126 Create New Customer - Demographics page

8. Enter the following customer demographic details (if available):
   a. Age
   b. Gender
   c. Marital status
   d. Annual income
   e. Number of household members
   f. Number of children
   g. Return customer, to indicate whether the customer has previously made a purchase from the store
   h. Employer
   i. Interests/Hobbies
9. Click **Finish**. This displays a pop-up window indicating that the user file has been created successfully.
10. Click **OK**.

12.6.2 Operations: Find Customer

To find a registered customer for the store:

1. From the **Operations** menu, select **Find Customers** to display the Find Customers page (Figure 12-127).

Figure 12-127 Operations: Find Customers page

2. Enter any combination of the following search criteria fields:
   - Customer logon ID
   - First name
   - Last name
   - Phone number
   - E-mail address
   - City
   - ZIP/Postal Code

3. For each field, one of the following search capabilities can be selected:
   - Match case, beginning with: Criterion will match any records with the selected field that begins with the value entered (case-sensitive).
   - Match case, containing: Criterion will match any records with the selected field that contains the value entered (case-sensitive).
   - Ignore case, beginning with: Criterion will match any records with the selected field that begins with the value entered (not case-sensitive).
   - Ignore case, containing: Criterion will match any records with the selected field that contains the value entered (not case-sensitive).
   - Exact match: Criterion will match any records with the selected field that contains the value exactly as entered.
4. Enter a value in at least one search criteria field and click **Find**.

   This displays a list of all customer records that match the search criteria on the Find Customers - Search Results page.

Figure 12-128 Find Customers: Search Results page

The Find Customers - Search Results page is a typical search results page. It enables the user to:

- Scroll page-by-page through results with First, Last, Previous, and Next links.
- Go directly to a page by entering the page number and clicking **Go**.
- Select all rows in the table by selecting the check box at the top of the table.
- Select individual rows by selecting the check box next to each individual row.
- Sort the table of results on any column.

However, the Find Customers - Search Results page also enables the user to perform the following actions specific to customers:

- Reset a customer's password by selecting the check box beside the customer record and clicking **Reset Password**. For more about resetting customer passwords, refer to "Operations: Reset Customer Password" on page 609.
- Create a new customer by clicking **New Customer**. This displays the Create Customer - General page. For more information about creating customers, refer to "Operations: Create New Customer" on page 600.
- Change a customer's details by selecting the check box beside the customer record and clicking **Change**. This displays the Change Customer Information - General page. For more information about changing customer details, refer to "Operations: Update Customer Details" on page 607.
- Find all orders for a customer by selecting the check box next to the customer record and clicking **Orders**. This performs a search for all orders belonging to the selected customer and displays the results on the Orders page. For more about finding orders, refer to "Operations: Find Orders" on page 609.
- Place a guest order for a customer by selecting the check box next to the customer record and clicking **Place Order**. This displays the Place Order - Products page. For more information about placing guest orders, refer to "Operations: Place Guest Order" on page 613.
- Find all returns for a customer by selecting the check box next to the customer record and clicking **Returns**. For more information about finding returns, refer to "Operations: Find a Return" on page 637.
- Create a return for a customer by selecting the check box next to the customer record and clicking **New Return**. For more information about creating returns, refer to "Operations: Create a Return" on page 638.

12.6.3 Operations: Update Customer Details

This section demonstrates how to update the details for a registered customer for the store.

Follow the steps as outlined in "Operations: Find Customer" on page 605 to find the customer. After the customer has been located on the Find Customers - Search Results page, follow these steps:

1. Select the check box next to the customer record and click **Change** to load the Change Customer Information - General page (Figure 12-129 on page 608).

Figure 12-129 The Change Customer Information: General page

This page is exactly the same as the Create Customer - General page except for these minor differences:

- The customer's Logon ID and Password cannot be changed.
- All fields are pre-populated with the existing values.
- Instead of clicking **Next** to gain access to the Address, Contact, and Demographic details, they are available as menu options to the left of the pane. Clicking a menu option opens the appropriate details page.
- The last update time is displayed. This is the date and time that the customer details were last modified. This field cannot be modified.
- The last visit time is displayed. This is the date and time that the customer last visited the store. This field cannot be modified.
- All other fields can be modified as per the Create Customer process as outlined in 12.6.1, "Operations: Create New Customer" on page 600.

2. After all modifications have been made click **OK** to save the changes. A pop-up window opens, indicating that the customer details were updated successfully.
3. Click **OK**.

12.6.4 Operations: Reset Customer Password

This section demonstrates how to reset the password of a registered customer. Resetting a password is performed if customers forget their password or have been locked out of their account. The system automatically generates a new password and e-mails it to the customer. This can be performed only if the customer has specified a primary e-mail address in the contact details.

Follow the steps that were outlined in 12.6.17, “Operations: Find Releases Ready to Ship” on page 631 to find the desired record. After it has been located on the Releases Ready to Ship search results page, follow these steps:

1. Select the check box next to the customer record and click **Reset Password**.

   This prompts the administrator to enter the new password.

2. Enter the password and click **OK**.

   A pop-up window opens, indicating that the password was reset successfully.

3. Click **OK**.

12.6.5 Operations: Find Orders

This section demonstrates how to find orders for the store:

1. From the **Operations** menu on the manage store page, select **Find Orders**. This displays the Find Orders page (Figure 12-130).

Figure 12-130 Find Orders page used to search for orders

2. Enter either an exact Order number or a partial Customer logon ID (along with a search filter). Alternatively, click the Advanced Search link to refine the search further. Advanced Search includes the following fields:
   - Order Status
   - Created Start Date
   - Created End Date
   - Modified Start Date
   - Modified End Date
   - First name
   - Last name
   - Address number 1
   - ZIP/Postal code
   - E-mail address 1
3. After the search criteria have been entered, click **Find**. The results display on the Orders page.

Figure 12-131 Orders page used to display the list of orders

The Orders page, a typical search results page, enables the user to:

- Scroll page-by-page through results with First, Last, Previous, and Next links.

- Go directly to a page by entering the page number and clicking **Go**.
- Select all rows in the table by selecting the check box at the top of the table.
- Select individual rows by selecting the check box next to each individual row.
- Sort the table of results on any column (other than Payment status and Order status).

The Orders page also enables the user to perform actions specific to orders:

- Place a guest order by clicking **Place Guest Order**. This displays the Place Guest Order page. For more information about placing guest orders, refer to "Operations: Place Guest Order" on page 613.
- Create a new return by selecting the check box next to the order and clicking **New Return**. For more information about creating new returns, refer to "Operations: Create a Return" on page 638.
- Display the summary details of an order either by selecting the order number link in the results table, or by selecting the check box next to the order and clicking **Summary**. This opens the Order Summary page (Figure 12-132 on page 612), which displays all details of the order and enables the user to print the details by clicking **Print**. It also enables the user to send an e-mail notification about the order to either the customer or the administrator. For more information about sending an e-mail notification for an order, refer to "Operations: Send Order E-mail Notification" on page 621.

Figure 12-132 Order Summary page to display and print the details of the order

- Change the details of an order by selecting its check box and clicking **Change** to display the Change Order - Products page. For more information about changing order details, refer to “Operations: Change Order Details” on page 623.
- Add comments to an order by selecting its check box and clicking **Add Comments** to display the Add Comments page. For more information about adding comments to an order, refer to “Operations: Add Order Comments” on page 624.
- Cancel an order by selecting its check box and clicking **Cancel Orders**, which displays the Cancel Orders page. For more information about cancelling orders, refer to “Operations: Cancel Order” on page 625.
- Proceed with the payment of an order by selecting its check box and clicking **Proceed with Payment**, which displays the Proceed with Payment page. For more information about proceeding with payments for orders, refer to “Operations: Proceed with Order Payment” on page 656.
- Process the payment for an order by selecting its check box and clicking **Process Payment** to display the Process Payment Order Search Results

page. For more information about processing payments for orders, refer to “Operations: Process Order Payment” on page 657.

12.6.6 Operations: Place Guest Order

When this book was written, this functionality was not fully working in the standard eSites SAR installation so it was not fully documented and should not be used. We expect that this functionality will be provided in a future fix pack. Check the fix pack release notes for more information.

This section demonstrates how to place a guest order for a registered customer. A guest order is an order submitted on behalf of a registered customer by the administrator.

1. From the **Operations** menu, select **Place Guest Order**. This displays the Place Guest Order - Products page.

Figure 12-133 Place Guest Order - Products page

2. Add to the order by clicking **Add** to open the Add Products - Find page.

Figure 12-134 Add Products - Find page

3. Enter at least a partial Product name or SKU code and the maximum number of results to return. Click **Find**. The Products - Search Results page loads.

Figure 12-135 Products - Search Results page

4. Enter the number of products in the Quantity field next to the product and click **OK**. This displays the Place Guest Order - Products page again, with the list of selected products added.

5. Products can be deleted from the list by selecting their check boxes and clicking **Remove**.
6. After the list of products and their quantities have been decided on, click **Next**. This loads the Place Guest Order - Shipping page.

Figure 12-136 Place Guest Order - Shipping page

7. To specify or modify the shipping address, select the product's check box and click **Select Another Address**. This loads the Select Shipping Address page.

Figure 12-137 Select Shipping Address

8. Select the check box next to the desired shipping address and click **OK** to return to the Place Guest Order - Shipping screen.
9. If no shipping addresses are listed, click **New** to create one on the **Create Shipping Address** page.

Figure 12-138 Create Shipping Address page

10. Enter the following customer shipping details:
    - Address identifier: a brief description to identify the address. For example, a customer may want to send a package to their work location so the Address identifier might be `Work`.
    - First name.
    - Last name.
    - Street address.
    - City.
    - State/Province.
    - Country/Region.
    - ZIP/Postal code.
    - Phone number.
    - E-mail address.

11. Click **OK** to return to the Place Guest Order - Shipping page.
12. To specify or modify the shipping method, select the check box next to the product and click **Select Another Method**. This displays the Shipping Methods page.

Figure 12-139 Shipping Methods page

13. Select the check box for the desired shipping method and click **OK** to return to the Place Guest Order - Shipping page.
14. Click **Next**. This displays the Place Guest Order - Product Availability page (Figure 12-140), which shows the availability of each product in the order.

Figure 12-140 Place Guest Order - Product Availability page

15. To remove a product from the order, select its check box and click **Remove**.

16. To move a product to a new, separate order, select its check box and click **Move To Separate Order**. This creates a separate order to handle the product. Note the Move to Separate Order column now shows a value of `Yes`.
17. To move a product from a separate order back into the current order, select its check box and click **Keep In Current Order**. Note that the Move to Separate Order column now shows a value of No.
18. After the products for this order have been decided on, click **Next**. This displays the Place Guest Order: Adjustments page.

Figure 12-141 Place Guest Order: Adjustments page

19. This page enables the total order price to be adjusted as follows:
    - Minus order level adjustment: Enter the price amount of any additional price adjustment to be subtracted from the order. For example, to waive the shipping charges for an order, enter a value equivalent to the shipping charge. Note that the amount is an adjustment made before tax and shipping charges have been calculated.
    - Shipping: Enter the total shipping charge to be added to the order.
    - Coupon: Enter the ID that uniquely identifies a coupon. The value of the coupon will be subtracted from the order as a discount made before any other discounts, taxes, or shopping charges are applied.
    - Click **Recalculate** to recalculate the total order amount.

– Click **Undo** to undo changes to adjustments. Note that this does not undo changes made before the Recalculate button was clicked.

20. After all adjustments have been made, click **Next**. This loads the Place Guest Order: Payment page.

Figure 12-142 Place Guest Order: Payment page

21. Select the Payment method, Credit card number, and Expiry month and year.

22. Click **Next**. This loads the Place Guest Order: Billing Address page.

Figure 12-143 Place Guest Order: Billing Address page

23. By default, the billing address is the same as the shipping address that was entered in an earlier step. If a different billing address is required, click **New**. This loads the Create Billing Address page, which works exactly the same as the Create Shipping Address page described in step 10 on page 616. Add a new address and click **OK** to return to the Billing Address screen.

24. Select the check box next to the desired billing address and click **Next**. This displays the Place Guest Order: Comments page.

25. Enter any additional comments and click **Finish** to submit the order.

12.6.7 Operations: Auctions

The Auctions page works exactly the same as the Auctions page under Merchandise (12.5.11, “Merchandise: Auctions” on page 590), except for the following minor differences:

- The ability to create new auctions is not available.
- The ability to change, retract, or close existing auctions is not available.

Figure 12-144 Auctions page used to manage store auctions

For more about managing auctions, see “Merchandise: Auctions” on page 590.

12.6.8 Operations: Send Order E-mail Notification

This section demonstrates how to send an e-mail notification to either the customer or the administrator for an order placed with the store.

Typically after an order has been placed with the store, an e-mail notification is sent automatically to either the customer or the administrator. To re-send a copy of that e-mail, first follow the steps outlined in “Operations: Find Orders” on page 609 to find the order. After the order has been located on the Orders search results page, follow these steps:

1. Select the check box next to the order and click **Summary**. This displays the Order Summary page.

   Refer to the online help system for information about the displayed fields.

Figure 12-145 Order Summary page

2. Click **E-mail order**. This displays the E-mail Order page (Figure 12-146 on page 622).

Figure 12-146 E-Mail Order page

3. Select the desired recipient. If the customer is selected, the Recipient e-mail address is populated automatically with the customer's e-mail address (assuming that the customer is registered). If the administrator is selected, the Send Order Notification E-mail details are populated automatically. These details are configurable under **Store** → **Message Type Configuration**. For more information, refer to "Store: Message Type Configuration" on page 487.
4. Fill in the desired e-mail recipient details and a subject and click **OK**. A window pops up to indicate that the message was sent successfully.

12.6.9 Operations: Change Order Details

This section demonstrates how to change the details for an order placed with the store.

Follow the steps that were outlined in 12.6.17, “Operations: Find Releases Ready to Ship” on page 631 to find the desired order. After it has been located on the Releases Ready to Ship search results page, follow these steps:

1. Select the check box next to the order and click **Change**. This displays the Change Order: Products page.

Figure 12-147 Change Order: Products page

This page is the same as the Place Guest Order: Products page (12.6.6, “Operations: Place Guest Order” on page 613) except for these minor differences:

- All fields are pre-populated with the existing values.
- Instead of clicking **Next** to gain access to the Shipping, Product Availability, Adjustments, Payment, Billing Address, and Comment details, they are available as menu options to the left of the pane. Clicking a menu option opens the appropriate details page.
- All other fields can be modified as per the Place Guest Order process outlined in 12.6.6, “Operations: Place Guest Order” on page 613.

2. After all of the modifications have been made, click **OK** to save the changes. A pop-up window indicates that the order details were updated successfully.

12.6.10 Operations: Add Order Comments

This section demonstrates how to add comments to an order placed with the store. Any comments added can be sent to the customer via e-mail if desired.

Follow the steps in 12.6.5, “Operations: Find Orders” on page 609 to find the order. After you locate it on the Orders search results page, follow these steps:

1. Select the check box next to the order and click **Add Comments**. This displays the Add Comments page.

Figure 12-148 Add Comments page

2. Enter the desired comment and select **Send this comment to the customer** to indicate that the comment should be sent to the customer.

   Clicking the check box automatically displays the customer’s e-mail address (assuming that the customer is registered).

3. Click **OK**. A window pops up to indicate that the comment was added to the order successfully. Click **OK** to close it.

12.6.11 Operations: Cancel Order

This section demonstrates how to cancel an order placed with the store.

Follow the steps that were outlined in 12.6.17, “Operations: Find Releases Ready to Ship” on page 631 to find the desired order. After it has been located on the Releases Ready to Ship search results page, follow these steps:

1. Select the check box next to the order and click **Cancel Orders**. This displays the Cancel Orders page.

Figure 12-149 Cancel Orders page

2. Enter the reason for the order cancellation and click **Send this comment to the customer**.

   Clicking this check box automatically displays the e-mail address of the recipient, assuming that the customer is registered.

3. Click **OK**. A confirmation window pops up. Click **OK** to close it.

   The status of the order turns into Cancelled.

12.6.12 Operations: Find a Pick Batch

This section demonstrates how to find pick batches for the store.

A pick batch is a set of order releases that are grouped to create a single pick ticket (which lists all of the products to be picked from inventory) and a packing slip for each release (which lists all of the products in each package). The Pick Packer uses the pick ticket and packing slip to physically assemble the packages for shipping.

1. From the **Operations** menu, select **Pick Batches**. This displays the Pick Batches page.

Figure 12-150 Pick Batches page

The Pick Batches page is a typical search results page. It enables the user to:

- Scroll page-by-page through results with First, Last, Previous, and Next links.
- Go directly to a page by entering the page number and clicking Go.
- Select all rows in the table by selecting the check box at the top of the table.
- Select individual rows by selecting the check box next to each individual row.

The Pick Batches page also enables the user to perform these actions that are specific to pick batches:

- Create the next pick batch by clicking **Create Next**. For more about creating pick batches, refer to 12.6.13, “Operations: Create a Pick Batch” on page 627.
- View a pick ticket by selecting the check box next to the pick batch and clicking **View Pick Ticket**. This displays the Pick Ticket page. For more information about viewing and printing pick tickets refer to 12.6.14, “Operations: Print a Pick Ticket” on page 628.

- Print and find packing slips by selecting the check box beside the pick batch and clicking **Packing Slips** to access the Packing Slips page. For more information about printing packing slips, refer to 12.6.15, “Operations: Print a Packing Slip” on page 628.
- Generate shipping exception reports by clicking **Reports**. This displays the Shipping Exceptions page. For more information about generating shipping exception reports refer to 12.6.16, “Operations: Generate Shipping Exceptions Report” on page 630.

12.6.13 Operations: Create a Pick Batch

This section demonstrates how to create a new pick batch to process orders placed with the store.

After the payment for an order has been approved, the system automatically creates releases to fulfill the order. A release is a grouping of order line items on an order that are shipping to the same address, from the same fulfillment center, with the same carrier, at the same time. Conceptually, it groups all items on the order that conceivably could be put in the same box. After the releases have been created for the order, the next step is to create a pick batch, a set of releases that are grouped together to create a single pick ticket (which lists all products to be picked from inventory) and a packing slip for each release (which lists all products in each package). The Pick Packer uses the pick ticket and packing slip to physically assemble the packages for shipping.

1. From the **Operations** menu, select **Pick Batches** to open the Pick Batches page.

Figure 12-151 Pick Batches page

2. Click **Create Next**. A window pops up to indicate success. (A pick batch will be created only if there are releases pending.) Click **OK**.

12.6.14 Operations: Print a Pick Ticket

This section demonstrates how to print a pick ticket for a pick batch in order to process orders placed with the store. A pick ticket is used by the Pick Packer to pick items from the inventory to fill orders.

Follow the steps that were outlined in 12.6.17, “Operations: Find Releases Ready to Ship” on page 631 to find the desired pick batch. After it has been located on the Releases Ready to Ship search results page, follow these steps:

1. Select the check box next to the pick batch and click **View Pick Ticket**. This displays the Pick Ticket page.

   Refer to the online help system for information about the displayed fields.

Figure 12-152 Pick Ticket page

2. Click **Print** to print the pick ticket.

12.6.15 Operations: Print a Packing Slip

This section demonstrates how to print a packing slip for a pick batch in order to process orders placed with the store. A packing slip is used by the Pick Packer to physically assemble a package.

Follow the steps that were outlined in 12.6.17, “Operations: Find Releases Ready to Ship” on page 631 to find the desired pick batch. After it has been located on the Releases Ready to Ship search results page, follow these steps:

1. Select the check box next to the pick batch and click **Packing Slips**. This displays the Packing Slips page.

Figure 12-153 Packing Slips page

Select the check box next to the desired packing slip and click **View** to open the Packing Slip page. Refer to the online help system for information about the displayed fields.

Figure 12-154 Packing Slip page

2. Click **Print** to print the packing slip.

12.6.16 Operations: Generate Shipping Exceptions Report

This section demonstrates how to generate a shipping exceptions report for a pick batch. This report is used to determine which of the releases in the pick batch are missing manifest information.

Follow the steps as outlined in 12.6.12, “Operations: Find a Pick Batch” on page 626 to find the desired pick batch. After the desired pick batch has been located on the Pick Batches search results page, follow these steps:

1. Select the check box next to the pick batch and click **Reports**. This opens the Shipping Exceptions page.

Figure 12-155 Shipping Exceptions page

2. Select a fulfillment center from the list and click **Add**.
3. To remove a fulfillment center, click **Remove**.
4. After the fulfillment center or centers have been selected, click **OK**. This loads the Shipping Exceptions report content page (Figure 12-156 on page 631).

   Refer to the online help system for information about the displayed fields.

Figure 12-156 Shipping Exceptions report content page

5. Click **Print** to print a copy of the report.

12.6.17 Operations: Find Releases Ready to Ship

This section demonstrates how to find releases that are ready for shipping.

A release is a grouping of order line items on an order that are shipping to the same address, from the same fulfillment center, with the same carrier, at the same time. Conceptually, it groups together all items on the order that could conceivably be put in the same box.

1. From the **Operations** menu, select **Releases Ready to Ship**. This displays the Releases Ready to Ship page (Figure 12-157 on page 632).

The Releases Ready to Ship page is a typical search results page. It enables the user to:

- Scroll page-by-page through results with First, Last, Previous, and Next links.
- Go directly to a page by entering the page number and clicking **Go**.
- Select all rows in the table by selecting the check box at the top of the table.
- Select individual rows by selecting the check box next to each individual row.

Figure 12-157 Releases Ready to Ship page

The Releases Ready to Ship page also enables the user to perform the following actions that are specific to releases:

- Create a package by clicking **Packages** to display the Packages page. For more information about creating packages, refer to 12.6.18, “Operations: Create Package” on page 632.
- Confirm a release has shipped by clicking **Confirm Shipment**. For more information about confirming the shipment of releases, refer to 12.6.21, “Operations: Confirm Release Shipped” on page 637.

12.6.18 Operations: Create Package

This section demonstrates how to create a package to satisfy an order placed with the store. The package is directly associated with a release, and it represents the physical package shipped to the customer.

Follow the steps that were outlined in 12.6.17, “Operations: Find Releases Ready to Ship” on page 631 to find the desired release. After it has been located on the Releases Ready to Ship search results page, follow these steps:

1. Select the check box next to the release and click **Packages**. This displays the Packages page (Figure 12-158 on page 633).

Figure 12-158 Packages page

2. Click **New**. This displays the New Package Details page.

Figure 12-159 New Package Details page

3. Enter the following details:
   – Package ID: A unique identifier for the package

- Tracking ID: Assigned by the shipping carrier
- Pickup ID: Assigned by the shipping carrier
- Shipping Provider
- Package Weight (including unit of measurement)
- Shipping Costs (including currency)
- Shipping Date (including year, month, and day)

4. Click **OK**. A window pops up to indicate success.
5. Click **OK**.

12.6.19 Operations: Change Package

This section demonstrates how to change the details for a package used to satisfy an order placed with the store. The package is directly associated with a release and represents the physical package shipped to the customer.

Follow the steps that were outlined in 12.6.17, “Operations: Find Releases Ready to Ship” on page 631 to find the desired release. After it has been located on the Releases Ready to Ship search results page, follow these steps:

1. Select the check box next to the release and click **Packages**. This displays the Packages page.

Figure 12-160 Packages page

2. Select the check box next to the desired package and click **Change**. This displays the Change Package Details page.

Figure 12-161 Change Package Details page

3. Update the fields of the Create Package Details page as outlined in 12.6.18, “Operations: Create Package” on page 632.
4. After all modifications have been completed, click **OK**. A window pops up to indicate that the package details were updated successfully.
5. Click **OK**.

12.6.20 Operations: Delete Package

This section demonstrates how to delete a package that was used to satisfy an order placed with the store. The package is directly associated with a release, and it represents the physical package shipped to the customer.

Follow the steps that were outlined in 12.6.17, “Operations: Find Releases Ready to Ship” on page 631 to find the desired release. After it has been located on the Releases Ready to Ship search results page, follow these steps:

1. Select the check box next to the release and click **Packages**. This displays the Packages page.

Figure 12-162 Packages page

2. Select the check box next to the desired package and click **Delete**. A pop-up window opens for confirming the deletion of the package.
3. Click **OK** to delete the package.

12.6.21 Operations: Confirm Release Shipped

This section demonstrates how to confirm that all of the packages for a release have been physically shipped.

Follow the steps that were outlined in 12.6.17, “Operations: Find Releases Ready to Ship” on page 631 to find the desired release. After it has been located on the Releases Ready to Ship search results page, follow these steps:

1. Select the check box next to the release and click **Confirm Shipment**. A window pops up to indicate that the release has been shipped successfully.
2. Click **OK**. The status of orders associated with that release turns to Shipped.

12.6.22 Operations: Find a Return

To find a return:

1. From the **Operations** menu, click **Find Returns**. A search dialog opens.

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.
2. Provide at least one of the following pieces of information (at least one field must be specified):
   - In the Return number field, type the return number, which uniquely identifies the return.
   - In the Order number field, type the order number that contains the product to be returned.
   - In the Originator logon ID field, type the store logon ID for the customer who originated the return. If this search dialog was launched by clicking Find Returns from the Return History list for a particular customer, the customer logon ID is populated with the customer’s logon ID for the store. The system performs a fuzzy or advanced search based on the logon ID that you specify. (For example, if you type the letter A, the system will search for any occurrences of logon IDs containing the letter A, not simply IDs that begin with the letter A).

     Note: The system performs a fuzzy search based on the Originator logon ID provided, and an exact search based on the values provided for all other fields on this dialog

   - In the Return status pull-down list, select the status of the return, such as pending or canceled.
3. Click **Find**. The system displays a list of returns that match the search criteria.

12.6.23 Operations: Create a Return

WebSphere Commerce supports returns using return merchandise authorization (RMA) functionality. A return is a record of a customer's request for a refund, to return merchandise, or both. The term is used whether an RMA is issued in advance of merchandise receipt or the transaction is begun at the time of merchandise receipt.

If a customer is not satisfied with a purchase, the merchant can offer a refund for the purchase. To return an order (or an order item or a product within an order), it must first be in one of the following states:

R Released
S Shipped
D Deposited
F Ready for remote fulfillment
G Pending remote fulfillment
C Completed

However, to return an order (or order item within an order) using the New Return wizard in the WebSphere Commerce Accelerator, both the order and order item within the order must be in either S (shipped) or D (deposited) state. To return items in any state (R, F, G, C, S, or D), use the ReturnItemAdd command.

Some products may be configured as non-refundable; for example, for hygienic reasons, intimate apparel sold directly to consumers would not be refundable. Whether the merchandise must be returned for a refund is configurable at the product level. For example, a specialty food dealer may want non-perishable food products returned but not fresh produce. A suggested refund amount and possible methods for issuing refunds are calculated according to system settings and policies. System settings and policies are overridable on a case-by-case basis with the appropriate level of security. The merchant may choose to issue RMAs in preparation for receiving returned merchandise and issuing a refund.

The possible payment methods for issuing a refund are calculated using system settings and policies. The default implementation utilizes a simple calculation. A refund may be issued against the original form of payment or to a line of credit, depending on system policies. The CalculateReturnCreditVehicleCmdImpl task command provides more details.

If the merchant chooses to issue RMAs, these can be created using a self-service interface utilizing an automatic approval mechanism built into the returns management system. A Customer Service Representative can also create an RMA or modify an existing one. The Customer Service Representative has the ease of use provided by the automatic approval mechanism but also has the flexibility to make any necessary adjustments and manually approve an RMA.

Using the commands provided in the returns system, a customer can request an authorization to return products they have ordered. With the Customer Service Representative's assistance, an RMA can also be issued for products ordered by others, such as gifts; products ordered outside the customer's business organization; or items for which the original order cannot be identified. You can read more about the automatic approval mechanism in the online help system.

To create a return on behalf of a customer:

1. You can create a return by searching for either the original order or the customer, and then launching the New Return wizard, by doing one of the following:
   - From the **Operations** menu, click **Find Orders**.

     A search dialog opens. If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

     Search for the order that contains the product for the return, by providing at least one of the following order information items:

     - In the Order number field, type the order number, which uniquely identifies the order.
     - In the Customer logon ID field, type the customer's unique store logon ID. If this search dialog was launched by clicking Find Orders from the Orders list for a particular customer, the customer logon ID is populated with the customer's logon ID for the store.
     - From the Order state pull-down list, select the status of the order, such as new or pending.

     Click **Find**. The system performs a search and displays a list of orders that match the search criteria.

     Select the check box next to the order that you want to work with, and click **New Return** to create a new return. The New Return wizard launches, displaying the Products From Order - Search Results page first.
   - From the **Operations** menu, click **Find Customers**.

     A search dialog opens. If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

     Provide all or part of any of the following customer information items:

     - Customer's logon ID
     - Customer's first name
     - Customer's last name

- Customer's primary phone number
- Customer's primary e-mail address
- The city of the customer's contact address
- The ZIP or postal code of the customer's contact address

Click **Find**. The system performs a search and displays a list of customers who match the search criteria.

Select the check box next to the order that you want to work with, and click **New Return** to create a new return. The New Return wizard launches, displaying the Products page first.

2. Provide appropriate information for the fields and click **Next** to save each page. Click **Back** to return to the previous page, if necessary.
3. When you have completed all pages, click **Finish** on the Confirmation page to create the return.

12.6.24 Operations: Find Expected Inventory

This section demonstrates how to find expected inventory for the store.

Expected inventory is received from a vendor, and is typically paid for with a purchase order. Expected inventory is tracked with expected inventory records. These enable an external identifier, typically a purchase order number from an external system, to be recorded to keep track of the inventory that has been ordered, as well as what has and has not arrived.

1. From the **Operations** menu, select **Expected Inventory** to open the Expected Inventory page, which lists the store's expected inventory records.

Figure 12-163 Expected Inventory page

The Expected Inventory page, a typical search results page, enables the user to:

- Scroll page-by-page through results with First, Last, Previous, and Next links.
- Go directly to a page by entering the page number and clicking **Go**.
- Select all rows in the table by selecting the check box at the top of the table.
- Select individual rows by selecting the check box next to each individual row.

The Expected Inventory page also enables the user to perform the following actions specific to expected inventory records:

- Create a new expected inventory record by clicking **New**. This displays the New Expected Inventory Record - General page. For more information about creating expected inventory records, refer to 12.6.25, “Operations: Create Expected Inventory” on page 642.
- Change an expected inventory record by selecting the check box next to the desired record and clicking **Change**. This displays the Change Expected Inventory Record - General page. For more information about changing expected inventory records, refer to 12.6.26, “Operations: Change Expected Inventory” on page 646.
- View the details of an expected inventory record by selecting the check box next to the desired record and clicking **Details**. This displays the Expected Inventory Details page. For more about viewing expected inventory records, refer to “Operations: View Expected Inventory” on page 647.
- Close an expected inventory record by selecting the check box next to the desired record and clicking **Close**. For more information about closing expected inventory records, refer to 12.6.30, “Operations: Close Expected Inventory” on page 650.
- Delete an expected inventory record by selecting the check box next to the desired record and clicking **Delete**. For more information about deleting expected inventory records, refer to 12.6.31, “Operations: Delete Expected Inventory” on page 650.
- Generate expected inventory record reports by clicking **Reports** to display the Expected Inventory Reports page. For more information about generating expected inventory record reports, refer to 12.6.32, “Operations: Expected Inventory Reports” on page 650.

12.6.25 Operations: Create Expected Inventory

This section shows how to create expected inventory records for the store.

Expected inventory is received from a vendor and typically is paid for with a purchase order. Expected inventory is tracked with expected inventory records. These enable an external identifier, typically a purchase order number from an external system, to be recorded to keep track of the inventory that has been ordered, as well as what has and has not arrived.

Expected inventory details are the specifics about products in an expected inventory record, such as the fulfillment center expecting the product, the expected receipt date, quantity expected, and comments.

When orders are placed for inventory that is available in a fulfillment center, the system allocates inventory to those orders. Allocating inventory to an order makes it unavailable to the order management system. If the order is canceled, the inventory becomes available again.

If an order is placed for inventory that is not available, a backorder can be created. If there is expected inventory that could be used to fulfill the backorder, then the expected inventory is allocated to the backorder and the customer can be provided with an expected ship date.

Before inventory for a product can be received, the product must be defined in the WebSphere Commerce system, regardless of whether the inventory receipt is expected or ad hoc.

1. From the **Operations** menu, select **Expected Inventory**. This displays the Expected Inventory page.

Figure 12-164 Expected Inventory page

2. Click **New**. This displays the New Expected Inventory Record - General page that is used to enter the general details for a new expected inventory record.

Figure 12-165 New Expected Inventory Record: General page

3. Enter the following details:
   - Vendor: The name of the vendor for the product
   - External ID: Identifier for the expected inventory record (typically, a purchase order number)
   - Order date: The date the order was placed with the vendor
4. Click **Next**. This displays the New Expected Inventory Record - Details page used to specify the expected products.

Figure 12-166 New Expected Inventory Record: Details page

5. Click **Add** to add products to be ordered. This opens the Find Products page.

Figure 12-167 Find Products page

6. Enter either a partial product name or a SKU and click **Find** to produce the Products - Search Results page.

Figure 12-168 Products - Search Results page

7. To add products to the expected inventory record, select the check box next to the desired products and click **OK**. This displays the Add Expected Inventory Details page.

Figure 12-169 Add Expected Inventory Details page

8. Enter the following details:
   - Fulfillment center: The name of the fulfilment center expecting the product
   - Expected date: The date the product is expected to arrive
   - Quantity: The number of products expected
   - Comments: Any additional comments
9. Click **OK** to return to the New Expected Inventory Record - Details page.
10. The newly selected product should be listed now.To remove it, select the check box next to the product and click **Remove**. To change the details, select the check box next to the product and click **Change**.
11. After all products have been specified, click **Finish**. A window pops up indicating that the expected inventory record was created successfully.
12. Click **OK** to close the pop-up window.

12.6.26 Operations: Change Expected Inventory

This section shows how to change the details for an expected inventory record.

Follow the steps as outlined in 12.6.24, “Operations: Find Expected Inventory” on page 640 to find the desired expected inventory record. After the record has been located on the Expected Inventory search results page, follow these steps:

1. Select the check box next to the desired record and click **Change**. This displays the Change Expected Inventory Record: General page, which is used to modify the details of an expected inventory record.

Figure 12-170 Change Expected Inventory Record: General page

This page is exactly the same as the Create Expected Inventory Record - General page except for the following minor differences:

- All fields are pre-populated with the existing values.
- Instead of clicking **Next** to gain access to the Details section, it is a menu option on the left side of the pane. Clicking a menu option opens the appropriate page.
- All other fields can be modified as per the Create Expected Inventory process as outlined in 12.6.25, “Operations: Create Expected Inventory” on page 642.

2. After all modifications have been made, click **OK** to save the changes.
3. A window pops up to indicate that the expected inventory record details were updated successfully. Click **OK** to close it.

12.6.27 Operations: View Expected Inventory

This section shows how to view the details of an expected inventory record.

Follow the steps outlined in 12.6.24, “Operations: Find Expected Inventory” on page 640 to find the desired expected inventory record. After the record has been located on the Expected Inventory search results page, follow these steps:

1. Select the check box next to the desired record and click **Details**. This displays the Expected Inventory Details page.

Figure 12-171 Expected Inventory Details page

The Expected Inventory Details page is a typical search results page. It enables the user to perform the following:

- Scroll page-by-page through results with First, Last, Previous, and Next links.
- Go directly to a page by entering the page number and clicking **Go**.
- Select all rows in the table by selecting the check box at the top of the table.
- Select individual rows by selecting the check box next to each individual row.

The Expected Inventory Details page also enables the user to perform the following actions specific to the products listed:

- Receive the expected inventory record by selecting the check box next to the product being received and clicking **Receive**. This displays the Receive Expected Inventory page. For more about receiving expected inventory, refer to 12.6.28, “Operations: Create Expected Inventory Receipt” on page 648.
- View the receipts for the expected inventory record by selecting the check box next to the product being received and clicking **Prior Receipts**. This displays the Prior Receipts page. For more information about viewing receipts for expected inventory, refer to 12.6.29, “Operations: View Expected Inventory Receipt” on page 649.

12.6.28 Operations: Create Expected Inventory Receipt

This creates a receipt when the expected inventory is received by the fulfillment center. An expected inventory record cannot be deleted after inventory has been received against it, and expected inventory details cannot be changed or deleted after any of that inventory has been received.

Before inventory for a product can be received, the product must be defined in the WebSphere Commerce system, regardless of whether the inventory receipt is expected or ad hoc.

Follow the steps in 12.6.24, “Operations: Find Expected Inventory” on page 640 to find the desired expected inventory record details. After the record has been found on the Expected Inventory Details search results page, follow these steps:

1. Select the check box next to the desired record and click **Receive**. This displays the Receive Expected Inventory page, which is used to generate a receipt when expected inventory arrives at the fulfillment center.

Figure 12-172 Receive Expected Inventory page

2. Enter the following details:
   - Receiving date: Date of the inventory receipt
   - Currency: Currency used to purchase the inventory

- Receiving quantity: The actual number of products received. This may differ from the expected quantity
- Unit Cost: Unit cost of the product being received
- Receipt Comments: Additional comments about the receipt
- Quality Comments: Additional comments about the quality of the good received

3. Click **OK**. A window pops up to indicate that the expected inventory receipt was created successfully. Click **OK** to close it.

12.6.29 Operations: View Expected Inventory Receipt

This section demonstrates how to view a receipt for expected inventory.

Follow the steps in 12.6.24, “Operations: Find Expected Inventory” on page 640 to find the desired expected inventory record details. When the record appears on the Expected Inventory Details search results page, follow these steps:

1. Select the check box next to the desired record and click **Prior Receipts**. This displays the Prior Receipts page used to display the receipts created for an expected inventory record.

Figure 12-173 Prior Receipts page

The Prior Receipts page is a typical search results page. It enables the user to:

- Scroll page-by-page through results with First, Last, Previous, and Next links.
- Go directly to a page by entering the page number and clicking **Go**.
- Select all rows in the table by selecting the check box at the top of the table.
- Select individual rows by selecting the check box next to each individual row.

12.6.30 Operations: Close Expected Inventory

This section demonstrates how to close an expected inventory record and remove it from the list of records displayed on the Expected Inventory page.

After all inventory has been received, the expected inventory record should be closed. Note that after an expected inventory record is closed, it cannot be re-opened. Ensure that all of the inventory that is associated with the expected inventory record has been received before closing.

Follow the steps in 12.6.24, “Operations: Find Expected Inventory” on page 640 to find the desired expected inventory record. After the record has been located on the Expected Inventory search results page, follow these steps:

1. Select the check box next to the desired record and click **Close**. A window pops up, prompting the user to confirm the closure of the record.
2. Click **OK**.

12.6.31 Operations: Delete Expected Inventory

This section demonstrates how to delete an expected inventory record and remove it from list of records displayed on the Expected Inventory page.

Follow the steps in 12.6.24, “Operations: Find Expected Inventory” on page 640 to find the desired expected inventory record. After the record has been located on the Expected Inventory search results page, follow these steps:

1. Select the check box next to the desired record and click **Delete**. This displays a popup dialog window that prompts the user to confirm the deletion of the record.
2. Click **OK**.

12.6.32 Operations: Expected Inventory Reports

When this book was written, this functionality was not fully working in the standard eSites SAR installation so it was not fully documented and should not be used. We expect that this functionality will be provided in a future fix pack. Check the fix pack release notes for more information.

12.6.33 Operations: Find Inventory

This section demonstrates how to find inventory for the store.

1. From the **Operations** menu, select **Find Inventory**. This displays the Find Inventory page.

Figure 12-174 Find Inventory page

2. Enter a partial product name or SKU and click **Find**. This displays the Inventory - Search Results page.

Figure 12-175 Inventory - Search Results page

The Inventory - Search Results page is a typical search results page that enables the user to:

- Scroll page-by-page through results with First, Last, Previous, and Next links.
- Go directly to a page by entering the page number and clicking **Go**.
- Select all rows in the table by selecting the check box at the top of the table.
- Select individual rows by selecting the check box next to each individual row.

This page also enables the user to perform these actions that are specific to inventory records:

- Create an ad hoc receipt for unexpectedly received inventory by clicking **Ad Hoc Receipt**. This displays the Ad Hoc Receipt page. For more information about creating ad hoc receipts, refer to 12.6.34, “Operations: Create Ad Hoc Inventory Receipt” on page 652.
- Adjust the quantity of inventory on hand by clicking **Adjust Quantity**. This displays the Adjust Quantity page. For more information about adjusting the quantity of inventory, refer to 12.6.35, “Operations: Adjust Inventory Quantity” on page 654.

12.6.34 Operations: Create Ad Hoc Inventory Receipt

This section demonstrates how to create a receipt for unexpected inventory.

Ad hoc inventory receipts are created when inventory arrives at a fulfillment center without a corresponding expected inventory record. This could be due to an unexpected inventory arrival, or it could be the choice of the merchant not to use expected inventory records to record inventory receipts. Products must exist in the WebSphere Commerce system in order to be received, whether the inventory receipt is expected or ad hoc.

Follow the steps outlined in “Operations: Find Inventory” on page 651 to find the inventory that was received. After the desired inventory has been located on the Inventory Search Results page, follow these steps:

1. Select the check box next to the desired SKU and click **Ad Hoc Receipt**. This displays the Ad Hoc Receipt page (Figure 12-176 on page 653), which is used to create an ad hoc receipt for inventory that has no expected record.

Figure 12-176 Ad Hoc Receipt page

2. The Ad Hoc Receipt page is similar to the Receive Expected Inventory page outlined in 12.6.28, “Operations: Create Expected Inventory Receipt” on page 648. The only difference is that the Ad Hoc Receipt page enables the user to select the vendor from which the goods were received. Fill out the details as in the Create Expected Inventory Receipt process in 12.6.28, “Operations: Create Expected Inventory Receipt” on page 648.
3. After the details have been entered, click **OK**.

   A window pops up to indicate that the ad hoc receipt was created successfully. Click **OK** to close it.

12.6.35 Operations: Adjust Inventory Quantity

This section demonstrates how to adjust the quantity of available inventory.

Inventory adjustments are made when the amount of inventory in the fulfillment center is not the same as the amount of inventory recorded in the WebSphere Commerce Accelerator. This could happen for several reasons. For example, if products in a fulfillment center are stolen or damaged, the amount of available inventory must be adjusted to reflect the situation. If a count is taken in a fulfillment center and there are more products than previously thought, this too must be recorded. WebSphere Commerce provides a sample set of inventory adjustment codes that define reasons for the inventory adjustment. For more information about inventory adjustment codes, refer to the *IBM WebSphere Commerce Store Development Guide*.

Important: Do not use the Adjust Quantity page to receive inventory. If your inventory has an associated expected inventory record, follow the process for creating an expected inventory receipt. Otherwise, follow the process for creating an ad hoc inventory receipt.

Follow the steps in 12.6.33, “Operations: Find Inventory” on page 651 to find the inventory that is to be adjusted. After the desired inventory has been located on the Inventory Search Results page, follow these steps:

1. Select the check box next to the desired SKU and click **Adjust Quantity**. This displays the Adjust Quantity page (Figure 12-177 on page 655), which is used to manually adjust the quantity of inventory units on hand.

Figure 12-177 Adjust Quantity page

2. The Adjust Quantity page displays the current quantity of units on hand. Enter the following details:
   - To increase the quantity levels, select **Increase quantity** and enter a value by which to increase the quantity.
   - To decrease the quantity levels, select **Decrease quantity** and enter a value by which to decrease the quantity.
   - Select an adjustment reason.
   - Enter additional comments if needed.
3. Click **OK**. This displays a pop-up dialog window that prompts the user to confirm the increase or decrease.
4. Click **OK**. This displays a pop-up dialog window that indicates that the inventory levels were adjusted successfully.
5. Click **OK** to close it.

12.6.36 Operations: Proceed with Order Payment

This section demonstrates how to proceed with the payment of an order that has a status of Payment Authorization Requires Review. An order can take on this state if an error occurred during payment authorization and thus requires manual review by the administrator.

Follow the steps in 12.6.5, “Operations: Find Orders” on page 609 to find the order. When it appears on the Orders search results page, follow these steps:

1. Select the check box next to the order and click **Proceed with Payment**. This displays the Proceed with Payment page (Figure 12-178), which displays whether the payment was allowed to proceed. If the operation is successful, the order status changes to Payment approved.
2. Click **OK**.

Figure 12-178 Proceed with Payment page

12.6.37 Operations: Process Order Payment

This section demonstrates how to process payments for orders placed with the store.

Follow the steps in 12.6.5, “Operations: Find Orders” on page 609 to find the order. When it appears on the Orders search results page, follow these steps:

1. Select the check box next to the order and click **Process Payment**. This displays the list of payments for that order on the Process Payments - Order Search Results page.

Figure 12-179 Process Payments - Order Search Results page

The Process Payments - Order Search Results page is exactly the same as the Approve payments page. Refer to 12.6.38, “Operations: Approve Payment” on page 658 for more information regarding approving payments.

12.6.38 Operations: Approve Payment

This section demonstrates how to approve a payment for an order placed with the store.

1. From the **Operations** menu, select **Approve Payment** to open the Approve page that is used to approve payments for orders placed with the store.

Figure 12-180 Approve payment page

2. This page provides several ways to approve the payment. Selecting either **Approve Selected** or **Approve All** produces the Approve Results page (Figure 12-180).

Figure 12-181 Approve Results page

3. Alternatively, the user can view the payment details before the approval by clicking the **Order number** link on the Approve payments page.

   This loads the Order page (Figure 12-182).

   Refer to the online help system for information about the displayed fields.

Figure 12-182 Order page

4. The Order page provides these options:
   - Approve: Approve the order.
   - Sale: Approve and deposit the order. For more information regarding sale payments, refer to 12.6.39, “Operations: Sale Payment” on page 662.
   - Credit: Credit a refund for the order. For more information regarding credit payments, refer to 12.6.40, “Operations: Credit Payment” on page 665.
   - Cancel: Cancel the payment. For more information regarding cancelling payments, refer to 12.6.43, “Operations: Cancel Payment” on page 669.

   To approve the order click **Approve**. This displays the Order Approve page (Figure 12-183 on page 660). Refer to the online help system for information about the displayed fields.

Figure 12-183 Order Approve page

5. Enter the following details:

Approval Amount	Amount approved for this payment.
Authorization Code	The reason for approval.
Decline Reason	Leave this blank for approval.
AVS Result Code	Address Verification System code used to identify the cardholder's address.

Click **OK** to return to the Order details page.

This page (Figure 12-184) now indicates that the order was approved successfully: The payment status for the order is Approved and the order status is Payment Approved.

Figure 12-184 Order page displaying the successful approval message

12.6.39 Operations: Sale Payment

This section demonstrates how to make a sale payment for an order placed with the store. A sale payment performs both an approval and deposit in one step.

1. From the **Operations** menu, select **Approve Payment** to display the Approve page that is used to approve payments for orders placed with the store.

Figure 12-185 Approve payment page

2. The Approve payment screen provides several ways to make a sale payment:

   Sale selected Clicking this button approves and deposits only selected payments.

   Sale all Clicking this button approves and deposits all of the payments that are listed.

   Selecting either of these options produces the Approve Results page.

Figure 12-186 Approve Results page used to display the result of the approval

3. Alternatively, the user can view payment details before approving the sale by clicking the **Order number** link on the Approve payments page.

   This loads the Order page. Refer to the online help system for information about the displayed fields.

Figure 12-187 Order page used to display the details of the payment

4. The Order page provides the following options:

Approve	Approve the order. For more information regarding approval of payments, refer to 12.6.38, “Operations: Approve Payment” on page 658.
Sale	Approve and deposit the order.
Credit	Credit a refund for the order. For more information regarding credit payments, refer to 12.6.40, “Operations: Credit Payment” on page 665.
Cancel	Cancel the payment. For more information regarding cancelling payments, refer to 12.6.43, “Operations: Cancel Payment” on page 669.

5. To make the sale payment, click **Sale**. This displays the Order Sale page used to approve the sale payment for the order (Figure 12-188).

Figure 12-188 Order Sale page

6. Enter the Sale Amount and click **OK**.

   This re-displays the Order details page with a status message that indicates that the order was approved and deposited successfully (Figure 12-189 on page 665).

Figure 12-189 Order Details page

The payment status for the order is now Deposited and the order status is Payment Approved.

12.6.40 Operations: Credit Payment

This section demonstrates how to create a credit payment for an order placed with the store. If a customer is not satisfied with their purchase, the merchant can offer a refund for the purchase. A credit payment is issued to refund an order.

Follow the steps in 12.6.52, “Operations: Find Payment” on page 688 to find the desired payment. When it appears on the Find Payment - Order Search page, follow these steps:

1. Click the **Order number** link for the payment. This displays the Order details page (Figure 12-190 on page 666), which shows the details of the payment.

Figure 12-190 Order details page

2. Click **Credit** to open the Order - Create credit page.

Figure 12-191 Order - Create credit page

3. Enter the following details:

Credit Amount	Amount to be refunded to the customer
Authorization Code	The reason for issuing the refund
Decline Reason	Left blank for credit approval

Click **Credit**. This re-displays the Order details page with a message that indicates that the credit was successful. A credit payment against the order with a credit status of Refunded will be created.

Figure 12-192 Order details page for the successful credit payment

12.6.41 Operations: Reject Payment

This section demonstrates how to reject a payment for an order placed with the store.

The process for rejecting a payment is similar to the approval process that was outlined in 12.6.38, “Operations: Approve Payment” on page 658 except that on the Order Approve page, a reason is entered in the decline reason field to indicate why the payment was rejected.

Clicking **OK** on this page with a value in the decline reason field re-displays the Order Approve page showing a rejection message (Figure 12-193). The payment status of the order has become Declined.

Figure 12-193 Order Approve page indicating the payment was rejected

12.6.42 Operations: Reject Credit Payment

When this book was written, this functionality was not fully working in the standard eSites SAR installation so it was not fully documented and should not be used. We expect that this functionality will be provided in a future fix pack. Check the fix pack release notes for more information.

12.6.43 Operations: Cancel Payment

This section shows how to cancel a payment for an order placed with the store.

Follow the steps in 12.6.52, “Operations: Find Payment” on page 688 to find the desired payment. When the payment appears on the Find Payment - Order Search page, follow these steps:

1. Click the **Order number** link for the payment to open the Order details page. Refer to the online help system for information about the displayed fields.
2. Click **Cancel**.

   This re-displays the Order details page with a message that indicates that the order was cancelled successfully (Figure 12-194). The status of the payment is now be Cancelled.

Figure 12-194 Order details page indicating successful cancellation

12.6.44 Operations: Delete Payment

This section shows how to delete a payment for an order placed with the store. This functionality is provided to clean out closed and cancelled payments.

Follow the steps in 12.6.52, “Operations: Find Payment” on page 688 to find the desired payment. When it appears on the Find Payment - Order Search page:

1. Click the **Order number** link for the payment to open the Order details page.

Figure 12-195 Order details page

2. Click **Delete**. This displays a message indicating the payment was deleted successfully. The payment will no longer exist in the system.

Figure 12-196 Order Details page indicating successful deletion

12.6.45 Operations: Close Payment

This section demonstrates how to close a completed payment.

Follow the steps in 12.6.52, “Operations: Find Payment” on page 688 to find the desired payment. When it appears on the Find Payment - Order Search page, follow these steps:

1. Click the **Order number** link for the payment to open the Order details page.
2. Click **Close**.

   This re-displays the Order details page with a message that indicates that the order was closed successfully.

The status of the payment is now Closed.

Figure 12-197 Order details page indicating successfully closed order

12.6.46 Operations: Deposit Payment

This section demonstrates how to deposit an approved payment for an order placed with the store.

Payments that have been manually approved must be manually deposited into a batch. A payment batch is used to save on transactional costs associated with payment settlement.

1. From the **Operations** menu, select **Deposit Payment**.

Figure 12-198 Deposit payment page

2. This displays the Deposit payment page, which lists all payments that are ready to deposit and provides several ways to deposit individual payments or groups of payments:

   Deposit selected Deposit only the selected payments.

   Deposit all Deposit all of the payments that are listed.

   Selecting either of these options produces the Deposit Results page (Figure 12-199 on page 673).

Figure 12-199 Deposit Results page

3. Alternatively, the user can view the payment details before the deposit. Clicking the **Payment number** link on the Deposit payments page loads the Order details page.

Figure 12-200 Order details page displaying details of the payment

4. The Order details page provides the following options:

Deposit Approve the order.

Void Cancel a refund for an order. For more information regarding void payments, refer to 12.6.47, “Operations: Void Payment” on page 676.

5. To approve the order, click **Deposit**.

Figure 12-201 Order Payment page

This opens the Order Payment page that is used to deposit the payment into a batch that is ready for settlement.

6. Optionally, you can modify the number in the Deposit Amount field (if a value other than the full amount of the payment is to be deposited) and click **Deposit**.

   This re-displays the Order Payment page showing a message indicating that the payment was deposited successfully (Figure 12-202). The status of the payment is now Deposited.

Figure 12-202 Order Payment page indicating the successful deposit

12.6.47 Operations: Void Payment

This section demonstrates how to void a payment.

This functionality is provided to cancel a payment. If payment is a credit payment then it has the effect of cancelling the refund. If the payment has been settled in a batch or is in the Closed state, it cannot be made void.

Follow the steps in 12.6.52, “Operations: Find Payment” on page 688 to find the desired payment. When it appears on the Find Payment - Order Search page, follow these steps:

1. Click the **Order number** link for the payment. This displays the Order details page.
2. Click the **Payment Number** link in the payments table at the bottom of the pane. This displays the Order Payment page (Figure 12-203).

Figure 12-203 Order Payment page for voiding the payment

3. Click **Void**.

4. This re-displays the Order Payment page with a message indicating that the payment was voided successfully. The status of the payment is now Void.

Figure 12-204 Order Payment page

12.6.48 Operations: Void Deposited Payment

This section demonstrates how to void a deposited payment.

This functionality moves the payment out of the batch and from the Deposited state back to the Approved state.

Follow the steps in 12.6.52, “Operations: Find Payment” on page 688 to find the desired payment. When it appears on the Find Payment - Order Search page, follow these steps:

1. Click the **Order number** link for the payment. This displays the Order details page.
2. Click the **Payment Number** link in the payments table at the bottom of the screen. This displays the Order Payment page.

Figure 12-205 Order Payment page

Refer to the online help system for information about the displayed fields if needed.

3. Click **Void Deposit**. This re-displays the Order Payment page with a message indicating that the deposited payment was reversed successfully. The status of the payment is now Approved.

Figure 12-206 Order Payment page

12.6.49 Operations: Settle Payment Batch

This section demonstrates how to settle deposited payments for orders placed with the store.

Payments that have been deposited into a batch must be settled. The process of settlement submits the batch of deposited payments to a transaction processor in order for the store to receive payment for goods shipped.

1. From the **Operations** menu, select **Settle Payment**. This displays the Settle payments page.

Figure 12-207 Settle payment page

2. The Settle payment screen lists all batches that are ready for settlement and provides several ways to settle individual batches or groups of batches:

   Settle selected Settle only the selected batches.

   Settle all Settle all listed batches.

   Selecting either of these options produces the Settle Results page (Figure 12-208 on page 681), which shows that the status of all payments in the batch is now Completed.

Figure 12-208 Settle Results page indicating the successful settlement

3. Alternatively, the user can view the batch details before the settlement by clicking the **Batch number** link on the Settle payments page. This loads the Batch summary page, which displays the summary details of the batch that is to be settled.

Figure 12-209 Batch summary page

4. For more information about the batch, click the **Batch Details** link to load the Batch with Details page, which is the same as the Batch summary page except that it lists the specific payments that make up the batch.

Figure 12-210 Batch with Details page

5. To settle the batch, click **Settle**. This displays the Batch - Settle page (Figure 12-210).

Figure 12-211 Batch - Settle page

6. Enter the Financial Institution Batch Identifier, which is the unique identifier for the financial institution that will process the batch.
7. Click **Settle**. This re-displays the Batch with Details page with a message indicating that the batch was settled successfully. The status of the batch and all payments in the batch is now Completed.

Figure 12-212 Batch with Details page showing successful settlement

12.6.50 Operations: Purge Payment Batch

This section demonstrates how to purge a payment batch. This functionality is provided to undo all payment deposits that are contained in the batch and thus can only be performed on batches with a status of Open. It removes all payments from the batch and returns them to Approved status.

Follow the steps in 12.6.52, “Operations: Find Payment” on page 688 to find the desired payment batch. When it appears on the Batch Search Results page, follow these steps:

1. Click the **Batch number** link for the batch. This displays the Batch Summary page.

Figure 12-213 Batch Summary page

Refer to the online help system for information about the displayed fields.

2. Click **Purge**. This displays the Batch Details page with a message prompting to confirm the purge of the batch (Figure 12-214 on page 685).

Figure 12-214 Batch Details page confirming the purge of the batch

3. Click **Purge**. This re-displays the Batch Details page showing a message that the batch was purged successfully. All payments that were contained in the batch have been removed and their status has been reset to Approved.

Figure 12-215 Batch Details page indicating that the batch was purged successfully

12.6.51 Operations: Delete Payment Batch

This section demonstrates how to delete a payment batch.

This functionality is provided to clean out settled batches and thus can only be performed on batches with a status of Closed. Note that first all payments and credits within the batch must be deleted. For more information about deleting payments, refer to 12.6.44, “Operations: Delete Payment” on page 670.

Follow the steps in 12.6.52, “Operations: Find Payment” on page 688 to find the desired payment batch. When it appears on the Batch Search Results page, follow these steps:

1. Click the **Batch number** link for the batch to display its Batch Summary page.

Figure 12-216 Batch Summary page used to display the summary of the batch

Refer to the online help system for information about the displayed fields if needed.

2. Click **Delete**. This displays the Batch Details page with a message confirming the user to select the delete button again to remove the batch.

Figure 12-217 Batch Summary page confirming the deletion of the batch

Refer to the online help system for information about the displayed fields.

3. Click **Delete**. This displays the Batch Details page with a message indicating that the batch was deleted successfully.

Figure 12-218 Batch Details page indicating that the batch was deleted successfully

The batch will be removed from the system.

12.6.52 Operations: Find Payment

This section shows how to find a payment for an order that has been placed with the store.

1. From the **Operations** menu, select **Find Payment** to open the Order Search page.

Figure 12-219 Order Search page

2. Enter at least one of the following search criteria:
   - Merchant: Select the store with which the order was placed.
   - Order Number
   - State: Select one or more status categories.
   - Payment Type
   - Order Date After: Enter a date before the order was submitted.
   - Order Date Before: Enter a date after the order was submitted.
   - Order Amount Currency
   - Order Amount Greater than or equal to
   - Order Amount Less than or equal to
   - Account: Select an account that correlates to the store, payment type, order number, and currency used.

To clear all of the fields, click **Reset**.

3. After the search criteria have been entered, click **Search**. This opens the Order Search Results page.

Figure 12-220 Order Search Results page

4. Select the check box next to each applicable order. The following actions can be taken on the payments, depending on their status:

   Approve Selected Orders Approves the selected payments. Refer to 12.6.38, “Operations: Approve Payment” on page 658 for more information regarding approving payments.

   Sale Selected Orders Approves and deposits the selected payments. Refer to 12.6.39, “Operations: Sale Payment” on page 662 for more information regarding sale payments.

   Deposit Selected Orders Deposits the selected payments. Refer to 12.6.46, “Operations: Deposit Payment” on page 672 for more information regarding depositing payments.

5. Individual order details can be displayed by clicking the **Order number** link to display the Order details page (Figure 12-221 on page 690).

Figure 12-221 Order details page

The Order details page displays detailed information about the payment for the order and the cardholder who made the payment. Refer to the online help system for information about the displayed fields.

6. The following actions can be applied (depending on payment state):

Approve Approve the payment. Refer to “Operations: Approve Payment” on page 658 for more about the approval of payments.

Sale Approve and deposit the payment. Refer to “Operations: Sale Payment” on page 662 for more about sale payments.

Credit Credit a refund payment. Refer to “Operations: Credit Payment” on page 665 for more about credit payments.

Deposit Deposit the payment. Refer to “Operations: Deposit Payment” on page 672 for more about the deposit of payments.

Cancel Cancel the payment.refer to “Operations: Cancel Payment” on page 669 for more about the cancellation of payments.

Void Void the payment. Refer to “Operations: Void Payment” on page 676 for more information regarding void payments.

Close Close the payment. Refer to “Operations: Close Payment” on page 671 for more about the closure of payments.

Delete Delete the payment. Refer to “Operations: Delete Payment” on page 670 for more about the deletion of payments.

12.6.53 Operations: Find Payment Batch

This section demonstrates how to find a batch of payments for orders that have been placed with the store.

1. From the **Operations** menu, select **Find Payment Batch**. This opens the Batch Search page.

Figure 12-222 Batch Search page

2. Enter at least one of the following optional search criteria:
   - Merchant: Select the store for which the batch was created.
   - Batch Number: To search for a specific batch, enter the number.
   - State: Select one or more specific batch states (Open, Closed).
   - Status: Select one or more specific batch statuses (Balanced or Out of balance). Balanced means that all of the totals for the payments within the batch are balanced.
   - Payment Type: Select the type of payment used to process the batch.
   - Batch Open Date After: Enter a date before the batch was opened.

– Batch Open Date Before: Enter a date after the batch was opened.

– Batch Close Date After: Enter a date before the batch was closed.

– Batch Close Date Before: Enter a date after the batch was closed.

– Account: Select an account that correlates to the store, payment type, order number, and currency used.

To clear all fields, click **Reset**.

3. After the search criteria have been entered, click **Search**. This displays the Batch Summary page. Individual batch details can be displayed by clicking the **Batch number** link.

Figure 12-223 Batch Search Results page

4. This opens the Batch Search Results page. Individual batch details can be displayed by clicking the **Batch number** link.

Figure 12-224 Batch Summary page

The Batch Summary page displays summary information about the batch. For more detailed information, click the **Batch Details** link to display the Batch Details page. This lists further information about the individual payments that make up the batch. Refer to the online help system for information about the displayed fields if needed.

5. The following actions can be applied (depending on the batch state):

Settle	Submit the batch for processing. For more information regarding the settlement of batches, refer to 12.6.49, “Operations: Settle Payment Batch” on page 680.
Purge	Remove the payments from the batch. For more information about purging batches, refer to 12.6.50, “Operations: Purge Payment Batch” on page 684.
Delete	Delete the batch. For more information regarding the deletion of batches, refer to 12.6.51, “Operations: Delete Payment Batch” on page 686.

12.7 Reports menu

The reports menu enables an administrator to generate these types of reports:

- Inventory Reports
- Order Management Reports
- Operational Reports

12.7.1 Inventory Reports

The following inventory reports are available:

- Inventory Receipts by Product

  This report lists all receipts: receipts received through expected inventory records, ad hoc receipts, and receipts added as a result of product disposition. For more information regarding generating this report, refer to 12.7.2, “Reports: Inventory Receipts by Product” on page 695.

- Inventory Adjustments

  This report depicts inventory adjustments by product. For more information regarding generating this report, refer to 12.7.3, “Reports: Inventory Adjustments” on page 698.

- Inventory Status

  This report depicts the current inventory allocation and receipt status of products in stock. For more information regarding generating this report, refer to 12.7.4, “Reports: Inventory Status” on page 700.

- Products on Backorder

  This report depicts cumulative backorder information by product. It only shows products whose expected ship date is prior to the current date. For more information regarding generating this report, refer to 12.7.5, “Reports: Products on Backorder” on page 702.

- Open Expected Inventory Records

  This report depicts open expected inventory records. For more information regarding generating this report, refer to 12.7.6, “Reports: Open Expected Inventory Records” on page 704.

To access the Inventory Reports page (Figure 12-225): From the **Reports** menu, select **Inventory Reports**.

Figure 12-225 Inventory Reports page

12.7.2 Reports: Inventory Receipts by Product

This section demonstrates how to generate a report for the store that lists Inventory Receipts by Product.

The Inventory Receipts by Product report lists all receipts received through expected inventory records, ad hoc receipts, and receipts added as a result of product disposition.

1. From the **Reports** menu, select **Inventory Reports**.

2. Click the **Inventory Receipts by Product** link. This opens the Inventory Receipts by Product page.

Figure 12-226 Inventory Receipts by Product page used to generate the report

3. Enter the start and end date for the report, along with the following details:
   - Include in this report: Select either All SKUs or individual Selected SKUs by using the **Add** and **Remove** buttons.
   - Selected fulfillment centers: Use the **Add** button to add at least one center from the Available fulfillment centers list. Remove selected fulfillment centers by clicking **Remove**.

4. Click **OK** to produce the Inventory Receipts by Product report content page.

Figure 12-227 Inventory Receipts by Product report content page

The Inventory Receipts by Product report content page displays the following information:

– The report criteria used to generate the report.

– The date and time the report was generated.

– A list of inventory receipts. For each receipt, the following is displayed:

- SKU: Stock Keeping Unit code for received products.
- Description: Description of the received products.
- Date Received: Date the products were received.
- Receipt Type: The type of receipt (either Ad Hoc or Expected).
- Fulfillment Center: The fulfillment center that received the products.
- Qty Received: The number of products received.
- Qty Units: The unit of measure for the quantity of products received.
- Receipt Comment: Any additional comments added to the receipt.
- Quality Comment: Any quality comments added to the receipt.

5. To print the report, click **Print**.

12.7.3 Reports: Inventory Adjustments

This section demonstrates how to generate an Inventory Adjustments report for the store.

The Inventory Adjustments report lists all inventory adjustments by product. An inventory adjustment is performed when the quantity of a product on hand is manually modified:

1. From the **Reports** menu, select **Inventory Reports**.
2. Click the **Inventory Adjustments** link. This opens the Inventory Adjustments page.

Figure 12-228 Inventory Adjustments page used to generate the report

3. Enter the start and end dates for the report, along with the following details:
   - Include in this report: Select either All SKUs or individual Selected SKUs by using the **Add** and **Remove** buttons.
   - Selected fulfillment center: Select at least one fulfillment center by using the **Add** button to add one from the list of Available fulfillment centers. Remove selected fulfillment centers by clicking **Remove**.
   - Selected inventory adjustment reasons: Select at least one inventory adjustment reason by using the **Add** button. Remove selected reasons by clicking **Remove**.

4. After the report criteria have been entered, click **OK**. This opens the Inventory Adjustments report content page.

Figure 12-229 Inventory Adjustments report content page

5. The Inventory Adjustments report content page displays the following information:
   - The report criteria used to generate the report.
   - The date and time the report was generated.
   - A list of inventory adjustments, each of which includes:
     - Adjustment Date: the date the adjustment was made.
     - SKU: Stock Keeping Unit code for the adjusted product.
     - Description: description of the adjusted product.
     - Fulfillment Center: the fulfillment center for the adjusted product.
     - Qty Adjusted: the number of products that were adjusted. If products were added this will be a positive figure, otherwise if products were removed it will be a negative figure.
     - Qty Units: the unit of measure for the quantity of products adjusted.
     - Adjustment Description: the reason for the adjustment.
     - Adjustment Comment: any additional comments about the adjustment.
6. To print the report, click **Print**.

12.7.4 Reports: Inventory Status

This section demonstrates how to generate an Inventory Status report for the store.

The Inventory Status report lists the current inventory allocation and receipt status of products in stock.

1. From the **Reports** menu, select **Inventory Reports**.
2. Click the **Inventory Status** link. This opens the Inventory Status page.

Figure 12-230 Inventory Status page

3. Enter the following details:
   - Include in this report: Select either all SKUs or individual Selected SKUs by using the **Add** and **Remove** buttons.
   - Selected fulfillment center: Select at least one fulfillment center from the list of Available fulfillment centers by using the **Add** button. Remove selected fulfillment centers by highlighting them and clicking **Remove**.
4. After the report criteria have been entered, click **OK**. This opens the Inventory Status report content page (Figure 12-231 on page 701).

Figure 12-231 Inventory Status report content page

The Inventory Status report content page displays the following information:

– The report criteria used to generate the report.

– The date and time the report was generated.

– A list of inventory products. For each product, the following is displayed:

- SKU: Stock Keeping Unit code for the product.
- Description.
- Fulfillment Center: the fulfillment center for the product.
- Qty Units: the unit of measure for the quantity of products.
- Qty On Site.
- Qty In Progress.
- Qty In Reserve.
- Qty Orderable.
- Qty Allocated to Backorders.
- Qty on Backorder.
- Last Receipt Date: when a receipt was last generated for the product.

5. To print the report, click **Print**.

12.7.5 Reports: Products on Backorder

This section demonstrates how to generate a Products on Backorder report for the store.

The Products on Backorder report summarizes backorder information by product. It only shows products whose expected ship date is prior to the current date.

1. From the **Reports** menu, select **Inventory Reports**.
2. Click the **Products on Backorder** link. This opens the Products on Backorder page.

Figure 12-232 Products on Backorder page used to generate the report

3. Enter the following details:
   - Include in this report: Select either All SKUs or individual Selected SKUs by using the **Add** and **Remove** buttons.
   - Selected fulfillment center: Select at least one center from the list of Available fulfillment centers by using the **Add** button. Remove selected fulfillment centers by highlighting them and clicking **Remove**.
4. After the report criteria have been entered, click **OK**. This opens the Products on Backorder report content page (Figure 12-233 on page 703).

Figure 12-233 Products on Backorder report content page

The Products on Backorder report content page displays the following information:

- The report criteria used to generate the report.
- The date and time the report was generated.
- A list of products on backorder for the store, each of which includes:
  - Fulfillment Center: name of the fulfillment center that has the product on backorder.
  - SKU: Stock Keeping Unit identifier for the product on backorder.
  - Description: description of the product on backorder.
  - Total Number of Backorders: total number of backorders waiting on the products to arrive.
  - Total Quantity on Backorder: total number of units on backorder.
  - Qty Units: unit of measurement for quantity on backorder.
  - Earliest Backorder Date: earliest date the products could arrive.
  - Earliest Promise Date: earliest date the products were promised to the customer to arrive.
  - Earliest Estimated Date: earliest estimated date products could arrive.

5. To print the report, click **Print**.

12.7.6 Reports: Open Expected Inventory Records

When this book was written, this functionality was not fully working in the standard eSites SAR installation so it was not fully documented and should not be used. We expect that this functionality will be provided in a future fix pack. Check the fix pack release notes for more information.

This section demonstrates how to generate an Open Expected Inventory Records report, which lists all open expected inventory records for the store.

1. From the **Reports** menu, select **Inventory Reports**.
2. Click the **Open Expected Inventory Records** link. This opens the Open Expected Inventory Records page.

Figure 12-234 Open Expected Inventory Records page

3. Enter the start and end dates, along with the following details:
   - Include in this report: Select either All SKUs or individual Selected SKUs by using the **Add** and **Remove** buttons.
   - Selected fulfillment centers: Select at least one center from the list of Available fulfillment centers by using the **Add** button. Remove selected centers by clicking **Remove**.
   - Selected fulfillment centers: Use the **Add** button to add at least one center from the Available fulfillment centers list. Click **Remove** to remove centers.

4. After the report criteria have been entered, click **OK**. This opens the Open Expected Inventory Records report content page.

Figure 12-235 Open Expected Inventory Records report content page

The Open Expected Inventory Records report content page displays the following information:

- The report criteria used to generate the report.
- The date and time the report was generated.
- A list of open expected inventory records for the store. The list includes information for identifying the inventory, shipping dates, origination, and quantities.

5. To print the report, click **Print**.

12.7.7 Order Management Reports

The following order management reports are available:

- Order Summary: This report summarizes orders by volume (number of orders) and value (in currency). For more information regarding generating this report, refer to 12.7.8, “Reports: Order Summary” on page 707.
- Overdue Backorders: This report depicts orders that have products on backorder and are overdue as defined by the user. For more information about generating this report, refer to 12.7.9, “Reports: Overdue Backorders” on page 709.

To access these reports: From the **Reports** menu, select **Order Management**. This opens the Order Management Reports page.

Figure 12-236 Order Management Reports page

12.7.8 Reports: Order Summary

This section shows how to generate a Order Summary report for the store.

The Order Summary report summarizes shipped orders by volume (number of orders) and value (in currency). It is used to review and analyze a store's performance.

Restriction: This report is only for orders that have been shipped.

1. From the **Reports** menu, select **Order Management Reports**.
2. Click the **Order Summary** link. This opens the Order Summary page.

Figure 12-237 Order Summary page used to generate the report

3. Enter the start date and end date that the report should cover. Click **OK**.
4. This opens the Order Summary report content page (Figure 12-238 on page 708).

Figure 12-238 Order Summary report content page

The Order Summary report content page displays the following information:

– The report criteria used to generate the report.

– The date and time the report was generated.

– A summary of orders for the store. The following is displayed:

- Year: year reported on
- Month: month reported on
- Total Product Charges: total amount of money charged for products
- Total Tax on Products: total amount of tax charged on products
- Total Shipping Charges: total amount of money charged for shipping
- Total Adjustments: total amount of money adjusted on orders
- Total Order Value: total amount of money on orders (taking tax, shipping, and adjustments into consideration)
- Number of Orders: total number of orders
- Average Sale per Order: average amount of money per order
- Currency: currency used for amounts

5. To print the report, click **Print**.

12.7.9 Reports: Overdue Backorders

This section shows how to generate an Overdue Backorders report for the store. The Overdue Backorders report lists the orders that have products on backorder and are overdue.

1. From the **Reports** menu, select **Order Management Reports**.
2. Click the **Overdue Backorders** link to open the Overdue Backorders page.

Figure 12-239 Overdue Backorders page used to generate the report

3. Enter the following details:
   - Minimum number of days overdue: the smallest number of days overdue. This is calculated only by the date, and does not consider time.
   - Include in this report: Select either All SKUs or individual Selected SKUs by using the **Add** and **Remove** buttons.
4. Click **OK**. This opens the Overdue Backorders report content page (Figure 12-240 on page 710).

Figure 12-240 Overdue Backorders report page

The Overdue Backorders report page displays the following information:

– The report criteria used to generate the report.

– The date and time the report was generated.

– A list of overdue backorders for the store. The following is displayed for each backorder:

- Promised Shipping Date: the date that was promised to the customer to be the products' ship-by date.
- Days Overdue: the number of days the backorder is overdue.
- Expected Shipping Date: the estimated shipping date for products.
- Order Number: the unique identifier for the order.
- SKU: Stock Keeping Unit identifier of the product being ordered.
- Description: description of the product being ordered.
- Qty Ordered: the quantity of products being ordered.
- Qty Units: the unit of measurement for the quantity ordered.

5. To print the report, click **Print**.

12.7.10 Operational Reports

The following operational reports are available:

- Store Activity Report: Provides key criteria for the site such as: orders, customer visits, and total sales. For more about generating this report, refer to 12.7.11, “Reports: Store Activity Report” on page 712.
- Order Status Report: Enables you to view details of orders by selecting either a particular order state or all valid order states. For more about generating this report, refer to 12.7.12, “Reports: Order Status Report” on page 715.
- Orderitem Status Report: Enables you to view details of Orders Items by selecting particular state or all valid Order states. For more about generating this report, refer to 12.7.13, “Reports: Order Item Status Report” on page 719.
- Product Sales Report: Shows sales figures for products sold on your site, including the name of the product, how many times it was ordered, total quantity ordered, and total revenue generated. For more information about this report, refer to 12.7.14, “Reports: Product Sales Report” on page 721.
- Region Report: Shows data about sales and shopper activity for the countries that shoppers provide when they register. For more information about this report, refer to 12.7.15, “Reports: Region Report” on page 723.

To access these reports: From the **Reports** menu, select **Operational Reports**. This opens the Operational Reports page (Figure 12-241).

Figure 12-241 Operational Reports page

12.7.11 Reports: Store Activity Report

This section demonstrates how to generate a Store Activity report for the store.

The Store Activity report summarizes the key activities of the store such as orders, customer visits, and total sales. It is used as a snapshot of store operations and performance.

1. From the **Reports** menu, select **Operational Reports**.
2. Click the **Store Activity Report** link to open the Store Activity Report page.

Figure 12-242 Store Activity Report page used to generate the report

3. Enter the following details:
   - Start date: Enter the date to start reporting.
   - End date: Enter the date to end reporting.
   - Currency: Select a currency for monetary values.

4. Click **OK**. This opens the Store Activity Report content page.

Figure 12-243 Store Activity Report content page

The Store Activity Report content page displays the following information:

– The report criteria used to generate the report.

– The date and time the report was generated.

– A summary of store activity as follows:

- Total Orders: total number of orders placed with the store in the selected time period.
- Gross Sales: total sales revenue resulting from orders placed with the store (including all adjustments, shipping, and tax charges) in the selected time period.
- Total Pages Viewed: total number of store pages viewed in the selected time period. This value might be affected by database maintenance.
- Total unique visitors that came to the site: total number of unique customers who placed orders with the store in the selected time period.

This value might be affected by database maintenance, or if a user logged in multiple times using the same browser.

- Total visits to the site: total number of times the store was visited in the selected time period. This value might be affected by database maintenance, or if a user logged in multiple times using the same browser.
- Total Orders Shipped: total number of shipped orders that were placed with the store in the selected time period.
- Total Orders in Pending State: total number of orders that were placed with the store in the selected time period and are waiting for the payment to be authorized.
- Total orders being reviewed: total number of orders that were placed with the store in the selected time period and are currently under review.
- Total orders affected by low inventory: total number of orders that were placed with the store that could not be completed due to low inventory levels.
- Total orders requiring payment authorization review: total number of orders that are unable to be completed because of problems with payment authorization, with a last update timestamp that falls within the selected time period.
- Total cancelled orders: total number of orders that were cancelled, with a last update timestamp that falls within the selected time period.
- Total shopping carts created: total number of orders that have a status of Pending that were last updated in the selected time period.
- Total number of categories in the store's catalog: total number of categories in the store's catalog. This does not include categories that have not been marked for deletion.
- Total number of categories viewed on the site: total number of categories viewed in the selected time period. This value might be affected by database maintenance.
- Total number of products in the store's catalog: the total number of SKUs in the store's catalog. This does not include SKUs that have been marked for deletion.
- Total number of products viewed on the site: total number of products viewed in the selected time period. This value might be affected by database maintenance.

5. To print the report, click **Print**.

12.7.12 Reports: Order Status Report

This section demonstrates how to generate an Order Status Report for the store.

The Order Status Report displays a list of orders and their status depending on the search criteria that is entered. In the resulting report, clicking on the Order ID displays details of the order items that are associated with the order.

1. From the **Reports** menu, select **Operational Reports**.
2. Click the **Order Status Report** link to open the Order Status Report page.

Figure 12-244 Order Status Report page used to generate the report

3. Enter the start date, end date, and the following details:
   - Currency: select a currency for monetary values.
   - The type of orders to report on. The following are supported:
     - All valid orders.
     - All orders awaiting payment authorization.
     - All pending orders.
     - All orders affected by low inventory.

- All orders that have been shipped.
- All orders that have been cancelled.
- All orders that have been backordered.

4. Click **OK**. This opens the Order Status Report content page.

Figure 12-245 Order Status Report content page

The Order Status Report content page displays:

– The report criteria used to generate the report.

– The date and time the report was generated.

– A list of orders and their status. For each order the following is displayed:

  - Order ID: unique order reference number.
  - Order Status: the current status of the order. Refer to the Glossary on page 931 for more information about order status.
  - Last Update timestamp: the date and time the order was last updated.
  - Product Charges: the charges resulting from the price of the products in the order.

- Adjustments: charges associated with any adjustments made to the order.
- Tax on products: charges associated with any tax on products in the order.
- Shipping charges: charges associated with shipping the order.
- Tax on shipping: charges associated with any tax on shipping the order.

5. To print the report, click **Print**.
6. To view the details of an order, click the **Order ID** link.
7. Click **OK** on the prompt to continue. This opens the Order Item Details Report page.

Figure 12-246 Order Item Details Report page

The Order Item Details Report content page displays the following:

– The date and time the report was generated.

– A list of all order items for the order. For each order item the following is displayed:

- Ordered Item: the name of the item being purchased.
- Estimated Availability Date: the estimated date that the item will be available for shipping.

- Fulfillment Center: the name of the originating fulfillment center.
- Fulfillment Status: Valid values include: INT- not yet released for fulfillment, OUT - released for fulfillment, SHIP - shipment confirmed.
- Inventory Status: the allocation status of inventory for this item. Valid values include: NALC - inventory is neither allocated nor backordered, BO - inventory is backordered, ALLC - inventory is allocated, FUL - inventory has been released for fulfillment.
- Time Orderitem created: the date the order item was created.
- Quantity Ordered: the number of quantity of items ordered.

8. To print the report, click **Print**.

12.7.13 Reports: Order Item Status Report

This section demonstrates how to generate an Order Item Status Report for the store. The Order Item Status Report displays a list of order items and their status, depending upon the search criteria entered.

1. From the **Reports** menu, select **Operational Reports**.
2. Click the **Orderitem Status Report** link. This opens the Order Item Status Report page.

Figure 12-247 Order Item Status Report page used to generate the report

3. Enter the report start date, end date, and the following details:
   - Currency: select a currency for monetary values.
   - Select the type of order items to report on. The following are supported:
     - All valid orders.
     - All orders awaiting payment authorization.
     - All pending orders.
     - All orders affected by low inventory.
     - All orders that have been shipped.
     - All orders that have been cancelled.
     - All orders that have been back ordered.

4. Click **OK**. This opens the Order Item Status Report content page.

Figure 12-248 Order Item Details Report content page

The Order Item Status Report content page displays the following:

– The report criteria used to generate the report.

– The date and time the report was generated.

– A list of order items and their status. For each order item the following is displayed:

- Order ID: unique order reference number.
- Product Ordered: the name of the product ordered.
- Status: refer to the Glossary on page 931 for more about order status.
- Quantity: the number of products ordered.
- Sales: total value of the order item.
- Fulfillment Center: the name of the originating fulfillment center.
- Fulfillment Status: Valid values include: INT - not yet released for fulfillment, OUT - released for fulfillment, SHIP - shipment confirmed.
- Inventory Status: the allocation status of inventory for this item. Valid values include: NALC - inventory is neither allocated nor backordered, BO - inventory is backordered, ALLC - inventory is allocated, FUL - inventory has been released for fulfillment.

5. To print the report, click **Print**.

12.7.14 Reports: Product Sales Report

This section demonstrates how to generate a Product Sales Report for the store. This report displays sales figures for products that were sold through the store, including product name, how many times it was ordered, total quantity ordered, and total revenue generated.

1. From the **Reports** menu, select **Operational Reports**.
2. Click the **Product Sales Report** link to open the Product Sales Report page.

Figure 12-249 Product Sales Report page used to generate the report

3. Enter the report start date and end date, and choose the Currency.
4. Click **OK**. This opens the Product Sales Report content page (Figure 12-249).

Figure 12-250 Product Sales Report content page

The Product Sales Report content page displays:

– The report criteria used to generate the report.

– The date and time the report was generated.

– A list of product sales. Each product sale shows these details:

- Catalog Entry: the name of the product sold.
- Catalog Entry ID: the unique identifier for the product sold.
- Times Ordered: total number of times this product was ordered.
- Total Amount Ordered: total quantity of this product that was ordered.
- Total Sales: total amount of sales generated by this product.
- Times Viewed: number of times this product was viewed on the site.

5. To print the report, click **Print**.

12.7.15 Reports: Region Report

This section demonstrates how to generate a Region Report for the store. This report displays data about sales and shopper activity for the countries that shoppers provide when they register.

1. From the **Reports** menu, select **Operational Reports**.
2. Click the **Region Report** link. This opens the Region Report page.

Figure 12-251 Region Report page used to generate the report

3. Enter the report start date, end date, and type of currency for monetary values.
4. Click **OK**. This opens the Region Report content page (Figure 12-252 on page 724).

Figure 12-252 Region Report content page

The Region Report content page displays:

– The report criteria used to generate the report.

– The date and time the report was generated.

– A list of regions. For each region these details are displayed:

- Region: name of the world region that generated the sales.
- Revenue Totals: total amount of money generated by sales to the region.
- Number of Orders: total number of orders placed by the region.
- Pages Viewed: number of pages viewed by the region.
- Number of Customers: number of customers who placed an order from the region.
- Number of Visits: number of visits made by customers from the region.
- Quantity Purchased: total number of individual products purchased by the region.

5. To print the report, click **Print**.

13

Manage a B2B store

This chapter of the e-Commerce Hosting Solutions Guide discusses the most common aspects of managing a Business-to-Business (B2B) store within the eSite hosting model.

In this chapter we describe the eSite Hub, B2B store administration.This includes a cookbook approach to the typical tasks that are performed and tools that are used. This chapter includes:

- Roles
- Access
- Manage organization
- Manage store

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13.1 Overview

In this section, we discuss the roles required to manage a B2B store. The user can access the functions after being assigned one of the required roles by the site administrator.

13.1.1 Roles

In WebSphere Commerce, a user can be either an administrator or a customer. Specifically, WebSphere Commerce supports a RegisterType attribute for a user. This attribute takes on one of three valid values (A, R, or G) and indicates the type of role that the user plays in WebSphere Commerce. Note that the attribute itself does not give the user any authority within WebSphere Commerce. If the user is an administrator, the user has a registration type of A to denote an Administrator role within WebSphere Commerce. For example, an approvals administrator may be specifically in charge of processing approvals.

For the administrator registration type, WebSphere Commerce provides a default set of roles:

- Business relationship roles
- Customer service roles
- Marketing roles
- Operational roles
- Organizational management roles
- Product management and merchandising roles
- Technical operations roles

We performed all of our store administrative functions with our seller administrator. The seller administrator has access to all of the functions in the menus discussed in the following sections. For more information concerning other available roles, see the section called “User authorities” in the WebSphere Commerce online help.

13.1.2 Access

We recommend that you perform the bulk of the store administration functions from the eSite Hub menu instead of the Commerce Accelerator when working in the eSite model.

To access the eSite Hub menu:

1. . Go to the eSite Hub page by entering the following address in a browser:

   `http://host_name/webapp/wcs/stores/servlet/eSiteHub/index.jsp`

   Or see your eSiteHub administrator (hub-orgadmin).

2. Click **Log on**.
3. Enter the user ID and password of an account with the proper role. (We used `seller2admin` and `passw0rd`.
4. Click **Log on**.
5. Click **manage organization or manage store**.

   If you select **manage organization**, the Organization Administration Console is displayed.

   If you select **manage store** and the current user has access to multiple stores, the Select Store and Language page is displayed. From here you would:

   a. Select the name of the store to manage from the pull-down list.
   b. Select the language from the pull-down list.
   c. Select the fulfillment center from the pull-down list.
   d. Click **OK**.

      The manage store menu is then displayed for the selected store.

   If you select **manage store** and the current user has access to a single store, then the user is taken directly to the manage store menu.

13.2 Manage organization

This section discusses the various roles that manage the organization.

13.2.1 eSite Hub B2B seller administrator

eSite Hub seller administrator description

The eSite Hub seller administrator (seller2admin) manages the store changes to taxes, shipping, and seller information. This seller admin role administrates the store through the eSite Hub. (The WebSphere Commerce Accelerator could be used to access the same functionality.) The seller administrator may be a lead on the store development team, and is the only role on the team with the authority to publish a store archive except for the site administrator (Site Admin), who used the eSite seller creation wizard to publish the initial B2B store.

Note: The initial seller store configuration is a site administrator task while using the seller creation wizard to actually publish the B2B store. The site administrator also creates the store (selling) organization. While many of the parameters for the seller creation are later reconfigurable by the seller administrator (seller2admin) and others, there are some, such as the store unique identifier (a required field), that cannot be changed. If it becomes absolutely necessary to change it, you will have to close the store and create another one with the corrected information. However, because the store's display information is always reconfigurable, closing and creating a new store should only have to be done on the rare occasion.

The store level administrator also configures messaging and manages payments for the store. The seller administrator (seller2admin) responds to system warnings, alerts, and errors. This store admin called seller2admin can apply filters to the common catalog and administer the local catalog store data if it exists in the store database. The seller administrator has a thorough knowledge of the store's business procedures.

eSite seller administrator

The following are the general areas you are authorized to perform as the eSite store seller administrator. These areas can also be assigned to other individuals such as a sales manager, marketing manager, products manager, or logistics manager by the site administrator.

The major eSite B2B menu listings are:

Store	Store administration
Sales	Management of customer accounts
Marketing	Targeting your customers
Products	Presenting and managing your merchandise
Logistics	Ensuring your customer orders

13.2.2 Create the seller organization and seller administrator

To register your B2B seller organization:

1. Use Internet Explorer to access:

   `http://host_name/webapp/wcs/stores/servlet/eSiteHub/index.jsp`

   You can obtain the complete URL from your eSite Hub site administrator.

   Bookmark the URL for the eSite Hub home page.

2. Click the **Registration** button on the eSite Hub.

3. Click the **Organization** button to open the Organization Registration page (Figure 13-1).

Figure 13-1 Registration

Organization Information (seller2org)

Specify the required information about your organization in the designated fields. In our example we use `seller2org` for our B2B Store2 organization name.

4. Enter `seller2org` as the required organization name.
5. Fill in all of the required fields.

> **Note:** Save the seller organization ID and password exactly as you entered it. This information is case-sensitive and you will need it later.

6. Continue down the page to fill in the required Administrator Information.

Administrator Information

Specify the detail information about the administrator in the designated fields.

Logon ID (required)

Password (required)

Password confirmation (required)

Challenge question

Challenge answer

Title

First name

Middle name

Last name (required)

Preferred currency

Street address (required)

City (required)

State/Province (required)

Country/Region (required)

Zip/Postal code (required)

Preferred method of communication

E-mail address 1 (required)

E-mail address 2

Figure 13-2 Administrator information frame

Administrator Information (seller2admin)

Enter information about the administrator in the required fields. To set up the store administrator, seller2admin, as the abbreviation for the seller 2 administrator.

7. Enter `seller2admin` as the seller administrator logon ID.
8. Enter `passw0rd` as the seller administrator password and re-enter it for confirmation.

> **Note:** You will enter passw(zero)rd when ever a password is needed.

9. Fill in all required seller administrator information.
10. Select **Seller** to specify the role of the organization.
11. Click **Submit Registration**. This approval-pending message appears:

```
Your registration request has been submitted for approval. You will be
notified via e-mail within 72 hours whether your registration is approved.
```

13.2.3 Create buyer administrator (buyer2admin)

The buyer administrator administers the buyer customers who register through the store home-page logon.

1. Use a browser to access:

   `http://host_name/webapp/wcs/stores/servlet/eSiteHub/index.jsp`

   Or you can obtain the complete URL from your eSite Hub site administrator.

2. Click **Registration**.
3. Click **Registered User** to open the User Registration page.

Figure 13-3 User Registration of buyer2admin

Organization Information (buyer2admin)

4. Designate your ID (we use `seller2org`) in the Organization name field, either by typing it or selecting it from a pull-down list if you are using a customized interface.
5. Select **Buyer** for the role of the organization.

User Information (buyer2admin)

Specify the rest of the information about the buyer2admin in the required fields:

6. Enter the new logon ID: `buyer2dmin`
7. Enter the new password: `passw0rd` (passw(zero)rd), and re-enter it to confirm.
8. Fill in all required buyer administrator information and click **Submit Registration**. An approval-pending message appears.

> **Note:** The organization name must be entered exactly to avoid an error.

13.2.4 Log on to store as buyer administrator (buyer2admin)

After your B2B store has been created by your eSite Hub site administrator and you have been approved by the site admin as buyer2admin, you may log on for the first time.

> **Important:** The only correct way to log on as a B2B buyer administrator is to follow the procedure that is outlined in this section.

1. Go to the B2B store home page that you bookmarked earlier. The address should appear in this format:

   `http://`*`host_name`*`/webapp/wcs/stores/servlet/StoreView?storeId=`*`store_id`*

2. On the logon page (Figure 13-4 on page 733), enter the logon information for our example:

   User ID `buyer2admin`

   Password `passw0rd`

Figure 13-4 buyer2admin Logon

3. Click **Submit**. This opens the store home page (Figure 13-5).

Figure 13-5 buyer2admin customer tool

4. Click the **Go to Approval Tool** link.
5. Click **Access Management**.
6. Click **Users**.
7. Go to **Approvals**.
8. Click **Approval Requests**.
9. Select **View Pending** from the pull-down list.
10. Select the check box next to each new user to be approved, and select **Approve** or **Reject** buttons for each.

13.2.5 Log on eSite Hub as the store administrator (seller2admin)

After you have been notified by e-mail that your registration has been approved, you can log on as the store administrator. To log on for the first time:

1. Open your browser and go to:

   `http://host_name/webapp/wcs/stores/servlet/eSiteHub/index.jsp`

2. Click **Log on**.
3. Enter user ID `seller2admin` and `passw0rd` for the password and click **Log on**.

13.3 Manage store

This section of the book provides an overview of the functions that are available in the **manage store** menu for a store based on the B2B eSite Asset Store.

Figure 13-6 manage store menu for B2B store

Much of the functionality that is provided in this menu is identical to the functions for a B2C store, which were discussed in Chapter 12, “Manage a B2C store” on page 453. For those functions that are the same in a B2B and a B2C store, we refer to the appropriate section in the previous chapter. Functions that are unique to a B2B store and functions that are accessed from a different menu than for a B2C store have detailed descriptions in this chapter.

13.3.1 Store: Open/Close

This functionality is the same as for a hosted B2C store. See 12.3.1, “Store: Open/Close” on page 459 for details for using this function.

13.3.2 Store: Change profile

This functionality is the same as for a hosted B2C store. See 12.3.3, “Store: Changing store profile information” on page 460 for details for using this function.

13.3.3 Store: Change pages

This page enables you to edit specified text or HTML in your store pages. Figure 13-7 shows which text messages are available to change.

Figure 13-7 Change Pages page

Important: The text displayed in the scroll box for each page may contain programming conventions, including HTML tagging, and placeholders for variables that are retrieved from the database.

- HTML tagging: An example of HTML tagging is Personal information, which means that “Personal Information” will display in boldface when rendered by a browser. If you want to change the way the font displays on the page, you will need an understanding of HTML.
- Database placeholders: A placeholder for a database variable displays as follows:

  {0} respects your privacy, where {0} is the placeholder. If you want to maintain these placeholders do not change them.
- Adding links: If you want to add links to other pages, you must add the prefix /wcsstore to the front of the file path. For example, <img src="/wcsstore/Reseller/upload/folder name/your image.jpg">, where Reseller is the name of the store directory you specified when creating your store.

To change the text in your store:

1. From the **Store** menu, select **Change Pages**.

2. Click the arrow next to the text to be changed.

   This opens a text box containing the current text of the message as depicted in Figure 13-8.

Figure 13-8 Change Pages text update

3. Click **View Location** to see where on the page the text will be displayed. A new browser window will open, as shown in Figure 13-9.

Figure 13-9 Change Pages text location

4. Close the location window.
5. Make any desired changes to the text. You can change as many of the text fields as you like in the same session. When you are through, click **OK**.

13.3.4 Store: Upload logo

This functionality is the same as for a hosted B2C store. See 12.3.5, “Store: Uploading the store logo” on page 463 for details for using this function.

13.3.5 Store: Change style

This page enables you to change the style of your store, including layout, color, and banner.

1. From the **Store** menu, select **Change Style**. If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

   The Style page displays the available store layouts (Figure 13-10).

Figure 13-10 Change style: Style page

2. Select a layout and click **Apply**. To view the new layout in your store, click **View Store**. Your store opens, displaying the new layout. To view the other available layouts in your store, return to the Style page, select another layout, and click **View Store** again.
3. When you have decided on a layout, be sure it is selected, and click **Next**.

4. The Color page opens, showing the available color schemes for the store (Figure 13-11). Select a color scheme and click **Apply**. To view the new color scheme in your store, click **View Store**. Your store opens in another window, displaying the new colors. To view the other available colors in your store, return to the Color page, select another color, and repeat.

Figure 13-11 Change Style: Colors

5. When you have decided on a color scheme, be sure it is selected and click **Next**.

   The Banner page displays (Figure 13-12 on page 740), showing the available color schemes for the store.

6. To select a banner, you have the following options:

   a. Upload your own banner:

      i. Select **Use your own banner**.

      ii. In the **Banner image** field, type the file path for the banner, or click **Browse** and navigate to the file on your system.

      iii. Click **Upload**.

   b. Select **Select a banner**. The available banners display. Choose one.

Figure 13-12 Change Style - select banner

7. Click **Apply**. To view the new banner in your store, click **View Store**. Your store opens displaying the new banner. To view the other available banners in your store, return to the Banner page, select another banner, and repeat.
8. When you have decided on a banner, click **Finish**.
9. Click **OK** to save your settings and return to the manage store menu.

13.3.6 Store: Manage files

This functionality is the same as for a hosted B2C store. See 12.3.7, “Store: Manage Files” on page 466 for details for using this function.

13.3.7 Store: Change flow

On this page, you can enable or disable certain features within the store. To change the flow in your store:

1. From the **Store** menu, select **Change Flow**.

> **Note:** When this book was written, Customer Care and Collaborative Workspaces were not available for hosted stores.

2. Click **Catalog** in the left navigation menu to open the Catalog page (Figure 13-13).

Figure 13-13 Change Flow: Catalog

3. Enable or disable any of the features listed on the page as needed.

4. Click **Order** on the left navigation menu to display the Order page (Figure 13-14).

Figure 13-14 Change Flow - order

5. Enable or disable any features as needed.
6. When you are finished, click **Apply** or **OK**.

13.3.8 Store: Change shipping

This functionality is the same as for a hosted B2C store. See 12.3.9, “Store: Change Shipping” on page 468 for details for using this function.

13.3.9 Store: Change tax

This functionality is the same as for a hosted B2C store. See 12.3.10, “Store: Change Tax” on page 480 for details for using this function.

13.3.10 Store: Payment settings

This functionality is the same as for a hosted B2C store. See 12.3.11, “Store: Payment Settings” on page 486 for details for using this function.

13.3.11 Store: Approval requests

Approvers and administrators with the appropriate access can view approval requests and make approval decisions. To view approval requests:

1. From the **Store** menu, select **Approval Requests**.

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

   View the information on this page. Note that it contains the following information for each request:

ID	This is a unique identification code for the request.
Submitter	The logon ID or other unique identifier for the user who initiated the approval request.
Process	The name of the business process for which approval has been requested.
Status	This column indicates whether an approval request is pending, has been approved, or has been rejected.
Submitted on	The date and time of submission.

2. Select the check box next to the request you are working on.
3. Click **Approve** to approve the request or **Reject** to reject it.

   The requests that have been approved or rejected no longer appear on the list. A message box indicates whether the approval or rejection attempt was successful.

4. As an alternative to step 3, you can view a summary of approval requests:
   a. Click **Summary** to display the Summary page.
   b. After reviewing the details, click **Approve** or **Reject**.

      A message box indicates whether the approval or rejection attempt was successful. The Approval Requests page opens, showing the updated status of the request you are working on.

13.3.12 Store: Find approval requests

To search for a specific request or group of requests:

1. From the **Store** menu, select **Find Approval Requests**.

   The Find Approval Requests page opens.

2. Specify the criteria appropriate to your search:

Request Number	If you are searching for a specific request, type its ID number, if known.

Process	If you want to retrieve all requests for a specific process, select it here.
Submitter	To retrieve all requests received from a specific submitter, select the submitter.
Approvers	(Displays to Site Administrators only) To retrieve all requests being reviewed by a specific approver, select the approver here.
Status	To retrieve all requests currently in a specific status, select the status.
Date	To retrieve all requests submitted either on a specific date or within a specific period, indicate your criteria here.

3. Click **Find**. The Search Results - Approval Requests page displays.

   If only pending requests are retrieved, the page appears identical to the Approval Requests page except that the View field will be disabled. If the search retrieves requests in an approved or rejected status, the page will include two additional columns: Approved On or Rejected On and Remarks. In addition, neither the Approve nor Reject buttons will be enabled.

13.3.13 Store: Approval submissions

Submitters and administrators who have the appropriate access can view approval submissions and the status of their associated approval decisions. To view approval submissions:

1. From the **Store** menu, select **Approval Submissions**. The Approvals Submissions page displays.

   View the information on this page. Note that it contains the following information for each submission:

ID	This is a unique identification code for the request.
Approver	The logon ID or other unique identifier for the user who is reviewing the approval request.
Process	The name of the business process for which approval has been requested.
Status	This column indicates whether an approval request is pending, has been approved, or has been rejected.
Submitted on	The date and time of submission
Remarks	(Displays only if status is Approved or Rejected) Comments explaining why a request was approved or rejected.

Approved on Date (Displays only if status is Approved} Indicates date and time of approval.

Rejected on Date (Displays only if status is Rejected) Indicates date and time of rejection.

2. Select the check box next to the approval submission that you are working on.
3. Click **Summary**. The Approval Submission detail page is displayed.

13.3.14 Store: Find approval submissions

To search for a specific submission or group of submissions.

1. From the **Store** menu, select **Find Approval Submissions**.

   The Find Approval Submissions dialog displays.
2. Specify the criteria appropriate to the search:

   Request Number If you are looking for a specific request, insert its ID number, if known.

   Process If you want to retrieve all requests for a specific process, select it here.

   Approver To retrieve all requests that are being reviewed by a specific approver, select the approver here.

   Status To retrieve all requests that have a specific status, select the status here.

   Date To retrieve all requests that were submitted either on a specific date, or within a specific period, indicate the criteria here.
3. Click **Find**.

   The Search Results - Approval Submissions page displays. If all submissions or only pending submissions are retrieved, the page will be identical in appearance to the Approval Submissions page. If the search retrieves submissions in an approved or rejected status, the page will include two additional columns: Approved On or Rejected On and Remarks.

13.3.15 Store: Fulfillment centers

This functionality is the same as for a hosted B2C store. See 12.3.14, “Store: Fulfillment Centers” on page 491 for details for using this function.

13.3.16 Store: Return reasons

A store defines its own reasons for returning a product. These reasons include those from both the customer's perspective and the merchant's or seller's perspective, as these may not always be the same. For example, a customer might return a product because it does not work properly, but the merchant or seller might find that the customer did not follow the instructions when using the product and that it actually works fine. Return reasons are based on the perspective of either the customer or the merchant or seller.

Return reasons must be defined before merchandise can be received from a customer and before disposition can occur.

1. From the **Store** menu, click **Return Reasons**.

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

2. To work with an individual return reason, select the check box next to the return reason you want to work with and click either **Change** or **Delete**.
   - If you click **Change**, the Change Return Reason dialog opens. Update the fields as required, and click **OK** to save the changes.
   - If you click **Delete**, a message confirming the deletion displays. Click **OK** to delete the return reasons.

3. To create a new return reason, do not select any return reasons from the list and click **New**.

   The New Return Reason dialog opens. Provide appropriate information for the fields, and **OK** to create the return reason.

13.3.17 Store: Report delivery settings

This functionality is the same as for a hosted B2C store. See 12.3.13, "Store: Reports Delivery Settings" on page 490 for details for using this function.

13.3.18 Store: Collaborative workspaces

This subject is outside the scope of this book. See the WebSphere Commerce V5.5 Online Help system for details for using this function.

13.3.19 Sales: Accounts

Business accounts represent the relationship between a store and the store's customer organizations and are the starting point for managing business relationships. Using business accounts, you can track contracts and orders for

customer organizations and configure how buyers from customer organizations shop in a store. Topics closely related to business accounts are as follows:

- Purchase order
- Credit line
- Invoices
- Display customization
- Contracts

A business account contains the following information about a customer organization:

- The name of the customer organization and a contact person within that organization.
- The department and name of the account representative from the store who is assigned to the customer organization.
- Information about purchase orders that a customer organization has with a store.
- How invoices are delivered to the customer organization.
- Whether the customer organization has a credit line.
- Any display customization information for the business customer. Store pages can be customized for a business account by specifying a piece of HTML code that can be used by a store's JavaServer Pages (JSP) files.
- Any general remarks about the business account.

Also, business accounts control customer entitlement by controlling the ability of buyers from customer organizations to access a store's master catalog and see standard pricing for products that are contained in the master catalog. If a customer organization is not entitled to purchase products in the store's master catalog at standard prices, they are limited to products and prices covered by contracts that the customer organization has with a store.

Before creating a business account for a customer organization, the customer organization must already exist in WebSphere Commerce. Also, at least one person associated with the customer organization should be a registered customer because a contact at the customer organization is required when creating a business account.

The first window that opens (Figure 13-15 on page 748) shows a list of customer accounts that already exist.

Three columns of information are displayed for each defined customer account:

- **Customer:** The name of the company holding the account

- **Representative:** The name of the representative organization within the seller's organization that is responsible for the account
- **Number of contracts:** The number of contracts that belong to the account

As seen in Figure 13-15, the seller administrator (seller2admin) can accomplish the following tasks:

- Create a new customer account
- Modify a customer account
- Create a new contract for a customer account
- List existing contracts for a customer account
- View orders for a customer account
- Display a summary of account information
- Display reports for a customer account
- Delete a customer account

Figure 13-15 Accounts

Create a new customer account

1. From the **Sales** menu, select **Accounts**.
2. Click **New**.
3. Click **Customer** in the left navigation bar (Figure 13-16 on page 749). When following this procedure, do not click **OK** until all information has been defined for the new customer account.
4. Supply this information:
   a. **Customer Organization**. Choose the name of the account holder from the pull-down list.

b. **Contact**. Choose the name of the primary contact person within the customer's organization.

c. **Address**. This read-only field displays the address of the selected contact.

d. **Contact Information**. Type additional information for the contact, such as details about when to call.

e. **Allow customers to purchase under the store's default contract**. Select this option to enable customers from this account to make purchases for items that are not defined for the contract, but are defined by the default contract for the store.

Figure 13-16 Define customer account information

5. Click **Representative** to define the customer account representative (Figure 13-17).

Department	(Mandatory) Select the name of the department within the seller's organization that is responsible for the account.
Representative	Select the name of the primary account representative within the selected department.
Address	This read-only field displays the address of the selected representative.

Figure 13-17 Define customer account representative

6. Click **Purchase Order** (Figure 13-18) to define purchase orders for the customer account.

Figure 13-18 Define purchase orders for a customer account

7. Check the appropriate box or boxes:
   a. **Purchase order number may be specified at time of order**

      Select this option to enable customers to specify purchase order numbers when submitting an order.
   b. **Check the uniqueness of the purchase order number**

      This option is displayed when the previous option is selected. Select this option if you want to verify that any purchase order number specified at time of purchase is unique.

      Defined purchase orders are displayed in a table with column names Purchase Order Number and Spending Limit.

      The following actions are available when defining a purchase order:

Add	Defines a new purchase order for the current account.
Change	Changes the selected purchase order.
Remove	Removes the selected purchase order.
   c. These options appear when you click **Add**:
      i. **Purchase Order Number**. (mandatory) Type the number for the new purchase order.
      ii. **Spending Limit**. Select this option to define a spending limit for the purchase order.
      iii. **Amount**. Specify the amount if the spending limit option is selected. (mandatory) Type the limit for the purchase order in the field provided, and then select the currency for the limit from the list.
      iv. Click **OK**.
   d. To change a purchase order.
      i. Check the box next to the purchase order number and click **Change**.
      ii. Modify the purchase order number and spending limit as desired.
      iii. Click **OK** to apply changes to purchase order.
   e. To remove a defined purchase order for the selected account:
      i. Check the box next to the purchase order number and click **Remove**.
      ii. Click **OK** on the dialog box.

8. Click **Invoicing** (Figure 13-19) to define how invoices for the customer account are delivered:
   - **E-mail**. Select this option to deliver invoices for orders using e-mail.
   - **Include with shipment**. Select this option to deliver invoices for orders inside the boxes used to ship the order.
   - **Regular mail**. Select this option to deliver invoices for orders using conventional mail.

Figure 13-19 Specify invoice delivery method for current account

9. Click **Credit Line** (Figure 13-20) to define how invoices for the customer account are delivered:
   i. **The account has a credit line.** Select this option to enable the account to use credit to pay for orders.
   ii. **Description**. (Mandatory) Type a name that a customer will see when selecting a credit line from a list of payment options.
   iii. **Credit line account number**. Enter details about the credit line.
   iv. **Billing Address**. Select the address to use for account billing.
   v. **Address**. (Read-only) Displays information for selected billing address.

Figure 13-20 Specifying a credit line for the current account

10. Click **Remarks**. Specify additional comments for the customer account.

11. Click **OK**.
12. Click **OK** to close the dialog box.

Modify a customer account

1. From the **Sales** menu, select **Accounts**.
2. Select the check box next to the account whose details will be modified.
3. Click **Change**.
4. Click the appropriate links to modify account information. The following links appear in the left navigation bar:
   - Customer
   - Representative
   - Purchase Order
   - Invoicing
   - Credit Line
   - Remarks

Figure 13-21 Change details for current account

5. Click **OK** when all changes are complete. This returns you to the Accounts home page with a list of existing customer accounts.

Create a new contract for a customer account

To create a new contract for a selected customer:

1. From the **Sales** menu, select **Accounts**.
2. Select the check box next to the business account for which the contract is being created.
3. Click **New Contract** to launch the Contract notebook.
4. Complete the fields for each page as required, and use the links on the left side to switch between pages.
5. Click **OK** to save the contract and close the notebook.

   The contract is displayed in the Contract List page.

List existing contracts for a customer account

1. From the **Sales** menu, click **Accounts**. The Account List page displays, containing business accounts currently defined for the selected store.

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.
2. Select the check box next to the business account that you want to view the contracts for.
3. Click **Contracts**.

   The Contract List page opens, showing contracts under the account selected.

View orders for a customer account

1. From the **Sales** menu, click **Accounts**. The Account List page displays, showing business accounts currently defined for the selected store.

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.
2. Select the check box next to the business account that you want to view the orders for.
3. Click **Orders**.

   The Order List page opens, showing orders under the account selected.

Display a summary of account information

1. From the **Sales** menu, click **Accounts**. The Account List page displays, containing business accounts currently defined for the selected store.

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.
2. Select the check box next to the business account that you want to view.

3. Click **Summary**. The Account Summary page opens, showing information about the selected business account.
4. When you are finished, click **OK** to return to the previous page.

Display reports for a customer account

1. From the **Sales** menu, click **Accounts**. The Accounts list opens, showing the accounts defined for the store.

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.
2. Select the check box next to an account.
3. Click **Reports**. The Account Management Reports list displays.
4. Click the title of the report you want to review. The selected report displays.

   There are six reports available to help you manage your accounts and contracts efficiently:

   – Orders by account report

     Review orders for the selected account balance.

   – Limits of limited purchase orders by account report

     Review the current balance and the limit of purchase orders for the selected account.

   – Refund by account report

     Review the refunds issued to the selected account.

   – Contracts close to expiry date report

     Review the contracts for the selected account that are close to expiring.

   – Orders by contract report

     Review orders for the selected contract.

   – Refund by contract report

     Review the refunds issued to the selected contract.

Delete a customer account

> **Note:** Deleting a customer account sets a flag in the database on the deleted record. The record is not actually removed from the database until the DBClean function is run. You will not be able to add any new accounts for the associated customer's organization until after DBClean is run on Account objects.

1. From the **Sales** menu, select **Accounts**.
2. Select the check box next to the account to be deleted.
3. Click **Delete**.

13.3.20 Sales: RFQs (Request For Quote)

Request for Quote (RFQ) is one of the trading mechanisms available in WebSphere Commerce. A buyer can create an RFQ for unique variations of goods and services that are offered in the catalog. If buyers cannot find a product in the catalog that matches their needs, they can select attributes from the personalized attributes dictionary to precisely define the product specifications.

A requisition list is used by buyers to add desired products to their RFQ. Buyers can include multiple products in one RFQ and define unique specifications for each product. They can include attachments on the RFQ or product specification level. They can also specify the terms and conditions for the transaction. When the buyer submits an RFQ request, it is placed into a Future or Active state. Through the WebSphere Commerce Accelerator, a seller can view the RFQ and submit a response when the request is in an Active state. A buyer can also change or cancel an RFQ.

When sellers respond to an RFQ, they have the option of responding to each attachment, terms and conditions, and product, as well as to each product specification or comment. They have the option of specifying a fulfillment center or substituting a product if the buyer has provided that option in the request. A seller can also modify or cancel a response.

After sellers have responded to the RFQ, the buyer closes the RFQ and evaluates the responses to choose a winner or multiple winners. When the RFQ response is accepted by the buyer and the seller is notified, the RFQ transaction is completed through one of the following processes:

- The buyer places an order that already contains the RFQ information.
- A contract already containing the RFQ information is created.
- The RFQ can go to next round.

A record of the RFQ is maintained in the RFQ List for a predetermined period, so that the buyer can copy an RFQ that is used repeatedly. Responses are retained for the same period to facilitate a seller's response to similar requests from the same buyer.

During the setup of WebSphere Commerce, the site administrator decides whether to enable the RFQ trading mechanism. If the decision is made to include the RFQ option, the site administrator must consider the following:

- Should approvals for the RFQ response process be enabled? If enabled, responses will be reviewed prior to transmittal to the buyer.
- Notification and job scheduling must be enabled to ensure that buyers and sellers are notified of changes in the status of RFQ requests and responses.

For more information about RFQ requests, see the *IBM WebSphere Commerce Sample Store Guide*. For a description of the RFQ process flow, see "RFQ Overview" on page 890.

The initial RFQ page is accessed by selecting **RFQ** from the **Sales** menu. The page shown in Figure 13-22 is displayed.

Figure 13-22 RFQ list page

This page enables sellers to manage RFQs that are received from all organizations that participate in their e-commerce exchange. The list can be sorted by the following columns: RFQ name, Status, Creation time, Submission date, and Closing date. The contents of the list can be displayed by the status of the RFQ request. The choices are:

All	All requests regardless of state
Active	Submitted by buyer
Closed	No more responses being accepted
Next Round	No more responses being accepted
Complete	Winners selected and notified

These functions are available to the seller administrator:

- Display RFQ request details
- Find RFQ requests
- Respond to RFQ request
- List responses

Display RFQ request details

To display the details of a selected RFQ request:

1. From the **Sales** menu, select **RFQs**.
2. Select the check box next to the RFQ request to view.
3. Click **Summary**.

Find RFQ requests

To find a particular RFQ request:

1. From the **Sales** menu, select **RFQs**.
2. Click **Find**.
3. Enter one or more search criteria.
4. Click **OK**.

Respond to RFQ request

1. From the **Sales** menu, click **RFQs**. This displays a list of RFQ requests.

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

2. Select the check box next to the RFQ request that you want to respond to.
3. Click **Respond**. The General form displays.
4. Or, to determine whether any previous responses to this request exist before you create a new one, click **Responses**.

   The RFQ Response page displays any existing responses for the selected request.

5. Click **New** to create a new response. The General form displays.
6. Type the name for the response into the Name field.

   To avoid the possibility of duplicating an existing response name and the associated error message, your response name must be unique within the e-commerce site. For example, you could use a combination of unique personal information, date, time, and sequence number when creating the name.

7. Type any remarks you wish to make into the Remarks text box.
8. Select the fulfillment center to be used from the list.

9. Determine whether all products must be accepted when the response is accepted by selecting **yes** or **no**. Details for performing the following actions are provided in the tasks listed in the Related Tasks section below.
10. Click **Next** to display the Attachments page.
11. After making any necessary responses to the attachments, click **Next** to display the Terms and Conditions page.
12. After making any necessary responses to the terms and conditions, click **Next**. to display the Products page.
13. After making any necessary responses to the product price, quantity, units, specifications, or comments, click **OK**. This displays the Products page.

    When making a response, you also have the option to substitute a product. See “Substituting a product in an RFQ response” in the WebSphere Commerce online help.
14. When all product-related responses have been made, click **Finish** to transmit your response to the buyer.

    It will be submitted directly to the buyer if approval has not been enabled. If approval has been enabled, the response will be submitted to the approver for review.

    You may also modify, retract, or cancel the response at this time.

List responses

1. From the **Sales** menu, click **RFQs**.

   This displays a list of RFQ requests. If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.
2. Select the check box next to the RFQ request for which you want to view the responses.
3. Click **Responses**.

   The RFQ Response page displays any existing responses for the selected request. The RFQ response list shows the following information:

   – Response name
   – Remarks
   – Status
   – Creation time

13.3.21 Sales: Personalized attributes

An attribute describes a characteristic of an object. Attributes are called *specifications* in WebSphere Commerce. Specifications are used to distinguish one product from another. Height, color, weight, and size are examples of an attribute or specification. A personalized attribute dictionary provides a list of attributes that buyers use to define the specifications that they want a product to have. They use the dictionary when preparing an RFQ request.

The Site Administrator creates and manages the specification definitions. Attributes that are used to create product specifications must be selected from the personalized attribute dictionary.

If buyers cannot find a product matching their needs in the catalog, they can select attributes from the personalized attributes dictionary to precisely define the product specifications. A free-form attribute field is available so that the buyer can propose a specification that is not available in the dictionary.

Name	Description	Attribute data type
Additional Info	Additional Info	FREEFORM
Attachment	Attachment	ATTACHMENT
Color	Color	STRING
Delivery Date	Delivery Date	DATETIME
Delivery Instructions	Delivery Instructions	FREEFORM
Length	Length	INTEGER
Logo	Logo	STRING
Material	Material	STRING
Monogram	Monogram	STRING
Size	Size	STRING
Thickness	Thickness	INTEGER
Warranty Requirements	Warranty Requirements	FREEFORM
Width	Width	INTEGER
accountNumber	Account Number	STRING
cardBrand	Credit Card Brand	STRING
cardExpiryMonth	Credit Card Expiry Month	STRING
cardExpiryYear	Credit Card Expiry Year	STRING

Figure 13-23 Personalized Attributes

Add a new personalized attribute

Only individuals that authorized by the site administrator may add attributes to the Personalized Attributes dictionary. To add a new attribute to the existing dictionary:

1. From the **Sales** menu, click **Personalized Attributes**. The Personalized Attribute list displays.
2. Click **New**. The New Personalized Attribute form displays.
3. Type the name for the new attribute in the **Name** field.
4. Type a complete description of the attribute in the **Description** text box field.
5. Select the appropriate data type from the Type list. The available attribute types are:
   - STRING
   - INTEGER
   - FLOAT
   - DATETIME
   - FREEFORM
   - BIGINT
   - ATTACHMENT
6. If additional security is required for the attribute, select **Yes** under the phrase `Should this attribute be encrypted?`
7. Clicking **OK** displays a confirmation message.
8. Click **OK** in the dialog box to return to the Personalized Attributes list.

Change an existing personalized attribute

Only individuals who are authorized by the site administrator may make changes to existing attributes. If you wish to add a new attribute to the existing personalized attribute dictionary:

1. From the **Sales** menu, select **Personalized Attributes**. The Personalized Attribute list displays.

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.
2. Select the check box for the attribute that you want to change.
3. Click **Change**. The Change Personalized Attribute form displays.

   Make the necessary changes to the Description Type or encryption parameters.
4. Clicking **OK** displays a confirmation message.
5. Click **OK** in the dialog box to return to the Personalized Attributes list.

> **Note:** You cannot change the name of an existing attribute on the Change Personalized Attribute form. If you want to change the name of an existing attribute, the existing attribute must be deleted. Create a new attribute with the new name.

Delete an attribute from the personalized attribute dictionary

Only individuals who are authorized by the site administrator may delete existing attributes. To delete an attribute from the existing personalized attribute dictionary:

1. From the **Sales** menu, click **Personalized Attributes**. The Personalized Attribute list displays.

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

2. Select the check box for the attribute that you want to delete.
3. Click **Delete**. The Personalized Attribute list displays with the deleted attribute no longer shown.

13.3.22 Sales: Find Customers

This functionality is the same as for a hosted B2C store. See 12.6.2, “Operations: Find Customer” on page 605 for details for using this function.

13.3.23 Sales: Find Orders

This functionality is the same as for a hosted B2C store. See 12.6.5, “Operations: Find Orders” on page 609 for details for using this function.

13.3.24 Sales: Order Management Reports

This functionality is the same as for a hosted B2C store. This function can be found on the Reports menu when managing a B2C hosted store. See 12.7.7, “Order Management Reports” on page 706 for details for using this function.

13.3.25 Sales: Operational Reports

This functionality is the same as for a hosted B2C store. This function can be found on the Reports menu when managing a B2C hosted store. See 12.7.10, “Operational Reports” on page 711 for details for using this function.

13.3.26 Sales: Auctions

This functionality is the same as for a hosted B2C store. This function can be found on the Merchandise menu and the Operations menu when managing a B2C hosted store. See 12.5.11, “Merchandise: Auctions” on page 590 for details for using this function.

13.3.27 Sales: Customer Care

When this book was written, the customer care function was not available for hosted stores.

13.3.28 Sales: Customer Care Queue

When this book was written, the customer care function was not available for hosted stores.

13.3.29 Sales: Approve Payment

This functionality is the same as for a hosted B2C store. This function can be found on the Operations menu when managing a B2C hosted store. See 12.6.38, “Operations: Approve Payment” on page 658 for details for using this function.

13.3.30 Sales: Deposit Payment

This functionality is the same as for a hosted B2C store. This function can be found on the Operations menu when managing a B2C hosted store. See 12.6.46, “Operations: Deposit Payment” on page 672 for details for using this function.

13.3.31 Sales: Settle Payment

This functionality is the same as for a hosted B2C store. This function can be found on the Operations menu when managing a B2C hosted store. See 12.6.49, “Operations: Settle Payment Batch” on page 680 for details for using this function.

13.3.32 Sales: Find Payment

This functionality is the same as for a hosted B2C store. It can be found on the Operations menu when managing a B2C hosted store. See 12.6.53, “Operations: Find Payment Batch” on page 691 for details for using this function.

13.3.33 Sales: Find Payment Batch

This functionality is the same as for a hosted B2C store. It can be found on the Operations menu when managing a B2C hosted store. See 12.6.53, “Operations: Find Payment Batch” on page 691 for details for using this function.

13.3.34 Marketing: Customer Profiles

This functionality is the same as for a hosted B2C store. See 12.4.1, “Marketing: Customer Profiles” on page 493 for details for using this function.

13.3.35 Marketing: Campaigns

This functionality is the same as for a hosted B2C store. See 12.4.2, “Marketing: Campaigns” on page 528 for details for using this function.

13.3.36 Marketing: Campaign Initiatives

This functionality is the same as for a hosted B2C store. See 12.4.3, “Marketing: Campaign Initiatives” on page 533 for details for using this function.

13.3.37 Marketing: E-Marketing Spots

This functionality is the same as for a hosted B2C store. See 12.4.4, “Marketing: E-Marketing Spots” on page 544 for details for using this function.

13.3.38 Marketing: Ad Copy

This functionality is the same as for a hosted B2C store. See 12.4.5, “Marketing: Ad Copy” on page 549 for details for using this function.

13.3.39 Products: Product Management

This functionality is the same as for a hosted B2C store. See 12.5.1, “Merchandise: product management” on page 554 for details for using this function.

13.3.40 Products: Categories

This functionality is the same as for a hosted B2C store. See 12.5.2, “Merchandise: Categories” on page 560 for details for using this function.

13.3.41 Products: Find Catalog Entries

This functionality is the same as for a hosted B2C store. See 12.5.3, “Merchandise: Find Catalog Entries” on page 563 for details for using this function.

13.3.42 Products: Find Categories

This functionality is the same as for a hosted B2C store. See 12.5.4, “Merchandise: Find Categories” on page 565 for details for using this function.

13.3.43 Products: Find Bundles or Kits

This functionality is the same as for a hosted B2C store. See 12.5.5, “Merchandise: Find Bundles or Kits” on page 566 for details for using this function.

13.3.44 Products: Find Merchandising Associations

This functionality is the same as for a hosted B2C store. See 12.5.6, “Merchandise: Find Merchandising Associations” on page 567 for details for using this function.

13.3.45 Products: Expected Inventory

This functionality is the same as for a hosted B2C store. See 12.5.9, “Merchandise: Expected Inventory” on page 586 for details for using this function.

13.3.46 Products: Vendors

This functionality is the same as for a hosted B2C store. See 12.5.10, “Merchandise: Vendors” on page 588 for details for using this function.

13.3.47 Products: Catalog Filter

This functionality is the same as for a hosted B2C store. See 12.5.7, “Merchandise: Catalog Filter” on page 568 for details for using this function.

13.3.48 Products: Catalog Import

This functionality is the same as for a hosted B2C store. See 12.5.8, “Merchandise: Catalog Import” on page 572 for details for using this function.

13.3.49 Products: Auctions

This functionality is the same as for a hosted B2C store. See 12.5.11, “Merchandise: Auctions” on page 590 for details for using this function.

13.3.50 Products: Find Auctions

This functionality is the same as for a hosted B2C store. See 12.5.12, “Merchandise: Find Auctions” on page 592 for details for using this function.

13.3.51 Products: Auction Styles

This functionality is the same as for a hosted B2C store. See 12.5.13, “Merchandise: Auction Styles” on page 593 for details for using this function.

13.3.52 Products: Bid Rules

This functionality is the same as for a hosted B2C store. See 12.5.14, “Merchandise: Bid Rules” on page 594 for details for using this function.

13.3.53 Products: Coupon Promotions

This functionality is the same as for a hosted B2C store. See 12.5.15, “Merchandise: Coupon Promotions” on page 595 for details for using this function.

13.3.54 Products: Product Promotions

This functionality is the same as for a hosted B2C store. See 12.5.16, “Merchandise: Product Promotions” on page 597 for details for using this function.

13.3.55 Products: Order Promotions

This functionality is the same as for a hosted B2C store. See 12.5.17, “Merchandise: Order Promotions” on page 599 for details for using this function.

13.3.56 Logistics: Returns

Customers return products to a fulfillment center for many different reasons. Perhaps the customer was unhappy with the quality or performance of a product, or perhaps the product was legitimately defective. Returned inventory may be

re-integrated into the pool of inventory available for order, or it may be discarded. This process is called disposition.

In the course of the disposition of a product, information about the customer's reported reason for returning it is recorded, in addition to information about the merchant or seller's perspective on the reason for that return. Then a disposition is determined and recorded, along with the reason for that decision.

Receiving returned products

1. From the **Logistics** menu, click **Returns**. The Returns list displays.

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

2. Select the check box next to the return for which you want to receive products.
3. Click **Receive** to open the Receive Products dialog.
4. Provide the date and the quantity to receive, and click **OK** to save the information.

   The Returns list displays, refreshed with the new information.

> **Note:** Even if all products have been received for a return, the Receive button will remain available until the ReturnCreditAndCloseScan scheduler command has been run, closing the receive record. Thus, it is possible for more products to be recorded as received in the system than were physically received in the fulfillment center if this command has not yet run.

Selecting the disposition of returned products

1. From the **Logistics** menu, click **Returns**. The Returns list displays.

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

2. Select the check box next to the return you want to work with.
3. Click **Returned Products** to open the Returned Products list.
4. Select the check box next to the returned product you want to work with.
5. Click **Disposition** to open the Disposition page.
6. Provide appropriate information for the fields.
7. Click **Add** to save the information.

Viewing return management reports

To create and view return management reports:

1. From the **Logistics** menu, click **Returns**. The Returns page displays.

   If you do not see this menu, then your logon ID does not have the appropriate authority to perform this task. Contact your site administrator.

2. Click **Reports** to display the Return Management Reports list.
3. Select one of the following reports:
   - Returns with Partial Receipts report
   - Return Receipts Not Disposed report
   - Outstanding Returns report
4. Complete the report selection criteria.
5. Click **OK**.

   The report content is displayed. From this page, you can print the report by clicking **Print** or you can display another report by clicking **OK**.

13.3.57 Logistics: Pick Batches

This functionality is the same as for a hosted B2C store. It can be found on the Operations menu when managing a B2C hosted store. See 12.6.12, “Operations: Find a Pick Batch” on page 626 for details for using this function.

13.3.58 Logistics: Releases Ready to Ship

This functionality is the same as for a hosted B2C store. It can be found on the Operations menu when managing a B2C hosted store. See 12.6.17, “Operations: Find Releases Ready to Ship” on page 631 for details for using this function.

13.3.59 Logistics: Expected Inventory

This functionality is the same as for a hosted B2C store.It can be found on the Operations menu and the Merchandise menu when managing a B2C hosted store. See 12.5.9, “Merchandise: Expected Inventory” on page 586 for details for using this function.

13.3.60 Logistics: Find Inventory

This functionality is the same as for a hosted B2C store. It can be found on the Operations menu when managing a B2C hosted store. See 12.6.33, “Operations: Find Inventory” on page 651 for details for using this function.

13.3.61 Logistics: Inventory Reports

This functionality is the same as for a hosted B2C store. It can be found in the Reports menu when managing a hosted B2C store. See 12.7.1, “Inventory Reports” on page 694 for details for using this function.

Part 4

Appendixes

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A

WebSphere Commerce implementation

This appendix describes the process that we followed for implementing WebSphere Commerce V5.5 Business Edition on our test servers. The starting point for the scenarios is a fully installed and tested single-tier WebSphere Commerce node runtime environment. The procedures that are documented include best practices, tips, and fix packs beyond the original IBM WebSphere Commerce V5.5 release, such as IBM DB2 UDB V8.1 Fix Pack 3, IBM WebSphere Application Server V5.0 Fix Pack 1, and the IBM WebSphere Commerce V5.5.0.3 Fix Pack.

The appendix is organized into the following sections:

- ITSO test environment
- Single-tier implementation
- Add a remote database server node

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ITSO test environment

Hardware and software prerequisites

For detailed information about WebSphere Commerce V5.5 hardware and software requirements, refer to the *Installation Guide*, IBM WebSphere Commerce V5.5 for Windows 2000 product guide.

Hardware used in the ITSO test environment

We used the following hardware within the ITSO runtime environment for a single-tier WebSphere Commerce node:

- WebSphere Commerce node
  - IBM eServer xSeries 230 (8658-61Y)
    - 1 CPU, Intel PIII 1 GHz
    - 1152 MB main memory
    - 18 GB DASD
    - 1 IBM Ethernet adapter
    - Host name: `m23vnx78.itso.ral.ibm.com`

We used the following hardware within the ITSO runtime environment for a two-tier WebSphere Commerce implementation:

- DB2 server node
  - IBM eServer xSeries 230 (8658-61Y)
    - 1 CPU, Intel PIII 1 GHz
    - 1152 MB main memory
    - 18 GB DASD
    - 1 IBM Ethernet adapter
    - Host name: `m23x2880.itso.ral.ibm.com`

Software used in the ITSO test environment

This section details the current levels of software used in the ITSO test environment.

Table A-1 Software used in the ITSO test environment

Software	Version
Microsoft Windows 2000 Server	2000 + Service Pack 4
Microsoft Internet Explorer	6 + Service Pack 1
IBM DB2 UDB, Enterprise Server Edition	8.1.3.132 (8.1 + Fix Pack 3)

Software	Version
IBM HTTP Server	1.3.26.1 (1.3.26 + WAS 5 FP1)
WebSphere Application Server	5.0.1 (5.0 + Fix Pack 1 + Fixes)
WebSphere Commerce, Business Edition * including WebSphere Commerce Payments * WebSphere Commerce store	5.5.0.3 (5.5 + Fix Pack 3)

Single-tier implementation

The precondition for adding a remote database server as documented in this appendix is that a single-tier WebSphere Commerce node has been installed. For details on installing a single-tier WebSphere Commerce node, refer to the *Installation Guide*, IBM WebSphere Commerce V5.5 for Windows 2000 product guide.

We completed the following high-level tasks to implement the single-tier WebSphere Commerce runtime environment as a prerequisite for the migration scenarios found in the appendix:

- Windows installation
- WebSphere Commerce V5.5 installation
- DB2 UDB V8.1 Fix Pack 3 installation
- WebSphere Application Server V5 Fix Pack 1 installation
- WebSphere Commerce V5.5.0.2 Fix Pack installation
- WebSphere Commerce instance creation
- WebSphere Commerce Payments instance creation
- Database backup
- Start servers
- Verify the runtime environment and store functionality

Note: In the procedure that is documented in this section, we installed the IBM WebSphere Application Server V5 Fix Pack 1, IBM DB2 UDB Fix Pack 3, and IBM WebSphere Commerce V5.5.0.2 Fix Pack before the WebSphere Commerce instance creation.

If you have already created the WebSphere Commerce instance, refer to the WebSphere Commerce V5.5 Fix Pack readme file to apply the fixes to the WebSphere Commerce instance (application server and enterprise application) that has already been deployed.

Windows installation

This section only highlights key issues, such as needing Windows 2000 Service Pack level 3 or higher, and user rights assigned to the administrator user that will be needed later for DB2.

Windows 2000 Service Pack 4

In our example, we installed Windows 2000 Server Service Pack 4.

Create admin user and assign user rights

To assign user rights to the administrator ID that is used by the WebSphere Commerce DB2 owner during instance creation, do the following:

1. Log onto Windows as an administrator.
2. Create a user ID and add the user to the administrators group (for example, we created a user called `admin`). You can also use an existing administrator user.
3. Click **Start** → **Settings** → **Control Panel** → **Administrative Tools** → **Local Security Policy**.
4. From the Local Security Settings window, select and expand **Local Policies** → **User Rights Assignment**.
5. Ensure that the administrator user ID (for example, admin) has the user right assignments for the following Windows Local Security Policies that are needed for DB2:
   - Act as part of the operating system
   - Create a token object
   - Increase quotas
   - Log on as a service
   - Replace a process level token
6. Log on as the administrator user ID created and rights assigned needed for DB2.

Verify network configuration

Prior to installing WebSphere Commerce and supporting software components, it is important that you verify that your network is configured properly. We recommend that you use a static TCP/IP address and verify that the host name can be resolved with the name server.

To determine whether the IP address is mapped to a fully qualified host name, start a command prompt session and issue the following command:

```
nslookup 'IP_address'
```

The desired result is a reply with the correct fully qualified host name of the system.

WebSphere Commerce V5.5 installation

For details on how to install WebSphere Commerce V5.5 on a single node using the IBM HTTP Server and DB2, refer to the *Installation Guide*, IBM WebSphere Commerce V5.5 for Windows 2000 product guide.

We accepted the default settings for most options. We used the WebSphere Commerce Install Shield to install WebSphere Commerce, WebSphere Application Server, IBM HTTP Server, and WebSphere Commerce Payments.

The key steps and options that we entered during the installation:

- We ran setup from the IBM WebSphere Commerce V5.5 CD 1.
- We selected **Typical** install.
- We installed the software components to the following directories:
  - IBM DB2 UDB: `c:\websphere\sqllib`
  - IBM HTTP Server: `c:\websphere\httpserver`
  - IBM WebSphere Application Server: `c:\websphere\appserver`
  - IBM WebSphere Commerce: `c:\websphere\commerceserver55`
- We used the `admin` user ID that was added to the administrator group and had rights assigned for DB2 in “Create admin user and assign user rights” on page 776.

DB2 UDB V8.1 Fix Pack 3 installation

We installed IBM DB2 UDB V8.1 Fix Pack 3 for 32-bit Windows. The internal DB2 level is 8.1.3.132 after the installation of Fix Pack 3. In our example, we do not have any existing databases at this stage. If you do have existing databases, refer to the FixpackReadme.txt file for details.

1. IBM DB2 UDB V8.1 Fix Pack 3 can be downloaded at:

   `ftp://ftp.software.ibm.com/ps/products/db2/fixes/english-us/db2winIA32v8/fixpak/FP3_WR21324/`

2. We downloaded FP3_WR21324_ESE.exe, which is for the IBM DB2 Universal Database V8.1, Enterprise Server Edition.

> **Note:** For a full description and listing of download files, refer to the FixpackReadme.txt file.

3. Stop all DB2 services in the Windows services. The services include dependencies. We stopped the DB2 services and work our way through the services list from bottom to top.
4. Install the IBM DB2 Universal Database V8.1, Enterprise Server Edition Fix Pack 3:
   - Run setup to start the fix pack installer.
   - We accepted the default installation options.
5. You will have to restart your system for the fixes to take effect.

Tip: If you have created databases before you installed the Fix Pack 3, you will need to rebind the DB2 utilities to the databases. In our example, we do not have any databases created at this stage of the procedure.

1. After the system has restarted, open a DB2 command window and enter the following DB2 command:

   ```
   db2level
   ```

   It should return `8.1.3.132` after Fix Pack 3 has been installed.
2. Rebind your DB2 utilities with all databases after the fix pack installation. This step is necessary for the fixes to become effective. The binding procedure has to be performed only once per database.

   To rebind existing DB2 UDB databases after installing Fix Pack 3, enter the following commands from a DB2 command window for each database:

   ```
   db2 terminate
   db2 CONNECT TO dbname
   db2 BIND DB2_installdir\BND\@db2ubind.lst GRANT PUBLIC
   db2 BIND DB2_installdir\BND\@db2cli.lst GRANT PUBLIC
   db2 terminate
   ```

   - *dbname* represents the name of a database to which the utilities should be bound.
   - *DB2_installdir* represents the directory where you have installed DB2. db2ubind.lst and db2cli.lst contain lists of required bind files used by IBM DB2 UDB V8.1.

WebSphere Application Server V5 Fix Pack 1 installation

This section describes the steps that are needed to install IBM WebSphere Application Server V5 Fix Pack 1 and interim fixes required for the WebSphere Application Server V5.0.1 to be used with WebSphere Commerce V5.5.0.2. As part of the procedure, we download and install the WebSphere Update Installer V5.0.x. The WebSphere Update Installer is used to uninstall WebSphere

Application Server fixes installed by the WebSphere Commerce Installer, and install WebSphere Application Server V5 Fix Pack 1 and interim fixes.

This section includes the following tasks:

- Install WebSphere Update Installer V5.0.x
- Uninstall WebSphere Application Server Fixes
- Install WebSphere Application Server V5 Fix Pack 1
- Install WebSphere Application Server V5.0.1 Fixes
- Verify the WebSphere Application Server

Install WebSphere Update Installer V5.0.x

The WebSphere Update Installer V5.0.x is used to install updates (fix packs and interim fixes) to WebSphere Application Server V5.0.x. We use the Update Installer to install WebSphere Application Server V5 Fix Pack 1 (V5.0.1) and other fixes beyond the V5.0.1 level. The IBM WebSphere Application Server V5.0.x Update Installer can be downloaded from:

http://www.ibm.com/software/webservers/appserv/was/support/

> **Important:** Do not use the WebSphere Application Server Update Installer found on WebSphere Commerce CD 2.

We did the following to download and run the WebSphere Application Server V5 UpdateInstaller:

1. Ensure that each WebSphere Application Server base node and application server are stopped. For example, in a command window enter the following in the *WAS_installdir*\bin directory:

   ```
   stopServer.bat server1
   stopNode.bat
   ```

2. Ensure that the IBM HTTP Server is stopped from Windows services.
3. Create a download directory for the UpdateInstaller (for example, c:\ibm\was\update).
4. Download UpdateInstaller - Windows and readme (updateInstaller.zip, readme_updateinstaller.html) to the c:\ibm\was\update directory from the following URL:

   http://www.ibm.com/support/docview.wss?rs=180&tc=SSEQTP&uid=swg24001908

5. Unzip updateInstaller.zip to the c:\ibm\was\update directory.
6. To run the UpdateInstaller Wizard, enter updateWizard.bat from the c:\ibm\was\update directory where you have unpacked the UpdateInstaller.

Uninstall WebSphere Application Server Fixes

During the WebSphere Commerce V5.5 installation, many WebSphere Application Server V5.0 Fixes are installed. Prior to installing WebSphere Application Server V5 Fix Pack 1, the V5.0 Fixes must be uninstalled to ensure that the newest level of the files are installed and active.

1. Stop WebSphere Application Server and all application servers and nodes.
2. Stop the IBM HTTP Server Windows service (WebSphere plug-in fixes).
3. Start the UpdateInstaller as described in step 6 on page 779.
4. When the Welcome window appears, click **Next**.
5. The Update Installation Wizard detects the WebSphere Application Server installation path (for example, c:\websphere\appserver). We accepted the default and clicked **Next**.
6. Select **Uninstall fixes**, and click **Next**.
7. In our case, the WebSphere Commerce Install Shield installed many WebSphere Application Server V5 Fixes, so many Fixes are displayed. Check all Fixes in the list (uninstall) and then click **Next**.
8. You should see a window that lists the fixes that are to be uninstalled. Click **Next** to begin uninstalling fixes.
9. When done, click **Finish**.

Install WebSphere Application Server V5 Fix Pack 1

To install the IBM WebSphere Application Server V5 Fix Pack 1, do the following:

1. Stop WebSphere Application Server and all application servers and nodes.
2. Stop the IBM HTTP Server Windows service (WebSphere plug-in fixes).
3. Prior to installing WebSphere Application Server V5 Fix Pack 1, run the backupConfig script to back up configuration files. The backupConfig.bat can be found in the <was_home>\bin directory.
4. The IBM WebSphere Application Server V5 Fix Pack 1 can be downloaded at:

   http://www.ibm.com/support/docview.wss?rs=180&context=SSEQTP&q=&uid=swg24004576&loc=en_US&cs=utf-8&lang=en
5. In our case, we downloaded Windows 2000/NT Base (was50_fp1_win.zip).
6. We unpacked the was50_fp1_win.zip file to the `c:\ibm\was\update\fp1` directory. After unpacking the zip file, you may delete the file to save space.
7. Change to the directory where you have unpacked the WebSphere Update Installer V5.0.x (for example, c:\ibm\was\update).
8. Start the WebSphere Application Server Update Installer Wizard by entering `updateWizard.bat`.

9. When the WebSphere Update Installer language window appears, select the appropriate language for the wizard (for example, English) and then click **OK**.
10. When the Welcome window appears, click **Next**.
11. The WebSphere Update Installer detects your current WebSphere Application Server version and installation directory. Click **Next**.
12. Select **Install fix packs** and then click **Next**.
13. Enter the directory where you have unpacked the fix pack. After the unpack, you should see the fixpacks directory in the directory where you have unpacked the Fix Pack 1. We entered `c:\ibm\was\update\fp1\fixpacks` in the Fix pack directory text field, and then clicked **Next**.
14. Select the **was50_fp1_win** fix pack (default) and then click **Next**.
15. You will be prompted for the directories for the IBM HTTP Server and the WebSphere Application Server Embedded Messaging. In our example, we accepted the following paths and then clicked **Next**.
    - IBM HTTP Server: c:\websphere\httpserver
    - Embedded Messaging: c:\websphere\appserver\MQ

    Note: The WebSphere Commerce V5.5 installer by default installs nearly all options of the WebSphere Application Server including embedded messaging. Embedded messaging is not supported by WebSphere Commerce.

16. Review the fix pack settings and then click **Next** to begin the fix pack installation of files.
17. When the WebSphere Application Server V5 Fix Pack 1 installation is complete, click **Finish**.

Install WebSphere Application Server V5.0.1 Fixes

After installing WebSphere Application Server V5.0.1 (Fix Pack 1): Table A-2 on page 782 lists the WebSphere Application Server V5.0.1 Fixes to be installed, a brief description of the problem addressed, and the location where the fix can be found.

Table A-2 WebSphere Application Server V5.0.1 fixes

Fix	Description
PQ71950	* This fix addresses a memory leak problem common to WebSphere Application Server V5.0 and V5.0.1. * The fix and more information can be found at: http://www.ibm.com/support/docview.wss?rs=180&context=SSEQTP&q=pq71950&uid=swg24004567&loc=en_US&cs=utf-8&lang=en+en * The fix can also be found on WebSphere Commerce V5.5 CD 2 in the \Software_Patches\WAS\repository directory.
PQ72451	* This fix addresses a prepared statement that is not properly closed, causing the JVM footprint to continue to grow, and is common to WebSphere Application Server V5.0 and V5.0.1. * The fix and more information can be found at: http://www.ibm.com/support/docview.wss?rs=180&context=SSEQTP&q=pq72451&uid=swg24004565&loc=en_US&cs=utf-8&lang=en * The fix can be found on WebSphere Commerce V5.5 CD 2 in the \Software_Patches\WAS\repository directory.
PQ74316	* This fix addresses a problem with stored response of a JSP (Dynacache) and is common to WebSphere Application Server V5.0 and V5.0.1. * The fix and more information can be found at: http://www.ibm.com/support/docview.wss?rs=180&context=SSEQTP&q=pq74316&uid=swg24004786&loc=en_US&cs=utf-8&lang=en * The fix can be found on WebSphere Commerce V5.5 CD 2 in the \Software_Patches\WAS\repository directory.
WebSphere Plug-in Cumulative Fix	* This cumulative fix addresses problems with the WebSphere Plug-in and is common to WebSphere Application Server V5.0, V5.0.1, and V5.0.2. * The fix and more information can be found at: http://www.ibm.com/support/docview.wss?rs=180&context=SSEQTP&q=cumulative+plugin&uid=swg24004524&loc=en_US&cs=utf-8&lang=en
WebSphere Connection Manager Cumulative Fix	* This cumulative fix addresses problems with the WebSphere Application Server Connection Manager and is common to V5.0.1 and V5.0.2. * The fix and more information can be found at: http://www.ibm.com/support/docview.wss?rs=180&context=SSEQTP&q=cumulative&uid=swg24005601&loc=en_US&cs=utf-8&lang=en

After installing WebSphere Application Server V5 Fix Pack 1 (V5.0.1), we installed the fixes that are listed in Table A-2 on page 782.

To install the fixes, use the Update Installer as follows:

1. Ensure that WebSphere Application Server and all application servers and nodes are stopped.
2. Ensure that the IBM HTTP Server Windows service is stopped.
3. Download the fixes that are listed in Table A-2 on page 782 to the c:\ibm\was\update\fixes directory.
4. Start the WebSphere Application Server Update Installer Wizard.

   For details, refer to “Install WebSphere Update Installer V5.0.x” on page 779.
5. Specify the directory where you have downloaded the fix. For example, c:\ibm\was\update\fixes.
6. Select **Install fixes** and then click **Next**.
7. Check the fixes listed in Table A-2 on page 782, and click **Next** (see Figure A-1 on page 784).

Figure A-1 WebSphere Application Server V5.0.1 fixes

8. Review the fixes to be installed summary, and then click **Next** to begin installing the fixes.

   You should see a message that the fixes were installed successfully.

9. When done, click **Finish**.

Verify the WebSphere Application Server

To verify the functionality of the WebSphere Application Server after installation, do the following:

1. Ensure that the IBM HTTP Server Windows service has been started.
2. Start the server1 application server where the WebSphere Administration Console enterprise application is installed:

```
cd \WebSphere\AppServer\bin
startServer server1
```

Note: Review the status of the server startup in the startServer.log as follows:

```
# tail -f c:\websphere\appserver\logs\server1\startServer.logs
```

You should see the following message:

```
Server server1 open for e-business
```

The server1 directory will be created the first time that the application server is started.

3. Start the WebSphere Application Server Administration Console by entering the following URL in a Web browser:

   `http://host_name:9090/admin`

4. Log on to the WebSphere Administration Console (for example, `admin`).
5. When you have verified the WebSphere Administration Console, log out, close the Web browser, and stop server1 as follows:

```
cd \websphere\appserver\bin
stopServer.bat server1
```

WebSphere Commerce V5.5.0.2 Fix Pack installation

Important: During the editing of this book, a new fix pack was released. If you are starting your initial installation, you should install WebSphere Commerce fix pack V5.5.0.3 instead of V5.5.0.2. See “WebSphere Commerce V5.5.0.3 Fix Pack installation” on page 802 for details. If you already have V5.5.0.2 installed, see this section and install V5.5.0.3 over your current installation.

This section describes the steps that are required to install IBM WebSphere Commerce V5.5.0.2 (Fix Pack 2). The fix pack can be installed silently or using a GUI. In our example, we use the GUI installer. The WebSphere Commerce V5.5.0.2 Fix Pack contains two installable fix pack modules, and their use depends on whether you have already created a WebSphere Commerce instance. If you have not created an instance, you only need to install the wc module. If you have created an instance, you must install both modules (wc and was). In our scenario, we have not created an instance at this stage.

For more detailed information about the contents of the fix pack and installation, refer to the *Installation Guide for IBM WebSphere Commerce V5.5.0.2 Fixpack* product guide that is included with the fix pack, found at:

http://www.ibm.com/support/docview.wss?rs=494&uid=swg24005628

Note: In our example, we have not created a WebSphere Commerce or WebSphere Commerce Payments instance at this stage. If you have already created an instance prior to installing Fix Pack 2, you must follow additional instructions found in the *Installation Guide for IBM WebSphere Commerce V5.5.0.2 Fixpack* on how to update existing instances with the fix pack.

To install the WebSphere Commerce V5.5.0.2 Fix Pack, do the following:

1. Log on to the WebSphere Commerce node Windows system with a user ID that is a member of the Administrators group.
2. Ensure that the following servers have been stopped:
   - IBM HTTP Server and Administration Server Windows services
   - IBM WebSphere Commerce Configuration Manager Windows service
   - Any WebSphere Application Servers, such as WebSphere Commerce <instances> that may have been created (not the case in our example)
3. The WebSphere Commerce V5.5.0.2 Fix Pack can be downloaded from:

   `http://www.ibm.com/support/docview.wss?rs=494&uid=swg24005628`

   In our example, we downloaded the fix pack WC_5502_WIN_BE.jar to the c:\temp\wc55.fp2 directory on the WebSphere Commerce node.
4. After unpacking the fix pack to the c:\temp\wc55.fp2 directory, start the fix pack installation GUI by entering `updateWizard.bat` from the directory where you have unpacked the fix pack download.
5. We accepted the default language (English) and clicked **OK**, and clicked **Next** on the Welcome page.
6. The Update Installation Wizard detects where WebSphere Commerce is installed on your system. In our example, we accepted the directory it detected (c:\ibm\wc), and clicked **Next**.
7. Select **Install fix packs**, and then click **Next**.
8. When prompted to enter the directory where the WebSphere Commerce V5.5.0.2 was unpacked, we entered `c:\temp\wc55.fp2\wc` and clicked **Next**.

   In our example, we have not created a WebSphere Commerce instance yet, so we only need to install the fix pack found in the wc directory of the unpacked files.
9. Review the fix pack information and confirm that the target installation directory information is correct. Click **Next** to begin installing the fix pack files.
10. When the installation is complete, you should see a message.

```
The following fix pack was successfully installed:
wc55BE_fp2_win
```

If successful, click **Finish**.

If you do not see the successfully installed message, the installer will indicate the log files to check to resolve the problem. In our example, the fix pack installation log files were located in the c:\ibm\wc\logs\update directory.

WebSphere Commerce instance creation

For details on how to create a WebSphere Commerce instance, refer to the *Installation Guide*, IBM WebSphere Commerce V5.5 for Windows 2000 product guide.

> **Note:** If you created a WebSphere Commerce or WebSphere Commerce Payments instance prior to installing the WebSphere Commerce V5.5.0.2 Fix Pack, refer to the *Installation Guide for IBM WebSphere Commerce V5.5.0.2 Fixpack* for instructions on updating the instance.

These are the high-level steps and settings that we used to create the WebSphere Commerce instance for the single-node configuration:

1. Ensure that the IBM HTTP Server Windows service has been stopped.
2. Ensure that the WebSphere Application Server server1 application server has been stopped.
3. Start the IBM WebSphere Commerce Configuration Manager Windows service (server component).
4. Start the WebSphere Commerce Configuration Manager (client component) by clicking **Start** → **Programs** → **IBM WebSphere Commerce** → **Configuration**.
5. Log on to the Configuration Manager. By default the user ID is `webadmin`, and the password is `webibm`. You will be prompted to change your password during the first logon.
6. Select and expand **WebSphere Commerce** → <node> → **Commerce** → **Instance List**.
7. Right-click **Instance List**, and select **Create Instance**.
8. We entered the following settings to create the WebSphere Commerce instance. If not specified, we accepted the default setting.

   Instance tab:

   – Instance name: `demo`
   – Instance's root path: `c:\websphere\commerceserver55\instances\demo`
   – Merchant Key: <16_char_hexidecimal>
   – Site Admin ID: `wcsadmin`

– Site Admin Password: <password>
– Confirm Site Admin Password: <password>

Database tab:

– WebSphere Commerce Database: select **Create a new database or tablespace**

– Database administrator name: `admin`

  We created the admin user in “Create admin user and assign user rights” on page 776.

– Database administrator password: <password>
– Database name: `wc1`

Schema tab:

– Database user name: `admin`

  In our example, the database administrator and user are the same. In a production environment, these may be separate users.

– Database user password: <password>

Languages tab:

– We accepted the default settings for English.

Web Server tab:

– Host name: `wcwin1.itso.ral.ibm.com`

  This is the host name of the Web server for the WebSphere Commerce. In case of a single tier, this is the host name of the WebSphere Commerce node. In a remote Web server configuration, this is the host name of the remote Web server used by WebSphere Commerce.

– Web Server Type: select **IBM HTTP Server**
– Primary Document Root: `c:\websphere\httpserver\htdocs\en_US`
– Server Port: `80`
– Authentication mode: select **Basic**

WebSphere tab:

– DataSource Name: `WebSphere Commerce DB2 DataSource wc1`
– JDBC Driver Location: `c:\websphere\sqllib\java\db2java.zip`
– Tools Port Number: `8000`
– WC Admin Port Number: `8002`
– WC OrgAdmin Port Number: `8004`

Payments tab:

– Host name: `wcwin1.itso.ral.ibm.com`

  This is the host name of the Web server for WebSphere Commerce Payments. In our example, it is the same node as WebSphere Commerce.

– Webserver Port: `5433`

Log system tab:

– We accepted the default settings.

Messaging tab:

– We accepted the default settings.

Auction tab:

– We accepted the default settings.

9. Click **Finish** to begin instance creation.
10. When instance creation is complete, you should see the message:

```
Restart your webserver to apply the changes to your webserver
configuration file.
```

    Restart the IBM HTTP Server windows service.

11. Next you should see the message:

```
Instance was successfully created.
```

    Refer to the *Installation Guide*, IBM WebSphere Commerce V5.5 for Windows 2000 to review log files and settings to verify that the installation was successful. In our example, the logs that are used to capture instance creation information are found in the c:\ibm\wc\instances\demo\logs directory.

12. Do not close the Configuration Manager, as it is needed in the next section to create the WebSphere Commerce Payments instance.

WebSphere Commerce Payments instance creation

For details on how to create a WebSphere Commerce Payments instance, refer to the *Installation Guide*, IBM WebSphere Commerce V5.5 for Windows 2000 product guide.

Note: If you created a WebSphere Commerce or WebSphere Commerce Payments instance prior to installing the WebSphere Commerce V5.5.0.2 Fix Pack, refer to the *Installation Guide for IBM WebSphere Commerce V5.5.0.2 Fixpack* for instructions on updating the instance.

These are the high-level steps and settings that we used to create the WebSphere Commerce Payments instance for the single-tier configuration:

1. From the Configuration Manager, Select and expand **WebSphere Commerce** → *node_name* → **Payments** → **Instance List**.
2. Right-click **Instance List**, and select **Create Instance**.
3. We entered the following settings to create the WebSphere Commerce instance. If not specified, we accepted the default setting.

   Instance tab:

   – Instance name: `wpm`
   – Check **Password Required for startup**

   > **Note:** If you check **Password Required for startup**, you must run IBMPayServer.bat after starting the WebSphere Commerce Payments application server.

   – Instance Password: <password>
   – WebSphere Node Name: `wcwin1`
   – Site Admin ID: `wcadmin`

   Database tab:

   – WebSphere Commerce Payments Database: select **Create a new database or tablespace**
   – Database administrator name: `admin`
   – Database administrator password: <password>
   – Database name: `pay1`

   Schema tab:

   – Database user name: `admin`
   – Database user password: <password>

   Languages tab:

   – We accepted the default settings for English.

   Web Server tab:

   – Host name: `wcwin1.itso.ral.ibm.com`

     This is the host name of the Web server for WebSphere Commerce Payments. In the case of a single tier, this is the host name of the WebSphere Commerce node. In a remote Web server configuration, this is the host name of the remote Web server that is used by WebSphere Commerce Payments.

   – Web Server Type: select **IBM HTTP Server**
   – Server Port: `5432`

– Check **Use SSL**
– SSL Port: `5433`

WCSRealm tab:

– WC Host name: wcwin1.itso.ral.ibm.com

This is the host name of the Web server for WebSphere Commerce.

– WC Web Server Port: `443`

4. Click **Finish** to begin instance creation.
5. When instance creation is complete, you should see the message:

```
Restart your webserver to apply the changes to your webserver
configuration file.
```

Restart the IBM HTTP Server windows service.

6. Next you should see the message:

```
Instance was successfully created.
```

Refer to the *Installation Guide*, IBM WebSphere Commerce V5.5 for Windows 2000 to review log files and settings to verify that the instance creation was successful.

7. When you are finished, close the Configuration Manager.

Database backup

Prior to publishing a sample store to verify the runtime environment, we recommend that you create a backup of the WebSphere Commerce instance database (for example, `demo`) and WebSphere Commerce Payments database (for example, `wpm`).

For details, refer to the *DB2 Administration Guide*.

Start servers

Before you can publish a sample store to verify the runtime environment, you have to start the following servers on the WebSphere Commerce node:

- Start IBM HTTP Server.
- Start DB2 server.
- Start WebSphere Commerce instance application server.
- Start WebSphere Commerce Payments application server.

Start IBM HTTP Server

The IBM HTTP Server can be started from Windows services. Ensure that you have restarted the IBM HTTP Server after the WebSphere Commerce and

WebSphere Commerce Payments instances were created in order for virtual hosts, alias, and other directives to become active. The IBM HTTP Server is configured to start automatically on server restart.

> **Tip:** The WebSphere Commerce V5.5.0.2 Fix Pack addressed a security problem related to directives in the IBM HTTP Server httpd.conf. When creating the WebSphere Commerce instance using the updated Configuration Manager, the httpd.conf will be updated properly.
>
> If you have created a WebSphere Commerce instance prior to installing the WebSphere Commerce V5.5.0.2 Fix Pack, you must manually update the httpd.conf file as documented in the *Installation Guide for IBM WebSphere Commerce V5.5.0.2 Fixpack* that is included with the fix pack.

Start DB2 server

The DB2 Server and supporting services can be started from Windows services. By default, the DB2 Server services are set to start automatically upon server restart.

Start WebSphere Commerce instance application server

To start the WebSphere Commerce instance application server, follow the instructions found in “Starting and stopping servers” on page 810.

Start WebSphere Commerce Payments application server

To start the WebSphere Commerce Payments application server, follow the instructions found in “Starting and stopping servers” on page 810.

Verify the runtime environment and store functionality

In order to verify the runtime environment, we publish a sample store and test the functionality of the store.

Publish a sample store

To publish a sample store:

1. Ensure that you have created a backup of the WebSphere Commerce instance and WebSphere Commerce Payments databases.
2. Ensure that the servers are started as listed in “Start servers” on page 791.

3. Start the WebSphere Commerce Administration Console by entering the following address in a Web browser:

   `https://host_name:8002/adminconsole`

   - *host_name* is the host name of the WebSphere Commerce node
   - `8002` is the virtual host port defined in the httpd.conf and WebSphere Application Server
   - `adminconsole` is the alias defined in the httpd.conf
   - https is used (SSL enabled)

   > **Note:** The WebSphere Commerce administration tools require Microsoft Internet Explorer V5.5 or higher. In our example, we used Internet Explorer V6 + Service Pack 1.

4. Log on with the site administrator ID (for example, `wcadmin`).
5. Select **Site** and click **OK**.
6. From the menu, select **Store Archives** → **Publish**.
7. From the Store Archives page, the view is set to Default, which lists the composite (full features store archives) for each business model that is supplied with WebSphere Commerce.

   Check the desired store to publish (for example, **B2BDirect.sar**) and then click **Next**.
8. On the Parameters page, notice that by default the parameters store directory and identifier are set to Read only. Click **Next**.
9. When the Summary page appears, click **Finish** to begin the publishing process for the store archive.
10. Store publishing will schedule a job because this is a long task. You can monitor the store publish from the **Store Archives** → **Publish Status** page.

    If this is successful, the publishing status will change to Successful.
11. After the Publish Status changes to Successful, check the check box for the given publishing job, and click **Details**.
12. Click **Launch Store**, and click **OK** for the application Web path for the store.
13. Click **Logoff**.
14. From the store home page, add the URL of the store to Favorites and close the Web browser window.
15. Close the WebSphere Commerce Administration Console.

Compiling JSPs for tools and store

We recommend that you precompile your JSPs for the WebSphere Commerce tools and store. Compiling the JSPs will significantly reduce the amount of time needed to load the WebSphere Commerce tools the first time they are accessed. By default, the WebSphere Application Server will compile the JSPs the first time the JSP is requested. This step is optional, but recommended.

IBM WebSphere Commerce V5.5 has separate Web modules for the administration tools and store as follows:

- WebSphere Commerce Administration Console: SiteAdministrator.war
- WebSphere Commerce Accelerator: CommerceAccelerator.war
- WebSphere Commerce Organization Administration Console: OrganizationAdministration.war
- WebSphere Commerce Stores: Stores.war

Syntax: JspBatchCompiler.sh

```
JspBatchCompiler -enterpriseapp.name <name>
   [-webmodule.name <name>]
   [-cell.name <name>]
   [-node.name <name>]
   [-server.name <name>]
   [-classloader.parentFirst <true|false>]
   [-classloader.singleWarClassloader <true|false>]
   [-filename <jsp name>]
   [-keepgenerated <true|false>]
   [-verbose <true|false>]
   [-deprecation <true|false>]
```

For more information, refer to the WebSphere Application Server V5 InfoCenter (search on JspBatchCompiler) at:

http://publib7b.boulder.ibm.com/webapp/wasinfo1/index.jsp?deployment=ApplicationServer&lang=en

To batch compile JSPs for the WebSphere Commerce tools:

1. Ensure that the WebSphere Commerce instance application server is started.
2. Open a command window, and set up the command line by running `setupCmdLine.bat` from the <was_home>\bin directory.
3. To compile the JSPs for the WebSphere Commerce Administration Console (SiteAdministration.war), enter the following from the <was_home>\bin directory:

```
JspBatchCompiler.bat -enterpriseapp.name WC_wc1 -webmodule.name
SiteAdministration.war -server.name WC_wc1 -node.name wcwin1 -cell.name
wcwin1
```

4. Repeat the previous step for each webmodule.name:
   - `CommerceAccelerator.war`
   - `OrganizationAdministration.war`
   - `Stores.war`

> **Tip:** We recommend that you create a script to perform the compile of the JSPs. The script must be run any time the cache is flushed for the application server.
>
> For example:
>
> Create a script wcjsp.bat in the <wc_home> bin directory like the following:
>
> ```
> JspBatchCompiler.bat -enterpriseapp.name WC_wc1 -webmodule.name
> SiteAdministration.war -server.name WC_wc1 -node.name wcwin1
> -cell.name wcwin1
> ```
>
> Execute the CompileJSPs.bat script:
>
> ```
> CompileJSPs.bat
> ```
>
> We have included a sample CompileJSPs.bat in the ITSO sample code c:\7018samples\scripts directory.

Verify the WebSphere Commerce tools

After compiling the JSPs for the WebSphere Commerce tools, verify that they are working properly.

WebSphere Commerce Administration Console

To start the WebSphere Commerce Administration Console, enter the following in a Web browser and log on as the site administrator (for example, `wcadmin`):

```
https://host_name:8002/adminconsole
```

WebSphere Commerce Accelerator

To start the WebSphere Commerce Accelerator, enter the following in a Web browser and log on as the site administrator (for example, `wcadmin`):

```
https://host_name:8000/accelerator
```

WebSphere Commerce Organization Administration Console

To start the WebSphere Commerce Organization Administration Console, enter the following in a Web browser and logo n as the site administrator (for example, `wcadmin`):

```
https://host_name:8004/orgadminconsole
```

Create a test shopping transaction

Register a new user and complete a shopping transaction as follows:

1. Enter the following URL in a Web browser to access the sample store that was published, or access the store URL saved to the Favorites list of your Web browser from a previous step:

   `http://wcwin1.itso.ral.ibm.com/webapp/wcs/stores/servlet/ToolTech/index.jsp`

   > **Note:** Depending on the number of stores that have been published, you may have a different store ID number, and if you published a store other than ToolTech you will have a different store directory name.

2. Register a new user. For example, we create a `testuser1` user.
3. Log on to the store as `testuser1`.
4. Purchase a product as the testuser1 user. When prompted to enter the credit card information, we entered `0000000000000000` (16 0s) as a test number for Visa.

   > **Note:** If you do not have a credit card type visible from the store checkout, most likely the WebSphere Commerce Payments application server (and IBMPayServer) were not running at the time of publishing. The sample store archives contain default payment information for credit card types for the offline payment cassette. To resolve this problem, republish the store or manually create an account, credit card type, and so on.

Verify payment

After the order is completed, the order should be awaiting payment approval within WebSphere Commerce Payments (assuming that you used the default offline cassette).

1. Enter the following URL to access the WebSphere Commerce Payments Administration Console:

   `https://host_name:5433/webapp/PaymentManager`

2. Log on to WebSphere Commerce Payments as the site administrator (for example, `wcadmin`).
3. Click **Approve** from the left navigational bar.
4. Check the check box for the order generated and click **Approved Selected**.

Congratulations, the WebSphere Commerce node single-tier configuration is now complete.

Add a remote database server node

This section describes the tasks that are required to migrate the WebSphere Commerce and related databases to a remote DB2 Server.

This section includes the following tasks:

- Windows 2000 installation
- Install DB2 V8.1 Enterprise Edition Server
- Backup and restore of databases
- Configure DB2 connectivity
- Verify the remote DB2 Server node configuration

Windows 2000 installation

Refer to “Windows installation” on page 776 for details on required service levels of Windows 2000 and user right assignments for DB2.

Install DB2 V8.1 Enterprise Edition Server

To install the IBM DB2 V8.1 Enterprise Edition Server on the remote DB2 Server, do the following:

1. Insert the DB2 UDB V8.1 Enterprise Server Edition CD.
2. Run **Setup** to start the installation.
3. When the DB2 Installer window appears, click **Install Products**.
4. When the Select the Product to Install window appears, select **DB2 UDB Enterprise Server Edition** (default and only option) and click **Next**.
5. When the Welcome window appears, click **Next** to launch the DB2 Setup Wizard.
6. When the License Agreement window appears, review the agreement and select **I accept the terms in the license agreement**. Click **Next**.
7. When the Type of Installation window appears, select **Custom Install** and click **Next**.
8. When the Select the Installation Action window appears, select **Install DB2 UDB Enterprise Server Edition** and click **Next**.
9. When the Installation Action window appears, take note of the Response File check box. This can be used to capture your selection options for a future installation. When selecting Custom Install, by default most of the installation options are set to be installed. Click **Next**.

10. When the Select the Features you want to Install window appears, select the following options and click **Next**:
    - Administration Tools: we accepted the default (all suboptions selected)
    - Getting started: we deselected this option

      Note: This option may be useful to install if you are experimenting and have plenty of disk space.

    - Client support: we accepted the default (all suboptions selected)
    - Application Development tools: we accepted the default (all suboptions selected, especially Base Application Development Tools to load stored procedures), with one exception. We deselected **Warehouse Samples**, as we will also deselect Business Intelligence.
    - Server Support: we accepted the default (all suboptions selected)
    - Business Intelligence: we deselected this option

      This option is needed for WebSphere Commerce Analyzer.

    - Directory: `c:\ibm\sqllib`

      Note: The selected options require about 400 MB of disk space.

11. When the Languages to Install window appears, select the desired language (for example, English), and click **Next**.
12. When the Set User Information for DB2 Administration Server window appears, enter the following and click **Next**:

Domain	We left this field blank.
User name	`db2admin`
Password	<password>
Confirm password	<password>

13. When the Setup the Administration Contact List appears, we accepted the default settings, then clicked **Next**.
14. At the warning message `Notification SMTP server has not been specified`, click **OK**.
15. When the Create a DB2 instance window appears, select **Create the DB2 instance** and click **Next**.
16. When the Configure DB2 instances window appears, we accepted the default (DB2, DB2CTLSV) and clicked **Next**.

17. When the Prepare the DB2 tools catalog window appears, select **Do not prepare the DB2 tools catalog on this computer** and click **Next**.
18. When the Specify a contact for health monitor notification window appears, select **Defer the task after installation is complete**, and click **Next**.
19. When the Request satellite information window appears, accept the default settings and click **Next**.
20. When the Start copying files window appears, review the selected options and click **Finish**.
21. When the Setup is Complete window appears, click **Finish**.
22. Restart your system.

DB2 UDB V8.1 Fix Pack 3 installation

Refer to “DB2 UDB V8.1 Fix Pack 3 installation” on page 777 for details.

Backup and restore of databases

Now that everything is working on the single-tier WebSphere Commerce node, we need to create a backup of the WebSphere Commerce instance database and the WebSphere Commerce Payments database. Then we restore these databases on the newly added remote DB2 Server node. Last, we drop the databases onto the WebSphere Commerce node.

For more information about DB2 backup, refer to the *DB2 Administration Guide*.

Back up databases on the WebSphere Commerce node

The high-level steps to back up the databases on the existing single-tier WebSphere Commerce node are:

1. Ensure that the WebSphere Commerce instance application server is stopped.
2. Ensure that the WebSphere Commerce Payments application server is stopped and that the IBMPayServer is stopped.
3. Create a backup directory that will be copied and restored on the remote DB2 Server node later. For example, we created the c:\wcwin1.db directory.
4. Verify that no applications are connected to the databases:

```
db2 list applications
```

There should not be any connections because the applications that connect to the databases have been stopped. If there are connections that cannot be stopped, enter the following to enforce that no applications are connected:

```
db2 force applications all
db2 terminate
db2stop
db2start
```

5. To back up the databases, do the following:
   a. To back up the WebSphere Commerce instance database:

      ```
      db2 backup db wc1 to c:\wcwin1.db
      ```

   b. To back up the WebSphere Commerce Payments database:

      ```
      db2 backup db pay1 to c:\wcwin1.db
      ```

Restore databases to the remote DB2 Server node

To restore the WebSphere Commerce instance database and WebSphere Commerce Payments database to the remote DB2 Server node:

1. Copy the database backup directory containing the DB2 database backups from the WebSphere Commerce node to the remote DB2 Server node (for example, c:\wcmall.db).
2. Restore the WebSphere Commerce instance database and WebSphere Commerce Payments database on the remote DB2 Server node:

   ```
   db2 restore db mall from c:\wcmall.db
   db2 restore db wpm from c:\wcwpm.db
   ```

3. Perform an SQL query on the restore WebSphere Commerce instance database as a basic test that the restore worked properly:

   ```
   db2 connect to mall
   db2 select * from catalog
   db2 connect reset
   ```

Drop databases

After you have created a backup of the databases and restored them to the remote DB2 Server node, you can drop the databases on the single-tier WebSphere Commerce node by running the following commands from a DB2 command window:

```
db2 drop db mall
db2 drop db wpm
```

Note: Make sure that you have a backup before dropping the databases.

Configure DB2 connectivity

The objective of this section is to configure network connectivity between DB2 installed on the WebSphere Commerce node and the remote DB2 Server node.

Catalog the TCP/IP node

To catalog the TCP/IP node, do the following on the WebSphere Commerce node:

1. Ensure that DB2 Server or Administration Client is installed on the WebSphere Commerce node.
2. Ensure that DB2 Server is installed on the remote DB2 Server node.
3. Open a DB2 command prompt on the WebSphere Commerce node.
4. From a DB2 command window, type the following command:

Syntax:

```
db2 catalog tcpip node node_name remote server_name server
<port_number>
```

The `<port_number>` is the DB2 instance connection port found on the DB2 Server node in the c:\winnt\system32\drivers\etc\services file. In our example, the connection port for the DB2 Server was `50001`. The service name in our services file looked like:

```
db2c_DB2 50001/tcp
```

Alternatively, a service name can be used in place of the port number. If a service name is used, the port and service name must be added to the DB2 client system services file so that it can resolve where to find the system.

For example:

```
db2 catalog tcpip node db2win1 remote db2win1 server 50000
```

Attach to the remote DB2 Server

From a DB2 command window, type the following command:

Syntax: `db2 attach to node_name user dbuser using dbpassword`

For example:

```
db2 attach to db2win1 user admin using <password>
```

Catalog the databases

After you have attached to the remote DB2 Server, catalog the WebSphere Commerce instance and WebSphere Commerce Payments databases from a DB2 command window:

Syntax: `db2 catalog db dbname at node node_name`

For example:

```
db2 catalog db wc1 at node db2win1
db2 catalog db pay1 at node db2win1
```

List databases

Notice that the databases are now remote when you list the DB2 database with the following command:

```
db2 list db directory
```

Verify the remote DB2 Server node configuration

After completing the database restore and connectivity configuration, verify that WebSphere Commerce in the two-tier configuration is functioning properly.

1. Restart the appropriate servers:
   - WebSphere Commerce node
     - IBM HTTP Server 1.3.26
     - IBM WebSphere Application Server V5 - server1
     - WebSphere Commerce instance application server
     - WebSphere Commerce Payments application server
   - DB2 Server node
     - DB2 Server
   - Verify the functionality of the WebSphere Commerce and WebSphere Commerce Payment administration tools and store.

WebSphere Commerce V5.5.0.3 Fix Pack installation

During the editing of this book, a new fix pack was released for WebSphere Commerce. We installed it over our existing platform that contained WebSphere Commerce V5.5.0.2.

Note: When performing an initial installation of your servers, you should install WebSphere Commerce fix pack 5.5.0.3 instead of WebSphere Commerce 5.5.0.2.

This section describes the steps that are required to install IBM WebSphere Commerce V5.5.0.3 (Fix Pack 3). The fix pack can be installed silently or using a GUI. In our example, we use the GUI installer. The WebSphere Commerce V5.5.0.3 Fix Pack contains two installable fix pack modules whose use depends on whether you have already created a WebSphere Commerce instance. If you have not created an instance, you only need to install the wc module. If you have created an instance, you must install both modules (wc and was). In our scenario, we have created both a commerce and a payments instance at this stage.

For more detailed information about the contents of the fix pack and installation, refer to the *Installation Guide for IBM WebSphere Commerce V5.5.0.3 Fixpack* product guide included with the fix pack found at:

http://www.ibm.com/support/docview.wss?rs=494&uid=swg24006027

To install the WebSphere Commerce V5.5.0.3 Fix Pack, do the following:

1. We have WebSphere Application Server V5.0.1 installed. We will require an additional interim fix to be installed before we can install Fix Pack 3 for WebSphere Commerce. Download and install the interim fix PQ78690 for WebSphere Application Server V5.0.1. See “Install WebSphere Application Server V5.0.1 Fixes” on page 781 for details on how to install this fix.
2. Create a temporary directory to download the fix pack into. This temporary directory will be denoted by wcfp3_installdir.
3. Download the fix pack from the WebSphere Commerce 5.5.0.3 fix pack Web site into the wcfp3_installdir directory. The file you download will be denoted by *WC_5503_file_name*.jar.

   Note: We used the Windows BE version, which is WC_5503_WIN_BE.jar

4. Extract the files in the *WC_5503_file_name*.jar file by first navigating to the wcfp3_installdir directory and running the following command:

   ```
   WAS_installdir\java\bin\jar -xvf WC_5503_file_name.jar
   ```

5. Ensure that you are logged in with a Windows user ID that is a member of the Administrator group.
6. Stop the following:
   – Web server and its respective administration processes

- WebSphere Commerce Application Servers (WC_demo, wpm_Commerce_Payment_Server)
- WebSphere Commerce Configuration Manager server

7. Open a command line window.

Applying the fix pack to WebSphere Commerce

8. Using the command line, navigate to the *wcfp3_installdir* directory and type the following command:

```
updateWizard.bat
```

9. Select a language and click **OK**.
10. Click **Next** to continue.
11. Click **Next** to accept the WebSphere Commerce product found on your computer.
12. Select **Install fix packs**. Click **Next**.
13. Under Fix Pack Directory, type the following:

```
wcfp3_installdir\wc
```

14. Click **Next**.
15. Click **Next** to accept the fix pack found.
16. Click **Next** to begin installing.
17. Ensure that the installer displays the message:

```
The following fix pack was successfully installed.
```

    If you do not see this message, the installer will indicate the log files to check. Click **Finish**.

Applying the fix pack to existing WebSphere Commerce instances

18. Navigate to the *WC_installdir*/bin directory.
19. Run the following command:

```
config_ant.bat -buildfile WC_installdir\xml\config\updateInstances.xml
-DupdateCEP=no
```

20. Run the following command:

Syntax:

`updatedb.bat` *`dbname dbuser dbpassword wc_instance_name dbtype dbhost staging locale`*

- *dbname* is the name of the database to be updated
- *dbuser* is the user ID of the schema owner
- *dbpassword* is the password of the user
- *wc_instance_name* is the name of the existing WebSphere Commerce instance
- for *dbtype* enter `DB2`
- *dbhost* is the host name of the machine where the database resides
- *staging* (Enter either `Y` or `N` if your database is for the staging server)
- *locale* is the default locale of this instance (`en_US`)

21. Navigate to the *wcfp3_installdir* directory and enter the following command:

    ```
    updateWizard.bat
    ```

22. Select a language and click **OK**.
23. Click **Next** to continue.
24. Click **Specify product information** and click **Browse**.
25. Navigate to the *WAS_installdir*/installedApps/cell_name directory.
26. Click the WC_instance_name.ear folder, then click **Open**.
27. Click **Next** to continue.
28. Select **Install fix packs**. Click **Next**.
29. Under Fix Pack Directory, type in the following:

    ```
    wcfp3_installdir\was
    ```

30. Click **Next**.
31. Click **Next** to accept the fix pack found.
32. Click **Next** to begin installing.
33. Ensure that the installer displays the message

    ```
    The following fix pack was successfully installed.
    ```

    If you do not see this message, the installer will indicate the log files to check. Click **Finish**.

    Repeat the process to update the Payments instance.

34. Enter the following command:

    ```
    updateWizard.bat
    ```

35. Select a language and click **OK**
36. Click **Next** to continue.
37. Click **Specify product information**, then click **Browse**.
38. Navigate to the *WAS_installdir*/installedApps/cell_name directory.
39. Click the payments_instance_name_Commerce_Payments_App.ear folder, then click **Open**.
40. Click **Next** to continue.
41. Select **Install fix packs**. Click **Next**.
42. Under Fix Pack Directory, type in the following:

    ```
    wcfp3_installdir\was
    ```

43. Click **Next**.
44. Click **Next** to accept the fix pack found.
45. Click **Next** to begin installing.
46. Ensure that the installer displays the message

    ```
    The following fix pack was successfully installed.
    ```

    If you do not see this message, the installer will indicate the log files to check. Click **Finish**.

Post installation steps

47. You should still have a command line window open and be in the *wcfp3_installdir*. Run the following command:

    ```
    postinstall.bat "WC_installdir"
    ```

    For example:

    ```
    postinstall.bat "C:\WebSphere\CommerceServer55"
    ```

48. Open a DB2 command window.
49. Enter the following commands:

    ```
    db2 connect to dbname user dbuser using dbpassword
    db2 reorgchk update statistics on table all
    db2rbind dbname all -l logfile
    ```

    – *dbname* is the name of the database housing the WebSphere Commerce Instance
    – *dbuser* is the user ID of the schema owner
    – *dbpassword* is the user password
    – *logfile* is the name of the file to write the log to
50. Close the DB2 command window.

51. You should still have a command line window open. Navigate to the *WC_installdir*/bin directory.
52. Run the following command:

    ```
    fixdeploy.bat WC_installdir\bin\projectList.txt temp_directory
    WAS_installdir cell_name WC_instance_name workstation WC_installdir
    ```

    For example:

    ```
    fixdeploy.at C:\WebSphere\CommerceServer55\bin\projectList.txt D:\temp
    C:\WebSphere\AppServer m23vnx78 demo workstation
    C:\WebSphere\CommerceServer55
    ```

53. Run the following command:

    ```
    redeploypayments.bat payments_instance_name payments_instance_password
    ```

54. Navigate to the HttpServer_installdir/conf directory and back up the current httpd.conf file.
55. Ensure that the IBM HTTP Server is stopped.
56. Start the WebSphere Commerce Configuration Manager server.
57. Launch the Configuration Manager Client graphical user interface.
58. Select **WebSphere Commerce** → **cell_name** → **Commerce** → **Instance List** → **instance_name** → **Instance Properties** → **Web Server**.
59. On the Web Server panel, you do not need to update anything. Click **Apply**.
60. Click **OK** when prompted to restart your Web server.
61. Click **OK** when the message `Successfully configured the webserver` is displayed.
62. Click **YES** in any message boxes you receive. These messages indicate that the IBM HTTP Server and the configuration file already exist.
63. Exit Configuration Manager.
64. Reboot your machine.
65. Start your servers.

B

Common procedures

This appendix describes several common procedures that are performed while installing or administering a hosting site based on the eSites model. Several scripts are provided to assist in these procedures. Refer to Appendix F, “Additional material” on page 923, for more information about how to access the provided scripts.

This appendix contains the following:

- Starting and stopping servers
- JSP compilation
- Delete sample data
- Load sample data
- Change host name
- Update the Web server plugin
- Configure for reporting

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Starting and stopping servers

During the course of setting up and opening your stores, you will start and stop the commerce and payments servers several times. A WebSphere Commerce instance is started and stopped as an application server called WC_*wc_instance_name* (where *wc_instance_name* is the name of the WebSphere Commerce instance you want to start or stop). We used the default name `demo`. To start a WebSphere Commerce instance called demo, you would start an application server called WC_demo.

The names of application servers are as shown in Table B-1.

Table B-1 Application server names

Application	Application server name
WebSphere Commerce	WC_*wc_instance_name*
WebSphere Commerce Payments	*wpm_instance_name*_Commerce_Payments_Server

By this convention, *wc_instance_name* is the name of the WebSphere Commerce instance (we used `demo`), and *wpm_instance_name* is the name of the WebSphere Commerce Payments instance (we used `wpm`).

WebSphere Commerce

To start a WebSphere Commerce application server:

1. Log on using a Windows user ID with Administrator authority.
2. Open a command line window.
3. Change directories to *WAS_installdir*\bin
   - *WAS_installdir* is the installation directory for WebSphere Application Server.
4. Enter the command:

   ```
   startServer server_name
   ```

   In our case, *server_name* is `WC_demo`.
5. Wait for the following message to be displayed:

   ```
   Server server_name open for e-business
   ```
6. Close the command line window.

To stop a WebSphere Commerce application server:

1. Log on using a Windows user ID with Administrator authority.

2. Open a command line window.
3. Change directories to *WAS_installdir*\bin
   – *WAS_installdir* is the installation directory for WebSphere Application Server.
4. Enter the command:

   `stopServer server_name`

   In our case, *server_name* is `WC_demo`.
5. Wait for the following message to be displayed:

   `Server server_name stop completed`
6. Close the command line window.

> **Note:** The server names are case-sensitive.

WebSphere Commerce Payments

To start a WebSphere Commerce application server, do the following:

1. Log on using a Windows user ID with Administrator authority.
2. Open a command line window.
3. Change directories to *WAS_installdir*\bin
   – *WAS_installdir* is the installation directory for WebSphere Application Server.
4. Enter the command:

   `startServer server_name`

   In our case, *server_name* is `WC_demo`.
5. Wait for the following message to be displayed:

   `Server server_name open for e-business`
6. Close the command line window.

To stop a WebSphere Commerce application server, do the following:

1. Log on using a Windows user ID with Administrator authority.
2. Open a command line window.
3. Change directories to *WAS_installdir*\bin
   – *WAS_installdir* is the installation directory for WebSphere Application Server.

4. Enter the command:

   `stopServer server_name`

   In our case, *server_name* is `WC_demo`.

5. Wait for the following message to be displayed:

   `Server server_name stop completed`

6. Close the command line window.

> **Note:** The server names are case-sensitive.

If the payments instance is password-protected, issue the IBMPayServer command as follows:

1. Open a command line window.
2. Change directories to *WC_installdir*/payments/bin.
   – *WC_installdir* is the installation directory for WebSphere Commerce.
3. Enter the following command:

   `IBMPayServer wpm_instance_name`

4. At the Password prompt, enter the WebSphere Commerce Payments instance.

JSP compilation

Included in the **7018samples.zip** file is a script that can be used to compile JSP code for your WebSphere Commerce instance.

Run the script

1. Obtain and unpack the additional material as described in Appendix F, “Additional material” on page 923
2. Open a command line window.
3. Change directories to where you unpacked the additional material.
4. Change to the Scripts\JSPCompile subdirectory.
5. Copy the file CompileJSPs.bat to the *WAS_installdir*\bin directory.
6. Change to the *WAS_installdir*\bin directory.
7. Run the .bat file as per the following syntax.

Syntax:

`CompileJSPs.cmd` *`enterpriseAppName node_name`*

- *enterpriseAppName* is the name of the WebSphere Commerce server application in WebSphere Application Server (for example, `WC_demo`)
- *node_name* is the short name of the host computer.

This file assumes that enterprise application name and the server name are the same and that the node name and the cell name are the same as well.

8. When the file has completed, open the file CompileJSPs.log in a text editor.

Output of the script

The script creates a log file in the current directory called CompileJSPs.log. Review this file for errors. The script compiles all four Web modules:

- SiteAdministration.war
- CommerceAccelerator.war
- OrganizationAdministration.war
- Stores.war

You should see in the log file where the JSP Batch Compiler was exited four times. Some errors will be found but that is acceptable (as in Figure B-1).

Figure B-1 Successful compilation

If you find any failures as depicted in Figure B-2 on page 814, this means that the compilation stopped. If you have to rerun the file, it will attempt to continue and

usually does. You can open CompileJSPs.bat and comment out any calls to the JSPBatchCompiler that you do not need to rerun.

```
Command Prompt
 need re-generating.
JSPG0043I: /tools/shipping/new_shipping/ShpjrulesDeletedPanel.jsp did not need r
e-generating.
JSPG0043I: /tools/shipping/new_shipping/ZoneDeleteRedirect.jsp did not need re-g
enerating.
JSPG0043I: /tools/shipping/new_shipping/ZonePanel.jsp did not need re-generating
.
JSPG0043I: /tools/shipping/new_shipping/ZonesDeletedPanel.jsp did not need re-ge
nerating.
JSPG0043I: /tools/shipping/new_shipping/ZonesList.jsp did not need re-generating
.
JSPG0045I: Compiling...
C:/WebSphere/AppServer/temp/m23vnx78/WC_demo/WC_demo/CommerceAccelerator.war/too
ls/shipping/new_shipping/_CalcRulePercentageChargePanel.java:193: illegal start
of expression
        <html>
        ^
JVMXM004: JVM is performing abort shutdown sequence
JVMDG217: Dump Handler is Processing a Signal - Please Wait.
JVMDG303: JVM Requesting Java core file
JVMDG304: Java core file written to C:\WebSphere\AppServer\bin\javacore.20031124
.225852.1768.txt
JVMDG215: Dump Handler has Processed Exception Signal 11.

C:\WebSphere\AppServer\bin>
```

Figure B-2 Failed compilation

Delete sample data

When the eSites.sar file is published, it creates a shared catalog under the eSites Catalog Asset Store. The stores that are created use this shared catalog. When you are ready to load your own data, you must remove the sample data from the data but leave the catalog in place. A script has been provided that deletes this data.

Before you run the script

Note: This script assumes that you are using DB2 as your database. If you are using Oracle, the script must be modified.

This script was tested in a single-tier environment. It should work properly in a two-tier or three-tier environment as long as it is run on the application server or the database server.

Run the script

In order to execute the script to delete the sample catalog data, review the following syntax and then perform the steps after it.

Syntax:

`DeleteSampleData.cmd` *`dbName dbUser dbPassword`*

- *dbName* is the name of the database that houses the WebSphere Commerce instance.
- *dbUser* is the DB2 user ID that owns the schema.
- *dbPassword* is the password for the DB2 user ID that owns the schema.

1. Ensure that the Commerce server is stopped.
2. Back up the WebSphere Commerce database.
3. Open a DB2 command window.
4. Change directories to the directory where the script is located.
5. Enter the command to run the script as described above.
6. Close the DB2 command window.

You are now ready to load your own catalog data. Make sure that you follow the procedures outlined in “Load sample data” on page 815 if you plan to use the shared catalog.

Load sample data

This section provides a script and a set of XML files for loading data into an existing shared catalog. The XML files include catalog data as well as inventory for the three stores that are used in our scenario.

Enable Inventory Tracking

After publishing the eSite.sar file, hosted stores will be created with the Availability To Promise (ATP) feature enabled, but with inventory tracking disabled by default.

To enable inventory tracking for all hosted stores that will be created using the Store Creation Wizard:

1. Open the TemplateHostingContract.xml file with a text editor. The file is located in the /*WC_installdir*/xml/trading/xml directory.
2. Search for the following string: **inventoryopflags**.
3. Replace inventoryopflags=14 with `inventoryopflags=0` and save the file.

To enable inventory tracking for a hosted store that will be imported using an XML file from the WebSphere Commerce Accelerator:

1. Open the XML file that defines the hosted store with an editor.
2. Search for the following string: **inventoryopflags**.
3. Replace inventoryopflags=14 with `inventoryopflags=0`.
4. Save the file.

> **Note:** The inventoryopflags is only for the FulfillmentCenter element of the XML. If there is no FulfillmentCenter element in the XML then this step is not required.

To enable inventory tracking for a hosted store that has already been created:

1. Open a DB2 command window.
2. Execute the following commands:

> **Syntax:**
>
> ```
> connect to dbname user dbuser using dbpassword
> update ffmcenter set inventoryopflags='0' where name=ffmcentername
> commit
> ```
>
> - *dbname* is the name of the database housing the WebSphere Commerce instance.
> - *dbuser* is the DB2 user ID that owns the schema.
> - *dbpassword* is the password for the DB2 ushered that owns the schema.
> - *ffmcentername* is the name of the fulfillment center of the store.

3. Close the DB2 command window.

> **Note:** Repeat the **`update ffmcenter`** command for each fulfillment center to be updated.

Load the files

We have provided a set of example files in the Additional Materials. See Appendix F, “Additional material” on page 923 for information about these files. Unzip the files and navigate to the **Scripts** → **LoadSampleData** directory to find the eSiteCatalog.zip file. Unzip this file in its current location. This creates the following directory structure:

```
eSiteCatalog
   data
      en_US
```

Edit the files

These files contain the required table entries for loading inventory records into three stores. The entries in the files assume that:

- eSites.sar has been published.
- The data will be loaded into the shared catalog.
- Three stores have been created.
- Each store has a unique fulfillment center.

You must edit the eSiteCatalog\data\ForeignKeys.dtd file to ensure that the correct values for your implementation are entered. These values are:

```
<!ENTITY ORGANIZATION_DN "o=seller organization,o=root organization">
<!ENTITY STORE_IDENTIFIER "eSite Catalog Asset Store">
<!ENTITY STORE_NAME "eSite Catalog Asset Store">
<!ENTITY MEMBER_ID "7000000000000000003">
<!ENTITY CATALOG_ID "10001">
<!ENTITY TRADEPOSCN_ID "10001">
<!ENTITY STOREENT_ID "10002">
<!ENTITY STOREENT1_ID "10051">
<!ENTITY STOREENT2_ID "10052">
<!ENTITY STOREENT3_ID "10053">
<!ENTITY FFMC1_ID "10051">
<!ENTITY FFMC2_ID "10052">
<!ENTITY FFMC3_ID "10053">
<!ENTITY en_US "-1">
```

Note: STOREENT_ID is the ID for the Catalog Asset Store and CATALOG_ID is the ID for the shared catalog.

For more information about how to create inventory assets, see the *IBM WebSphere Commerce Store Developer Guide V5.5.*

Load the data

We have provided a script in the Additional Materials for loading the sample data into the database. When you are ready to load the sample data, do the following:

1. Obtain and unpack the additional material as described in Appendix F, “Additional material” on page 923.
2. Open a command line window.

3. Change directories to where you unpacked the additional material.
4. Change to the Scripts\LoadSampleData subdirectory.
5. Run the LoadSampleData.cmd file as per the following syntax.

Syntax:

`LoadSampleData.cmd` *`dbname dbuser dbpassword`*

- *dbname* is the name of the database that houses the WebSphere Commerce instance.
- *dbuser* is the DB2 user ID that owns the schema.
- *dbpassword* is the password for the DB2 user ID that owns the schema.

6. When prompted, enter the full installation path for WebSphere Commerce.
7. When prompted, enter the full path for the eSiteCatalog directory.
8. When the script has completed, you can check for errors in the trace file located in *WC_installdir*\logs.
9. Copy the product and category images to the production server.
10. Restart the commerce and payment servers.

Note: When using a shared catalog under the eSite Catalog Asset Store, the target directory for the images is:

WAS_installdir/installedApps/*node_name*/*WC_wc_instance_name*.ear/Stores.war/eSiteCatalogAssetStore/images

Change host name

Changing the host name after installing WebSphere Application Server and WebSphere Commerce is an almost impossible task if attempted manually. We have included some scripts that can make this a reasonable task.

Working environment

We utilized two separate but identically configured servers. We installed and configured WebSphere Commerce and then made an image of the machine. This image was then copied to the other machine. The image contained:

- Windows 2000 Server with Service Pack 4
- IBM DB2 UDB V8.1 with Fix Pack 3
- WebSphere Application Server V5.0 with Fix Pack 1

- WebSphere Commerce V5.5 Business Edition with Fix Pack 5.5.0.3

The commerce installation was a single-tier implementation with local databases.

What's included

The 7018samples.zip contains a directory called Scripts, which has two subdirectories: imaging and migration

- imaging
  - getdbinfo.bat
  - MigrateDriver.class
  - MigrateDriver.java
  - migrateWinDriver.bat
  - olddomain.txt
  - oldhostname.txt
- migration
  - changehost.bat
  - migrate.bat
  - migratedriver.bat
  - newdomain.txt
  - WINFO.exe
  - hostname.reg

Process

1. Obtain and unpack the additional material as described in Appendix F, "Additional material" on page 923.

   Note: If you copied an image from another machine, as in our case, you must disconnect your computer from the network to avoid a conflict.

2. Copy the **Scripts/imaging** directory to C:\ on your target machine.
3. Copy the **Scripts/migration** directory to C:\ on your target machine.

   Note: If the C:\imaging and C:\migration directories do not exist on your target machine, edit the .bat files and replace the references with the actual directories and locations.

4. Open the migrateWinDriver.bat file in a text editor.

5. Find this line:

   ```
   java -classpath c:\migration\. MigrateDriver win c:\WebSphere
   ```

   Change `c:\WebSphere` to whatever directory on your C drive that you want to migrate. This will change any and every occurrence of hostname under the identified directory. If you need to migrate multiple directories, run this script multiple times.

   Note: You cannot change it to **C:** because this will cause the script to fail.

6. Find this line:

   ```
   cd c:\websphere\appserver\java\bin\
   ```

   If this directory does not exist, change this to the actual location of java.exe on your C drive. If this directory does exist, do not change this line.

7. Find this line:

   ```
   echo DBuser name = db2admin > c:\migration\dbname.txt
   ```

   Change **db2admin** to the owner of your database schema. If you used db2admin, then do not change this line.

8. Save the file and close the editor.
9. Open the file **olddomain.txt** in a text editor.
10. Enter the domain name used by the machine your image came from (for example., `itso.ral.ibm.com`). Do not enter a leading period.
11. Save the file and close the editor.
12. Open the file **oldhostname.txt** in a text editor.
13. Enter the short name of the machine that your image came from.
14. Save the file and close the editor.
15. Open the file **newdomain.txt** in a text editor.
16. Enter the domain that you will be using on the target machine (for example, `itso.ral.ibm.com`). Do not enter a leading period.
17. Save the file and close the editor.
18. Open the file **hostname.reg** in a text editor.
19. Replace all occurrences of `Changeme` with the new host name.
20. Find this line:

    ```
    "DB2ACCOUNTNAME"="ChangeMe\wcsadmin"
    ```

In this line, `wcsadmin` is the user ID that we were logged in as when DB2 was installed. If this is different on your machine, change this to the correct user ID.

21. Save the file and close the editor.
22. Open a command line window.
23. Change directories to **C:\imaging**.
24. Type `migrate` and press Enter to start the migration process.
25. When the process is complete, reboot your computer.

> **Note:** If you copied an image from another computer, as in our case, you must change the IP address to avoid a conflict.
>
> If you disconnected your computer from the network, reconnect after the machine has shut down.

26. Follow the directions in "Update the Web server plugin" on page 821 to update the Web server plugin.

Update the Web server plugin

Periodically, you must update the WebSphere Application Server plugin for IBM HTTP Server. This is required after changing the host name on the local computer. Follow these steps to complete the process in a Windows environment:

1. Open the Services window.
2. Right-click **IBM WebSphere Application Server V5 - Server 1**.
3. Click **Start**. A status window appears. Wait for it to go away.
4. Right-click **IBM HTTP Server 1.3.26**.
5. Click **Stop**. A status window appears. Wait for it to go away.
6. Right-click **IBM HTTP Server Administration 1.3.26**.
7. Click **Stop**. A status window appears. Wait for it to go away.
8. Leave the Services window open because you will need it later.
9. Open the WebSphere Application Server Administrative Console by clicking **Start** → **Programs** → **IBM WebSphere** → **Application Server V5.0** → **Administrative Console**.
10. After the login page is displayed, enter an account to track activity and click **OK**. The Administrative Console displays in the browser.

11. Expand **Environment** in the column on the left of the page and click **Update Web Server Plugin** (Figure B-3).

Figure B-3 WebSphere Application Server Administrative Console

12. Click **OK** to update the plugin, as shown in Figure B-4 on page 823.

Figure B-4 Update Web server plugin configuration

A message box appears, indicating that the Web server plugin configuration was updated successfully.

13. Close the browser.
14. Return to the Services window.
15. Right-click **IBM WebSphere Application Server V5 - Server 1**.
16. Click **Stop**.
17. Right-click **IBM HTTP Server 1.3.26**.
18. Click **Start**.
19. Right-click **IBM HTTP Server Administration 1.3.26**.
20. Click **Start**.
21. Close the **Services** window.

Configure for reporting

More than 50 reports are provided with WebSphere Commerce V5.5. To display data on many of these reports, several configuration steps must be taken.

> **Note:** This puts additional load on both the application and database servers. A great deal of data will be stored in the commerce database depending on the number of hits on your site. Make sure that your environment can handle the additional workload and disk storage requirements before enabling these components.

Configuring Marketing Events statistical counters

To configure the Marketing Events statistical counters:

1. Open the Configuration Manager.
2. Expand the node with your machine name, expand the Instance list, and select the instance you want to modify.
3. Expand the **Components** section of the tree.
4. Select the statistics that you want to capture during site usage. You can enable the following components:
   - CampaignRecommendationListener
   - CampaignRecommendationStatisticsListener
   - OrdersMgpPersistListener

   > **Note:** Do not enable these listeners:
   >
   > - ProductAdvisorInvocationListener
   > - ProductComparisonInvocationListener
   > - ProductExplorerInvocationListener
   > - SalesAssistantInvocationListener
   >
   > They are for the Product Advisor, which is not currently enabled for hosted stores.

   a. For each component, check the **Enable Component** check box.
   b. Click the **Advanced** tab.
   c. Check the **Start** check box.
   d. Click **Apply**.
5. Select the **UserTrafficEventListener** component.
6. Check the **Enable Component** check box.

7. Click the **Advanced** tab.
8. Click **Apply**.
9. Close the Configuration Manager.
10. Stop and start your WebSphere Commerce Server according to the instructions in “Starting and stopping servers” on page 810.

Configuring the display source for statistical counters

To configure the location from which statistical data is displayed:

1. Open the Configuration Manager.
2. Expand the node with your machine name, expand **Instances**, and select the instance you want to modify.
3. Select the CommerceAccelerator listing and enter the host name of the machine from which you want to serve campaign statistics in the Statistic Source field. By default, this is the machine where the WebSphere Commerce Accelerator is located.

   You can enter either the host name of the production server or of a development server if you do not have access to the production server through either the Internet or your intranet.

   If you enter the host name of a development server, you will have to export the statistics from the production server to the specified development server prior to viewing the statistics.

   Furthermore, if the machine from which you want to serve statistics is different from the machine where you originally log in, you should add the port number to the host name. This host name will be used when users click Statistics in the Campaign list.
4. Click **Apply**.
5. Close the Configuration Manager.
6. Stop and start your WebSphere Commerce Server according to the instructions in “Starting and stopping servers” on page 810.

Configuring caching to capture user traffic data

To set the level of caching performed on user traffic data:

1. Open your *wc_instance_name*.xml file, which is located in this directory:

   ```
   WC_installdir\instances\instance_name\xml
   ```
2. Find a code fragment similar to this:

   ```
   <LogSystem name="Log System">
   ```

```
   <messageLog display="false" notification="false"
notificationClassName="com.ibm.commerce.messaging.ras.ErrorNotificationHand
ler" />
   <activityLog display="false">
<userTraffic cacheSize="20" />
      <accessLogging cacheSize="32" logAllRequests="false" />
   </activityLog>
</LogSystem>
```

Note: In the example fragment, the element in bold controls the caching level of user traffic logging. Setting it to `1` ensures that the USRTRAFFIC table is written to every time a URL is requested. Setting it to `20`, for example, will cause a write to the USRTRAFFIC table after 20 URLs have been requested. The lower this number is, the more likely it is to affect performance.

3. In addition, the value must be set to `true` in the <start> element of the following sample fragment in your *wc_instance_name*.xml file:

```
<component
compClassName="com.ibm.commerce.event.usertraffic.UserTrafficEventListener"
     enable="true" name="UserTrafficEventListener">
   <property display="false">
      <start enabled="true" />
   </property>
  </component>
```

4. Save the file.
5. Stop and start your WebSphere Commerce Server according to the instructions in “Starting and stopping servers” on page 810.

C

WebSphere Commerce Studio implementation

The original release of IBM WebSphere Commerce Studio V5.5, Business Developers Edition and Professional Developers Edition includes IBM WebSphere Studio Application Developer V5.0. This appendix includes instructions for installing WebSphere Commerce Studio V5.5 with fix packs such as WebSphere Studio Application Developer V5.0.1, WebSphere Test Environment V5.0.1, DB2 UDB V8.1 Fix Pack 3, and WebSphere Commerce Studio Toolkit V5.5.0.2 Fix Pack.

In our example, we used IBM WebSphere Studio Application Developer V5.0.1 for the following reasons:

- IBM WebSphere Studio Application Developer V5.0.1 is a prerequisite to IBM WebSphere Commerce Studio Toolkit V5.5.0.2 Fix Pack.
- We installed IBM WebSphere Application Server V5 Fix Pack 1 (V5.0.1) on the runtime environment to address EJB deployment issues with DB2 UDB V8.1 metadata. As part of the IBM WebSphere Studio Application Developer V5.0.1 installation, we will upgrade to WebSphere Test Environment V5.0.1.

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> **Note:** For more information about WebSphere Commerce Studio installation, refer to the *Installation Guide,* IBM WebSphere Commerce Studio V5.5 and the *Update Guide for WebSphere Commerce Studio Toolkit V5.5.0.2* product guides.

At the time of writing, IBM WebSphere Application Server V5 Fix Pack 2 (V5.0.2) had been released. The corresponding development tooling for IBM WebSphere Application Server V5.0.2 is IBM WebSphere Studio Application Developer V5.1, which includes a WebSphere Test Environment V5.0.2. IBM WebSphere Studio Application Developer V5.1 is sold separately from IBM WebSphere Commerce Studio V5.5.

The prerequisites section of the *Update Guide for WebSphere Commerce Studio Toolkit V5.5.0.2* product guide mentions support for WebSphere Studio Application Developer V5.1. Refer to the WebSphere Commerce support page for additional information. We have not tested this solution.

The support of WebSphere Studio Application Developer V5.1 by WebSphere Commerce Studio provides developers with the following benefits:

- WebSphere Test Environment V5.0.2 support included in WebSphere Studio Application Developer V5.1, which includes many fixes and new functionality
- The ability for hot swap development of commands and EJBs within the WebSphere Test Environment

> **Note:** The IBM WebSphere Commerce V5.5, Express Edition includes IBM WebSphere Application Server V5.0.2, and the IBM WebSphere Commerce Studio, Express Developer Edition includes IBM WebSphere Studio Application Developer V5.1 (WebSphere Test Environment V5.0.2), and WebSphere Commerce workspace and plugins.

WebSphere Commerce Studio installation

This section describes the steps we performed to install WebSphere Commerce Studio V5.5 for the ITSO development environment. The procedures that are outlined include fix packs for WebSphere Studio Application Developer, DB2, and WebSphere Commerce Studio.

The WebSphere Commerce Studio installation is organized as follows:

- Windows 2000 installation
- Install WebSphere Commerce Studio V5.5
- Install WebSphere Studio Application Developer V5.0.1 PTF
- Install WebSphere Test Environment V5.0.1
- Install WebSphere Studio Application Developer V5.0.1 Interim Fix 3
- Install DB2 UDB V8.1 Fix Pack 3
- Install WebSphere Commerce Studio Toolkit V5.5.0.2 Fix Pack

Windows 2000 installation

This section highlights the key issues that are addressed when installing Windows 2000 Server, such as using Windows 2000 Service Pack level 3 or higher, and user rights assigned to the administrator user that will be needed later for DB2.

Windows 2000 Service Pack 4

In our example, we installed Windows 2000 Service Pack 4.

Windows 2000 service levels

We installed the latest Windows 2000 service level critical updates on top of Service Pack 4.

Create admin user and assign user rights

To assign user rights to the administrator ID used by the WebSphere Commerce DB2 owner during instance creation, do the following:

1. Log on to Windows as an administrator.
2. Create a user ID and add the user to the administrators group (for example, we created a user called `admin`). Alternatively, you could use an existing administrator user such as your development logon ID.

> **Note:** This user can be your development user ID that you use to log on to the Windows system or db2admin.
>
> For our example, we created a user called `admin` to whom we assigned these user rights and added to the administrator group. Within our procedure, replace your administrator user ID where we have entered `admin` as a sample user ID.

3. Click **Start** → **Settings** → **Control Panel** → **Administrative Tools** → **Local Security Policy**.
4. From the Local Security Settings window, select and expand **Local Policies** → **User Rights Assignment**.
5. Ensure that the administrator user ID (for example, admin) has user right assignments for the following Windows Local Security Policies that are needed for DB2:
   - Act as part of the operating system
   - Create a token object
   - Increase quotas
   - Log on as a service
   - Replace a process level token
6. Log on as the administrator user ID that had necessary rights assigned for DB2.

Verify network configuration

Prior to installing WebSphere Commerce and supporting software components, it is important that you verify that your network is configured properly. We recommend that you use a static TCP/IP address and verify that the hostname can be resolved with the name server.

Install WebSphere Commerce Studio V5.5

This section includes the high-level steps for installing WebSphere Commerce Studio. The WebSphere Commerce Studio installer will install IBM DB2 UDB V8.1 and IBM WebSphere Studio Application Developer V5.0 as part of the installation.

To install WebSphere Commerce Studio:

1. Decide whether to use a remote DB2 database. If yes, it must be installed on a separate Windows system before installing WebSphere Commerce Studio. In our example, we installed the DB2 UDB server locally.

2. Insert the WebSphere Commerce Studio CD and run **setup**.

   You may be prompted to change CDs during the installation, depending on your selections.

3. We accepted the default options unless specified.
4. When prompted for the WebSphere Commerce Studio Instance Information, we entered the following and then clicked **Next**:
   - WebSphere Commerce Studio instance name: `wc1dev`
   - Merchant Key: <16_hex_number>
   - WebSphere Commerce Payments instance password: <password>
   - Site Administrator ID: `wcadmin`
   - Site Administrator password: <password>
5. When prompted for the WebSphere Commerce Studio Database Information, we entered the following and then clicked **Next**:
   - WebSphere Commerce Studio database name: `wc1dev`
   - Select development database type: **IBM Universal Database**
   - Check **Create WebSphere Commerce Studio database**
6. When prompted for additional WebSphere Commerce Studio Database Information, we entered the following and then clicked **Next**:
   - Database administrator ID: `admin`

     Note: The admin user is a Windows user with the proper DB2 user assignments:
     - Act as part of the operating system
     - Create a token object
     - Increase quotas
     - Log on as a service
     - Replace a process level token

   - Database administrator password: <password>
   - Database user ID: `admin`

     In our example, the DB2 instance owner and schema owner (user) are the same user (admin).

   - Database user password: <password>

     Note: If you had selected the remote database option, you would specify the DB2 server hostname and port. In addition, you would have to install the DB2 Database Administration Client.

7. When prompted to Choose Destination of software components, we entered the following shortened installation paths and then clicked **Next**:
   - WebSphere Commerce Studio: `c:\ibm\wcstudio` (740 MB)
   - DB2: `c:\ibm\sqllib` (500 MB)
   - WebSphere Studio Application Developer: `c:\ibm\wsad` (870 MB)
   - WebSphere Commerce Workspace: `c:\ibm\workspace` (500 MB)
8. You will be prompted for CDs. The WebSphere Commerce Studio installer will do the following:
   - Install WebSphere Studio Application Developer
   - Install DB2 Server and DB2 Administration Client
   - Create the WebSphere Commerce Studio instance
   - Create the WebSphere Commerce Payments instance
   - Import the WebSphere Commerce workspace into WebSphere Studio Application Developer
   - Install WebSphere Application Server Fixes required by the WebSphere Test Environment
9. After the installation is complete, restart your system.
10. Verify the WebSphere Commerce Studio installation.

    For details refer to the *Installation Guide,* IBM WebSphere Commerce Studio V5.5 product guide.

Install WebSphere Studio Application Developer V5.0.1 PTF

Details on installing the IBM WebSphere Studio Application Developer V5.0.1 PTF can be found at:

`http://www.ibm.com/support/docview.wss?rs=457&context=SSBRLP&q=&uid=swg24004660&loc=en_US&cs=utf-8&lang=en`

> **Note:** The IBM WebSphere Studio Application Developer V5.0.1 PTF does not update the WebSphere Test Environment. We will update the WebSphere Test Environment in the next section.

The high-level steps to install IBM WebSphere Studio Application Developer V5.0.1 PTF are as follows:

1. Log on to your system with a user ID that has Administrator authority (needs write access to the install location).
2. Start IBM WebSphere Studio Application Developer V5.0 by selecting **Start** → **Programs** → **IBM WebSphere Studio** → **Application Developer 5.0**.

3. Search for the PTF on the IBM update site by selecting **Help** → **Software Updates** → **New Updates** from the WebSphere Studio Application Developer workspace as seen in Figure C-1.

> **Note:** The Update Manager will find the available updates online from the IBM support site. If this does not work, you can download the PTF .zip file directly and install it locally as described in the PTF installation instructions.

Figure C-1 WebSphere Studio Application Developer available updates

4. The WebSphere Studio Application Developer V5.0.1 PTF contains two updates:
   – WebSphere Studio Application Developer Product (Windows/Linux) 5.0.1: Updates to product components

– WebSphere Studio Application Developer (Windows/Linux) 5.0.1: Updates to base components

Ensure that both updates are checked, as in Figure C-1 on page 833, and click **Next**.

5. Review the license agreement and, if you agree to the conditions, select **I accept the terms in the license agreements** and click **Finish**.
6. If you are warned that you are about to install an unsigned feature, click **Install** to continue. This warning will not cause problems during installation.
7. During the install you will be asked for confirmation during the installation of the second part of the PTF. Click **Install** to continue.
8. When the installation is complete you will be prompted with the message:

```
You will need to restart the workbench for the changes to take effect.
Would you like to restart now?
```

   Click **Yes** to complete the installation and restart.

9. To verify that the WebSphere Studio Application Developer V5.0.1 PTF installation was successful, do the following:
   a. Switch to the Install/Update Perspective by selecting **Help** → **Software Updates** → **Update Manager**.
   b. Select the **Installation Configurations** view. Select and expand **Current Configurations**. Under each file:<path> entry you should see the PTF 5.0.1 features listed. Verify that the two WebSphere Studio Application Developer features are at version 5.0.1, as seen in Figure C-2.

Figure C-2 Verify PTF features are installed successfully

The IBM WebSphere Studio Application Developer V5.0.1 PTF installation is now complete.

Install WebSphere Test Environment V5.0.1

This section describes how to install the WebSphere Test Environment V5.0.1 for IBM WebSphere Studio Application Developer V5.0.1. WebSphere Test Environment V5.0.1 is the corresponding runtime in the development environment for the WebSphere Application Server V5.0.1 (Fix Pack 1) runtime.

Details on installing the WebSphere Test Environment V5.0.1 can be found at:

http://www.ibm.com/support/docview.wss?rs=457&context=SSBRLP&context=SS2MD7&q=websphere+test+environment&uid=swg21109863&loc=en_US&cs=utf-8&lang=en+en

To install the WebSphere Test Environment V5.0.1 in the IBM WebSphere Studio Application Developer V5.0.1 environment, do the following:

1. Log on to your system with a user ID that has Administrator authority (need write access to the install location).
2. Ensure that the IBM WebSphere Studio Application Developer is closed.
3. Back up the <wsad_home>\runtimes\base_v5 directory. This step is optional, but it is recommended if you have disk space to do so.
4. Download the WebSphere Test Environment V5.0.1 for Windows zip file (was50_fp1_win.zip) to a temporary directory (for example, c:\temp) from:

   http://www3.software.ibm.com/ibmdl/pub/software/websphere/studiotools/html/501/wsad/install_was.html
5. Unzip the file to the root of your WebSphere Studio Application Developer installation directory. In our example, we unzipped to the c:\ibm\wsad directory.
6. Open a Windows command prompt and navigate to the <wsad_home>/runtimes/base_v5/ptf directory.
   - `<wsad_home>` is the installation directory where you have installed IBM WebSphere Studio Application Developer.
7. To apply the update, type `wteInstall`.
8. Review the readme and license information files for more information about this update.

Install WebSphere Studio Application Developer V5.0.1 Interim Fix 3

After the IBM WebSphere Studio Application Developer V5.0.1 PTF has been installed, we recommend that you install the WebSphere Studio Application Developer V5.0.1 Interim Fix 003. The Interim Fix 003 installation instructions can be found at:

http://www.ibm.com/support/docview.wss?rs=457&context=SSBRLP&q=&uid=swg24005554&loc=en_US&cs=utf-8&lang=en

Like the WebSphere Studio Application Developer V5.0.1 PTF, the Interim Fix 003 can be installed using the Update Manager as follows:

1. Log on to your system with a user ID that has Administrator authority (needs write access to the install location).
2. Start IBM WebSphere Studio Application Developer V5.0 by selecting **Start** → **Programs** → **IBM WebSphere Studio** → **Application Developer 5.0**.
3. Search for the PTF on the IBM update site by selecting **Help** → **Software Updates** → **Update Manager**.
4. In the Feature Updates view, select and expand **Sites to Visit** → **IBM WebSphere Studio Application Developer Fixes** → **Version 5.0 Fixes** → **WebSphere Studio Application Developer Interim Fix 003 5.0.1.3**.
5. Details about this interim fix are shown in the Preview view. Click **Install** to begin the installation.

   For more information about what is included in the interim fix, click the **More Info** link.
6. When the Feature Install wizard appears, click **Next**.
7. Review the license agreement and, if you accept the conditions, select **I accept the terms in the license agreements**, and click **Next**.
8. When the Optional Features window appears, click **Next**.

   Note: Do not modify the selections. Changing the default choices may result in errors.

9. When the Install Location window appears displaying the install path, click **Finish** to begin the installation.

   Attention: Errors may occur if you change the default Install Location.

10. If you are warned that you are about to install an unsigned feature, click **Install** to continue.

    This warning will not cause problems during installation.
11. When the installation is complete you will be prompted with the message:

    ```
    You will need to restart the workbench for the changes to take effect.
    Would you like to restart now?
    ```

    Click **Yes** to complete the installation.

12. To verify that the WebSphere Studio Application Developer V5.0.1 Interim Fix 003 installation was successful:
    a. Switch to the Install/Update Perspective by selecting **Help** → **Software Updates** → **Update Manager**.
    b. Select the **Installation Configurations** view. Select and expand **Current Configurations**. Verify that WebSphere Studio Application Developer 5.0.1 Interim Fix 003 is installed under c:/ibm/wsad/wstools/eclipse.

The IBM WebSphere Studio Application Developer V5.0.1 Interim Fix 003 installation is now complete.

Install DB2 UDB V8.1 Fix Pack 3

We installed IBM DB2 UDB V8.1 Fix Pack 3 for 32-bit Windows. After the Fix Pack installation, the internal DB2 level is 8.1.3.132. In our example, the WebSphere Commerce instance database and WebSphere Commerce Payments database were created during the WebSphere Commerce Studio installation. For this reason, special steps must be taken to rebind the DB2 utilities to the databases after the fix pack installation.

> **Note:** If you plan to use IBM WebSphere Digital Media Enable V5.5, we recommend that you use DB2 UDB V8.1 Fix Pack 2. The DB2 Information Integrator for Content (EIP) V8.1.2 (Fix Pack 2 level) required DB2 UDB V8.1 Fix Pack 2. There is no fix pack level of EIP for DB2 UDB V8.1 for Fix Pack 3. There are plans to create a Fix Pack 4 level for both.

Details on installing IBM DB2 Universal Database V8.1, Enterprise Server Edition Fix Pack 3 can be found at:

`ftp://ftp.software.ibm.com/ps/products/db2/fixes/english-us/db2winIA32v8/fixpak/FP3_WR21324/`

The high-level steps to install IBM DB2 UDB V8.1 Fix Pack 3 are as follows:

1. Log on to your system with a user ID that has Administrator authority.
2. Download the IBM DB2 Universal Database V8.1, Enterprise Server Edition Fix Pack 3 (`FP3_WR21234_ESE.exe`) from the following URL to a temporary directory (for example, c:\temp):

   `ftp://ftp.software.ibm.com/ps/products/db2/fixes/english-us/db2winIA32v8/fixpak/FP3_WR21324/`
3. Stop all DB2 services in the Windows services.
4. Install the IBM DB2 UDB V8.1 Fix Pack 3.
   – Run the self-extracting fix pack installer (`FP3_WR21234_ESE.exe`)

– We accepted the default installation options.

5. Restart your system for the fixes to take effect.
6. After the system has restarted, open a DB2 command window and enter the **db2level** command. It should return `8.1.3.132` after Fix Pack 3 has been installed.
7. Rebind your DB2 utilities with all databases after the fix pack installation. This step is necessary for the fixes to become effective. The binding procedure has to be performed only once per database.

   In our example, we need to rebind the following databases:

   – WebSphere Commerce instance database (wc1dev)
   – WebSphere Commerce Payments database (wpm)

   To list the name of the databases, enter the following:

   ```
   db2 list db directory
   ```

   To rebind the DB2 UDB databases after applying fixes, enter the following commands from a DB2 command window for each database:

   ```
   db2 terminate
   db2 CONNECT TO <dbname>
   db2 BIND <DB2_installdir>\BND\@db2ubind.lst GRANT PUBLIC
   db2 BIND <DB2_installdir>\BND\@db2cli.lst GRANT PUBLIC
   db2 terminate
   ```

   - `<dbname>` represents the name of a database to which the utilities should be bound.
   - `<DB2_installdir>` represents the directory where you have installed DB2. `db2ubind.lst` and `db2cli.lst` contain lists of required bind files used by DB2 UDB V8.1.

Install WebSphere Commerce Studio Toolkit V5.5.0.2 Fix Pack

This section describes the procedure for installing the IBM WebSphere Commerce Studio Toolkit V5.5.0.2 Fix Pack. In our example, we are updating IBM WebSphere Commerce Studio V5.5, Business Developer Edition and using IBM DB2 Universal Database V8.1, Enterprise Server Edition (Fix Pack 3).

During the fix pack installation, several key tasks are performed that we would like to clarify to give you a better understanding of what to expect during the installation:

- WebSphere Commerce Studio uses the WebSphere Studio Application Developer Update Manager to download the WebSphere Commerce Studio V5.5.0.2 Toolkit Fix Pack to the file system on your local system.

- Both the WebSphere Commerce Studio and WebSphere Commerce workspace directories are serviced using the Update Installation Wizard.

The order in which these tasks occurs is as follows:

- Prerequisites (WebSphere Studio Application Developer V5.0.1).
- Pre-install of fix pack (copy version files).
- Installation of fix pack using the Update Manager.

  Update Manager is used to start the fix pack installation and download the fix pack to the local file system.
- Install fix pack to the WebSphere Commerce Studio directory.

  The Update Installation Wizard is launched by the Update Manager to install the fix pack to the WebSphere Commerce Studio directory.
- Update instance database (updatedb.bat).
- Install fix pack to the workspace directory.

  The Update Installation Wizard is launched manually to install the fix pack to the WebSphere Commerce workspace directory.
- After the installation, the user must complete the post-install configuration steps in “WebSphere Commerce Studio configuration” on page 843.

Detailed installation instructions can be found in the *Update Guide for WebSphere Commerce Studio Toolkit V5.5.0.2* pdf, which can be downloaded with the fix pack at:

http://www.ibm.com/support/docview.wss?rs=494&uid=swg24005628

Prerequisites

Ensure that you have upgraded IBM WebSphere Studio Application Developer to V5.0.1 as described in “Install WebSphere Studio Application Developer V5.0.1 PTF” on page 832.

Pre-install of fix pack

Before you install the IBM WebSphere Commerce Studio Toolkit V5.5.0.2 Fix Pack, do the following:

1. Move version files:

   a. Navigate to the <wcstudio_home>\Commerce\properties\version directory.

   b. Move all of the files between the following directories:

      From: <wcstudio_home>\Commerce\properties\version

      To: <wcstudio_home>\properties\version

2. Back up resources.xml.
   a. Navigate to the *wcstudio_Workspace*\WebSphereTestEnvironment\WebSphereCommerceServerConfiguration.wsc\cells\localhost\nodes\localhost\servers\server1 directory.
   b. Back up the resources.xml file.

Installation of fix pack using the Update Manager

To install the IBM WebSphere Commerce Studio Toolkit V5.5.0.2 Fix Pack, do the following:

1. Start IBM WebSphere Commerce Studio by selecting **Start** → **Programs** → **IBM WebSphere Commerce Studio** → **WebSphere Commerce development environment**.
2. From the workspace, select **Help** → **Software Updates** → **Update Manager**.
3. In the Feature Updates window, right-click **Sites to Visit**, and select **New** → **Site Bookmark**.
4. When the New Update Site Bookmark window appears, enter the following and then click **Finish**:
   – Name: <update_name>

     For example, `wcs5502`.
   – URL: In the URL field enter one of the following for the corresponding edition:
     - Business Developer Edition:

       `ftp://ftp.software.ibm.com/software/websphere/commerce/55/5502/studio/BE/site.xml`

       Note: This is what we entered for the ITSO example.
     - Professional Developer Edition:

       `ftp://ftp.software.ibm.com/software/websphere/commerce/55/5502/studio/PE/site.xml`
5. From the Features Updates window, select and expand <update_name> → **WebSphere Commerce Studio V5.5 Fixes**. Click **WebSphere Commerce Studio Fix Pack 5.5.0.2**.
6. In the Preview window, click **Install** to begin the installation.
7. When the Features Install window appears, click **Next** to confirm the feature that you are about to install.
8. Review the license agreement and, if you accept the conditions, select **I accept the terms in the license agreements**, and click **Next**.

9. Click **Finish** to begin the installation.
10. When the Feature Verification window appears, click **Install**.

    The installer begins to download the update files. When the files have been downloaded the Update Installation Wizard starts.

Continue to the next section.

Install fix pack to the WebSphere Commerce Studio directory

This section describes how to use the Update Installation Wizard to update the WebSphere Commerce Studio directory with the fix pack.

1. When the Update Installation Wizard appears, click **OK** for English.
2. When the Welcome page appears, click **Next**.
3. When the Target Installation directory window appears, we entered `c:\ibm\wcstudio` and then clicked **Next**.

   In our example, the installer did not detect the WebSphere Commerce Studio installation directory. Enter the installation directory in the text field or click the Browse option and navigate to the directory.
4. Select **Install fix packs** and then click **Next**.
5. When the Fix pack location directory window appears, enter `<wsad_home>\Installer\studio` in the Fix pack directory text field. For example, we entered `c:\ibm\wsad\Installer\studio` and then clicked **Next**.
6. When the list of fix packs window appears, ensure that **studio55BE_fp2** is selected and click **Next**.
7. When the summary page appears, click **Next** to begin the fix pack installation.
8. When the fix pack installation is complete, you should see the following message:

   ```
   The following fix pack was successfully installed:
   studio55BE_fp2
   ```
9. Click **Finish**.
10. The Update Installation Wizard closes and you return to the Update Manager.

    The Install/Update window appears with the message:

    ```
    You will need to restart your workbench for the changes to take effect.
    Would you like to restart.
    ```

    In our example, we clicked **Yes** to restart the workspace.
11. Close WebSphere Studio Application Developer.

Update instance database (updatedb.bat)

The updatedb.bat script is used to update existing instance databases. This process should be repeated for each instance database that was created before installing the fix pack.

1. Open a command window and change to the *WCStudio_installdir*\Commerce\bin directory.
2. Run the following command:

   ```
   updatedb.bat dbname dbuser dbpassword wc_instance_name dbtype host_name
   ```

   Where:

   – *dbname* is the name of the instance database.
   – *dbuser* is the DB2 user name that owns the database schema.
   – *dbpassword* is the DB2 user password.
   – *wc_instance_name* is the WebSphere Commerce instance name.
   – *dbtype* is either DB2 or Oracle.
   – *host_name* is the host name of the machine where the database resides.

   For example:

   ```
   updatedb.bat wc1dev admin mypassword wc1dev DB2 wcbuild
   ```

3. When the script is done, you should see the message:

   ```
   Successfully updated: dbname
   ```

   – *dbname* is the instance database name.

Install fix pack to the workspace directory

This section describes how to install the fix pack to the WebSphere Commerce workspace directory using the Update Installation Wizard.

1. Ensure that WebSphere Studio Application Developer has been stopped.
2. Navigate to the <WSAD_home>\Installer directory and double-click **updateWizard.bat**.
3. When the Update Installation Wizard appears, click **OK** for English.
4. When Welcome page appears, click **Next**.
5. When the Target Installation window appears, notice that this time the WebSphere Commerce Studio 5.5 Business is detected and the WebSphere Commerce Studio installation directory is displayed. In this case, however, we want to install the fix pack to the WebSphere Commerce workspace directory.

   Check **Specify product information**, enter the WebSphere Commerce workspace directory, and click **Next**. We entered `c:\ibm\workspace`.
6. Select Install fix packs and click **Next**.

7. When the fix pack location directory window appears, enter the following path in the fix pack directory: `<wsad_home>\Installer\workspace` and click **Next**. For example, we entered `c:\ibm\wsad\Installer\workspace`.

   Note: Previously, we entered the studio directory. In this case, we specify the workspace directory. If you enter the studio directory, the Update Installation Wizard will get an installation failure.

8. When the list of fix packs window appears, ensure that **studio55BE_fp2** is selected and click **Next**.
9. When the summary page appears, click **Next** to begin the fix pack installation.

   Note: We found that the product summary did not display the product name.

10. When the fix pack installation is complete, you should see the following message:

    ```
    The following fix pack was successfully installed:
    studio55BE_fp2
    ```

11. Click **Finish**.

The WebSphere Commerce Studio installation is now complete. Continue to the WebSphere Commerce Studio configuration section.

WebSphere Commerce Studio configuration

This section describes the required and optional configuration tasks for WebSphere Commerce Studio after the installation.

Required post-install configuration

After the installation of WebSphere Commerce Studio, perform the following required configuration tasks.

Note: As documented in the *Update Guide for WebSphere Commerce Studio Toolkit V5.5.0.2*: When using WebSphere Studio Application Developer V5.0.1, you do not have to repackage the messaging adapter JARs as was the case for the original release of WebSphere Commerce Studio V5.5 and WebSphere Studio Application Developer V5.0.

Update existing instance XML

This section describes how to update the instance XML file for changes that are needed after installing the WebSphere Commerce Studio V5.5.0.2 Toolkit Fix Pack. These changes should be made on each instance that was created before installing the fix pack.

Workaround: As we wrote this book, we found that the config_ant.bat that was supplied with the WebSphere Commerce Studio V5.5.0.2 Toolkit Fix Pack did not work as documented in the *Installation Guide for IBM WebSphere Commerce V5.5.0.2 Fixpack* guide. We found that we had to modify the config_ant.bat script to address the error message that was displayed after attempting to run config_ant.bat:

```
The system cannot find the path specified.
```

See modified config_ant.bat in Example C-1.

1. Open a command window and change to the <wcstudio_home>\Commerce\bin directory.
2. We modified the config_ant.bat to properly set variables (for example, JAVA_HOME), as seen in Example C-1.

Example: C-1 Workaround update to config_ant.bat

```
@echo off
setlocal

call setenv.bat
set WAS_USER_SCRIPT=config_env.bat
if exist %WAS_HOME%\bin\setupCmdLine.bat call %WAS_HOME%\bin\setupCmdLine.bat

"%JAVA_HOME%\bin\java" %PM_ARGS% "-Dwas.install.root=%WAS_HOME%"
"-Dwas.repository.root=%CONFIG_ROOT%"
-Dcom.ibm.CORBA.BootstrapHost=%COMPUTERNAME%
-Djava.security.policy="config.policy" com.ibm.ws.bootstrap.WSLauncher
org.apache.tools.ant.Main %*

endlocal
```

3. Run the following command:

   ```
   config_ant.bat -buildfile
   wcstudio_installdir\Commerce\xml\config\updateInstances.xml
   -DupdateCEP=no -Duninstall=no -DinstName=instance
   ```

   – *WCStudio_installdir* is the WebSphere Commerce Studio installation path (for example, c:\ibm\wcstudio).

– *instance* is the WebSphere Commerce Studio instance name (such as `wc1dev`).

For example:

```
config_ant.bat -buildfile
c:\ibm\wcstudio\Commerce\xml\config\updateInstances.xml -DupdateCEP=no
-Duninstall=no -DinstName=wc1dev
```

4. After the config_ant.bat script is run, verify that the WCStudio_installdir\Commerce\Instances*wc_instance_name*\xml*wc_instance_name*.xml file has been updated (for example, new date and file size is different than the backup that was created. If you really want to know what is different, compare the *wc_instance_name*.xml and the backup.

Update WebSphere Commerce Server data source

Before you can start the WebSphere Commerce server in the WebSphere Test Environment of WebSphere Studio Application Developer, you must update the WebSphere Commerce server data source with the correct database user and password.

To update the WebSphere Commerce server data source, do the following:

1. Start WebSphere Commerce Studio by selecting **Start** → **Programs** → **IBM WebSphere Commerce Studio** → **WebSphere Commerce development environment**.
2. In the J2EE Hierarchy view of the J2EE Perspective, expand **Servers** and double-click **WebSphereCommerceServer**. The WebSphereCommerceServer view displays.
3. You will see a warning dialog with the message:

   ```
   Some project definitions in the server configuration are not valid. Do
   you want the editor to fix the project definitions automatically?
   ```

   Click **Yes**.
4. In the WebSphereCommerceServer view, select the **Data source** tab.
5. On the Data sources page, expand **Server Settings**.
6. In the JDBC provider list table, we selected **DB2 JDBC Driver**. After a JDBC provider is chosen, the tables below the JDBC Provider list table are updated.
7. In the Data source field that is defined in the selected JDBC provider, select the data source for the WebSphere Commerce Studio database. In our example, we selected:

   ```
   DB2 jdbc/WebSphere Commerce DB2 DataSource instance
   ```

   – *instance* is the name of the WebSphere Commerce Studio instance. In our example, we named the instance `wc1dev`.

8. Click **Edit**. The Modify Data Source wizard starts.
9. In the Modify Data Source wizard, ensure that the following are set properly. We only had to change the default user password.
   - Name: `jdbc/WebSphere Commerce DB2 DataSource` <instance_name>
   - JNDI name: `jdbc/WebSphere Commerce DB2 DataSource` <instance_name>
   - Database name: <db_name>
   - Default user ID: <db2_user>
   - Default user password: <db2_user_password>
10. Click **Finish** to update the information and close the Modify Data Source.
11. Save the updates to the configuration by selecting **File** → **Save WebSphereCommerceServer**.

Note: Updating the WebSphere Commerce Payments server data source is not required.

Update the WebSphere Commerce Studio API docs

To update the WebSphere Commerce Studio API documentation:

1. Close WebSphere Commerce Studio.
2. Download the javadoc.zip file to a temporary directory from the WebSphere Commerce Support Web site at:

   http://www.ibm.com/support/docview.wss?uid=swg24005628
3. Unpack the contents of the javadoc.zip file into the *wsad_home*\eclipse\plugins\com.ibm.commerce.api.doc directory, replacing any existing files.
4. Start WebSphere Commerce Studio.
5. Select **Help** → **Help Contents**.
6. From the Help Contents page, select one of the following to ensure that the documentation is working properly:
   - WebSphere Commerce Production information
   - WebSphere Commerce Development information
   - WebSphere Commerce messages

Note: If you are prompted by the Update Manager to apply pending changes for the WebSphere Studio Application Developer V5.0.1 PTF/interim fix and WebSphere Commerce Studio V5.5.0.2 Toolkit Fix Pack, check both and click **Finish**. You will be prompted to restart WebSphere Commerce Studio.

Optional post-install configuration

This section describes optional but recommended configuration tasks for the WebSphere Commerce Studio development environment.

Reduce the memory requirements for DB2

The WebSphere Commerce instance database settings are optimized for a production environment with the anticipation that many users will access the WebSphere Commerce site.

There are two reasons that we choose to tune down the database settings within the development environment. First, typically only one user will be accessing the WebSphere Test Environment that is running the WebSphere Commerce Server. Second, having additional system memory can improve the performance of operations in the WebSphere Commerce Studio. This task is optional, but it is recommended for these reasons.

To reduce the memory requirements of DB2 within the WebSphere Commerce Studio environment, complete the following steps:

1. Start a DB2 command window.
2. Enter the commands that are listed in Example C-2.

Example: C-2 Reduce the memory requirements for DB2 (optional)

```
db2 connect to <wcstudio_instancedb> user <db2admin> using <password>
alter bufferpool IBMDEFAULTBP size 1000
alter bufferpool BUFF8K size 50
alter bufferpool BUFF16K size 50
alter bufferpool BUFF32K size 50
```

Configure payment methods

Before enabling the WebSphere Commerce Payments for use with WebSphere Commerce in the WebSphere Test Environment with WebSphere Studio Application Developer, you may need to configure the payment methods accepted by a store.

When you a publish a sample store, several sample payment methods are configured automatically and the instructions in this section can be skipped. However, you should complete these steps after publishing a sample store if the sample store does not contain payment methods you would like to test.

1. Ensure that the WebSphere Commerce server is started.

   The WebSphere Commerce instance is created during the WebSphere Commerce Studio installation.

To start the WebSphere Commerce application in the WebSphere Test Environment: In the Servers view, right-click **WebSphereCommerceServer** and select **Start**.

2. Ensure that the WebSphere Commerce Payments server is started.

   When the WebSphere Commerce Payments instance is created during the WebSphere Commerce Studio installation, by default the password is not needed to start the server.

   To start the WebSphere Commerce Payments application in the WebSphere Test Environment: In the Servers view, right-click **WebSphereCommercePaymentsServer** and select **Start**.

3. Log on to WebSphere Commerce Payments Console using the site administrator user ID and password. You can access the WebSphere Commerce Payments Console by entering one of these URLs in a browser:

   `http://host_name:5432/webapp/PaymentManager`

   or

   `https://host_name:5433/webapp/PaymentManager`

4. From the left panel, click **Merchant Settings**.
5. Click **Refresh** to see what merchant was added after you have published a sample store.
6. In the right window, click **Add a Merchant**.
7. Enter a Merchant Name for your sample store. The Merchant Number must be the same as the storeId for your store (for example, `10001`).
8. Check the **OfflineCard** check box and click **Create Merchant**. A `Merchant created successfully` message should appear.

   Note: If a merchant already exists for your storeID, you cannot create another merchant for the same storeID.

9. In the left panel, click **Merchant Settings** again. In the right-side window, beside the name of your new merchant, the green cassette status icon (under the OfflineCard column) indicates that the OfflineCard cassette is enabled and running for that merchant. Click the green icon.
10. You must now create an account for each currency that is supported by your store, by clicking **Accounts**:

    a. Click **Add an Account**.

    b. Enter an Account Name and an Account Number. The account number must be unique within that store.

c. Select the appropriate currency from the pull-down list. Click **Create Account**.

d. In the Accounts window, click the name of your new account, then click **Brands**.

e. Click **Add a Brand**. Enter a Brand Name (for example, `VISA`) and click **Create Brand**.

11. Repeat step 10 on page 848 for all other Brands to be used with this account.

Configure the default Web browser

We recommend that you configure the browser within WebSphere Studio Application Developer to use the external Microsoft Internet Explorer Web browser.

On a typical development system, there are two methods of accessing Internet Explorer (IE):

- IE 6 from Windows
- IE internal to WebSphere Studio Application Developer

When starting some WebSphere Commerce administration tools from the browser in WebSphere Studio Application Developer 5, a new window is opened that does not share the same session as the original window.

To work around this issue, do one of the following:

1. Update WebSphere Studio Application Developer 5 to use the external browser (preferred option).

   By updating WebSphere Studio Application Developer 5 to use the external IE browser, a user can click the browser icon from WebSphere Studio Application Developer and it will launch the system's IE 6.

2. The alternative is to just use the external Internet Explorer (and not use the built-in IE Web browser of WebSphere Studio Application Developer 5).

Set default XML editor to optimize performance

While writing this book, we discovered that opening large XML files with the XML Editor that is included with the WebSphere Studio Application Developer V5 did not perform as desired. The XML Editor is the default for .xml and .dtd files. To provide better performance, we set the default editor for .xml to Text Editor (or Source Editor). This change is optional.

1. From the main menu in WebSphere Studio Application Developer, select **Windows** → **Preferences**.

2. Select **Workbench** → **File Associations**.
3. Select the ***.xml** file.
4. From the File Associated editors list, click **Add** on the **Text Editor**.
5. Click **Default** to make the Text Editor the default editor for .xml.

> **Note:** The downside to this change is that you no longer have syntax-checking that is provided by the XML Editor.

WebSphere Commerce Studio verification

After the WebSphere Commerce Studio installation and configuration are complete, we recommend that you verify that the WebSphere Commerce Payments and WebSphere Commerce servers start properly.

> **Note:** We started the WebSphereCommerceServer last to ensure that the console shows the WebSphere Commerce messages.
>
> Alternatively, you can switch between the console output for the servers within the Debug Perspective in WebSphere Studio Application Developer V5.0.1.
>
> WebSphere Studio Application Developer V5.1 contains a new feature to switch console output directly in the console view in the J2EE and Server Perspectives.

Start the WebSphere Commerce Payments Server

To start the WebSphere Commerce Payment Server:

1. From the WebSphere Commerce Studio workspace, select the J2EE Perspective.
2. Click the **Servers** tab.
3. Select **WebSphereCommercePaymentsServer**, and right-click **Start**.

   If successful, you should see this message:

   ```
   Server server1 open for e-business.
   ```

Start the WebSphere Commerce Server

To start the WebSphere Commerce Server:

1. From the WebSphere Commerce Studio workspace, select the J2EE Perspective.

2. Click the **Servers** tab.
3. Select **WebSphereCommerceServer**, and right-click **Start**.

   If successful, you should see this message:

   ```
   Server server1 open for e-business.
   ```

D

Error-handling scenarios

This appendix acts as a guide for troubleshooting errors that might arise when using the eSites model.

It includes:

- Troubleshooting guide
- WebSphere troubleshooting
- WebSphere Commerce messages

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Troubleshooting guide

Several problems were encountered by the development team during the customization development phase. The following section presents an overview of how to recognize some of the common pitfalls that can arise. In particular it provides an overview of the cause, effect, and resolution for the following issues:

- Missing resource exception
- Servlet exception missing resource
- Servlet exception unable to compile JSP
- Create and manage store page cannot be displayed
- Additional errors

Important: It is vital to recognize the importance of retracing all of your steps to double-check that everything has been followed correctly in the event of an error. The instructions contained in the book are very precise. The slightest spelling mistake can make the difference between a successful customization and one that fails with an error that might be difficult to diagnose. The first step in the event of any error should always be to retrace your steps and check that everything has been typed correctly as shown.

Most of the common problems that were encountered were due to simple spelling mistakes, updating the wrong file, or simply missing steps. These problems manifested themselves into errors that ranged from exception stack trace dumps in the console to completely blank pages being presented to the user. We list some of common errors that might be encountered and suggest the reason for their occurrence.

Missing resource exception

A missing resource exception indicates that the application is unable to locate a property. Typically, this indicates that either the application is reading from the wrong property file, the property file has not been updated to contain the property, or the property name has been misspelled.

Effect

An example of this occurred during the dynamic text messages customization outlined in 6.5, “Dynamic text messages” on page 95. When editing the infashiontext_dynamic_en_US.properties file, the developer misspelled the property ShoppingCart_text as Shoppingcart_text (that is, spelled cart with a lowercase c). When the Change Pages store administration menu option was selected it caused the error shown in Figure D-1 on page 855.

Figure D-1 Missing resource exception

It also caused the exception in Example D-1 to appear in the console.

Example: D-1 Missing resource exception in console after selecting Change Pages

```
[12/1/03 13:04:25:438 EST] 14ed2ef1 CommerceSrvr  E ErrorCmdExecUnit
ErrorCmdExecUnit CMN0412E: The following Remote Exception occurred during
processing: "java.util.MissingResourceException: Can't find resource for bundle
java.util.PropertyResourceBundle, key
ShoppingCart_Text".java.util.MissingResourceException: Can't find resource for
bundle java.util.PropertyResourceBundle, key ShoppingCart_Text
   at java.util.ResourceBundle.getObject(ResourceBundle.java(Compiled Code))
   at java.util.ResourceBundle.getString(ResourceBundle.java(Compiled Code))
   at org.apache.jsp._Dialog._jspService(_Dialog.java:522)
   at
com.ibm.ws.webcontainer.jsp.runtime.HttpJspBase.service(HttpJspBase.java:89)
   at javax.servlet.http.HttpServlet.service(HttpServlet.java:853)
   at
com.ibm.ws.webcontainer.jsp.servlet.JspServlet$JspServletWrapper.service(JspSer
vlet.java:364)

<Note: the rest of the stack trace is not shown>
```

```
[12/1/03 13:04:25:531 EST] 14ed2ef1 WebGroup      I SRVE0180I:
[CommerceAccelerator] [/webapp/wcs/tools] [Servlet.LOG]:
/GenericSystemError.jsp: init
[12/1/03 13:04:25:672 EST] 14ed2ef1 SystemOut     O ErrorDataBean:
Originating command:
Message Type: 1
Message Key: _ERR_REMOTE_EXCEPTION
Message: CMN3101E The system is unavailable due to "CMN0412E".
```

Resolution

The missing resource exception displays the name of the resource that is missing, making it easy to identify and rectify. In this case, the key value is ShoppingCart_Text.

The first step is to locate the property file that is supposed to contain that property and confirm that the property exists and has been spelled correctly (that is, that it matches the text as shown in the exception). If the problem persists, check the name of the property file that the application uses to load the property. This is typically defined in either an XML file or is hard-coded into a JSP. In this case, the name of the property file that is used is defined by the resource attribute in the StoreFront.xml file.

Additional notes

This problem can also arise if the name of a property is misspelled inside a JSP. In one case, the developer misspelled the name of the HomePagePromo_Text property as HomePagePromo_text (that is, “text,” not “Text”) while updating StoreCatalogDisplay.jsp as part of the same customization. The page failed to load correctly and the message in Example D-2 appeared in the console:

Example: D-2 Missing resource exception in console after loading JSP

```
[12/1/03 13:49:08:781 EST] 3526aec1 CommerceSrvr  E HttpForwardViewCommandImpl
forwardDocument CMN1244E: An error occurred when forwarding document
/eSiteStoreFrontAssetStore/ShoppingArea/CatalogSection/CategorySubsection/Store
CatalogDisplay.jsp. javax.servlet.ServletException: Can't find resource for
bundle java.util.PropertyResourceBundle, key
HomePagePromo_textjavax.servlet.ServletException: Can't find resource for
bundle java.util.PropertyResourceBundle, key HomePagePromo_text
   at
com.ibm.ws.webcontainer.jsp.servlet.JspServlet$JspServletWrapper.service(JspSer
vlet.java:433)

<Note: the rest of the stack trace is not shown>
```

To resolve this, the process in the previous section was followed.

Servlet exception missing resource

This is similar to a missing resource exception, except that in this case the property file itself cannot be located. Typically, this indicates that the name of the property file has been misspelled or has been placed in the wrong directory.

Effect

An example of this occurred during the dynamic text messages customization (6.5, “Dynamic text messages” on page 95). When editing the EnvironmentSetup.jsp file, the developer misspelled the property file name sitetext_dynamic as sitetextdynamic (that is, omitted the underscore). When the home page for the B2C store was loaded, it caused a blank page to appear. It also caused the exception shown in Example D-3 to appear in the console.

Example: D-3 Servlet exception missing resource after loading the store home page

```
[12/1/03 14:08:21:031 EST]  927ae9a CommerceSrvr  E
com.ibm.commerce.common.beans.StoreDataBean getResourceBundle The system could
not find the resource "sitetextdynamic" in the path
"C:\WEBSPH~1\WORKSP~1\Stores\Web
Content/WEB-INF/classes\9996;C:\WEBSPH~1\WORKSP~1\Stores\Web
Content/WEB-INF/classes\eSiteStoreFrontAssetStore".
[12/1/03 14:08:21:250 EST]  927ae9a CommerceSrvr  E HttpForwardViewCommandImpl
forwardDocument CMN1244E: An error occurred when forwarding document
/eSiteStoreFrontAssetStore/ShoppingArea/CatalogSection/CategorySubsection/Store
CatalogDisplay.jsp.
javax.servlet.ServletExceptionjavax.servlet.ServletException
   at
com.ibm.ws.webcontainer.jsp.servlet.JspServlet$JspServletWrapper.service(JspSer
vlet.java:433)
   at
com.ibm.ws.webcontainer.jsp.servlet.JspServlet.serviceJspFile(JspServlet.java:6
94)
   at
com.ibm.ws.webcontainer.jsp.servlet.JspServlet.service(JspServlet.java:792)
   at javax.servlet.http.HttpServlet.service(HttpServlet.java:853)

<Note: the rest of the stack trace was truncated>
```

Resolution

This type of exception displays the name of the resource that is missing, making it easy to identify and rectify. In this case the key value is sitetextdynamic. The first step is to determine what the name of the property file should be, then check that it has been spelled correctly in the code. If the problem persists, the next step is to check the location of the property file and ensure that the file name matches the value that is used in the code.

Servlet exception unable to compile JSP

This means that the servlet engine encountered errors when attempting to compile the JSP. Typically, this indicates an error in the JSP code.

Effect

An example occurred during the dynamic text messages customization (6.5, “Dynamic text messages” on page 95). When editing the StoreCatalogDisplay.jsp file, the developer misspelled the local variable name siteDynamicText as SiteDynamicText (that is, spelled “site” with a capital s). This caused a blank page to appear when the home page for the B2C store was loaded. It also caused the exception in Example D-4 to appear in the console.

Example: D-4 Servlet exception missing resource after loading the store home page

```
[12/1/03 14:23:23:938 EST]  918ae9a CommerceSrvr  E HttpForwardViewCommandImpl
forwardDocument CMN1244E: An error occurred when forwarding document
/eSiteStoreFrontAssetStore/ShoppingArea/CatalogSection/CategorySubsection/Store
CatalogDisplay.jsp. javax.servlet.ServletException: Unable to compile class for
JSP

An error occurred at line: 100 in the jsp file:
/eSiteStoreFrontAssetStore/ShoppingArea/CatalogSection/CategorySubsection/Store
CatalogDisplay.jsp

Generated servlet error:
C:\WEBSPH~1\WORKSP~1\.metadata\.plugins\com.ibm.etools.server.core\tmp0\cache\l
ocalhost\server1\WebSphereCommerceServer\Stores.war\eSiteStoreFrontAssetStore\S
hoppingArea\CatalogSection\CategorySubsection\_StoreCatalogDisplay.java:566:
Undefined variable or class name: SiteDynamicText
        out.print(SiteDynamicText.getString("HomePagePromo_Text"));
                  ^
1 error
javax.servlet.ServletException: Unable to compile class for JSP

An error occurred at line: 100 in the jsp file:
/eSiteStoreFrontAssetStore/ShoppingArea/CatalogSection/CategorySubsection/Store
CatalogDisplay.jsp

Generated servlet error:
C:\WEBSPH~1\WORKSP~1\.metadata\.plugins\com.ibm.etools.server.core\tmp0\cache\l
ocalhost\server1\WebSphereCommerceServer\Stores.war\eSiteStoreFrontAssetStore\S
hoppingArea\CatalogSection\CategorySubsection\_StoreCatalogDisplay.java:566:
Undefined variable or class name: SiteDynamicText
        out.print(SiteDynamicText.getString("HomePagePromo_Text"));
                  ^
1 error
```

```
   at
com.ibm.ws.webcontainer.jsp.servlet.JspServlet$JspServletWrapper.service(JspSer
vlet.java:433)
   at
com.ibm.ws.webcontainer.jsp.servlet.JspServlet.serviceJspFile(JspServlet.java:6
94)
   at
com.ibm.ws.webcontainer.jsp.servlet.JspServlet.service(JspServlet.java:792)
   at javax.servlet.http.HttpServlet.service(HttpServlet.java:853)

<Note: the rest of the stack trace was truncated>
```

Resolution

This type of exception displays both the location of the error and a hint to the type of error, making it easy to identify and rectify. In this case, the problem is an undefined variable or class name called SiteDynamicText. Updating the name of the variable is all that is required. If the location or type of problem is not identified, then start by backing out of any changes made to the file until the page loads successfully. Then carefully review each change until the suspect code is identified. Debugging the JSP via WebSphere Commerce Studio (that is, stepping through executing code) is possible but should be used as a last resort.

Create and manage store page cannot be displayed

When the message Page cannot be displayed is returned in the browser, it indicates that the requested page could not be found on the server. There are numerous reasons that could cause this to occur. The first step always is to ensure that the server is running and the URL is correct. However, if this message appears when selecting either the **create store** or **manage store** menu options inside the eSites Hub, then it typically means that the port numbers are incorrect.

Effect

If the port numbers are incorrect when either **create store** or **manage store** is selected, then the browser displays the Page cannot be displayed message as shown in Figure D-2 on page 860, and nothing will be written to the console.

Figure D-2 Page cannot be displayed when create store is selected

Resolution

This type of exception provides little information and is thus difficult to identify. The problem occurs because the port numbers that are used by WebSphere Commerce Studio and WebSphere Commerce are different. If running on WebSphere Commerce Studio, the lines of code in the JSP that define the port numbers should be commented out as follows:

1. In the J2EE Navigator perspective, locate the Stores project.
2. Browse to the /Web Content/eSiteHub folder.
3. Open the CreateStore.jsp file in the Source view of the JSP Editor.
4. Comment out the lines that append the port number as follows:

```
//scwURL.append(":");
//scwURL.append(toolsPort);
```

5. Save and close the file.
6. Browse to the /Web Content/eSiteHub/include folder.

7. Open the CachedNavigation.jsp file in the Source view of the JSP Editor.
8. Comment out the lines that append the port number as follows (and in Figure D-3):

```
//acceleratorURL.append(":");
//acceleratorURL.append(toolsPort);

//orgAdminConsoleURL.append(":");
//orgAdminConsoleURL.append(orgadminPort);
```

9. Save and close the file.

Note: If running on the server, these lines should be uncommented.

Figure D-3 Commenting out lines in CreateStore.jsp

Publish SAR file fails

Occurs when the SAR file cannot be published by the server.

Effect

A SAR file can fail to publish for any of a number of reasons. However, if it fails to load on a development PC, it is most likely caused by incorrect database settings. If the database settings have not been configured correctly, the vast amount of information that is typically produced by loading a SAR file can overload the database, causing the publishing process to fail.

Resolution

Before publishing a SAR file on a development PC, we recommend that you follow these precautionary steps:

1. Disable all schema optimization options as follows:
   a. In WebSphere Commerce Studio, open the WebSphere Commerce view. This can be accessed by selecting **Window** → **Show View** → **Other** → **Other** → **WebSphere Commerce**.
   b. Right-click **Configuration Manager Server** and select **Start Server**.
   c. After the server has started, right-click **Configuration Manager Server** and select **Run Client**.
   d. Select **WebSphere Commerce** → *node_name* → **Commerce** → **Instance List** → *wc_instance_name* → **Search Configuration** where:
      - *node_name* is the name of the local host.
      - *wc_instance_name* is the name of the WebSphere Commerce instance.
   e. Select the **Schema Optimization** tab.
   f. Ensure that all check boxes are cleared.
   g. Select **Apply**.
   h. Close the Configuration Manager Client.

Figure D-4 Configuration Manager client options

2. Increase the database transaction log space as follows:
   a. Open a DB2 command window.
   b. Type db2 update db cfg for *databasename* using LOGFILSIZ *logfilsiz* where:
      - *databasename* is the name of the database.
      - *logfilsiz* is a large number (that is, at least 50000).
   c. Restart the DB2 database.
   d. Open a DB2 command window.
   e. Type db2 update db cfg for databasename using LOGPRIMARY 20 where:
      - *databasename* is the name of the database.
      - 20 is the number of primary logs.
   f. Close the DB2 command window.

Additional errors

This is a list of common errors that might be encountered and the resolution used to overcome each:

- Missing SAR file in Accelerator

  If **Store Archives** → **Publish** is selected from the Accelerator menu to publish a new asset store and the store is not present in the list of available store archives, typically this means that you have forgotten to insert an entry in the SARRegistry.xml file for the new store archive. Insert the entry, restart the server, and the store archive should appear.

- Access control error when selecting custom menu option

  If the Seller logs onto the eSites Hub and selects a custom menu option from the Accelerator menu to load a custom JSP but is denied access, typically this means that the access control policies have not been loaded into the database or that the database load failed. If the load failed, XML error files will be present in the same directory as the policy files. The files can be identified easily because the filename contains the name of the original policy file and the keyword *error* on the end. Correct the policy files, reload them into the database, and restart the server to gain access to the custom page.

- Servlet exception when selecting Change Pages store administration page

  If a servlet exception appears in the console when selecting the Change Pages store administration page to manage site-wide dynamic messages, and the exception text states:

  ```
  StoreFrontDataBean: method setStoreFrontFilename(Ljava/lang/String;)V
  not found
  ```

  This indicates that the fix pack for Accelerator has not been installed correctly. Install the JAR file as per 6.5, “Dynamic text messages” on page 95, and restart the server to gain access to the Change Pages store administration page.

- Resource not found exception when selecting Change Pages store administration page

  If a resource not found exception appears in the console when selecting the Change Pages store administration page to manage site-wide dynamic messages, and the exception text states:

  ```
  The system cannot find resource "StoreTextDialogMPS" in the namespace
  "devtools"
  ```

  This indicates that the namespace has not been updated. To update the namespace, insert an entry in the resources.xml file as per 6.5, “Dynamic text messages” on page 95, and restart the server to gain access to the Change Pages store administration page.

WebSphere troubleshooting

The majority of errors that are encountered can be resolved by simply investigating both the output in the console and the response returned to the browser. If all steps have been retraced and errors are still being encountered that cannot be resolved, the next step is to utilize the tools that have been provided by WebSphere for problem determination.

WebSphere provides several tools for troubleshooting errors beyond simple logging and tracing. For more information regarding the tools and techniques that are used for problem determination in WebSphere, refer to Chapter 18, “Troubleshooting,” in *IBM WebSphere Application Server V5.0 System Management and Configuration: WebSphere Handbook Series*.

A whitepaper about WebSphere Commerce problem resolution is available at:

http://www-1.ibm.com/support/docview.wss?rs=497&uid=swg21138822

The guide is somewhat dated but should still provide some useful information.

WebSphere Commerce messages

Descriptions of the WebSphere Commerce error messages can be found in the WebSphere Commerce Information Center at:

http://publib.boulder.ibm.com/infocenter/wc55help/index.jsp

Most entries contain the message, an explanation of the problem that caused the message, and possible actions to take to remedy the problem. Here is an example:

```
CMN0103E: Could not obtain the key from the registry. CMN3101E The system is
unavailable due to {0}.
   Explanation: The key could not be obtained from the registry, because the
   registry could be empty or it has not been initialized.

   Action: Ensure the registry was initialized and contains the valid entries.
   During the servlet startup, restart the instance and try again. If the
   error occurred during refresh registry, retry to refresh the registry
   identified by the class name.
```

E

Process Flows

This appendix provides a high-level flow for standard:

- Order processing
- RFQ Overview

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Order processing

This section provides a general overview of the procedures that are used to process an order from the time the Buyer (that is, a customer) submits an order until the order is shipped and received by the customer. For more detailed information about order processing refer to “Operations” on page 600.

Several procedures that make up order processing:

1. Capture the order.
2. Approve payment for the order.
3. Create releases to fulfill the order.
4. Create a pick batch.
5. Create and ship the package.
6. Settle the payment.

Capture the order

A customer or an administrator who has the authority to act on behalf of the customer (such as a Customer Service Provider or reseller administrator) places an order with the store. Placing an order involves browsing the online catalog, selecting one or more products for the order, and providing billing, shipping, and offline payment information. After the customer or administrator completes the order checkout sequence by clicking the Order now button on the store’s Checkout page, the order moves from the state `Pending with products in the shopping cart` to the state `Pending payment approval`.

To submit a new order, follow these steps:

1. Browse to the home page of the B2C store.
2. Select an item in the online catalog and click the **Add to shopping cart** link.
3. The Shopping cart page is now displayed. Click **Checkout**.
4. Add the customer billing address for the order and click **Next**.
5. Select the appropriate **Ship to** address and click **Next**.
6. Select the appropriate **Shipping method** and click **Next**.
7. Enter the payment information and click **Order now**.

At this stage the new order has been submitted for processing and the Order confirmation page is displayed. The Order confirmation page displays the unique order number, the total cost of the order (including taxes and shipping), and an estimated ship date.

Figure E-1 Order confirmation page

The status of the order at this stage is `Pending payment approval`. Registered customers can check the status of the order on the Order status page, which can be accessed by clicking the **My Account** link that is displayed at the top of every page and then clicking **View orders**.

Figure E-2 Order status page

Approve payment for the order

After the order has been placed, the merchant (that is, the Seller) is automatically notified via e-mail that a new order pending payment approval exists.

> **Note:** This option is configured under the **Store** → **Message Type Configuration** menu option when the Seller Administrator is logged in and managing the store. At the time of writing this book, this feature was not working on our development server. As a workaround, the Find Orders page enables the Seller Administrator to find all outstanding orders (that is, orders that have a status of `Pending payment approval`.)

The next step is for the Seller Administrator to log onto the eSites Hub and approve the payment manually:

1. Log onto the eSites Hub as the Seller Administrator.
2. Select **manage store**.
3. Select the store that the order was placed with and click **OK**.
4. Select **Operations** → **Find Orders**.

   This displays the Find Orders page.

Figure E-3 Find Orders page

5. Enter the order number and click **Find**.

   This displays the Orders search results page.

Figure E-4 Orders search results page displays list of orders

6. Select the check box next to the order and click **Process Payment**.

   This displays the Process Payment search results page.

Figure E-5 Process Payments search results page

7. Select the **order number** link.

   This displays the Order Details page, which shows credit card details such as card number, expiration date, and the cardholder's billing address. The information is used to manually verify the credit card details.

Figure E-6 Order Details page used to verify credit card details

8. Click **Approve**.

   This displays the Order Approve page.

Figure E-7 Order Approve page for approving or rejecting the payment

9. To approve the order, click **Approve**.

   This displays the Order details page with a message at the top indicating that the order was approved successfully.

Figure E-8 Order details page following a successful approval

This updates the status of the order to `Payment approved`.

Figure E-9 Order status page displaying the updated status

Create releases to fulfill the order

After the payment has been approved, the system automatically creates releases to fulfill the order. A release is a grouping of order line items on an order that are shipping to the same address, from the same fulfillment center, with the same carrier, at the same time. Conceptually, it groups all items on the order that could conceivably be put in the same box. In addition, a catalog item can be configured to be released separately, meaning that the system creates a separate release for that item.

> **Note:** This process can take some time to complete. It took our development server 15 minutes to process the order of one laptop computer.

After the releases have been created to fulfill the order, the status of the order changes to `Inventory fulfilled` and inventory levels are updated automatically. Figure E-10 on page 878 depicts the Order status page displaying the updated status after the releases have been created to fulfill the order.

Figure E-10 Order status page

Create a pick batch

The next step is to create a pick batch. A pick batch is a set of releases that are grouped to create a single pick ticket (which lists all of the products to be picked from inventory), and a packing slip for each release (which lists all of the products in each package). The Pick Packer uses the pick ticket and packing slip to physically assemble the packages ready for shipping.

It is envisaged that the Pick Packer will routinely create pick batches to process all outstanding releases. To create a pick batch:

1. Log onto the eSites Hub as the Pick Packer.
2. Select **manage store**.
3. Select the store that the order was placed with and click **OK**.
4. Select **Operations** → **Pick Batches**.

   This displays the Pick Batches page.

Figure E-11 Pick Batches page used to create new pick batch

5. Click **Create Next**.

   A pop-up window appears, confirming the creation of the pick batch.

6. Click **OK**.

   The Pick Batches page is re-displayed with the newly created pick batch.

7. Select the check box next to the pick batch and click **View Pick Ticket**.

   This displays the Pick Ticket page.

Figure E-12 Pick Ticket page

8. Click **Print** to print the pick ticket.
9. Click **OK** to return to the Pick Batches page.
10. Select the check box next to the pick batch and click **Packing Slips**.

    This displays the Packing Slips page, which contains a list of packing slips, one for each release in this pick batch.

Figure E-13 Packing Slips page

11. Select the check box next to the release for the order and click **View**.

    This displays the Packing Slip page.

Figure E-14 Packing Slip details page

12. Select **Print** to print the packing slip.
13. Select **OK** to return to the Packing Slips page.

Create and ship the package

After the pick ticket and packing slips have been printed out, the Pick Packer is able to physically pick out the items from the inventory as per the pick ticket and assemble them into packages ready for shipping as per the packing slips (assuming of course all the products are either in stock or have been received from the appropriate distributors). Note that a copy of the packing slip is included in the physical package.

When the release is ready to ship, the next step is for the Shipping Clerk to create a new package in Commerce Accelerator to enable the physical package to be shipped to the customer. To create a new package, follow these steps:

1. Log onto the eSites Hub as the Shipping Clerk.
2. Select **manage store**.
3. Select the store that the order was placed with and click **OK**.

4. Select **Operations** → **Releases Ready to Ship**.

   This displays the Releases Ready to Ship page.

Figure E-15 Releases Ready to Ship page

5. Select the check box next to the release and click **Packages**.

   This displays the Packages page.

Figure E-16 Packages page used to display the list of packages

6. Click **New**.

   This displays the New Package Details page.

Figure E-17 New Package Details page used to create a new package

7. Enter the packing details and click **OK**.

   A window pops up, indicating that the package was created successfully.

8. Click **OK**.

   This returns to the Packages page, which now lists the newly created package.

At this stage the package is ready and should be physically shipped to the customer. After the package has been shipped, the Shipping Clerk confirms the shipment:

9. Select **Operations** → **Releases Ready to Ship**.

   This displays the Releases Ready to Ship page.

10. Select the check box next to the release that is ready to ship and click **Confirm Shipment**.

    A window pops up, indicating that the shipment has been confirmed.

11. Click **OK**.

The customer is notified via e-mail that the order has been shipped. The order status is updated to `Shipped`.

Figure E-18 Order status page displaying the updated status after shipping confirmation

Settle the payment

After the package has been shipped to the customer, the payment for the order must be deposited by the Seller Administrator. Depositing a payment means placing the payment into a batch of payments that are ready for settlement. The purpose of batches is to reduce transaction fees by processing several payments at the same time. To deposit the payment, follow these steps:

1. Log onto the eSites Hub as the Seller Administrator.
2. Click **manage store**.
3. Select the store that the order was placed with and click **OK**.

4. Select **Operations** → **Deposit Payment**.

   This displays the Deposit page.

Figure E-19 Deposit page displaying all undeposited payments

5. Select the check box next to the payment for the order and click **Deposit Selected**.

   After a short interval the Deposit Results page is displayed, indicating that the deposit was successful.

Figure E-20 Deposit Results page displaying successful payment deposit

After the payment has been deposited, the last step is to settle the payment. The process of settlement submits a batch of payments and refunds for processing by a payment processor. This enables the store to physically receive the money for goods sold. To settle the payment, follow these steps:

6. Select **Operations** → **Settle Payment**.

   This displays the Settle page.

Figure E-21 Settle page displaying all unsettled payments

7. Select the check box next to the payment for the order and click **Settle Selected**.

   After a short interval, the Settle Results page is displayed, indicating that the settlement was successful.

Figure E-22 Settle Results page displaying the results of a successful payment settlement

At this stage the package has been shipped to the customer, the inventory levels have been adjusted, and the store has charged the customer's credit card for the total amount of the order. The order status is now `Shipped` and the payment status is `Settled`. This completes the process.

RFQ Overview

Request for Quote (RFQ) is one of the trading mechanisms in WebSphere Commerce. When you create a hosted store based on the B2B Asset Store, you get the RFQ request tool. A buyer can create an RFQ for unique variations of goods and services that are offered in the catalog. If buyers cannot find a product matching their needs in the catalog, they can select attributes from the personalized attributes dictionary to precisely define the product specifications.

A requisition list is used by buyers to add desired products to their RFQs. Buyers can include multiple products in one RFQ and define unique specifications for each product. They can include attachments on the RFQ or product specification level. They can also specify the terms and conditions for the transaction. When the buyer submits an RFQ request, it is placed into a *future* or *active* state. Through manage store, a seller can view the RFQ and submit a response when the request is in an active state. A buyer can also change or cancel an RFQ.

When sellers respond to an RFQ, they have the option of responding to each attachment, terms and conditions, and product, as well as to each product specification or comment. They have the option of specifying a fulfillment center, or substituting a product if the buyer has provided that option in the request. A seller can also modify or cancel a response.

After sellers have responded to the RFQ, the buyer closes the RFQ and evaluates the responses to choose a winner or multiple winners. When the RFQ response is accepted by the buyer and the seller is notified, the RFQ transaction is completed through one of the following processes:

- The buyer places an order that already contains the RFQ information.
- A contract already containing the RFQ information is created.
- The RFQ can go to next round.

A record of the RFQ is maintained in the RFQ list for a predetermined period so that the buyer can copy an RFQ that they use repeatedly. Responses are retained for the same period to facilitate a seller's response to similar requests from the same buyer.

The Site Administrator makes the decision, during the setup of WebSphere Commerce, whether to enable the RFQ trading mechanism. If the decision is made to include the RFQ option, the Site Administrator must consider the following:

- Should approvals for the RFQ response process if enabled? If enabled, responses will be reviewed prior to transmittal to the buyer.
- Notification and job scheduling must be enabled to ensure that buyers and sellers are notified of changes in the status of RFQ requests and responses.

This section provides an overview of the RFQ process. For more information about RFQ requests, see the *IBM WebSphere Commerce Sample Store Guide*.

Administrative activities for using RFQs

The capability to utilize RFQs, while included in WebSphere Commerce V5.5 Business Edition, is not enabled by default. Prior to allowing buyer organizations to create RFQs, the site administrator must complete two tasks:

- Enable the RFQ trading mechanism.
- Enable the RFQ notification messaging.

Enable the RFQ trading mechanism

Before you can use the RFQ trading mechanism, the Site Administrator must enable RFQs using SQL scripts that can be found in the WC directory and were created as part of the WebSphere Commerce installation process.

Two SQL scripts are used:

wcs.enable_rfq.sql Use this SQL script to enable RFQs in WebSphere Commerce.

wcs.disable_rfq.sql Use this SQL script to disable RFQs in WebSphere Commerce.

The SQL scripts are specific to the type of database that is used with WebSphere Commerce and can be found in the following directories:

DB2 database *WC_installdir*/schema/db2
Oracle database *WC_installdir*/schema/oracle

To enable RFQs:

1. Open a DB2 command window.
2. Log on to the WebSphere Commerce database that was created during installation.
3. Enable RFQs using the wcs.enable_rfq.sql script for the database you are using with WebSphere Commerce. For example, if you are using DB2, issue the **`db2 -tvf wcs.enable_rfq.sql`** command.
4. Close the DB2 command window.

You can change the frequency with which the scheduler performs commands relating to RFQ through the Scheduler.

If you intend to use WebSphere Commerce Payments in conjunction with RFQ orders, it must be enabled in a separate process.

To disable RFQs:

1. Open a DB2 command window.
2. Log on to the WebSphere Commerce database that was created during installation.
3. Disable RFQs using the wcs.disable_rfq.sql script for the database you are using with WebSphere Commerce. For example, if you are using DB2, issue the **`db2 -tvf wcs.disable_rfq.sql`** command.
4. Close the DB2 command window.

Enable the RFQ notification messaging

The following RFQ notification messages are generated:

The RFQ was submitted successfully

Informs the RFQ owner that the RFQ request has been transmitted to sellers. Informs the seller's sales managers and seller member groups that an RFQ request has been transmitted to them.

The RFQ was closed successfully

Informs the RFQ owner that all sellers have been told that no more responses will be accepted. Informs the seller's sales managers and seller member groups that no more responses are being accepted by the RFQ owner.

The RFQ was completed successfully

Informs the seller's sales managers and seller member groups that winners have been selected and that an order or contract process has been initiated.

To enable RFQ notification messaging:

1. Open the Administration Console and select **Site** on the Administration Console Site/Store Selection page.
2. From the Configuration menu, select **Message Types**. The Message Type Configuration page displays.

   Do the following for the RFQSubmitMessage, RFQCloseMessage, and RFQCompleteMessage message types. Each message type must be configured separately.
3. Select the check box for the message type you want to work on and click **Change**.
4. The Message Type form displays. Click **Next**.
5. The Parameters form displays. Type in values for the following fields:

   Host `us.ibm.com`
   Protocol `smtp`
   Sender `rfqadmin@us.ibm.com`

   > **Note:** These values are only examples and should be modified to reflect your specific requirements.

6. Click **Finish** or **Cancel** to return to the Message Type Configuration page.

Changing the parameter values that were entered in Step 5, including the message recipients, can also be done through the Scheduler:

1. Locate the command on the Scheduler Status Display page and select it.

2. Click **Change**.
3. Make the necessary changes in the Job parameters field.

RFQ Response States

Table E-1 provides a listing of each of the possible states that an RFQ response can take during processing.

Table E-1 RFQ response states

Status	Explanation	Associated actions
Draft	The response is still being composed.	Create Response and View Draft Response
Pending approval	Approvals has been enabled and an approver is reviewing the response.	All the actions included in the approval chain are represented by this state.
Accepted	The approver has approved the response and allowed its transmittal to the buyer.	Part of the approval chain.
Rejected	The approver has rejected the response.	Part of the approval chain.
Active	The response has been submitted, and approved if appropriate, and is available for evaluation by the buyer. If approvals has been enabled, the response goes to the approver rather than directly to the buyer. If the approver approves the response, it is passed on to the buying organization.	Submit Response
Canceled	The seller has decided not to send this response to the buyer.	Cancel Response
Retracted	A review of the draft within the seller organization has generated some concerns. The response cannot be transmitted to the buyer from this state. It can only move to a canceled or draft state. This state provides the user with some time to reconsider the response before committing to canceling or modifying the response.	Wait for Buyer Action
In-evaluation	The buyer is in the process of evaluating the responses received.	Wait for Buyer Action
Won	Your response is a winning response.	Receive Buyer Action
Lost	Your response is a losing response.	Receive Buyer Action
Won Completed	The RFQ has entered the order or contract process.	Receive Buyer Action

Status	Explanation	Associated actions
Lost completed	The RFQ has entered the order or contract process.	Receive Buyer Action
Won next round	The buyer accepts your response but creates a next round RFQ for continued negotiation.	Receive Buyer Action
Lost next round	The buyer rejects your response but creates a next round RFQ for continued negotiation.	Receive Buyer Action

RFQ processing

This section provides a general overview of the procedures that are used to process an RFQ from the time the buyer submits a request for a quote until responses are received from sellers, approved, and an order is created to fulfill the request.

Several procedures make up RFQ processing:

1. Create the RFQ.
2. Respond to the RFQ.
3. Select the RFQ response.
4. Complete the RFQ.

Create the RFQ

A buyer can create an RFQ for unique variations of goods and services that are offered in the catalog. If buyers cannot find a product matching their needs in the catalog, they can select attributes from the personalized attributes dictionary to precisely define the product specifications.

Buyers can include multiple products in one RFQ and define unique specifications for each product. They can include attachments at the RFQ or product specification level. They can also specify the terms and conditions for the transaction.

The first step is for the Buyer Administrator to log onto the B2B store and create an RFQ:

1. Log onto the B2B store as the Buyer Administrator.
2. Select **RFQ List** from the menu.

   This displays the RFQ List page, which contains all RFQs that have been created for the store.

Figure E-23 RFQ List page displaying the list of all RFQs created for the store

3. Click **Create RFQ**.

   This displays the Create New RFQ page.

Figure E-24 Create New RFQ page

4. Enter the following details:

RFQ Name	Name used to identify the RFQ.
Short Description	A short description of the RFQ.
Long Description	A more detailed description of the RFQ.
RFQ result	Ensures an order will be created at the end of successful negotiations when Order is selected.
Date RFQ becomes active	Date and time on which responses will first be accepted for the RFQ.
RFQ Date	Last date and time on which responses will be accepted for the RFQ.

5. Click **Create**.

   This displays the RFQ Modify page.

Figure E-25 RFQ Modify page used to add attachments, products, and terms and conditions

6. Click **Add** under the RFQ attachment section.

   This displays the Add New Attachment page, which is used to add attachments to the RFQ. Attachments can be any files that provide information regarding the RFQ (such as a spreadsheet or PDF).

Figure E-26 Add New Attachment page

7. Enter a Description that uniquely identifies the attachment.
8. Click **Browse** to find a file from the user's local file system.
9. Click **Upload** to attach the file and return to the RFQ Modify page. The attachment should now be listed under the RFQ attachment section.
10. Click **Add** under the Terms and Conditions section.

    This displays the Add Terms and Conditions page that is used to add any special terms and conditions to the RFQ.

Figure E-27 Add Terms and Conditions page

11. Enter the Terms and conditions.
12. Select **Yes** for Specification required in the response? to ensure that the terms and conditions must be included in any RFQ response.
13. Select **No** for Specification can be changed? to ensure that the terms and conditions cannot be modified by the Seller in any RFQ response.
14. Click **Add** to add the terms and conditions and return to the RFQ Modify page. The terms and conditions should now be listed under the Terms and conditions section.
15. Click **Add Product from Catalog** to specify the product that the quote is being made on.

    This displays the Main Category Display page.

16. Browse through the catalog until the desired product is found and the detailed product information is displayed on the Item Display page.

Figure E-28 Item Display page showing detail information about a product in the catalog

17. Select **Existing** under the Request for Quote section and click **Add to RFQ**.

    This displays the Add to RFQ page.

Figure E-29 Add to RFQ page

18. Select the radio button next to the newly created RFQ and click **Add**. This reopens the RFQ Modify page, where the product is listed under the RFQ product information section.
19. For the newly added product, enter the following fields:

Price	(optional) Specify the desired price per unit.
Quantity	Designate the number of products required.
Units	Select the measurement that is used to specify the quantity. (Use **one** to specify a number value.)
Substitutable	Select **No** to indicate that the seller should not substitute another product in the RFQ response.

20. After the product details have been specified, click **Save changes**. This reopens the RFQ Modify page.
21. Click **Submit RFQ** to submit the RFQ. This reopens the RFQ List page.

The status of the newly created RFQ is now either `Future` (if the RFQ Active Date has not been reached yet) or `Active`, meaning that Sellers can now submit responses to the quote.

Respond to the RFQ

After a buyer has submitted an RFQ and it has become active (by reaching the RFQ Active Date), the seller can respond to the terms and conditions and product descriptions that were specified by the buyer. The seller can either accept the RFQ as received or can present counterproposals in their response. For example, the seller may want to propose another delivery date, suggest another product, or change the value of a changeable product specification.

Every seller in an organization can respond to an RFQ request. This means that an organization can allow several individuals to respond. For example, factories on different continents may be able to offer different price and delivery combinations. Only the seller who created a response can modify it.

The next step is for the Seller Administrator to log onto the eSites Hub store and respond to the RFQ:

1. Log onto the eSites Hub store as the Seller Administrator.
2. Select **manage store**.
3. Select the B2B store that created the RFQ and click **OK**.
4. Select **Sales** → **RFQs**.

   This displays the RFQs page, which contains a list of all RFQs for the store.

Figure E-30 RFQs page displaying all RFQs for the store

5. Select the check box next to the newly created RFQ and click **Summary**.

   This displays the RFQ Summary page that enables the Seller to view the details of the RFQ including the duration, attachments, terms and conditions, and the products required for quoting.

Figure E-31 RFQ Summary page

6. Click **Respond**.

   This displays the New Response - General page.

Figure E-32 New Response - General page

7. The New Response - General page enables the Seller to specify the general details of the RFQ response.
8. Enter the following details:

   Name A unique name used to identify the response

   Remark Additional information intended for the buyer

   Fulfillment center The fulfillment center from which goods will ship

   Select **Yes** for Must all products in the response be accepted when this response is accepted? to ensure that all products must be accepted by the Buyer.
9. Click **Next**.

   This displays the New Response - Attachments page.

Figure E-33 New Response - Attachments page used to view, add, remove, and replace attachments

10. The New Response - Attachments page enables the Seller to review any attachments to the RFQ.
11. Click the **File name** link to view the attachment from the buyer. Additional attachments can be added, replaced, and removed using the Add, Replace, and Remove buttons.
12. After the Attachments have been reviewed, click **Next**.

    This displays the New Response - Terms and conditions page.

Figure E-34 New Response - Terms and conditions page

13. The New Response - Terms and conditions page enables the Seller to review terms and conditions of the RFQ.

> **Note:** A response to submit counter terms and conditions cannot be created because in an earlier step we specified that terms and conditions could not be changed by the seller.

14. After the terms and conditions have been reviewed, click **Next**.

    This displays the New Response - Products page.

Figure E-35 New Response - Products page for responding to product's price, quantity, and specification

The New Response - Products page enables the Seller to quote on all the products in the RFQ.

15. Select the check box next to the desired product and click **Respond**.

    This displays the Respond page.

Figure E-36 Respond page

16. This Respond page displays all details for the requested product quote including price, quantity, and units. To accept the requested values as is, click **OK**. Otherwise, modify the following fields:

Quantity	Quoted quantity that can be supplied
Units	Measurement for the quantity
Price	Quoted price that can be supplied

17. After any modifications have been made, click **OK**. This re-displays the New Response - Products page.
18. Click **Finish** to create the response. A window pops up, indicating that the RFQ response was created successfully.

> **Note:** Clicking the Finish button does not submit the response. It merely creates the response. The response will be in Draft mode.

19. Click **OK**.

After the response has been created, the next step is to submit the response to the Buyer:

20. From the menu, select **Sales** → **RFQs** to return to the RFQs page.

21. Select the check box next to the RFQ that the response was created for and click **Responses**.

    This displays the RFQ Responses page, which contains a list of all responses that were created for the RFQ.

Figure E-37 RFQ Responses page

22. Select the check box next to the newly created response and click **Summary**.

    This displays the Response Summary page.

Figure E-38 Response Summary page

The Response Summary page is used to review the details of the response.

23. After the details have been reviewed, click **Submit**.
24. A window pops up, prompting the user to submit the response. Click **OK**.

    The status of the RFQ response is now `Active`.

Select the RFQ Response

Before the buyer can accept or reject any response, the RFQ must be closed. When the RFQ is closed, responses are no longer accepted.

After the seller has responded to the RFQ, the buyer closes the RFQ and evaluates responses to select a winner or multiple winners. When the RFQ response is accepted by the buyer, the seller is notified.

The next step is for the Buyer Administrator to log onto the B2B store and close the RFQ:

1. Log onto the B2B store as the Buyer Administrator.
2. Select **RFQ List** from the menu.

   This displays the RFQ List page containing a list of all RFQs that have been created for the store.
3. Click the **List RFQ Responses** link next to the desired RFQ.

   This displays the RFQ Responses page containing the list of all responses for the RFQ.

Figure E-39 RFQ Responses page

4. When the Buyer is satisfied that enough responses have been collected, they can close the RFQ so that no more responses can be submitted. Alternatively, the RFQ will close automatically when the RFQ Close Date is reached.
5. Click **Close RFQ**.

   This displays the RFQ Summary page.

Figure E-40 RFQ Summary page indicating that the RFQ has been closed

   The status of the RFQ is now `Closed`.

The next step is to accept a response to fulfill the request.

6. Click **List RFQ Response**.

   This re-displays the RFQ Responses page.

Figure E-41 RFQ Responses page

7. Click the **Accept all products** link next to the successful response.

   This re-displays the RFQ Responses page with the updated response status.

Figure E-42 RFQ Response page indicating that the response was accepted

The response has been accepted and thus the status is now `Won`. The successful Seller is notified via e-mail. The Seller can check the status of the responses by logging onto the Hub, selecting **Sales** → **RFQs**, and loading the RFQ Responses page for the selected RFQ.

Figure E-43 RFQ Response page indicating that the Seller has been successful

Complete the RFQ

After the RFQ response is accepted by the Buyer and the Seller is notified, the RFQ transaction is completed when the Buyer submits an order containing the RFQ information.

The next step is for the Buyer Administrator to log onto the B2B store and complete the RFQ:

1. Log onto the B2B store as the Buyer Administrator.
2. Select **RFQ List** from the menu.

   This displays the RFQ List page containing a list of all RFQs that have been created for the store.
3. Click the **List RFQ Responses** link next to the desired RFQ.

   This displays the RFQ Responses page.

Figure E-44 RFQ Responses page that displays the list of responses for the RFQ

4. Click the **Complete** link next to the successful response.

   This displays the Convert RFQ response to order page.

Figure E-45 Convert RFQ response to order page

5. Enter the following information:

Shipping address	The address to ship the goods to
Shipping method	The method used to ship the goods
Billing address	The address to bill the goods to
Payment method	The method used to pay for the goods
Credit card number	The credit card number used for payment
Exp	Expiration month and year of credit card
Purchase order number	The number used to track the purchase

6. Click **Create Order**. This displays the Order Status page.

Figure E-46 Order Status page

7. A new order has been created and submitted to the successful Seller to satisfy the RFQ. The status of the order is set to `Pending Payment Approval`. To view the details of the order, click the **Order Number** link.

   This displays the Order Details page.

Figure E-47 Order Details page

Note that the total price and quantity reflect the agreed-upon value that the Seller stated in the RFQ response.

8. The Seller is now able to log into the Hub and view the details of the newly created order by selecting **Sales** → **Find Orders** to perform an order search and loading the Order Summary page for the selected order.

Figure E-48 Order Summary page displaying order details

This completes the RFQ processing procedures. The Seller can now process the order just as any other order in the system. Refer to “Order processing” on page 868 for more information regarding processing orders.

F

Additional material

This redbook refers to additional material that can be downloaded from the Internet as described below.

Locating the Web material

The Web material that his associated with this redbook is available in softcopy on the Internet from the IBM Redbooks Web server. Point your Web browser to:

ftp://www.redbooks.ibm.com/redbooks/SG247018

Alternatively, you can go to the IBM Redbooks Web site at:

ibm.com/redbooks

Select the **Additional materials** and open the directory that corresponds with the redbook form number, SG247018.

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Using the Web material

The additional Web material that accompanies this redbook includes the following files:

File name	*Description*
7018code.zip	e-Commerce Hosting Solutions Guide, using WebSphere Commerce V5.5 Business Edition zipped code samples
eSite.sar	SAR file for publishing the eSite model

System requirements for downloading the Web material

The following system configuration is recommended:

Hard disk space: 20 MB minimum
Operating System: Windows 2000 Server
Processor: 1 GHz or higher
Memory: 1 GB minimum

How to use the Web material

Create a subdirectory (folder) on your workstation and download the files to this folder. Unzip the contents of the Web material zip file into this folder. You should now see the following directories:

- Customization 6.10 Custom Registration Menus
- Customization 6.2 New Storefront Style & Template
- Customization 6.3 New e-Marketing Spot
- Customization 6.4 Customized Store Directory
- Customization 6.5 Dynamic Text Messages
- Customization 6.6 New Store Profile
- Customization 6.7 Custom Shopcart Display
- Customization 6.8 New Coupon Promotion
- Customization 6.9 Custom Accelerator Menus
- eSite
- Sample CSV Load
- Scripts

Customization 6.2 StoreFront Style & Template

This directory provides the necessary files to customize a New Store Front as described in 6.2, “New storefront style and template” on page 76.

The deployment steps for each file are described in 9.2.2, “Deployment” on page 262.

The following files are provided in this directory:

- color13 (Directory)
  - go_button.gif
- color14 (Directory)
  - go_button.gif
- color15 (Directory)
  - go_button.gif
- color16 (Directory)
  - go_button.gif
- color17 (Directory)
  - go_button.gif
- color18 (Directory)
  - go_button.gif
- style3 (Directory with the styles description)
- color3_1.gif
- color3_2.gif
- color3_3.gif
- color3_4.gif
- color3_5.gif
- color3_6.gif
- Master3_1.css
- Master3_2.css
- Master3_3.css
- Master3_4.css
- Master3_5.css
- Master3_6.css
- style.xml
- style3.gif
- StyleDir.xml
- VirtualPages.xml
- Features.xml

Customization 6.3 New e-Marketing Spot

This directory provides the necessary files to customize a New Store Front as described in 6.3, “New e-Marketing Spot” on page 89.

The deployment steps for each file are described in 9.3.3, “Deployment” on page 273.

The following files are provided in this directory:

- ShopCartProductESpot.jsp
- OrderItemDisplay.jsp
- infashiontext_en_US.properties
- infashiontext.properties

Customization 6.4 Customized Store Directory

This directory provide the necessary files to customize a New Store Front as described in 6.4, “Customized store directory” on page 92.

The deployment steps for each file are described in 9.4, “Customized store directory” on page 304.

The following files are provided in this directory:

- column10051.jpg
- column10052.jpg
- column10053.jpg
- ContentForSARRegister.txt
- MallDirectory.jsp
- MallHeader.jsp
- StoreDirectory.sar

Customization 6.5 Dynamic Text Messages

This directory provides the necessary files to customize a New Store Front as described in 6.5, “Dynamic text messages” on page 95.

The deployment steps for each file are described in 9.5.3, “Deployment” on page 309.

The following files are provided in this directory:

- .imported_classes.jar
- CommerceAcceleratorMPS.xml
- Dialog.jsp
- EnvironmentSetup.jsp
- infashiontext_dynamic_en_US.properties
- infashiontext_dynamic_labels_en_US.properties
- OrderItemDisplay.jsp
- PreviewHomePagePromo.html
- PreviewShopCart.html
- resources.xml
- sitetext_dynamic_en_US.properties
- sitetext_dynamic_label_en_US.properties
- StoreCatalogDisplay.jsp
- StoreFront.xml
- StoreFrontMPS.xml
- StoreTextDialogMPS.xml

Customization 6.6 New Store Profile

This directory provides the necessary files to customize a New Store Front as described in 6.6, “New asset store” on page 119.

The deployment steps for each file are described in 9.3.3, “Deployment” on page 273.

The following files are provided in this directory:

- CommerceAcceleratorXHS.xml
- CommerceAcceleratorXPS.xml
- CreateStore.jsp
- CustomB2CStore.sar
- CustomB2CStorePreReqAccessControlPolicies.xml
- CustomB2CStorePreReqAccessControlPolicies_en_US.xml
- CustomB2CStorePreReqUserGroups_en_US.xml
- DeploymentHostingContractXHS.xml
- SARRegistry.xml
- TemplateHostingContractXPS.xml
- resources.xml
- wc1dev.xml

Customization 6.7 Custom Shopcart Display

This directory provides the necessary files to customize a New Store Front as described in 6.7, “Custom shopcart display” on page 129.

The deployment steps for each file are described in 9.7.3, “Deployment” on page 325.

The following files are provided in this directory:

- Features.xml
- ShoppingCart.xml
- fsf.xml
- OrderItemDisplay.jsp
- config_en_US.properties
- scf.xml

Customization 6.8 New Coupon Promotion

This directory provides the necessary files to customize a New Store Front as described in 6.8, “New coupon promotion” on page 139.

The deployment steps for each file are described in 9.8.2, “Deployment” on page 328.

The following files are provided in this directory:

- \en_US\images\discount_15_percent.gif
- \es_ES\images\discount_15_percent.gif
- \fr_FR\images\discount_15_percent.gif
- \it_IT\images\discount_15_percent.gif
- \ja_JP\images\discount_15_percent.gif
- \ko_KR\images\discount_15_percent.gif
- \pt_BR\images\discount_15_percent.gif
- \zh_CN\images\discount_15_percent.gif
- \zh_TW\images\discount_15_percent.gif

Customization 6.9 New Accelerator Menus

This directory provides the necessary files to customize a New Store Front as described in 6.9, “Custom accelerator menu” on page 156.

The deployment steps for each file are described in 9.9.3, “Deployment” on page 331.

The following files are provided in this directory:

- CommerceAcceleratorMHS.xml
- RegisteredCustomersViewPolicy.xml
- RegisteredCustomers.jsp
- mccNLS_en_US.properties

Customization 6.10 Custom Registration Menus

This directory provides the necessary files to customize a New Store Front as described in 6.10, “Custom registration menus” on page 163.

The deployment steps for each file are described in 9.10.3, “Deployment” on page 334.

The following files are provided in this directory:

- CachedNavigation.jsp
- UserRegistrationAddForm.jsp
- OrgRegistrationAddForm.jsp
- b2cHostingChannel_en_US.properties

Sample CSV Load

This directory provides the necessary files to load a sample catalog as described in 12.5.8, “Merchandise: Catalog Import” on page 572.

The following files are provided in this directory:

- catalog.csv

- images.zip

eSite

This directory provides the necessary files to load and configure the eSite model as described in 8.1.1, “Loading the eSite model” on page 226.

The following files are included in this directory:

- CommerceAcceleratorBHS.xml
- CommerceAcceleratorBPS.xml
- DeploymentHostingContractBHS.xml
- eSitePreReqAccessControlPolicies.xml
- eSitePreReqAccessControlPolicies_en_US.xml
- eSitePreReqUserGroups_en_US.xml
- resources.xml
- SARRegistry.xml
- TemplateHostingContractBPS.xml
- cachespec.xml

Scripts

This directory provides the necessary files to execute the scripts described in Appendix B, “Common procedures” on page 809.

The following files are included in this directory:

- ChangeHostName
  - imaging\changehost.bat
  - imaging\hostname.reg
  - imaging\migrate.bat
  - imaging\migratedriver.bat
  - imaging\newdomain.txt
  - imaging\winfo.exe
  - migration\getdbinfo.bat
  - migration\MigrateDriver.class
  - migration\MigrateDriver.java
  - migration\migrateWinDriver.bat
  - migration\olddomain.txt
  - migration\oldhostname.txt
- DeleteSampleData
  - DeleteSampleData.cmd
  - DeleteSampleData.sql
- JSPCompile
  - CompileJSPs.cmd
- LoadSampleData
  - eSiteCatalog.zip

- LoadSampleData.cmd
- catalog_images\paper_full.gif
- catalog_images\paper_thumb.gif
- catalog_images\printer_acc_full.gif
- catalog_images\printer_acc_thumb.gif
- catalog_images\printer_cable_full.gif
- catalog_images\printer_cable_thumb.gif
- catalog_images\redbook_full.gif
- catalog_images\redbook_thumb.gif
- catalog_images\toner_full.gif
- catalog_images\toner_thumb.gif

Additional materials that accompany this redbook include the following files:

File name	*Description*
7018code.zip	e-Commerce Hosting Solutions Guide, using WebSphere Commerce V5.5 Business Edition zipped code samples
eSite.sar	SAR file for publishing the eSite model.

How to use the Additional materials

Create a subdirectory (folder) on your workstation. Download the files from:

`ftp://www.redbooks.ibm.com/redbooks/SG247018/`

Unzip the contents of the zip file into this folder. You should now see the following directories:

- Customization 6.10 Custom Registration Menus
- Customization 6.2 New Storefront Style & Template
- Customization 6.3 New e-Marketing Spot
- Customization 6.4 Customized Store Directory
- Customization 6.5 Dynamic Text Messages
- Customization 6.6 New Store Profile
- Customization 6.7 Custom Shopcart Display
- Customization 6.8 New Coupon Promotion
- Customization 6.9 Custom Accelerator Menus
- eSite
- Sample CSV Load
- Scripts

For details about the contents of the directories, see the above sections under Web materials.

Glossary

access control policy A group of constraints and criteria, established by the Site Administrator, that restrict a user's access only to those resources that are necessary for carrying out the responsibilities relevant to their assigned role.

access group A type of member group that is used to define access control. Commands and views are associated with one or more access groups, enabling members assigned to that role to have access to those views and commands.

Buyer (buy-side) A defined role in WebSphere Commerce that makes purchases from the Seller's Web site on behalf of a customer account. Typically, purchases are made under one or more agreements that have been negotiated with the Seller.

Buyer (sell-side) A defined role in WebSphere Commerce that handles negotiations and ordering, keeps track of inventory, makes purchase order decisions, tracks reasons for returns, and tracks expected inventory records and receipts.

cassette In WebSphere Commerce Payments, a software component that supports a particular payment protocol (such as VisaNet or BankServACH) within the WebSphere Commerce Payments framework. A cassette consists of a collection of Java classes and interfaces that can be easily installed into other software components to extend their function.

Contract States
Active - An active contract is one that was deployed successfully and can have purchases made against it. If the expiry date for a contract has passed, the contract remains in the active state until it is cancelled.
Deployment failed - If a contract cannot be published to the server, the contract is set to the deployment failed state. Check error logs, attempt to correct the problem that prevents deployment of the

Contract States (continued)
contract, and try to deploy the contract again. In XML files and the WebSphere Commerce database tables, this state appears as DeploymentFailed.
Closed - An active, suspended, or approved contract goes to the closed state automatically when a new version of the contract has been approved. Creating a new version of a contract creates a copy of the contract and places the copy in the draft state.
Suspended - When a contract is suspended, purchases cannot be made against that contract. The contract cannot be changed, but it can be resumed, making the contract active again.
Cancelled - A cancelled contract is no longer in use but is left in the database for reference.
Mark for delete - A contract that is marked for deletion can no longer be accessed using WebSphere Commerce. In XML files and the WebSphere Commerce database tables, this state appears as MarkForDelete.
Initial - This state represents the starting point of the contract lifecycle.
Draft - A draft contract is a newly created contract, a contract that has been imported from an external source as a draft contract, or a contract that has been created by duplicating an existing contract. A contract in draft state is incomplete and not ready to be submitted for approval. The sales manager or account representative decides when a draft contract is ready to submit for approval.
Pending (approval) - A contract in the pending state is a draft contract that is complete and has been submitted for approval. The sales manager or account representative decides when a draft contract is ready to submit for approval. The designated approvers for the contract must review the contract. Products cannot be purchased under a contract in this state.

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Contract States:
Approved - If the contract's designated approvers decide that a contract is complete and acceptable, they can move the contract into the approved state. WebSphere Commerce automatically attempts to deploy an approved contract.
Rejected - If the designated approver for a store decides that a contract is not complete or is unacceptable, they can move the contract into the rejected state. A contract in the rejected state can be changed and resubmitted for approval, cancelled, or marked for deletion.
Deployment in progress - A contract that is in deployment is an approved contract being published to the server. Purchases cannot be made against the contract. In XML files and the WebSphere Commerce database tables, this state appears as DeploymentInProgress.

Fulfilment Status The fulfillment status of the OrderItem:
INT - not yet released for fulfillment
OUT - released for fulfillment
SHIP - shipment confirmed

Inventory Status The allocation status of inventory for the OrderItem:
NALC - inventory is neither allocated nor backordered
BO - inventory is backordered
ALLC - inventory is allocated
FUL - inventory has been released for fulfillment

Order Status
A - payment authorization requires review
Payment authorization has encountered an unusual circumstance, such as an address verification warning. The payment authorization should be reviewed and accepted, or the Order should be canceled, using the Order Management user interface. If the authorization is accepted, then the user interface will change the Order Status to either B or C as appropriate.
B - backordered An initial authorization has been performed. A re-authorization for the full amount will be done when all backordered items are allocated.
C - complete Payment for the full amount has been authorized.

Order Status (continued)
D - deposited Payment has been captured.
E - CSR edit A Customer Service Representative is working with the Order.
F - ready for remote fulfillment The Order is ready to be sent to a remote system for fulfillment. This status is used by the MQAdapter feature and the TransferOrder task command.
G -waiting for remote fulfillment The Order has been sent to a remote system for fulfillment. This status is used by the MQAdapter feature and the TransferOrder task command.
H - error in remote fulfillment This status is associated with these conditions:
(1) An order has been submitted for transfer and the distributor responded with a "failed transfer" confirmation. The failure may be due to an invalid user ID or password. The error code for the transfer is stored in the ORDSTAT table OSCODE column and the error status message can be located in the ORDSTAT table OSCMT column. (2) An empty quotation order arrived due to quotation failure.
I - submitted The customer has submitted the Order but has not yet initiated payment.
L - low inventory The customer has initiated payment. A previously allocated (or backordered) OrderItem has become unavailable.
M - payment initiated The customer has initiated payment. Authorization is pending.
N - approval denied Approval has been denied for some OrderItems.
P - pending The customer can modify this Order.
Q - quick order profile The Order contains default information for a customer, such as shipping address and payment information that can be copied when creating a new pending Order.
R - released All OrderItems have been released for fulfillment.
S - shipped. All OrderItems have been manifested.
T - temporary Used by the Order Management user interface to temporarily back up an Order.
W - waiting for approval Not all OrderItems have obtained approval.
X - canceled. The Order has been canceled.
Y - private requisition list The Order is a private requisition list.
Z - shareable requisition list The Order is a shareable requisition list.

Payment Status
Approved
Deposited
Closed
Void
Declined

RMA Status
PRC = being edited by a customer
EDT = being edited by a Customer Service Representative
PND = pending
APP = approved
CLO = closed
CAN = canceled

Store Status - The current status of the hosted service agreement or store. A service agreement or store can have the following states:
Open - A hosted store exists for the seller and is open to customers.
Closed - A hosted store exists for the seller and is not open to customers.
Suspended - A hosted store exists but the service agreement is suspended. Customers cannot access the hosted store and the seller cannot open the store.
Deploying - The hosted service agreement is being deployed. The hosted store is created as part of this deployment process.
Deployment Failed - Deployment of the hosted service agreement has failed. No hosted store has been created.

Abbreviations and acronyms

ATP	available to promise
CA	certificate authority
CCF	common connector framework
CSR	Customer Service Representative
DTD	document type definition
EDI	electronic data interchange
HTML	Hypertext Markup Language
HTTP	Hypertext Transfer Protocol
IBM	International Business Machines Corporation
IDE	integrated development environment
ITSO	International Technical Support Organization
jar	Java Archive
JDBC	Java Database Connectivity
JMS	Java Message Service
JSP	JavaServer Page
LDAP	Lightweight DIrectory Access Protocol
ODBC	Open Database Connectivity
QoS	quality of service
RFQ	request for quote
RMA	Return Merchandise Authorization
ROI	return on investment
sar	store archive
SET	Secure Electronic Transaction
SKU	stock keeping unit
SMTP	Simple Mail Transfer Protocol
SSL	secure sockets layer
TCP/IP	Transmission Control Protocol/Internet Protocol
WAS	WebSphere Application Server
WC	WebSphere Commerce
WCA	WebSphere Commerce Analyzer
WSAD	WebSphere Studio Application Developer
XML	extensible markup language

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Related publications

The publications listed in this section are considered particularly suitable for a more detailed discussion of the topics covered in this redbook.

IBM Redbooks

For information about ordering these publications, see “How to get IBM Redbooks” on page 939. Note that some of the documents that are referenced here may be available in softcopy only.

- *Best Practices and Tooling for Creating IBM WebSphere Commerce Sites*, REDP3616
- *DB2 UDB/WebSphere Performance Tuning Guide*, SG24-6417
- *Enhance Your Business Applications: Simple Integration of Advanced Data Mining Functions*, SG24-6879
- *IBM WebSphere Application Server V5.1 System Management and Configuration: WebSphere Handbook Series*, SG24-6195
- *IBM WebSphere V5.1 Performance, Scalability, and High Availability: WebSphere Handbook Series*, SG24-6198
- *IBM WebSphere V5.0 Security WebSphere Handbook Series*, SG24-6573
- *WebSphere Commerce V5.4 Catalog Design and Content Management*, SG24-6885
- *WebSphere Commerce V5.5 Capacity Planning*, ZG24-6733
- *WebSphere Commerce V5.5 Handbook,* SG24-6969
- *WebSphere Studio Application Developer Version 5 Programming Guide*, SG24-6957

Other publications

These publications are also relevant as further information sources:

- *IBM WebSphere Commerce V5.5 Fundamentals Guide*
- *Quick Beginnings* for Windows 2000, IBM WebSphere Commerce V5.5
- *Quick Beginnings* for AIX, IBM WebSphere Commerce V5.5

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- *Quick Beginnings* for Solaris, IBM WebSphere Commerce V5.5
- *Quick Beginnings* for OS/400, IBM WebSphere Commerce V5.5
- *Quick Beginnings* for Linux, IBM WebSphere Commerce V5.5
- *Installation Guide,* IBM WebSphere Commerce V5.5 for UNIX systems
- *Installation Guide*, IBM WebSphere Commerce V5.5 for Windows 2000
- *Installation Guide,* IBM WebSphere Commerce V5.5 for OS/400
- *Installation Guide,* IBM WebSphere Commerce V5.5 for Linux
- *Additional Software Guide, IBM WebSphere Commerce V5.5* (all platforms)
- *Installation Guide,* IBM WebSphere Commerce Studio V5.5
- *Installation and Configuration Guide, IBM WebSphere Commerce Analyzer V5.5*
- *Datamart Reference, IBM WebSphere Commerce Analyzer V5.5*
- *Technical Reference, IBM WebSphere Commerce Analyzer V5.5*
- *Payments Programming Guide and Reference, IBM WebSphere Commerce V5.5*
- *Payments Cassette for Paymentech Supplement, IBM WebSphere Commerce V5.5*
- *Payments Cassette for BankServACH Supplement, IBM WebSphere Commerce V5.5*
- *Payments Cassette for VisaNet Supplement, IBM WebSphere Commerce V5.5*
- *Payments Offline Cassette Supplement, IBM WebSphere Commerce V5.5*
- *Payments Custom Offline Cassette Supplement, IBM WebSphere Commerce V5.5*
- *Sample Store Guide, IBM WebSphere Commerce V5.5*
- *Store Development Guide, IBM WebSphere Commerce V5.5*
- *Programming Guide and Tutorials, IBM WebSphere Commerce V5.5*
- *Web Services Guide, IBM WebSphere Commerce V5.5*
- *Administration Guide, IBM WebSphere Commerce V5.5*
- *Security Guide, IBM WebSphere Commerce V5.5*
- *Accelerator Customization Guide, IBM WebSphere Commerce V5.5*
- *What's New in IBM WebSphere Commerce V5.5*

Online resources

These Web sites and URLs are also relevant as further information sources:

- IBM WebSphere Commerce V5.5, Business Edition
  - Home page

    http://www.ibm.com/software/genservers/commerce/wcbe/index.html
  - Technical Library

    http://www.ibm.com/software/genservers/commerce/wcbe/library/lit-tech-general.html
  - Support

    http://www.ibm.com/software/genservers/commerce/wcbe/support/
- IBM WebSphere Commerce V5.5, Professional Edition
  - Home page

    http://www.ibm.com/software/genservers/commerce/wcpe/index.html
  - Technical Library

    http://www-306.ibm.com/software/genservers/commerce/wcpe/library/
  - Support

    http://www-306.ibm.com/software/genservers/commerce/wcpe/support/
- IBM WebSphere Commerce Zone (development information)

  http://www.software.ibm.com/wsdd/zones/commerce/
- IBM Services for IBM WebSphere Commerce Software

  http://www.ibm.com/software/genservers/commerce/services/
- How to Buy IBM WebSphere Commerce

  http://www.ibm.com/software/swprod/swprod.nsf/(BuildHTBPage)?OpenAgent&DocID=BMAL-5KSR6N

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