IBM WebSphere Commerce
for Windows NT and Windows 2000

Installation Guide

for use with a DB2® Universal Database

Version 54

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> **Note:**
>
> Before using this information and the product it supports, be sure to read the general information under "Notices" on page 181.

First Edition, Third Revision(July 2002)

This edition applies to IBM® WebSphere Commerce Business Edition for Windows NT® and Windows® 2000, Version 5.4 and to all subsequent releases and modifications until otherwise indicated in new editions. Make sure you are using the correct edition for the level of the product.

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Contents

Welcome to WebSphere Commerce

This book describes how to install and configure WebSphere Commerce 5.4 for Windows NT or Windows 2000 for use with a DB2 database. It is intended for system administrators or for anyone else responsible for performing installation and configuration tasks.

If you have WebSphere Commerce Suite Version 5.1 installed, follow the migration steps described in the *WebSphere Commerce Migration Guide*. This book will be available in the Technical Libraries section of the WebSphere Commerce Web page.

Updates to this book

To learn about last-minute changes to the product, see the README file in the root directory of the WebSphere Commerce Disk 1 CD. In addition, a copy of this book, and any updated versions of this book, are available as PDF files from the Library →Technical Library section of the WebSphere Commerce Web site:

- Business Edition:

  `http://www.ibm.com/software/webservers/commerce/wc_be/lit-tech-general.html`
- Professional Edition:

  `http://www.ibm.com/software/webservers/commerce/wc_pe/lit-tech-general.html`

Updates from the last version of this document are identified by revision characters contained in the margin. This book uses the following conventions for revision characters:

- The ″+″ character identifies updates that have been made in the current version of this document.
- The ″|″ character identifies any updates that have been made in the previous versions of this document.

Conventions used in this book

This book uses the following highlighting conventions:

- **Boldface type** indicates commands or graphical user interface (GUI) controls such as names of fields, icons, or menu choices.
- `Monospace type` indicates examples of text you enter exactly as shown, file names, and directory paths and names.

- *Italic type* is used to emphasize words. Italics also indicate names for which you must substitute the appropriate values for your system. When you see the following names, substitute your system value as described:

host_name
> The fully qualified host name of your WebSphere Commerce Web server (for example, server1.torolab.ibm.com is fully qualified).

instance_name
> The name of the WebSphere Commerce instance with which you are working.

drive   The letter representing the drive on which you installed the product or component being discussed (for example, C:).

> This icon marks a Tip - additional information that can help you complete a task.

Important
These sections highlight especially important information.

Warning
These sections highlight information intended to protect your data.

Default installation paths

When this book refers to installation paths, it uses the following default path names:

drive:\WebSphere\CommerceServer
> The WebSphere Commerce installation path.

drive:\WebSphere\sqllib
> The IBM DB2 Universal Database 7.1.0.55 installation path.

drive:\WebSphere\HTTPServer
> The IBM HTTP Server 1.3.19.1 installation path.

drive:\WebSphere\AppServer
> The WebSphere Application Server 4.0.2 installation path.

drive:\dmb
> The IBM DB2 Text Extender 7.1 installation path.

drive:\Program Files\IBM\PaymentManager
> The IBM WebSphere Payment Manager 3.1.2 installation path.

Note: If not enough room exists on the default drive, the WebSphere Commerce installation program is designed to install the product on the next available drive with sufficient space.

CAUTION:
We strongly suggest that you do not override the default paths of the mandatory products during their installation. The WebSphere Commerce installation program is designed to search for products in certain locations and moving these products to another directory may cause errors.

Products included with WebSphere Commerce

The following products are packaged with WebSphere Commerce:

- WebSphere Commerce Components
  - WebSphere Commerce Server
  - WebSphere Commerce Accelerator
  - WebSphere Catalog Manager
  - WebSphere Commerce Administration Console
  - Product Advisor
  - Blaze Rules Server and Blaze Innovator Runtime
  - Macromedia LikeMinds client
- IBM DB2 Universal Database 7.1.0.55
- IBM DB2 Extenders 7.1
- IBM HTTP Server 1.3.19.1
- WebSphere Application Server 4.0.2
- IBM WebSphere Payment Manager 3.1.2, which includes:
  - Payment Manager SET Cassette 3.1.2
  - Payment Manager Cassette for CyberCash 3.1.2
  - Payment Manager Cassette for VisaNet 3.1.2
  - Payment Manager Cassette for BankServACH 3.1.2
- IBM WebSphere Commerce Analyzer 5.4
- Brio Broadcast Server 6.2
- IBM SecureWay Directory Server 3.2.1
- Segue SilkPreview 1.0™
- WebSphere Commerce 5.4 Recommendation Engine powered by LikeMinds™
- QuickPlace 2.9.8
- Sametime 2.5

Alternative Web servers

Although IBM HTTP Server is the Web server provided with WebSphere Commerce, Microsoft IIS 5.0 on Windows 2000, Microsoft IIS 4.0 on Windows NT, iPlanet Web Server, Enterprise Edition 4.1.8 on Windows NT, and Lotus Domino Web Server 5.0.5, 5.0.6, and 5.0.8 are also supported.

Alternative databases

Although IBM DB2 Universal Database 7.1.0.55 Enterprise Edition is the database provided with WebSphere Commerce, you can use Oracle Database 8.1.7.2.1, Enterprise Edition, or Standard Edition (also known as Oracle 8i release 3). If you choose to use Oracle Database 8.1.7, Enterprise Edition or Standard Edition instead of DB2 Universal Database, you need to refer to the *IBM WebSphere Commerce Installation Guide: Installing WebSphere Commerce 5.4 for use with an Oracle Database*.

If you are currently using IBM DB2 Universal Database 7.1.0.55 Workgroup Edition, you will be required to upgrade it to IBM DB2 Universal Database 7.1.0.55 Enterprise Edition.

Alternative Lightweight Directory Access Protocol software

You can use the following types of Lightweight Directory Access Protocol (LDAP) directory servers with WebSphere Commerce 5.4:

- IBM SecureWay® Directory
- NT Netscape Directory Server
- 2000 Microsoft Active Directory

Supported Web browsers

You can only access the WebSphere Commerce tools and online help using Microsoft® Internet Explorer 5.5 from a machine running a Windows operating system on the same network as your WebSphere Commerce machine. You must use Internet Explorer full version 5.50.4522.1800 (also known as Internet Explorer 5.5 Service Pack 1 and Internet Tools) or later with the latest critical security updates from Microsoft— prior versions do not support full functionality of WebSphere Commerce tools.

Shoppers can access Web sites by using any of the following Web browsers, all of which have been tested with WebSphere Commerce:

- Any version of Netscape Navigator supported with Netscape Communicator 4.6 or above, including Netscape Navigator 4.04, and 4.5
- Netscape Navigator 3.0 and 4.0 or above for Macintosh
- Microsoft Internet Explorer 4 and 5 or above
- AOL 5 and 6 or above

Supported configurations

WebSphere Commerce, its components and its supported alternative software can be installed in a variety of configurations. The following configurations are supported and are described in this book:

1-tier install:
 In this configuration, all components of WebSphere Commerce are installed on a single machine. To install this configuration, complete the steps outlined for your Web server:

IBM HTTP Server

1. Install DB2 Universal Database, IBM HTTP Server, WebSphere Application Server, and WebSphere Commerce as outlined in Chapter 4, "Installing WebSphere Commerce" on page 19.
2. Install Payment Manager as outlined in Chapter 5, "Installing IBM WebSphere Payment Manager 3.1.2" on page 39.
3. Complete the following tasks in Chapter 6, "Pre-configuration steps" on page 51:
   - Starting the WebSphere Application Server
4. Create your WebSphere Commerce instance as outlined in Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55.
5. Complete the following tasks in Chapter 8, "Post-configuration steps" on page 83:
   - Configuring Payment Manager to work with WebSphere Commerce
   - Configuring your Payment Manager settings
   - Compiling the JavaServer Pages™ files.
   - Running the Security Checker tool
6. Complete any optional tasks, such as:
   - Creating a store from a sample store archive
   - Enabling SSL for production with IBM HTTP Server

iPlanet Web Server

1. Install iPlanet Web Server as outlined in "Install and Configure iPlanet Web Server" on page 14.
2. Install DB2 Universal Database, WebSphere Application Server, and WebSphere Commerce as outlined in Chapter 4, "Installing WebSphere Commerce" on page 19.

3. Install Payment Manager as outlined in Chapter 5, "Installing IBM WebSphere Payment Manager 3.1.2" on page 39.

4. Complete the following tasks in Chapter 6, "Pre-configuration steps" on page 51:
   - Upgrading the iPlanet Web Server plug-in level
   - Starting the WebSphere Application Server

5. Create your WebSphere Commerce instance as outlined in Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55.

6. Complete the following tasks in Chapter 8, "Post-configuration steps" on page 83:
   - Completing your iPlanet Web Server installation
   - Configuring Payment Manager to work with WebSphere Commerce
   - Configuring your Payment Manager settings
   - Compiling the JavaServer Pages files.
   - Running the Security Checker tool

7. Complete any optional tasks, such as:
   - Creating a store from a sample store archive

Domino Web Server

1. Install Domino Web Server as outlined in "Installing and Configuring Domino Web Server" on page 15.

2. Install DB2 Universal Database, WebSphere Application Server, and WebSphere Commerce as outlined in Chapter 4, "Installing WebSphere Commerce" on page 19.

3. Install Payment Manager as outlined in Chapter 5, "Installing IBM WebSphere Payment Manager 3.1.2" on page 39.

4. Complete the following tasks in Chapter 6, "Pre-configuration steps" on page 51:
   - Starting the WebSphere Application Server

5. Create your WebSphere Commerce instance as outlined in Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55.

6. Complete the following tasks in Chapter 8, "Post-configuration steps" on page 83:
   - Configuring Payment Manager to work with WebSphere Commerce
   - Configuring your Payment Manager settings

- Compiling the JavaServer Pages files.
- Running the Security Checker tool

7. Complete any optional tasks, such as:
   - Creating a store from a sample store archive

Microsoft IIS

1. Install Microsoft IIS as outlined in "Installing Microsoft IIS for WebSphere Commerce" on page 13.
2. Install DB2 Universal Database, WebSphere Application Server, and WebSphere Commerce as outlined in Chapter 4, "Installing WebSphere Commerce" on page 19.
3. Install Payment Manager as outlined in Chapter 5, "Installing IBM WebSphere Payment Manager 3.1.2" on page 39.
4. Complete the following tasks in Chapter 6, "Pre-configuration steps" on page 51:
   - Configuring Microsoft IIS
   - Starting the WebSphere Application Server
5. Create your WebSphere Commerce instance as outlined in Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55.
6. Complete the following tasks in Chapter 8, "Post-configuration steps" on page 83:
   - Completing your Microsoft IIS configuration
   - Configuring Payment Manager to work with WebSphere Commerce
   - Configuring your Payment Manager settings
   - Compiling the JavaServer Pages files.
   - Running the Security Checker tool
7. Complete any optional tasks, such as:
   - Creating a store from a sample store archive

2-tier install:
In this configuration, the database server is installed on a separate machine from all other WebSphere Commerce components.

IBM HTTP Server

1. Install your database as outlined in Chapter 2, "Installing your DB2 Universal Database" on page 9.
2. Install IBM HTTP Server, WebSphere Application Server, and WebSphere Commerce as outlined in Chapter 4, "Installing WebSphere Commerce" on page 19.

3. Install Payment Manager as outlined in Chapter 5, "Installing IBM WebSphere Payment Manager 3.1.2" on page 39.
4. Complete the following tasks in Chapter 6, "Pre-configuration steps" on page 51:
   - Complete your remote DB2 Universal Database installation
   - Starting the WebSphere Application Server
5. Create your WebSphere Commerce instance as outlined in Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55.
6. Complete the following tasks in Chapter 8, "Post-configuration steps" on page 83:
   - Configuring Payment Manager to work with WebSphere Commerce
   - Configuring your Payment Manager settings
   - Compiling the JavaServer Pages files.
   - Running the Security Checker tool
7. Complete any optional tasks, such as:
   - Creating a store from a sample store archive
   - Enabling SSL for production with IBM HTTP Server

iPlanet Web Server

1. Install your database as outlined in Chapter 2, "Installing your DB2 Universal Database" on page 9.
2. Install iPlanet Web Server as outlined in "Install and Configure iPlanet Web Server" on page 14.
3. Install WebSphere Application Server, and WebSphere Commerce as outlined in Chapter 4, "Installing WebSphere Commerce" on page 19.
4. Install Payment Manager as outlined in Chapter 5, "Installing IBM WebSphere Payment Manager 3.1.2" on page 39.
5. Complete the following tasks in Chapter 6, "Pre-configuration steps" on page 51:
   - Complete your remote DB2 Universal Database installation
   - Upgrading the iPlanet Web Server plug-in level
   - Starting the WebSphere Application Server

6. Create your WebSphere Commerce instance as outlined in Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55.

7. Complete the following tasks in Chapter 8, "Post-configuration steps" on page 83:
   - Completing your iPlanet Web Server installation
   - Configuring Payment Manager to work with WebSphere Commerce
   - Configuring your Payment Manager settings
   - Compiling the JavaServer Pages files.
   - Running the Security Checker tool

8. Complete any optional tasks, such as:
   - Creating a store from a sample store archive

Domino Web Server

1. Install your database as outlined in Chapter 2, "Installing your DB2 Universal Database" on page 9.

2. Install Domino Web Server as outlined in "Installing and Configuring Domino Web Server" on page 15.

3. Install WebSphere Application Server, and WebSphere Commerce as outlined in Chapter 4, "Installing WebSphere Commerce" on page 19.

4. Install Payment Manager as outlined in Chapter 5, "Installing IBM WebSphere Payment Manager 3.1.2" on page 39.

5. Complete the following tasks in Chapter 6, "Pre-configuration steps" on page 51:
   - Complete your remote DB2 Universal Database installation
   - Starting the WebSphere Application Server

6. Create your WebSphere Commerce instance as outlined in Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55.

7. Complete the following tasks in Chapter 8, "Post-configuration steps" on page 83:
   - Configuring Payment Manager to work with WebSphere Commerce
   - Configuring your Payment Manager settings
   - Compiling the JavaServer Pages files.
   - Running the Security Checker tool

8. Complete any optional tasks, such as:

- Creating a store from a sample store archive

Microsoft IIS

1. Install your database as outlined in Chapter 2, "Installing your DB2 Universal Database" on page 9.

2. Install Microsoft IIS as outlined in "Installing Microsoft IIS for WebSphere Commerce" on page 13.

3. Install WebSphere Application Server, and WebSphere Commerce as outlined in Chapter 4, "Installing WebSphere Commerce" on page 19.

4. Install Payment Manager as outlined in Chapter 5, "Installing IBM WebSphere Payment Manager 3.1.2" on page 39.

5. Complete the following tasks in Chapter 6, "Pre-configuration steps" on page 51:
   - Complete your remote DB2 Universal Database installation
   - Configuring Microsoft IIS
   - Starting the WebSphere Application Server

6. Create your WebSphere Commerce instance as outlined in Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55.

7. Complete the following tasks in Chapter 8, "Post-configuration steps" on page 83:
   - Completing your Microsoft IIS configuration
   - Configuring Payment Manager to work with WebSphere Commerce
   - Configuring your Payment Manager settings
   - Compiling the JavaServer Pages files.
   - Running the Security Checker tool

8. Complete any optional tasks, such as:
   - Creating a store from a sample store archive

3-tier install:

In this configuration, the database server and Web server are each installed on separate machines from the WebSphere Commerce server and WebSphere Application Server.

IBM HTTP Server

1. Install your database as outlined in Chapter 2, "Installing your DB2 Universal Database" on page 9.

2. Install IBM HTTP Server, WebSphere Application Server, and WebSphere Commerce as outlined in Chapter 4, "Installing WebSphere Commerce" on page 19.

3. Install Payment Manager as outlined in Chapter 5, "Installing IBM WebSphere Payment Manager 3.1.2" on page 39.

4. Complete the following tasks in Chapter 6, "Pre-configuration steps" on page 51:
   - Complete your remote DB2 Universal Database installation
   - Starting the WebSphere Application Server

5. Create your WebSphere Commerce instance as outlined in Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55.

6. Complete the following tasks in Chapter 8, "Post-configuration steps" on page 83:
   - Configuring your IBM HTTP Server in a 3–tier environment
   - Copying assets to your Web server
   - Configuring Payment Manager to work with WebSphere Commerce
   - Configuring your Payment Manager settings
   - Compiling the JavaServer Pages files.
   - Running the Security Checker tool

7. Complete any optional tasks, such as:
   - Creating a store from a sample store archive
   - Enabling SSL for production with IBM HTTP Server

iPlanet Web Server

1. Install your database as outlined in Chapter 2, "Installing your DB2 Universal Database" on page 9.

2. Install iPlanet Web Server as outlined in "Install and Configure iPlanet Web Server" on page 14.

3. Install WebSphere Application Server, and WebSphere Commerce as outlined in Chapter 4, "Installing WebSphere Commerce" on page 19.

4. Install Payment Manager as outlined in Chapter 5, "Installing IBM WebSphere Payment Manager 3.1.2" on page 39.

5. Complete the following tasks in Chapter 6, "Pre-configuration steps" on page 51:

- Complete your remote DB2 Universal Database installation
- Upgrading the iPlanet Web Server plug-in level
- Starting the WebSphere Application Server

6. Create your WebSphere Commerce instance as outlined in Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55.

7. Complete the following tasks in Chapter 8, "Post-configuration steps" on page 83:
   - Completing your iPlanet Web Server installation
   - Copying assets to your Web server
   - Configuring Payment Manager to work with WebSphere Commerce
   - Configuring your Payment Manager settings
   - Compiling the JavaServer Pages files.
   - Running the Security Checker tool

8. Complete any optional tasks, such as:
   - Creating a store from a sample store archive

Domino Web Server

1. Install your database as outlined in Chapter 2, "Installing your DB2 Universal Database" on page 9.

2. Install Domino Web Server as outlined in "Installing and Configuring Domino Web Server" on page 15.

3. Install WebSphere Application Server, and WebSphere Commerce as outlined in Chapter 4, "Installing WebSphere Commerce" on page 19.

4. Install Payment Manager as outlined in Chapter 5, "Installing IBM WebSphere Payment Manager 3.1.2" on page 39.

5. Complete the following tasks in Chapter 6, "Pre-configuration steps" on page 51:
   - Starting the WebSphere Application Server

6. Create your WebSphere Commerce instance as outlined in Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55.

7. Complete the following tasks in Chapter 8, "Post-configuration steps" on page 83:
   - Copying assets to your Web server
   - Configuring Payment Manager to work with WebSphere Commerce

- Configuring your Payment Manager settings
- Compiling the JavaServer Pages files.
- Running the Security Checker tool

8. Complete any optional tasks, such as:
   - Creating a store from a sample store archive

Microsoft IIS

1. Install your database as outlined in Chapter 2, "Installing your DB2 Universal Database" on page 9.
2. Install Microsoft IIS as outlined in "Installing Microsoft IIS for WebSphere Commerce" on page 13.
3. Install WebSphere Application Server, and WebSphere Commerce as outlined in Chapter 4, "Installing WebSphere Commerce" on page 19.
4. Install Payment Manager as outlined in Chapter 5, "Installing IBM WebSphere Payment Manager 3.1.2" on page 39.
5. Complete the following tasks in Chapter 6, "Pre-configuration steps" on page 51:
   - Configuring Microsoft IIS
   - Starting the WebSphere Application Server
6. Create your WebSphere Commerce instance as outlined in Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55.
7. Complete the following tasks in the 3–tier section of Chapter 8, "Post-configuration steps" on page 83:
   - Completing your Microsoft IIS configuration
   - Copying assets to your Web server
   - Configuring Payment Manager to work with WebSphere Commerce
   - Configuring your Payment Manager settings
   - Compiling the JavaServer Pages files.
   - Running the Security Checker tool
8. Complete any optional tasks, such as:
   - Creating a store from a sample store archive

Port numbers used by WebSphere Commerce

The following is a list of the default port numbers used by WebSphere Commerce or its component products. Please ensure that you do not use these ports for non-WebSphere Commerce applications. If you have a firewall configured in your system, ensure that you can access these ports.

Port Number	Used By
80	IBM HTTP Server non-secure Web servers
389	Lightweight Directory Access Protocol (LDAP) Directory Server
443	IBM HTTP Server secure Web server
900	WebSphere Application Server bootstrap
1099	WebSphere Commerce Configuration Manager
1521	Oracle Listener (default)
8000	WebSphere Commerce Tools
8080	WebSphere Test Environment for VisualAge® for Java™
8620	Payment Manager Cassette for SET™
8888	iPlanet Web Server Administration
9000	WebSphere Application Server Location Server
16999	WebSphere Commerce Cache Daemon (default)
50000	DB2® connect (default)
50001	DB2 interrupt (default)

Quick reference to user IDs, passwords and Web addresses

Administration in the WebSphere Commerce environment requires a variety of user IDs. These user IDs along with their requisite authorities are described in the list below. For the WebSphere Commerce user IDs, the default passwords are identified.

Windows User ID

Your Windows user ID *must* have Administrator authority. DB2 requires that the user ID and password adhere to the following rules:

- They cannot be more than 8 characters in length.
- They can contain only the characters A to Z, a to z, 0 to 9, @, #, $, and _.
- They cannot begin with an underscore (_).

- The user ID cannot be any of the following, in upper, lower, or mixed case: USERS, ADMINS, GUESTS, PUBLIC, LOCAL.
- The user ID cannot begin with any of the following in upper, lower, or mixed case: IBM, SQL, SYS.
- The user ID cannot be the same as any Windows service name.
- The user ID must be defined on the local machine, and belong to the Local Administrator's group.
- The user ID must have the *Act as part of the operating system* advanced user right.

> You can perform the installation without the *Act as part of the operating system* advanced user right, however, the DB2 setup program will be unable to validate the account that you specify for the Administration Server. It is recommended that any user account used to install DB2 has this advanced user right.

> **Important**
>
> If your Windows user ID does *not* have Administrator authority, is more than 8 characters in length, or is not defined on the local machine, you will be notified of the problem and will not be able to proceed with the installation.

Later, you will use this user ID as the DB2 database user name (database user logon ID).

> If you need to create a user ID fitting the above criteria, you can find information on creating a Windows user ID in the Windows online help.

Configuration Manager user ID

The Configuration Manager tool's graphical interface allows you to modify the way WebSphere Commerce is configured. The default Configuration Manager user ID and password are webadmin and webibm. You can access Configuration Manager from your WebSphere Commerce machine, or any machine on the same network as WebSphere Commerce.

IBM HTTP Server User ID

If you are using IBM HTTP Server, you can access your Web server home page by opening your Web browser and typing the following Web address:

http://*host_name*

If you have customized your Web server, you may be required to type the name of your Web server's front page after the host name.

WebSphere Commerce Instance Administrator

The Instance Administrator user ID and password apply to the following WebSphere Commerce tools:

- WebSphere Commerce Accelerator. To access the WebSphere Commerce Accelerator from a remote machine running a Windows operating system, open your Internet Explorer Web browser, and type the following Web address:

  `https://`*host_name*`:8000/accelerator`

- WebSphere Commerce Administration Console. To access the WebSphere Commerce Administration Console from a remote machine running a Windows operating system, open your Internet Explorer Web browser, and type the following Web address:

  `https://`*host_name*`:8000/adminconsole`

- Store Services. You can access your Store Services page by opening your Web browser and typing the following Web address:

  `https://`*host_name*`:8000/storeservices`

- `▶ Business` Organization Administration Console. You can access the Organization Administration Console by opening your Web browser and typing the following Web address:

  `https://`*host_name*`/orgadminconsole`

The default Instance Administrator user ID is `wcsadmin` and the default password is `wcsadmin`.

Note: The `wcsadmin` user ID should never be removed, and should always have instance administrator authority.

WebSphere Commerce requires that the user ID and password adhere to the following rules:

- The password must be at least 8 characters in length.
- The password must include at least 1 numeric digit.
- The password does not contain more than 4 occurrences of a character.
- The password does not repeat the same character more than 3 times.

Payment Manager Administrator

When you install Payment Manager, the WebSphere Commerce Administrator ID, `wcsadmin`, is automatically assigned the Payment Manager Administrator role. Follow the instructions in Chapter 5,

"Installing IBM WebSphere Payment Manager 3.1.2" on page 39 to switch the Payment Manager Realm Class to WCSRealm if it has not already been done.

The Payment Manager Administrator role enables a user ID to control and administer Payment Manager.

Part 1. Installing WebSphere Commerce 5.4

Topics covered in this section include:

- Chapter 1, "Preinstallation requirements" on page 3
- Chapter 2, "Installing your DB2 Universal Database" on page 9
- Chapter 3, "Installing your Web server" on page 13
- Chapter 4, "Installing WebSphere Commerce" on page 19
- Chapter 5, "Installing IBM WebSphere Payment Manager 3.1.2" on page 39

You must complete these topics in order to successfully install WebSphere Commerce.

Important

This book describes how to install WebSphere Commerce on a machine that does not already have a previous version of WebSphere Commerce installed. If you have WebSphere Commerce Suite Version 5.1 installed and you want to upgrade to WebSphere Commerce 5.4WebSphere Commerce Business Edition, please follow the instructions in the *WebSphere Commerce Migration Guide*. This document will be available from the IBM Web site at the following Web address:

`http://www.ibm.com/software/webservers/commerce/wc_be/`

Chapter 1. Preinstallation requirements

This chapter describes the steps you need to perform before you install WebSphere Commerce.

Knowledge requirements

To install and configure WebSphere Commerce, you require knowledge of the following:

- Personal computers and your operating system
- The Internet
- Web server operation and maintenance
- DB2 Universal Database
- Basic operating system commands

To create and customize your store or mall, you require knowledge of the following:

- WebSphere Application Server
- DB2 Universal Database
- HTML and XML
- Structured Query Language (SQL)
- Java programming

Please refer to *WebSphere Commerce Programmer's Guide* for more information on customizing your store or mall. A copy of this book is included with both WebSphere Commerce and WebSphere Commerce Studio.

If you intend to use Microsoft IIS 4.0, Microsoft IIS 5.0, iPlanet Web Server, Enterprise Edition 4.1.8, or Lotus Domino Web Server, you should have a good understanding of them as well.

Prerequisite hardware

You must ensure that you meet the following minimum hardware requirements before installing WebSphere Commerce 5.4:

You require a dedicated Pentium® III 733 MHz (1 GHz or higher recommended for a production environment) IBM-compatible personal computer with the following:

- A minimum of 768 MB of RAM per processor. Each additional WebSphere Commerce instance will require an additional 512 MB of RAM per instance.
- A minimum of 2 GB of free disk space on your target installation drive.
  - You also need an additional 300 MB on the C: drive. If your machine is formatted with FAT partitioning and the partition is over 1.024 GB, you will need twice as much free disk space. The installation will check for adequate free disk space and will warn you if there is not enough space.
  - If your machine is formatted with FAT partitioning and the partition is over 2049 MB, you will need three times as much free disk space.
- Double the amount of paging space as you have RAM (for example, 512 MB RAM should have 1024 MB paging space). This is adjusted through the Virtual Memory panel of Windows System Properties.
- A CD-ROM drive.
- A graphics-capable monitor with a color depth of at least 256 colors.
- A mouse or other pointing device.
- A local area network (LAN) adapter that is supported by the TCP/IP protocol.

Note: When enabling WebSphere Application Server security it is strongly recommended that your machine meets the following requirements:
- A mininum machine memory of 1 GB.
- A minimum heap size of 384 MB, for the WebSphere Commerce application.

Prerequisite software

You must ensure that you meet the following minimum software requirements before installing WebSphere Commerce:

- You have one of the following operating systems installed:
  - Windows NT Server Version 4.0 with Service Pack 6a installed on your WebSphere Commerce server. You can obtain the service pack at the following Web address:

    `http://www.microsoft.com`

    > **Important**
    > If you do not apply Service Pack 6a *before* installing WebSphere Commerce 5.4, you will not be allowed to install WebSphere Commerce.

> To determine if Service Pack 6a is installed, open a DOS prompt and type `winver` from command line. If you have the correct service pack installed, the system information will include a reference to *Service Pack 6a*.

 – Windows 2000 Server or Advanced Server Edition with Service Pack 2 installed. You can obtain the service pack at the following Web address:

 `http://www.microsoft.com`

Components already installed

Preparing Secure Sockets Layer protocol for testing

If you have IBM HTTP Server already installed on your system, you must ensure that you have prepared your system for Secure Sockets Layer (SSL) protocol for testing. If SSL is enabled, you should be able to open the following URL in a Web browser:

`https://`*host_name*

where *host_name* is the fully qualified host name of the machine running IBM HTTP Server. The security key file that you build in this section will *not* prevent shopper transactions from being viewed by unauthorized individuals. Before you open your store to shoppers, follow the instructions in Chapter 12, "Enabling SSL for production with IBM HTTP Server" on page 131.

If you can not open the URL above, you must prepare SSL on you system. To prepare your system, do the following:

1. Stop the IBM HTTP Server as described in "Starting and Stopping IBM HTTP Server" on page 148.
2. Change directory to *drive*:\WebSphere\HTTPServer\conf.
3. Backup `httpd.conf` to a temporary directory.
4. Rename `httpd.conf` to `httpd.conf.bak`.
5. Backup `httpd.conf.sample` to a temporary directory.
6. Rename `httpd.conf.sample` to `httpd.conf`.
7. Select **Start → Programs → IBM HTTP Server → Start Key Management Utility**.
8. In the **IBM Key Management** window, click the **Key Database File** menu, and select **New**.
9. Enter the file name and the file location as follows in the **New** window of IBM Key Management:

 drive:/WebSphere/HTTPServer/ssl/keyfile.kdb

 Click **OK**.

10. The **Password Prompt** window displays.
11. Enter and confirm your IBM HTTP Server password, and enable **Stash the password to a file**. Click **OK**.
12. Click the **Create** menu, and select **New Self-Signed Certificate**.
13. On the window that displays, fill in all fields not listed as optional. Click **OK**
14. Start the IBM HTTP Server as described in "Starting and Stopping IBM HTTP Server" on page 148.

Additional tasks

If you have WebSphere Application Server 4.0.2 or IBM HTTP Server 1.3.19.1 already installed on your machine, you must complete certain tasks before continuing with your WebSphere Commerce installation.

If you have IBM HTTP Server and WebSphere Application Server already installed, ensure the IBM HTTP Server plugin has been applied to the *drive*:\WebSphere\HTTPServer\conf\httpd.conf file. The following four lines should exist at the end of the file:

```
LoadModule ibm_app_server_http_module drive:\WebSphere\AppServer\bin\
     mod_ibm_app_server_http.dll
Alias /IBMWebAS/ drive:\WebSphere\AppServer\web\
Alias /WSsamples drive:\WebSphere\AppServer\WSsamples\
WebSpherePluginConfig drive:\WebSphere\AppServer\config\plugin-cfg.xml
```

If these lines are missing, add it to the end of the file.

If you have DB2 Universal Database installed, ensure that the WebSphere Application Server Application Development Client is installed, and that JDBC 2 is enabled.

Other requirements

You must also do the following:
1. Ensure that you have a Windows user ID that has Administrator authority. The user ID and password *must* adhere to the rules as stated in "Quick reference to user IDs, passwords and Web addresses" on page xx, including having the *Act as part of the operating system* advanced user right. If you use a remote database you will also use this user ID and password as the DB2 database user logon ID and password.

> **Important**
>
> If your Windows user ID does *not* have Administrator authority, or is more than 8 characters in length, or is not defined on the local machine, you will be notified of the problem and will not be able to proceed with the installation.

2. If you are using Windows, ensure that your Windows user ID has the following user rights:
   - Create Token Object
   - Increase Quota
   - Replace Quota Level Token
3. If you have any applications running, stop them. You will need to restart your machine during the installation process, which can cause running applications to lose data.
4. If you are running Lotus® Notes™, or any other server on your machine, stop the server. If you have a Web server on your machine that is currently using port 80, port 443, or port 8000, disable it.
5. Since WebSphere Commerce uses both IP addresses and host names, the IP address on your system must resolve to a host name. To determine your IP address, open a command window and type the following:

   ping *host_name*

   The desired result is a reply from your correct IP address.
6. If you are using IBM HTTP Server as your Web server, ensure that the host name of your Web server does not contain an underscore (_). IBM HTTP Server does not support machines with an underscore in their host name.
7. If you are using Windows 2000, the default operating system installation installs a copy of Microsoft IIS Web server on your system. If you choose to use IBM HTTP Server rather than Microsoft IIS, you must uninstall this server or stop the following services before installing one of the supported Web servers:
   - IIS Admin Service
   - World Wide Web Publishing Service
   - Simple Mail Transport Protocol (SMTP)

   You should also set these services to manual, or disabled, rather than automatic so that they do not start when you restart your system.

Chapter 2. Installing your DB2 Universal Database

If you are installing a DB2 Universal Database on the same computer as your WebSphere Commerce server, you do not need to complete the steps in this chapter. Please proceed to Chapter 3, "Installing your Web server" on page 13.

If you are installing DB2 Universal Database on a machine other than your WebSphere Commerce server, you must complete the steps in this chapter before installing any other components of WebSphere Commerce.

Installing DB2 on a Remote Machine

To reduce the load on your WebSphere Commerce server, you may want to install your database on a separate machine. This machine must run on the same operating system as the WebSphere Commerce machine in a homogeneous environment. You must complete the steps in this section to successfully install DB2 Universal Database on a machine other than your WebSphere Commerce machine.

On your DB2 server machine, complete the following steps:

1. Insert the DB2 Universal Database CD and select setup.exe from the root of the CD.
2. Choose **Install** from the Installation window. The DB2 install program starts.
3. In the Select Products window, select **DB2 Enterprise Edition** and **DB2 Application Development Client**. Click **Next** to continue.
4. In the Select Installation Type window, select **Custom**. Click **Next** to continue.
5. In the Select Components window, ensure the following components are selected:

   Note: To select subcomponents as shown below, click **Subcomponents** to open the Select Subcomponents window.

   - Application Development Interfaces
     - JDBC Support
     - SQLJ Support
     - IBM enhanced Java Runtime Environment
   - DB2 Query Patroller Client
   - DB2 Connect Server Support
   - Data Warehousing Tools

- Warehouse Server
- Data Warehouse Center
- Warehouse Local Control Database
- Information Catalog Administrator
- Information Catalog User
- Information Catalog Manager for the Web
- Base DB2 UDB Support
- Administration and Configuration Tools

We recommend installing the following components as well:

- Documentation
- Getting Started

Click **Next** to continue.

6. In the Create DB2 Instance window, select **Yes**, and click **Next** to continue.

7. In the Configure DB2 Services window, do the following for each service:

    a. Select the service and click **Protocols**.

    b. Select the **TCP/IP** tab.

    c. Note the values of Service name and Port number for the service. These will be required when installing the DB2 client.

    Click **Next** when done.

8. Complete the Define a Local Warehouse Control Database window. Note the values you enter for Username and Password. These values will be required when installing the DB2 client. The DB2 instance ID and password on the DB2 server machine must be the same as the DB2 client machine user ID and password. When completed, click **Next**.

9. A summary of your choices displays in the **Start Copying Files** window. Use this summary to confirm your selections and the following values that will be required for the DB2 client installation:

    - DB2 Instance Log On Username
    - DB2 Instance Log On Password (not shown in summary)
    - DB2 Instance TCP/IP Service Name
    - DB2 Instance TCP/IP Port Number
    - Administration Server Log On Username
    - Administration Server Log On Password (not shown in summary)
    - Control Server Log On Username
    - Control Server Log On Password (not shown in summary)
    - Control Server TCP/IP Service Name
    - Control Server TCP/IP Port Number

When you have confirmed your selection and noted the values required for the DB2 client installation, click **Next** to complete the install.

> **Important**
>
> The DB2 Universal Database instance ID and password must be the same on both the server machine and client machine.

10. When the DB2 Universal Database installation is complete, the Setup Complete window displays. Click **Finish** to exit the DB2 install program.
11. The Product Registration tool may start after exiting the DB2 install program. You may choose to complete it at this time.
12. The DB2 **First Steps** window displays. Select **Exit** to close the **First Steps** window.

You must do the following to complete the DB2 Universal Database installation:

1. From the Windows **Services** window, stop the **DB2 JDBC Applet Server** service.
2. On the WebSphere Commerce Disk 2 CD navigate to the following directory:

   `CD_drive:\Software_Patches\DB2_patch4853\`

3. Copy the `bin`, `java11`, and `java12` directories from the WebSphere Commerce Disk 2 CD, to the following directory on your remote database machine:

   `drive:\WebSphere\sqllib\`

   Select **Yes to All**.
4. Navigate to the `drive:\WebSphere\sqllib\java12` directory.
5. Run `usejdbc2.bat`.
6. From the Windows **Services** window, start the **DB2 JDBC Applet Server** service.

After installing DB2 Universal Database on your DB2 server machine, continue with the installation instructions in Chapter 3, "Installing your Web server" on page 13.

Chapter 3. Installing your Web server

Although WebSphere Commerce includes a copy of IBM HTTP Server 1.3.19.1, you can also use iPlanet Web Server, Enterprise Edition 4.1.8 or Lotus Domino Web Server 5.0.6 as your Web server. In addition, Windows NT users can use Microsoft IIS 4.0, and Windows 2000 users can use Microsoft IIS 5.0.

If you are installing IBM HTTP Server you can go directly to Chapter 4, "Installing WebSphere Commerce" on page 19. If you are using any other Web server you *must* complete the steps in this chapter on your Web server machine before installing WebSphere Commerce.

> **Important**
>
> If you install your Web server remotely from your WebSphere Commerce machine, ensure that both products are installed to the same drive letter. For example, if you install your Web server software to drive C: on your remote Web server machine, install WebSphere Commerce to drive C: on your WebSphere Commerce machine.

Installing Microsoft IIS for WebSphere Commerce

If you are using Microsoft IIS as your Web server, complete the following steps on your web server machine:

1. Install Microsoft IIS according to the instructions provided by Microsoft.

   Note: Before installing WebSphere Commerce you must stop all Microsoft IIS web related services and applications including the IIS Admin Service, World Wide Web Publishing service, FTP service, the Default Web Site, the Default FTP Site, and the Default SMTP Virtual Server. Depending the configuration of your Microsoft IIS server, you may not find all the services or servers on your Web server machine. See Microsoft IIS documentation for instructions on how to stop these services and servers.

2. You must now install WebSphere Commerce and create your WebSphere Commerce instance.
   - To install WebSphere Commerce, see Chapter 4, "Installing WebSphere Commerce" on page 19.
   - To create your WebSphere Commerce instance, see Part 2, "Configuring WebSphere Commerce" on page 49.

> **Note:** After installing WebSphere Commerce and creating WebSphere Commerce instance you must start all Microsoft IIS web related services and applications including the IIS Admin Service, World Wide Web Publishing service, FTP service, the Default Web Site, the Default FTP Site, and the Default SMTP Virtual Server. Depending the configuration of your Microsoft IIS server, you may not find all the services or servers on your Web server machine. See Microsoft IIS documentation for instructions on how to stop these services and servers.

Install and Configure iPlanet Web Server

> **Restriction**
>
> iPlanet Web Server, Enterprise Edition 4.1.8 is only supported on Windows NT.
>
> You cannot use iPlanet Web Server, Enterprise Edition 4.1.8 as your Web server on a Windows 2000 Server machine.

If you are using iPlanet Web Server, Enterprise Edition 4.1.8 as your Web server, complete the following steps on your Web server machine:

1. Install iPlanet Web Server according to the instructions provided by Netscape. Ensure that you install the following components:
   - Netscape Enterprise Server

   Do *not* select **Use Custom JDK**.
2. Ensure that you create three Web servers: one server for non-SSL communication (on port 80), one server for SSL communincation (on port 8000), and another server for SSL communication (on port 443).
3. Install a secure certificate signed by a certifying authority, on port 443 and port 8000, according to Netscape's instructions.
4. Disable the iPlanet Servlets. To disable the iPlanet Servlets, do the following:
   a. Start the iPlanet Web Server.
   b. Disable the iPlanet Servlet:
      1) In the iPlanet Console, select the server that needs to be modified.
      2) Click **Manage**.
      3) Select the **Servlets** tab.
      4) For Activate Servlet Engine, select **No**.
      5) Click **OK**.
      6) Click **Save and Apply**.

7) Repeat these steps for all iPlanet Web servers.

   c. Start a browser and enter the name of the local machine as the URL. If you see the Web server home page, the server is installed and configured correctly.

5. You must now install WebSphere Commerce and create your WebSphere Commerce instance.

- To install WebSphere Commerce, see Chapter 4, "Installing WebSphere Commerce" on page 19.
- To create your WebSphere Commerce instance, see Part 2, "Configuring WebSphere Commerce" on page 49.

Important:

By default, outside users can access any file that can be served up by iPlanet Web Server. For security reasons, you should restrict access to Web directories. See iPlanet Web Server documentation for information on restricting file and directory access. In addition, you should open the `obj.conf` file and search for the `NameTrans` entries; ensure that the files in the targeted directories are protected.

Installing and Configuring Domino Web Server

If you are using Lotus Domino 5.0.5, 5.0.6, or 5.0.8 as your Web server, complete the following steps on your Web server machine:

Note: An excellent resource for this section are the IBM Redbooks. To obtain a copy of these books, see the IBM Redbook Web site at:

    http://www.redbooks.ibm.com/redbooks/SG245955.html

1. Install Domino Web Server according to the instructions provided by Lotus.
2. Install the Domino Web Server administration client according to the instructions provided by Lotus. You must select the following options during the installation process:
   - Ensure that you select **Domino Administrator** when prompted to select your setup type.
   - Ensure that the Domino Web Services check box is selected when prompted to choose components.
   - Ensure that the HTTP check box in the Web Browser section is selected when configuring your Domino Web Server.

   Domino Administrator on the **Domino Administrator** window.
3. From your Web server machine, select **Start > Programs > Lotus Application > Lotus Domino Administrator**.
4. Ensure that your Domino Web Server is running.

5. Select **File > Open Server**.
6. Enter the Server name. For example, *host_name/domain_name*.
7. Click **OK** to continue.
8. You must create aliases for the Domino Web Server. To create aliases for the Domino Web Server, do the following:
   a. From the left panel, select **All Server Document**.
   b. Select the *server_name*.
   c. Click the **Web Server Configuration** button.
   d. Select **Create URL Mapping/Redirection**.
   e. Select the **Basics** tab
   f. Select the **URL -> Redirection URL** option from the **What do you want to setup** drop down box.
   g. Click the **Mapping** tab. The **Mapping/Redirection** window displays. Enter the incoming URL, and redirection URL as shown in the following table. Click **Save and Close** to save each alias.

   Note: You must repeat step 8a to 8g for each alias you want to create.

Table 1.

Alias Name	Incoming URL	Redirection URL
accelerator	/accelerator	/WebSphere/AppServer/installedApps/ WC_Enterprise_App_*instance_name*.ear/ wctools.war/tools/common/accelerator.html
adminconsole	/adminconsole	/WebSphere/AppServer/installedApps/ WC_Enterprise_App_*instance_name*.ear/ wctools.war/tools/adminconsole/ wcsadmincon.html
orgadminconsole	/orgadminconsole	/WebSphere/AppServer/installedApps/ WC_Enterprise_App_*instance_name*.ear/ wcstores.war/tools/buyerconsole/ wcsbuyercon.html
storeservices	/storeservices	/WebSphere/AppServer/installedApps/ WC_Enterprise_App_*instance_name*.ear/ wctools.war/tools/devtools/ storeservices.html

9. Additional alias configuration steps are required. To configure your Domino Web Server, do the following:
   a. From the left panel, select **All Server Document**.
   b. Select the *server_name*.
   c. Click the **Web Server Configuration** button.
   d. Select **Create URL Redirection/Mapping**.

e. Click the **Basics** tab.

f. Select **URL -> Directory** from the **What do you want to set up** drop down box.

g. Click the **Mapping** tab. The **Mapping/Redirection** window displays. Enter the incoming URL, and redirection URL as shown in the following table. Click **Save and Close** to save each alias.

Table 2.

Alias Name	Incoming URL	Target server directory
wcs	/wcs	*drive*:\WebSphere\AppServer\installedApps\ WC_Enterprise_App_*instance_name*.ear\ wctools.war
wcsstore	/wcsstore	*drive*:\WebSphere\AppServer\installedApps\ WC_Enterprise_App_*instance_name*.ear\ wcstores.war
webeditor	/webeditor	*drive*:\WebSphere\AppServer\installedApps\ WC_Enterprise_App_*instance_name*.ear\ wcwebeditor.war
wcsdoc	/wcsdoc	*drive*:\WebSphere\CommerceServer\web\ doc*<locale>*
wcshelp	/wcshelp	*drive*:\WebSphere\CommerceServer\web\ doc*<locale>*

10. Select **Web > Web Server Configuration** in the left hand window.

11. Expanding *server_name* > **Domino Server** will list the aliases that have been added.

12. You must now restart your Domino Web Server to apply your changes. To restart your Domino Web Server, do the following:

a. To stop your Domino Web Server by typing **Ctrl-C** on your keyboard.

b. To restart your Domino Web Server, select **Start > Programs > Lotus Application > Lotus Domino Server**.

13. Complete the installation of WebSphere Commerce.

Chapter 4. Installing WebSphere Commerce

This chapter describes how to install WebSphere Commerce.

If you are using Microsoft IIS, Domino Web Server, iPlanet Web Server, or are installing DB2 Universal Database on a machine other than your WebSphere Commerce machine, you must complete the steps in Chapter 2, "Installing your DB2 Universal Database" on page 9 and Chapter 3, "Installing your Web server" on page 13 before performing any steps in this chapter.

Important:

- This chapter describes how to install WebSphere Commerce using the CDs provided with the product box. If you copy one or more of the CDs to a network for the purposes of installing from a network drive, you *must* not change the name of the folders, paths, and directories that are on the CDs. During the installation process, if you are prompted for a component or CD, you must specify the location of the component.
- If you are running anti-virus software you must change its startup type to **Manual** in the Services window and then restart your machine before installing WebSphere Commerce. After you finish installing WebSphere Commerce, remember to set the anti-virus service startup type back to **Automatic**.
- If you have already installed components of WebSphere Commerce 5.4, you must ensure that any associated services have been stopped in the **Services** window of the **Control Panel**.
- If you have installed a web server, please stop any associated services or applications before installing WebSphere Commerce.

Installation Procedures

To install WebSphere Commerce, do the following:

1. Log on to a Windows user ID that has Administrator authority. Your Windows user ID must adhere to the criteria outlined in the "Windows user ID" section of "Quick reference to user IDs, passwords and Web addresses" on page xx.
2. Insert the WebSphere Commerce Disk 1 CD into your CD-ROM drive.
3. Change to the root directory of the WebSphere Commerce Disk 1 CD and run setup.exe.
4. The Choose Setup Language window opens. Select a language from the list and click **OK**.

5. If your system does not meet the preinstallation requirements, a dialog box will appear detailing the requirements which have not been met. Click **Cancel** and then **Exit Setup** to exit the installation program. Take the appropriate steps to meet the preinstallation requirements which were listed and begin the installation again. If your system meets the minimum requirements but is not optimized for WebSphere Commerce, note the suggested improvements to your system so that these can be made post-installation, and click **Next** to continue.

6. A Welcome window opens. Click **Next** to continue.

7. The License Agreement screen opens. Note that a DOS window may briefly appear on your screen prior to the license agreement being displayed. Review the terms of the license agreement and either accept or decline the agreement. If you accept the terms of the license agreement, the installation program will continue. If you decline the license agreement, the installation program will exit.

8. On the User ID and Password window, enter an administrative Windows user ID and password. This user ID and password will be used for DB2, WebSphere Application Server, and IBM HTTP Server if they are installed through the WebSphere Commerce install. Verify your password and click **Next** to continue.

9. If you have already installed any components of WebSphere Commerce, the system automatically selects the Custom installation method. Please turn to "Custom Installation" on page 22 to continue. If you do not have any elements of WebSphere Commerce installed, the **Setup Type** window displays. Click **Typical** or **Custom**, and then **Next** to continue, depending on which type of installation you want to perform, as follows:

Typical Installation	Select a **Typical** installation if you want to install the default components which are packaged with WebSphere Commerce, and you want them all installed on your WebSphere Commerce machine. The following components will be installed: • IBM DB2 Universal Database 7.1.0.55 • IBM HTTP Server 1.3.19.1 • WebSphere Application Server 4.0.2 with and IBM Developer Kit for Windows, Java 2 Technology Edition, v1.3 • WebSphere Commerce 5.4 You can change the location in which the WebSphere Commerce components are installed.

Custom Installation	Select a **Custom** installation if:
	• You are using Microsoft IIS 4.0, Microsoft IIS 5.0, iPlanet Web Server, Enterprise Edition 4.1.8 or Oracle Database 8.1.7, Enterprise Edition or Standard Edition with your WebSphere Commerce system.
	• You want to select which components are installed.
	• You have installed your database or Web server on a machine other than your WebSphere Commerce server.

10. If you select **Typical**, continue with the steps in "Typical Installation" below. If you select **Custom**, continue with the steps in "Custom Installation" on page 22.

Typical Installation

If you selected a Typical installation in step 9 on page 20 above, continue with the steps in this section to complete your installation.

__ 1. The Choose Destination window opens. This window allows you to override the default installation path for some of the products that are being installed. When you have chosen your installation paths, click **Next** to continue.

> By default, the installation program uses the first drive that contains enough free space.

__ 2. Either accept the default folder name or enter the name of the subfolder which will be created for WebSphere Commerce in the **Program** folder. Click **Next** to continue.

__ 3. A window displays prompting you for the location where the installation log file will be stored. Accept the default or enter a new directory, and click **Next**.

__ 4. The Summary window displays a summary of the selections you have made. This window lists the components which will be installed, and the drives on which they will be installed. Click **Next** to continue.

__ 5. You will be prompted to do the following:

   • Insert the DB2 Universal Database CD to install the DB2 Enterprise Server, and DB2 Application Development Client. Click **OK** to continue.

   • Insert the WebSphere Application Server, Advanced Edition CD to install the IBM HTTP Server, and the WebSphere Application Server. Click **OK** to continue. You are prompted to provide the path to the WebSphere Application Server, Advanced Edition CD. Click the **Browse** button and select the following path CD_drive:\nt\httpd.

- Insert the WebSphere Commerce Disk 2 CD and click **OK** to continue. This installation may take several minutes to complete.
- The installation program informs you that the installation of WebSphere Commerce 5.4 is complete. Click **OK** to continue. WebSphere Commerce 5.4 is installed.

__ 6. The installation program informs you that the installation of the WebSphere Application Server FixPak 2 was completed. Click **OK** to continue.

__ 7. After WebSphere Commerce has been installed, you are prompted to restart. Click **Finish**.

__ 8. Restart your machine.

__ 9. After your system restarts, log on to the same Windows user ID that you used to begin the installation. It is important that you wait for your system to finish creating the WebSphere Application Server database.

__ 10. Complete the steps in "Verifying and Troubleshooting the installation" on page 35 to ensure that WebSphere Commerce 5.4 has been properly installed.

Custom Installation

If you selected a Custom installation in step 9 on page 20, you must now select from the following choices:

- To install your database, Web server, application server, and WebSphere Commerce server on this single node, see "A single-tier installation".
- To install your Web server, application server, and WebSphere Commerce server on this node, see "A 2–tier installation" on page 25.
- To install the WebSphere Commerce server on this node, see "A 3–tier installation – WebSphere Commerce server" on page 28.
- To install or configure a Web server on this node, see "A 3–tier installation – Web server" on page 30

A single-tier installation

1. From the Custom Installation window, select the **The commerce server, a Web server and a database** check box and click **Next** to continue.
2. On the Database and Web Server Selection window, use the drop-down menus to indicate which Web server and database management system you will be using with WebSphere Commerce. Use the following points for guidance:

Web Server	Use the drop-down menu to indicate one of the following:
	IBM HTTP Server 1.3.19.1 This is the Web server provided with WebSphere Commerce.
	Microsoft IIS Select this option from the list to indicate that you will be using Microsoft IIS 4.0, or Microsoft IIS 5.0, with WebSphere Commerce. Microsoft IIS must already be installed, as described in Chapter 3, "Installing your Web server" on page 13.
	▶ NT **iPlanet Web Server, Enterprise Edition 4.1.8** Select this option from the list to indicate that you will be using iPlanet Web Server with WebSphere Commerce. iPlanet Web Server must already be installed, as described in Chapter 3, "Installing your Web server" on page 13. This product is not supported on Windows 2000.
	Lotus Domino Web Server 5.0.6 Select this option from the list to indicate that you will be using Domino Web Server with WebSphere Commerce. Domino Web Server must already be installed, as described in Chapter 3, "Installing your Web server" on page 13.
Database	Use the drop-down menu to select the following:
	IBM DB2 Universal Database 7.1.0.55 This is the database management system provided with WebSphere Commerce.

When you have made your selections, click **Next**.

3. The **WebSphere Commerce Component Selection** window allows you to choose if the following WebSphere Commerce components will be installed:

- **Commerce Server Samples**. You must select this check box if you want to use a WebSphere Commerce sample stores.
- **Commerce Server Documentation**. You must select this check box if you want to install the full version of the online help.

After making your selections, click **Next** to continue.

4. The **Choose Destination** window allows you to override the default installation path for each component you selected. If a previous version of a component is already installed, the updated version will be installed in the same directory path.

When you have chosen your installation paths, click **Next**.

> By default, the WebSphere Commerce installation program uses the first drive it finds that has enough space for all your selections. If you want, you can change the drive for all components, or use a different drive for each component.

5. On the **Select Program Folder** window, either accept the default folder name or enter the name of the folder which will be created for WebSphere Commerce in the Start menu. Click **Next** to continue.

6. A window displays prompting you for the location where the installation log file will be stored. Accept the default or enter a new directory, and click **Next**.

7. The Summary window displays a summary of the selections you have made. This window lists setup type, the components which will be installed, the drives on which they will be installed, and whether any applications will be upgraded. Click **Next** to continue.

8. You will be prompted to do the following:

   - Insert the DB2 Universal Database CD to install the DB2 Enterprise Server, and DB2 Application Development Client. Click **OK** to continue.

   - Insert the WebSphere Application Server, Advanced Edition CD to install the IBM HTTP Server (if selected), and the WebSphere Application Server. Click **OK** to continue. You are prompted to provide the path to the WebSphere Application Server, Advanced Edition CD. Click the **Browse** button and select the following path CD_drive:\nt\httpd.

     Note: If you are using an iPlanet Web Server, you are prompted to enter the directory that contains the obj.conf file for your nonsecure server.

   - Insert the WebSphere Commerce Disk 2 CD and click **OK** to continue.

   - The installation program informs you that the installation of WebSphere Commerce 5.4 is complete. Click **OK** to continue.

9. The installation program informs you that the installation of the WebSphere Application Server FixPak 2 was completed. Click **OK** to continue.

10. The **Installation Complete** window opens.

11. After WebSphere Commerce has been installed, you are prompted to restart. Click **Finish**.

12. Restart your machine.

13. After your system restarts, log on to the same Windows user ID that you used to begin the installation. It is important that you wait for your system to finish creating the WebSphere Application Server database.

14. Complete the steps in "Verifying and Troubleshooting the installation" on page 35 to ensure that WebSphere Commerce 5.4 has been properly installed.

A 2–tier installation

A 2–tier installation is an intermediate configuration where the database is installed separately from the Web server and the Commerce server. This option will install the Web server, Application server, and Commerce server on the current machine. You have to install Database Server on a separate machine.

To install WebSphere Commerce in a 2–tier configuration, do the following:

1. From the Custom Installation window, select the **The commerce server, a Web server and a database** check box and click **Next** to continue.

2. When presented with the Database and Web Server Selection window, use the drop-down menus to indicate which Web server and database management system you will be using with WebSphere Commerce. Use the following points for guidance:

Web Server	Use the drop-down menu to indicate one of the following:
	IBM HTTP Server 1.3.19.1 This is the Web server provided with WebSphere Commerce.
	Microsoft IIS Select this option from the list to indicate that you will be using Microsoft IIS 4.0, or Microsoft IIS 5.0 with WebSphere Commerce. Microsoft IIS must already be installed, as described in Chapter 3, "Installing your Web server" on page 13.
	▶ NT ◀ **iPlanet Web Server, Enterprise Edition 4.1.8** Select this option from the list to indicate that you will be using iPlanet Web Server with WebSphere Commerce. iPlanet Web Server must already be installed, as described in Chapter 3, "Installing your Web server" on page 13. This product is not supported on Windows 2000.
	Lotus Domino Web Server 5.0.6 Select this option from the list to indicate that you will be using Domino Web Server with WebSphere Commerce. Domino Web Server must already be installed, as described in Chapter 3, "Installing your Web server" on page 13.
Database	Use the drop-down menu to select the following:
	DB2 Universal Database Client V7.2 This is the database management system provided with WebSphere Commerce. Although you have installed DB2 on s separate machine, ensure that this component is selected, as the WebSphere Commerce installation program installs the client component of DB2 Universal Database.

When you have made your selections, click **Next**.

3. The **WebSphere Commerce Component Selection** window allows you to choose if the following WebSphere Commerce components will be installed:

- **Commerce Server Samples**. You must select this check box if you want to use a WebSphere Commerce sample stores.
- **Commerce Server Documentation**. You must select this check box if you want to install the full version of the online help.

After making selections, click **Next** to continue.

4. The **Choose Destination** window allows you to override the default installation path for each component you selected. If a previous version of a component is already installed, the updated version will be installed in the same directory path.

When you have chosen your installation paths, click **Next**.

> By default, the WebSphere Commerce installation program uses the first drive it finds that has enough space for all your selections. If you want, you can change the drive for all components, or use a different drive for each component.

5. On the Select Program Folder window, either accept the default folder name or enter the name of the folder which will be created for WebSphere Commerce in the Start menu. Click **Next** to continue.

6. A window displays prompting you for the location where the installation log file will be stored. Accept the default or enter a new directory, and click **Next**.

7. The Summary window displays a summary of the selections you have made. This window lists setup type, the components which will be installed, the drives on which they will be installed, and whether any applications will be upgraded. Click **Next** to continue.

8. You will be prompted to do the following:
   - Insert the DB2 Universal Database CD to install the DB2 Administration Client. Click **OK** to continue.
   - Insert the WebSphere Application Server, Advanced Edition CD to install the IBM HTTP Server (if selected), and the WebSphere Application Server. Click **OK** to continue. You are prompted to provide the path to the WebSphere Application Server, Advanced Edition CD. Click the **Browse** button and select the following path `CD_drive:\nt\httpd`.

     Note: If you are using an iPlanet Web Server, you are prompted to enter the directory that contains the `obj.conf` file for your nonsecure server.
   - If you are using iPlanet Web Server as your WebSphere Commerce Web server, you are prompted to provide the location of the `obj.conf` file for your non-secure Web server.
   - Insert the WebSphere Commerce Disk 2 CD and click **OK** to continue. This installation may take several minutes to complete.
   - The installation program informs you that the installation of WebSphere Commerce 5.4 is complete. Click **OK** to continue.

9. The installation program informs you that the installation of the WebSphere Application Server FixPak 2 was completed. Click **OK** to continue.

10. After WebSphere Commerce has been installed, you are prompted to restart. Click **Finish**.

11. Restart your machine.

12. After your system restarts, log on to the same Windows user ID that you used to begin the installation. It is important that you wait for your system to finish creating the WebSphere Application Server database.

13. Complete the steps in "Verifying and Troubleshooting the installation" on page 35 to ensure that WebSphere Commerce 5.4 has been properly installed.

A 3–tier installation

A 3–tier installation is an advanced configuration where the database, WebSphere Commerce server and the Web server are installed on separate machines. This section describes how to complete the WebSphere Commerce server and the Web server installation. You should have already installed the database server on a separate machine.

A 3–tier installation – WebSphere Commerce server

A 3–tier installation is an advanced configuration where the database, WebSphere Commerce server and the Web server are installed on separate machines. This option will install the Commerce server on your WebSphere Commerce server machine. You should have already installed the database server on a separate machine.

Important

If you install your Web server remotely from your WebSphere Commerce machine, ensure that both products are installed to the same drive letter. For example, if you install your Web server software to drive C: on your remote Web server machine, install WebSphere Commerce to drive C: on your WebSphere Commerce machine.

To install WebSphere Commerce in a 3–tier configuration, do the following on your WebSphere Commerce server machine:

1. From the Custom Installation window, select the **The commerce server** check box and click **Next** to continue.

2. When presented with the Database and Web Server Selection window, use the drop-down menus to indicate which database management system you will be using with WebSphere Commerce. Use the following points for guidance:

Database	Use the drop-down menu to select the following:
	DB2 Universal Database Client V7.2 This is the database management system provided with WebSphere Commerce. Although you have installed DB2 on s separate machine, ensure that this component is selected, as the WebSphere Commerce installation program installs the client component of DB2 Universal Database.
Join an existing WebSphere Administrative domain	Select this option to use an existing WebSphere Application Server domain. You should only select this option if you want to enable WebSphere Application Server cloning. For more information on cloning, see Chapter 10, "Cloning" on page 117.

When you have made your selections, click **Next**.

3. The **Use Remote Web server** window displays. Enter the fully qualified name of you remote Web server machine.

4. The **WebSphere Commerce Component Selection** window allows you to choose if the following WebSphere Commerce components will be installed:

   - **Commerce Server Samples**. You must select this check box if you want to use a WebSphere Commerce sample stores.
   - **Commerce Server Documentation**. You must select this check box if you want to install the full version of the online help.

   After making selections, click **Next** to continue.

5. The **Choose Destination** window allows you to override the default installation path for each component you selected. If a previous version of a component is already installed, the updated version will be installed in the same directory path.

   When you have chosen your installation paths, click **Next**.

> By default, the WebSphere Commerce installation program uses the first drive it finds that has enough space for all your selections. If you want, you can change the drive for all components, or use a different drive for each component.

6. On the **Select Program Folder** window, either accept the default folder name or enter the name of the folder which will be created for WebSphere Commerce in the Start menu. Click **Next** to continue.

7. A window displays prompting you for the location where the installation log file will be stored. Accept the default or enter a new directory, and click **Next**.

8. The **Summary window** displays a summary of the selections you have made. This window lists setup type, the components which will be

installed, the drives on which they will be installed, and whether any applications will be upgraded. Click **Next** to continue.

9. You will be prompted to do the following:
   - Insert the DB2 Universal Database CD to install the DB2 Administration Client. Click **OK** to continue.
   - Insert the WebSphere Application Server, Advanced Edition CD to install the IBM HTTP Server (if selected), and the WebSphere Application Server. Click **OK** to continue. You are prompted to provide the path to the WebSphere Application Server, Advanced Edition CD. Click the **Browse** button and select the following path CD_drive:\nt\httpd.

     Note: If you are using an iPlanet Web Server, you are prompted to enter the directory that contains the obj.conf file for your nonsecure server.

   - Insert the WebSphere Commerce Disk 2 CD and click **OK** to continue.
   - The installation program informs you that the installation of WebSphere Commerce 5.4 is complete. Click **OK** to continue.

10. The installation program informs you that the installation of the WebSphere Application Server FixPak 2 was completed. Click **OK** to continue.

11. After WebSphere Commerce has been installed, you are prompted to restart. Click **Finish**.

12. Restart your machine.

13. Complete the steps found in "A 3–tier installation – Web server", to install and configure your Web server node.

A 3–tier installation – Web server

A 3–tier installation is an advanced configuration where the database, WebSphere Commerce server and the Web server are installed on separate machines. This option will install and configure the Web server on your web server machine. You must have already installed the database server on a separate machine.

Important

If you install your Web server remotely from your WebSphere Commerce machine, ensure that both products are installed to the same drive letter. For example, if you install your Web server software to drive C: on your remote Web server machine, install WebSphere Commerce to drive C: on your WebSphere Commerce machine.

If you are using Domino Web Server, Microsoft IIS, or iPlanet Web Server, these must already be installed as described in Chapter 3, "Installing your Web server" on page 13 — the installation program will only configure your Web server to communicate with your WebSphere Application Server.

To install WebSphere Commerce in a 3–tier configuration, do the following on your Web server machine:

1. From the Custom Installation window, select the **A Web server** check box and click **Next** to continue.
2. When presented with the Database and Web Server Selection window, use the drop-down menus to indicate which Web server you will be using with WebSphere Commerce. Use the following points for guidance:

Web Server	Use the drop-down menu to indicate one of the following:
	IBM HTTP Server 1.3.19.1 ⠀⠀⠀⠀This is the Web server provided with WebSphere Commerce. **Microsoft IIS** ⠀⠀⠀⠀Select this option from the list to indicate that you will be using Microsoft IIS 4.0, or Microsoft IIS 5.0 with WebSphere Commerce. Microsoft IIS must already be installed, as described in Chapter 3, "Installing your Web server" on page 13. ▶ NT ◀ **iPlanet Web Server, Enterprise Edition 4.1.8** ⠀⠀⠀⠀Select this option from the list to indicate that you will be using iPlanet Web Server with WebSphere Commerce. iPlanet Web Server must already be installed, as described in Chapter 3, "Installing your Web server" on page 13. This product is not supported on Windows 2000. **Lotus Domino Web Server 5.0.6** ⠀⠀⠀⠀Select this option from the list to indicate that you will be using Domino Web Server with WebSphere Commerce. Domino Web Server must already be installed, as described in Chapter 3, "Installing your Web server" on page 13.

When you have made your selections, click **Next**.

3. The **WebSphere Commerce Component Selection** window allows you to choose if the following WebSphere Commerce components will be installed:
   - **Commerce Server Samples**. Do *not* select this check box.
   - **Commerce Server Documentation**. You must select this check box if you want to install the full version of the online help.

- **WebSphere Application Server Plugins V4.0**. You must select this check box to install the WebSphere Application Server Web server plugins.

  Note: Selecting the **WebSphere Application Server Plugins V4.0** check box ensures that your Web server machine can communicate with your WebSphere Commerce machine.

  After making selections, click **Next** to continue.

4. The **Choose Destination** window allows you to override the default installation path for each component you selected. If a previous version of a component is already installed, the updated version will be installed in the same directory path.

   When you have chosen your installation paths, click **Next**.

> By default, the WebSphere Commerce installation program uses the first drive it finds that has enough space for all your selections. If you want, you can change the drive for all components, or use a different drive for each component.

5. On the Select Program Folder window, either accept the default folder name or enter the name of the folder which will be created for WebSphere Commerce in the Start menu. Click **Next** to continue.

6. A window displays prompting you for the location where the installation log file will be stored. Accept the default or enter a new directory, and click **Next**.

7. The Summary window displays a summary of the selections you have made. This window lists setup type, the components which will be installed, the drives on which they will be installed, and whether any applications will be upgraded. Click **Next** to continue.

8. You will be prompted to do the following:
   - Insert the DB2 Universal Database CD to install the DB2 Administration Client. Click **OK** to continue.
   - Insert the WebSphere Application Server, Advanced Edition CD to install the IBM HTTP Server (if selected), and the WebSphere Application Server. Click **OK** to continue. You are prompted to provide the path to the WebSphere Application Server, Advanced Edition CD. Click the **Browse** button and select the following path `CD_drive:\nt\httpd`.

     Note: If you are using an iPlanet Web Server, you are prompted to enter the directory that contains the `obj.conf` file for your nonsecure server.

   - Insert the WebSphere Commerce Disk 2 CD and click **OK** to continue.

- The installation program informs you that the installation of WebSphere Commerce 5.4 is complete. Click **OK** to continue.

9. The installation program informs you that the installation of the WebSphere Application Server FixPak 2 was completed. Click **OK** to continue.

10. After WebSphere Commerce has been installed, you are prompted to restart. Click **Finish**.

11. Restart your machine.

12. After your system restarts, log on to the same Windows user ID that you used to begin the installation.

13. Complete the steps in "Verifying and Troubleshooting the installation" on page 35 to ensure that WebSphere Commerce 5.4 has been properly installed.

Complete your remote DB2 Universal Database installation

If you are using DB2 on a machine other than your WebSphere Commerce machine, you should have previously completed the steps outlined in "Installing DB2 on a Remote Machine" on page 9. You also need to complete the following steps to allow WebSphere Commerce access to your database:

1. On your **DB2 server machine**, run the following three commands from a DB2 command window:

```
db2set DB2_RR_TO_RS=yes
db2set DB2BIDI=yes
db2set DB2_STPROC_LOOKUP_FIRST=true
```

Restart your DB2 Universal Database services. For information on stopping and starting your DB2 Universal Database, see "Starting and Stopping DB2 Universal Database" on page 149.

2. On your **DB2 server machine**, verify the services file entry by doing the following:

a. Open the services file located in the *drive*:\WINNT\system32\drivers\etc directory, and find the entries that have comments referring to your DB2 instance connection port. Record the service name from the first column that corresponds to the lower port number. For example, if the following services were displayed:

```
db2cDB2 50000/tcp # Connection port for DB2 instance DB2
db2iDB2 50001/tcp # Interrupt port for DB2 instance DB2
```

you would record the db2cdb2 service name.

b. Verify the service name recorded in the database manager configuration using the following command from a DB2 command window:

```
db2 get dbm cfg
```

Look at the SVCENAME entry. Verify that a value exists, and that it matches the value for the service name recorded above. For example, something similar to the following should be displayed:

```
TCP/IP Service name (SVCENAME) = db2cdb2inst1
```

If this value does not exist, update the database manager configuration using the following command:

```
db2 update dbm cfg using svcename service_name
```

where *service_name* should be replaced with the service name (SVCENAME) recorded above.

3. On your **WebSphere Commerce machine**, catalog the remote database server node by typing the following in a DB2 command window:

```
db2 catalog tcpip node node_name
 remote database_server_hostname server port_number
```

where:

node_name
      Is the unique name of your choice that DB2 will use to identify the database server TCP/IP node.

database_server_hostname
      Is the host name of your database server.

port_number
      Is the port being used by DB2 (the default is 50000).

4. Attach to the remote database node by typing the following:

```
db2 attach to node_name user db2_user_ID using db2_userid_password
```

where:

node_name
      Is the unique name of your choice that DB2 will use to identify the TCP/IP node.

db2_user_ID
      Is your DB2 logon user ID.

db2_userid_password
      Is the corresponding password for *db2_user_ID*.

5. Create your WebSphere Application Server database:

a. On a DB2 command line type:

```
db2 create db was40
```

b. Increase the application heap size for the WAS database by typing:

```
db2 update db cfg for was40 using applheapsz 256
```

To verify that the WAS40 database has been properly created on the remote database machine, type:

```
db2 list db directory
```

The WAS database should have a directory entry type of REMOTE and a catalog node number of –1.

6. Create your Payment Manager database:

   a. On a DB2 command line type:

```
db2 create db payman
```

   b. Increase the application heap size for the payman database by typing:

```
db2 update db cfg for payman using applheapsz 256
```

To verify that the payman database has been properly created on the remote database machine, type:

```
db2 list db directory
```

The payman database should have a directory entry type of REMOTE and a catalog node number of –1.

Verifying and Troubleshooting the installation

You should complete the steps found in this section to verify that WebSphere Commerce had been installed correctly. Depending on your WebSphere Commerce installation type, complete the tasks outlined in one of the following sections:

- "Verifying and Troubleshooting the installation in a single tier and a 2–tier environment"
- "Verifying and Troubleshooting the installation in a 3–tier environment" on page 36

Verifying and Troubleshooting the installation in a single tier and a 2–tier environment

To verify that WebSphere Commerce has been installed properly, ensure that the following directories have been created on your system:

- *drive*:\WebSphere\AppServer
- *drive*:\WebSphere\sqllib
- *drive*:\WebSphere\HTTPServer (if you are using the IBM HTTP Server)
- *drive*:\WebSphere\CommerceServer

You should also verify that the following log files do not contain error messages:

- The *drive*:\WCinstall.log (the location of which you specified during the installation) describes any problems encountered during the installation.

- To verify that WebSphere Application Server has installed properly, check *drive*:\WebSphere\AppServer\logs\wssetup.log One error is logged, indicating that the wrong JDBC level is installed on your machine. This error can be safely ignored. You should see an Install Complete statement at the end of the log to indicate a successful installation.
- To verify that the WebSphere Application Server FixPak was applied properly, check *drive*:\WebSphere\AppServer\logs\was40_ae_ptf_2.log.
- To verify that the WebSphere Application Server database was created properly, check *drive*:\WebSphere\AppServer\logs\wasdb2.log. Ensure that all DB2 commands completed successfully.
- To verify that the WebSphere Application Server efixes installed properly, check *drive*:\WebSphere\AppServer\eFix directory. You should ensure that all of the efixes were applied correctly by checking the Extractor.Log file in each directory. The Extractor.Log should not contain any errors or warnings.

To verify your Web server installation, try to access the following Web page in a browser:

- http://*host_name*

Where *host_name* is the fully qualified host name of your WebSphere Commerce machine. If the http address does not work, ensure that your Web server has been started.

Note: WebSphere Commerce Installation and Configuration Checker, or IC Checker, is a standalone, downloadable problem determination tool which enables users to verify the installation and configuration of WebSphere Commerce. IC Checker gathers configuration data and logs, and performs simple error-checking. For information on the IC Checker, see "Downloadable tools" on page 167.

Verifying and Troubleshooting the installation in a 3–tier environment

To verify that WebSphere Commerce has been installed properly, ensure that the following directories have been created on your WebSphere Commerce machine:

- *drive*:\WebSphere\AppServer
- *drive*:\WebSphere\CommerceServer

To verify that DB2 Universal Database has been installed properly, ensure that the following directories have been created on your database machine:

- *drive*:\WebSphere\sqllib

To verify that your Web server has been installed properly, ensure that the following directories have been created on your Web server machine (if you are using the IBM HTTP Server):

- *drive*:\WebSphere\AppServer
- *drive*:\WebSphere\HTTPServer (if you are using the IBM HTTP Server)
- *drive*:\WebSphere\CommerceServer

You should also verify that the following log files on your WebSphere Commerce machine, do not contain error messages:

- The *drive*:\WCinstall.log (the location of which you specified during the installation) describes any problems encountered during the installation.
- To verify that WebSphere Application Server has installed properly, check *drive*:\WebSphere\AppServer\logs\wssetup.log. One error is logged, indicating that the wrong JDBC level is installed on your machine. This error can be safely ignored.You should see an Install Complete statement at the end of the log to indicate a successful installation.
- To verify that the WebSphere Application Server FixPak was applied properly, check *drive*:\WebSphere\AppServer\logs\was40_ae_ptf_2.log.
- To verify that the WebSphere Application Server efixes installed properly, check *drive*:\WebSphere\AppServer\eFix directory. You should ensure that all of the efixes were applied correctly by checking the Extractor.Log file in each directory. The Extractor.Log should not contain any errors or warnings.

To verify your Web server installation, open a browser on your Web server machine and access the following Web page:

- http://*host_name*

Where *host_name* is the fully qualified host name of your Web server machine. If the http address does not work, ensure that your Web server has been started.

> **Note:** WebSphere Commerce Installation and Configuration Checker, or IC Checker, is a standalone, downloadable problem determination tool which enables users to verify the installation and configuration of WebSphere Commerce. IC Checker gathers configuration data and logs, and performs simple error-checking. For information on the IC Checker, see "Downloadable tools" on page 167.

Chapter 5. Installing IBM WebSphere Payment Manager 3.1.2

This chapter describes how to install and configure Payment Manager on your local WebSphere Commerce machine, or on a machine that is remote from your WebSphere Commerce machine. Install Payment Manager on a remote machine to improve the performance of payment processing. To complete the steps in this chapter, you will need the IBM Payment Manager 3.1.2 CD.

If you want to install Payment Manager on your local WebSphere Commerce machine you *must* install Payment Manager after installing WebSphere Commerce and before you create your WebSphere Commerce instance, so that the Payment Manager install program can automatically configure Payment Manager for WebSphere Commerce.

For additional information, see the *IBM WebSphere™ Payment Manager for Multiplatforms Installation Guide, Version 3.1.2* and the *IBM WebSphere Payment Manager for Multiplatforms Administrator's Guide, Version 3.1.2* on the Payment Manager CD.

Prerequisites for installation

If you are installing Payment Manager on your WebSphere Commerce machine, most of the prerequisites for installing Payment Manager are already met. You can proceed directly to "Before installing Payment Manager" on page 42 and install Payment Manager. If you are installing Payment Manager on a machine that is remote from your WebSphere Commerce machine, you need to meet the hardware and software prerequisites for your machine as documented in the following sections.

Hardware requirements

- Intel Pentium II personal computer with a 500 MHz processor or better that supports Windows NT Version 4.0 or Windows 2000 Server.
- A network communications adapter that supports the TCP/IP protocol (Ethernet or Token Ring card).
- Network connectivity to the internet
- A CD-ROM drive.
- 512 MB RAM minimum.

- 150 MB free disk space minimum if you are installing Payment Manager and WebSphere Application Server on the same file system (or 75 MB on the Payment Manager system and 75 MB on the WebSphere Application Server system if installing separately)
- 150 MB of disk space minimum on whichever disk the TEMP environment variable points to.

  > **Note:** Note: On Windows 2000, each user has their own TEMP environment variable which is set by default to:
  > ```
  > c:\Documents and Settings\logon_userid\Local Settings\Temp
  > ```

- Additional disk space for your database.
- Additional disk space for any payment cassettes you intend to use.

To find the location of your temporary files, at a DOS command prompt enter:
```
set TEMP
```

> **Note:** The total recommended disk space is greater than the sum of all software products packaged with the Payment Manager. This numeric value allows for database and log file post-installation growth.

Software requirements

- One of the following:
  - Windows NT Version 4.0 Workstation or Server with Service Pack 6a, or higher. You can download the latest service packs from:
    ```
    http://www.microsoft.com
    ```
  - Windows 2000 Server or Advanced Server Edition with Service Pack 2.

  For information on upgrading your operating system, see your Windows documentation.
- A database product. The following databases are supported by IBM Payment Manager 3.1.2:
  - IBM DB2 Universal Database 7.1.0.55
  - Oracle Database 8.1.7, Enterprise Edition or Standard Edition
- WebSphere Application Server 4.0.2
- IBM SDK for Java. WebSphere Application Server 4.0.2 requires the IBM Developer Kit for Windows, Java 2 Technology Edition, v1.3 . (This software is installed by default when you install WebSphere Application Server 4.0.2) To obtain IBM SDK for Java, see:
  ```
  http://www.ibm.com/java/jdk/download/index.html
  ```
- A Web server (IBM HTTP Server 1.3.19.1 is installed by default when you install WebSphere Application Server 4.0.2). See the WebSphere Application Server documentation for supported Web servers.

- A Web browser to view the Payment Manager user interface. Payment Manager has been optimized for:
  - Netscape Communicator 4.08 or higher.
  - Microsoft Internet Explorer 4.01 with Service Pack 2, or higher.

  Note: While a Web browser is not required to be installed on the same machine as Payment Manager, a Web browser is necessary to access the Payment Manager user interface as well as WebSphere Application Server.

Standard installation

IBM WebSphere Payment Manager 3.1.2 relies on several software products, including:
- A database product
- IBM WebSphere Application Server
- A Web server product

The Payment Manager installation program determines whether or not a suitable set of prerequisite products has been installed. If WebSphere Application Server and a suitable web server have not been installed, the Payment Manager installation program will issue a message that they were not detected on your system. These components must be installed and running before you install IBM WebSphere Payment Manager 3.1.2.

You can install the following software from the CD-ROMs supplied with the WebSphere Commerce package:
- IBM DB2 Universal Database 7.1.0.55
- WebSphere Application Server 4.0.2, Advanced Edition
- IBM HTTP Server 1.3.19.1
- IBM Developer Kit for Windows, Java 2 Technology Edition, v1.3 .

If you are using different levels of software than the above, or you are migrating from an earlier version of Payment Manager, refer to the *IBM WebSphere Payment Manager for Multiplatforms Installation Guide, Version 3.1.2* publication for additional planning and installation considerations.

Installing a database and WebSphere Application Server

If you do not have WebSphere Application Server 4.0.2 installed on the machine where you are installing Payment Manager, you need to install it:

1. Insert the WebSphere Application Server, Advanced Edition CD supplied with WebSphere Commerce into your CD-ROM drive. If the WebSphere Application Server installation program does not get invoked automatically, double-click `setup.exe` at the root of the CD. In the Select Language window, select your language and follow the online install

instructions to install WebSphere Application Server. Upon restarting your machine after installing WebSphere Application Server, the WebSphere Application Server installation program launches a DB2 command window and then creates and populates the WAS40 database.

Before installing Payment Manager

1. Read the latest readme file, readme.framework.html, accessed through documentation links on the Payment Manager Web site:

   http://www.ibm.com/software/webservers/commerce/paymentmanager/
   support.html

   and on the Payment Manager CD-ROM.

2. Payment Manager requires IBM Developer Kit for Windows, Java 2 Technology Edition, v1.3 . If you are using earlier versions of WebSphere Application Server (for example, Version 2.0.3.x or 3.0.2.x) which use earlier versions of the IBM SDK for Java, you must upgrade WebSphere Application Server and have the IBM Developer Kit for Windows, Java 2 Technology Edition, v1.3 installed prior to installing Payment Manager. WebSphere Application Server 4.0.2 uses IBM Developer Kit for Windows, Java 2 Technology Edition, v1.3 .

3. You must have a database product already installed for use with Payment Manager:
   - If you are using UDB, you must use IBM DB2 Universal Database 7.1.0.55 or higher.
   - Create a database for Payment Manager (for example, payman) by issuing the following commands in a DB2 Command Line Processor:

     ```
     create db payman
     update db cfg for payman using APPLHEAPSZ 256
     ```
   - The database must be running during Payment Manager installation.

4. Before installation begins, ensure that:
   - WebSphere Application Server is installed. The WebSphere Application Server administration server should be running at installation. Also, make sure WebSphere Application Server does not have an application server named **WebSphere Payment Manager** configured for another purpose (such as for use with other products). If so, rename or delete it. To delete it, do the following:
     a. From the WebSphere Application Server Administrative console, select the Payment Manager application server. Right-click the selection.
     b. Select **Remove**.
   - If you are migrating from Payment Manager Version 2.1 or Version 2.2, ensure the Payment Manager is **not** running.

5. Ensure that WebSphere security is disabled before installing Payment Manager or any payment cassettes. To disable security, see "Disabling WebSphere Application Server security" on page 162.After following subsequent procedures to install Payment Manager and any payment cassettes, you can re-enable security.

Installing Payment Manager

To install Payment Manager, follow these steps:

1. Log on to a Windows user ID that has Administrator authority. Your Windows user ID must adhere to the criteria outlined in the "Windows user ID" section of "Quick reference to user IDs, passwords and Web addresses" on page xx.
2. Ensure the resolution on your display is set to 800 by 600 pixels or higher to best view the Payment Manager installation program.
3. Insert the *Payment Manager for Windows NT and Windows 2000* CD-ROM.
4. Change to the root directory of the CD-ROM
5. From a command prompt, enter **Install**.
6. On the Payment Manager Install screen, click **Next**.
7. Accept the default destination directory or enter another directory, and click **Next**.
8. If you are migrating from Payment Manager Version 2.2 or Version 2.1 and the installation program finds the Test Cassette, it will delete it and inform you of the deletion. Click **Next** to proceed.
9. If WebSphere Application Server 4.0.2 is already installed and the installation program can not determine which IBM SDK for Java that WebSphere Application Server is using, you will be asked to enter the location of the IBM SDK for Java directory. If the location displayed is correct, click **Next**. If not, enter the correct location and click **Next**.
10. Select which database you will use with Payment Manager. Select **IBM DB2 Universal Database**, and click **Next**.
11. When the installation finds the JDBC™ driver information, click **Next**. If it does not find the JDBC driver information, use the following information, depending on your database product:

    DB2 Universal Database
    - JDBC Driver Class name: `COM.ibm.db2.jdbc.app.DB2Driver`
    - JDBC Class location: `DB2_install_directory\java\db2java.zip`
    - JDBC Driver shared library path: `DB2_install_directory\bin\`

    Note: If you enter incorrect database information and database errors occur, using the **Back** button may cause more database error pop-ups to appear. If this occurs, you can either click **Cancel** and

restart the installation, or you can click **Back** through several screens and then move forward using the **Next** buttons (ensuring that the correct values are entered at each intervening screen) until you get back to the database entry screen. Once this screen reappears, you can enter the correct information.

12. On the Payment Manager Database Access Information screen, enter your values according to what database you will use with Payment Manager, and click **Next** to continue:

    DB2 Universal Database
    - Database owner user ID
    - Administrator's user ID
    - Administrator's password
    - Payment Manager database name (for example, `payman`)
    - DB2 instance name

13. On the Payment Manager WebSphere Configuration Information screen, accept the default node name if it is correct for your machine, or enter the WebSphere Application Server node name of the machine where you wish to run Payment Manager. The node name must be the same as what is listed in the WebSphere Application Server Administration Console for node name of your machine.

14. On the Installation Summary screen, review the chosen parameters. Click **Next** to continue the installation.

    Note: At times during the installation, the progress bar may appear to have stopped. Do not terminate the installation, which is continuing. The progress bar will resume moving, when system resources permit.

15. The IBM WebSphere Payment Manager 3.1.2 Readme window opens. Click **Next** to continue.

16. The Payment Manager installation is complete.

17. Restart your system.

Windows shortcuts

As part of the installation, shortcuts are provided on the Windows Start menu. You can use these shortcuts to do the following:

- Log on to Payment Manager
- View the readme file, if you haven't already done so.
- Uninstall Payment Manager
- View Payment Manager product documentation on an IBM Web site.

Post installation steps

After you have installed IBM Payment Manager 3.1.2 on your operating system, perform these activities, as necessary:

- Install the payment cassette or cassettes you will be using with Payment Manager.

  Before installing the payment cassettes:

  - Ensure that WebSphere Application Server and your Web server are started, as shown in "Starting and Stopping WebSphere Application Server" on page 147 and "Starting and Stopping IBM HTTP Server" on page 148.

  - If it is running, stop the WebSphere Payment Manager Application Server from the WebSphere Application Server Administrator's Console. This ensures that the configuration files for Payment Manager can be updated by the payment cassette installation program. If you are installing more that one type of cassette, you must stop the Payment Manager Application before installing each cassette. For more information, see "Starting and Stopping Payment Manager" on page 150.

  For information on using the CustomOffline Cassette or the OfflineCard Cassette, which are installed with Payment Manager, see the *Payment Manager Administrator's Guide*.

  For information on installing other payment cassettes, see the cassette-specific supplement for the cassette you are installing. For IBM cassettes, see the following documents:

  - The *IBM WebSphere Payment Manager for Multiplatforms Cassette for SET Supplement* , in PDF file format (`paymgrset.pdf`)

  - The *IBM WebSphere Payment Manager for Multiplatforms Cassette for VisaNet Supplement*, in PDF file format (`paymgrvisanet.pdf`)

  - The *IBM WebSphere Payment Manager for Multiplatforms Cassette for CyberCash Supplement* , in PDF file format (`paymgrcyber.pdf`)

  - The *IBM WebSphere Payment Manager for Multiplatforms Cassette for BankServACH Supplement* , in PDF file format (`paymgrbank.pdf`)

  For third-party cassettes, see the information provided with the cassette.

Configuring Lotus Domino Server

If you are using Lotus Domino Server Release 5 with Payment Manager, you must add the user `admin` to Lotus Domino Server after installing the Payment Manager (but before logging into the Payment Manager user interface for the first time). To add the user `admin` to the Domino directory:

1. Enter the following URL in a web browser:

   `http://`*host_name*`/webadmin.nsf`

2. Select **Directories → People → Add Person**.
3. In the **Last name** field enter: admin.
4. In the **User name** field enter: admin.
5. In the **Internet password** field enter: admin.

Note: To access Payment Manager through the WebSphere Commerce Administration Console you must add the default WebSphere Commerce Instance Administrator userID and password. For example, wcsadmin.

Each time you add a Payment Manager user, you must first add the user in Lotus Release 5 using the above instructions. Users must also be added to WebSphere realm. Under WebSphere Application Server, Payment Manager creates its own realm.

To add users to the realm, use the PSDefaultRealm.cmd. For example, at a command prompt, enter:

PSDefaultRealm *realm_file_name* add *userID password*

where *realm_file_name* is the Payment Manager realm file name (for example, WCSRealm), and *userID*, and *password* are the desired user ID and password.

Configuration for remote Payment Manager

If IBM Payment Manager 3.1.2 is installed on a system remote from WebSphere Commerce 5.4, IBM Payment Manager 3.1.2 will use the PSDefaultRealm. If you would like to use IBM Payment Manager 3.1.2 in conjunction with your WebSphere Commerce, you will need to manually configure your IBM Payment Manager 3.1.2 system to use the WCSRealm instead of the PSDefaultRealm.

This can be done by following these steps (on your IBM Payment Manager 3.1.2 system):
1. Open the WebSphere Application Server Administrative Console.
2. Navigate to and access the WebSphere Payment Manager application server by doing the following:
   a. Expand **WebSphere Administrative Domain**.
   b. Expand **Nodes**.
   c. Expand *node_name*.
   d. Expand **Application Servers**.
   e. Select **WebSphere Payment Manager**. Click the **Stop** button to stop the WebSphere Payment Manager application server.

3. After the WebSphere Payment Manager application server has stopped. Select the **JVM Settings** tab page. In the System Properties box, select and change the value for the `wpm.RealmClass` initialization parameter.

   • Replace `com.ibm.etill.framework.payserverapi.PSDefaultRealm` with `com.ibm.commerce.payment.realm.WCSRealm`

   Once the value has been changed, click **Apply**

4. If the IBM Payment Manager 3.1.2 system is enabled for SSL, add `*.443` entries to the `default_host` window in the WebSphere Application Server Administrative Console as described in "Adding Port Host Aliases to WebSphere Application Server" on page 158.

   Note: If you do not enable SSL, you must configure the WebSphere Commerce server to use the non-SSL Payment Manager client in the Payment Manager setting page of the WebSphere Commerce Configuration Manager when creating a WebSphere Commerce instance. You can change the Payment Manager settings after the instance is created, however, you must restart the instance for your changes to take effect.

5. Open the `WCSRealm.properties` file from your WebSphere Payment Manager directory. This file contains definitions for the `WCSHostName` and `WCSWebPath`.

6. For the `WCSHostName`, enter the fully-qualified hostname of the remote machine where WebSphere Commerce is installed. (The default is the hostname of the system where Payment Manager is installed.) You do not have to change value specified for the `WCSWebPath` property.

7. Start the WebSphere Payment Manager Application Server in the WebSphere Application Server Administrative Console for your changes to take effect.

Part 2. Configuring WebSphere Commerce

Topics covered in this section include:

You *must* complete the appropriate steps inChapter 6, "Pre-configuration steps" on page 51 and Chapter 8, "Post-configuration steps" on page 83 in order to successfully configure WebSphere Commerce. You can create your instance using the Configuration Manager tool by following the steps in Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55.

Chapter 6. Pre-configuration steps

This chapter contains a list of tasks that must be completed before you configure your WebSphere Commerce instance. Please complete the appropriate sections from the following list:

- Modifying your PATH
- Upgrading the iPlanet Web Server plug-in level (iPlanet Web Server users)
- Starting the WebSphere Application Server (all users)

Modifying your PATH

You must ensure that the your PATH Windows System Variable is configured correctly. To ensure that your PATH is configured correctly, do the following on your WebSphere Commerce machine:

1. Check your Windows System Variables to ensure that the following line exists in the PATH:

   `drive:\WebSphere\AppServer\java\bin;`

2. If this line does not exist, open a command line window and enter the following command:

   `set PATH=drive:\WebSphere\AppServer\java\bin;%PATH%`

3. To test that the PATH is set correctly, run the following:

   `java -fullversion`

   You will see a message indicating that the correct version of the software is installed.

Configuring Microsoft IIS

Before creating your WebSphere Commerce instance, you must configure Microsoft IIS. To configure Microsoft IIS, do the following on your Web server machine:

1. Download, and install the Microsoft MetaEdit 2.2 Utility. This utility can be found on the following Web site:

   `http://www.microsoft.com/`

2. Enter (Q232068) in the **Search** field, and click **Go**.

3. Select the **FILE: How to Download, Install, and Uninstall the IIS MetaEdit 2.2 Utility (Q232068)** link, and follow the instructions on how to install and configure the Microsoft MetaEdit 2.2 Utility.

4. Open the MetaEdit 2.2 Utility and ensure the path names found in the `HKEY LM\\W3SVC\\Filtes\\sePlugins\\FilterPath` are long path names. For example, *drive*`:\WebSphere\AppServer\bin\iisWASPlugin_http.dll`.

5. To configure the Microsoft IIS Server, do the following:

   a. If you are using Microsoft IIS 5.0, you must ensure that the virtual pathnames added to **IIS Default Web Site** are long names.

      1) Select **Programs >Administrative Tools >Internet Services Manager**.

      2) Expand *host_name*.

      3) Click on **Default Web Site**.

      4) Ensure that the pathnames in the following fields appear as long names. For example, the default pathnames are shown below.

Table 3.

Field name	Path
sePlugins	*drive*`:\WebSphere\AppServer\bin`
IBMWebAS	*drive*`:\WebSphere\AppServer\web`
WSsamples	*drive*`:\WebSphere\AppServer\WSsamples\`
theme	*drive*`:\WebSphere\AppServer\WSsamples\` `images`

To modify the pathnames, do the following:

a) Expand the **Default Web Site**.

b) Right-click the alias.

c) Select **Properties**.

d) Click **Browse** and select the correct path.

e) Click **OK**.

f) Click **OK** again.

g) Repeat step 5a4b to step 5a4f for each alias.

      5) Click **Apply**.

6. Restart your machine.

7. Ensure that the WebSphere Application Server is started.

Upgrading the iPlanet Web Server plug-in level

Since the WebSphere Commerce installation program upgrades the level of WebSphere Application Server after the iPlanet Web Server plug-in has been installed, you must re-install the plug-in in order for it to be at the appropriate level. To upgrade the iPlanet Web Server plug-in level, do the following on your iPlanet Web Server machine:

1. In the *drive*:\WebSphere\AppServer\bin directory, create backup copies of `plugin_common.dll` and `ns41_http.dll`.

2. Ensure that any iPlanet Web Server associated services have been stopped in the Services window of the Control Panel.

3. You must now configure the Webserver plugins for iPlanet Web Server port 443. To install the plugins, do the following:

   a. Insert the WebSphere Application Server, Advanced Edition CD and run the install program, choosing to install the **Webserver Plugins** only.

   b. On the **Websphere Application Server 4.0 configure iPlanet Enterprise v4.0** window, select `https-`*host_name*`-https-443` only. Complete the WebSphere Application Server Webserver Plugins installation.

4. You must now configure the Webserver plugins for iPlanet Web Server port 8000. To install the plugins, do the following:

   a. Insert the WebSphere Application Server, Advanced Edition CD and run the install program, choosing to install the **Webserver Plugins** only.

   b. On the **Websphere Application Server 4.0 configure iPlanet Enterprise v4.0** window, select `https-`*host_name*`-https-8000` only. Complete the WebSphere Application Server Webserver Plugins installation.

5. Restore the backup copies of `plugin_common.dll` and `ns41_http.dll` to the *drive*:\WebSphere\AppServer\bin directory.

Starting the WebSphere Application Server

To start WebSphere Application Server do the following:

1. While logged in as a Windows user ID with Administrator authority, open the **Services** window. For instructions on opening the **Services** window, see "Opening the Windows Services panel" on page 147.

2. Ensure that your database has been started on your database machine.

3. Do the following on your Web server machine:

   • If your web server is located on the same machine as the WebSphere Application Server, ensure that your Web server services have been started. If not, select these services and click **Start**. For IBM HTTP Server, the IBM HTTP Server service must be started. If a service will not start, please see the troubleshooting section of this book.

   • If you are using s remote Web server you must copy the *drive*`:\WebSphere\AppServer\config\plugin-cfg.xml` file from your WebSphere Commerce to the same directory and drive letter on your Web server machine. If the directory does not exist on your Web server machine, create it. Restart your webserver.

4. From the **Service** list, select **IBM WS AdminServer**.
5. Click **Start**.

After starting the WebSphere Application Server, you should verify that it is working properly. To verify that WebSphere Application Server is working properly, do the following:

1. Select **Start Menu → Programs → IBM WebSphere → Application Server V4.0 → Administrator's Console**.
2. Expand **WebSphere Administrative Domain → Nodes →** *Node_name* **→ Application Servers**.
3. Select `Default Server` and right-click. Select **Start**.
4. Open a web browser and enter the following URL:

   > **Note:** If you have installed WebSphere Commerce in a 3-tier configuration, you must copy the *drive*:`\WebSphere\AppServer\config\plugin-cfg.xml` file from your WebSphere Commerce to the same directory and drive letter on your Web server machine. If the directory does not exist on your Web server machine, create it. Restart your webserver.

   `http://`*host_name*`/servlet/snoop`

   The test servlet should run without errors.

The `Default Server` is used for testing purposes only, and can be removed at any time to conserve system resources. The `Default Server` is not required by WebSphere Commerce, and should not be running on a production server.

The next step

After you have completed all the necessary steps in this chapter, you can create your instance with the Configuration Manager by completing the steps in the following chapter:

- Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55

Chapter 7. Creating or modifying an instance with Configuration Manager

This chapter describes how to create or modify an instance with the Configuration Manager. If you have not completed the steps in Chapter 6, "Pre-configuration steps" on page 51, you will not be able to create an instance.

Notes:

1. If you want to use IBM WebSphere Payment Manager 3.1.2 to handle online transactions for your instance, you should install Payment Manager before creating your instance. Your instance will be configured to work with Payment Manager automatically. To install Payment Manager, see Chapter 5, "Installing IBM WebSphere Payment Manager 3.1.2" on page 39.

2. If you have made any customizations to the `XMLConfig.bat` file normally located in the *drive*:`\WebSphere\AppServer\bin` directory, you need to remove these customizations before running Configuration Manager. Otherwise, the setup of WebSphere Commerce application server in WebSphere Application Server may fail.

3. In WebSphere Application Server 4.0.2, a single WebSphere Commerce Server consists of an Installed EJB Module, and an Installed Web Module to serve client requests to one or more stores. In the WebSphere Commerce Configuration Manager, each WebSphere Commerce instance appears as a separate root category in the instances tree. In the WebSphere Application Server topology view, a WebSphere Commerce instance will appear under a node entry as a separate WebSphere Commerce application server.

Chapter checklist

- Ensure that your Database server is running.
- Ensure that your Web server is running, if it is installed on the same machine as WebSphere Commerce.
- Ensure that the **IBM WC Configuration Manager server** service has been started by opening the Windows Services panel and selecting **IBM WC Configuration Manager server**. If the service is stopped, select **Start**.

> **Important**
>
> Leaving the **IBM WC Configuration Manager server** service running could potentially pose a security problem. Stop the **WC Configuration Manager server** service when you are not using the Configuration Manager.
>
> To prevent potential security problems, you should also ensure that the **IBM WC Configuration Manager server** is set for *manual* startup, not automatic.

- Ensure that the WebSphere Application Server has been started. To start the server, open the **Services** window, select **IBM WS AdminServer V4.0**, and click **Start**.

  Attention: If WebSphere Application Server security is turned on, you must disable it before creating your instance.

Launch the Configuration Manager

To access the Configuration Manager, complete the following steps:

1. Ensure that the **IBM WC Configuration Manager server** process is running in the services panel.

   > **Important**
   >
   > Leaving the **IBM WC Configuration Manager server** service running could potentially pose a security problem. Stop the **WC Configuration Manager server** service when you are not using the Configuration Manager.
   >
   > To prevent potential security problems, you should also ensure that the **IBM WC Configuration Manager server** is set for *manual* startup, not automatic.

2. From the Start Menu, select **Programs** → **IBM WebSphere Commerce** → **Configuration**

3. Enter your Configuration manager user ID, and password. The default Configuration Manager user ID is webadmin, and the default password is webibm.

4. You will be asked to change your password the first time you log in. To change the user ID or password at a later time, please refer to "Changing the Configuration Manager Password" on page 155.

Instance Creation Wizard

> To create your instance, do the following in the WebSphere Commerce Configuration Manager:
>
> 1. Expand your host name.
> 2. Right-click on **Instance List**.
> 3. From the resulting pop-up menu, select **Create Instance**.
> 4. The Instance Creation wizard opens. Complete the fields in each of the following panels.

Instance

Instance name
> This is the name that you want to use for your instance. The default name is demo.

Instance's root path
> Enter the path where you want to store all files related to your WebSphere Commerce instance. The default path is
> *drive*:\WebSphere\CommerceServer\instances*instance_name*

Merchant Key
> This is the 16-digit hexadecimal number for the Configuration Manager to use as the encryption key. *You must enter your own key in the Merchant Key field.* Ensure that the key that you enter will be sufficient to protect your site, especially for a production server. After you have created a store you can only change this key by using the **Database Update Tool**. To use this tool, access Configuration Manager, right-click on the database node, and select **Database Update Tool**.

PDI encrypt
> Enable this check box to specify that information specified in the ORDPAYINFO and ORDPAYMTHD tables should be encrypted. By selecting this check box, payment information will be stored in the database in encrypted format.

PVC header enabled
> Reserved for future releases.

URL mapping file
> Enter the path to the file you will be using for URL mapping. You can also accept the default file
> *drive*:\WebSphere\CommerceServer\xml\mapping\urlmapper.xml

Database

Database administrator name
> Enter the user name of your database administrator. This is the user

name that is used to perform the installation, unless you have defined an alternate database administrator name.

Database administrator password
Enter the password associated with the database administrator's user ID. This is the password of the user name that is used to perform the installation, unless you have defined an alternate database administrator name.

Database name
Enter the name assigned to the database or accept the default.

For DB2, accept the default, or type the name you want to assign to your database. The name must be eight characters in length or less.

Database type
From the drop-down list, select the name of the database management system you intend to use.

Database user name
If you have created a DB2 user for the database other than the database administrator, you can enter their user ID in this field. Otherwise, use the same user name as the database administrator.

Database user password
This is the password that is associated with the above database user name.

Run Database Performance Wizard
Select the **Run Database Performance Wizard** checkbox to perform DB2 database optimization.

Use staging server
If **Use staging server** is selected, the Configuration Manager defines this database as being for use by a staging server. For more information on staging servers, see the WebSphere Commerce online information. (See "Using the online help" on page 173 for guidance on accessing this information.)

Set as active database
Select this option to use this database for this WebSphere Commerce instance. Disable this option if you want to use another database for your instance.

Use remote database
Enable this check box if your database server is on a different node than WebSphere Commerce.

Note: If you have installed your database server on a different node than WebSphere Commerce (for example, if you are configuring a two or three tier environment), you *must* select this check box.

Database Server Hostname

This field is enabled if you select **Use Remote Database**. Enter the fully-qualified hostname of the node on which your database resides.

Database Server Port

This field is enabled if you select **Use Remote Database**. The default port for DB2 is 50000.

Database Node Name

This field is enabled if you select **Use Remote Database** and if you are using DB2 as your database. If you have not already cataloged a node for your remote database, the Configuration Manager will catalog a node for you.

Languages

Use the Languages panel of the Configuration Manager to configure your database to support all required languages. Choose your default language from the drop down list. The wcs.bootstrap_multi_*xx_XX*.xml file that matches your default language must also be in the Selected Languages window. To add support for additional languages to your database, complete the following steps:

1. Select the appropriate language .xml file from the Available Languages window. The .xml file will be in the form of wcs.bootstrap_multi_xx_XX.xml, where xx_XX is the four letter locale code for the language you want to select.

2. Click the arrow that points to the Selected Languages window. The language you have chosen should now be listed in the Selected Languages window.

3. Repeat steps 1 and 2 for each language for which support is needed.

Note: If you plan to create stores that support more than one language, for example, a store that is available in either English or Spanish, you must select all languages your stores will support. In this case, you must have both English and Spanish in the Selected Languages window. The sample stores provided with WebSphere Commerce support more than one language. If you select only one language on the Languages panel, then you will not see certain portions of the sample store that does support multiple languages.

Web Server

Use Remote Web Server

Select this check box if you are installing your Web server on a separate machine from your WebSphere Commerce server. If this box is selected, your Web server will not be configured by the Configuration Manager. If you select this check box, you must

manually configure your Web server machine as described in
Chapter 8, "Post-configuration steps" on page 83.

>   **Note:** If you have installed your Web server on a different node than
>   WebSphere Commerce (for example, if you are configuring a
>   three tier environment), you *must* select this check box.

Hostname
Accept the default, or type the *fully qualified* host name of your Web
server machine (`hostname.domain.com` is fully qualified). The default is
the host name of your WebSphere Commerce machine. Ensure that
you do not enter the `www` prefix in the hostname field. If you want to
accept the default host name, ensure the default host name is fully
qualified before accepting it.

Web Server Type
From the drop-down list, select the Web server software that you
intend to use.

Primary Document Root
Accept the default, or type the path of your Web server document
root.The path you type must already exist.

Server Port
Enter the port number that you want your WebSphere Commerce
Server to use. The default value is 80.

Authentication Mode
Select the authentication mode that you would like to use for this
WebSphere Commerce instance. The choices are as follows:

Basic Authentication will be performed using a custom certificate.

X.509 Authentication will be performed using the X.509 certificate
standard.

Secure Server Configuration Path
Enter the directory path to the `obj.conf` files for your secure Web
server (port 443). This field only displays if you use Netscape iPlanet
as your Web server. This field does not appear if you are using a
remote Web server.

Non-secure Server Configuration Path
Enter the directory path to the `obj.conf` files for your non-secure Web
server (port 80). This field only displays if you use Netscape iPlanet
as your Web server. This field does not appear if you are using a
remote Web server.

Secure Tools Server Configuration Path
This field is only visible if you have selected Netscape iPlanet as your

Web server (port 8000). Enter the full path to your Netscape iPlanet secure tools server `obj.conf` file. This field does not appear if you are using a remote Web server.

WebSphere

DataSource Name
Used to set up the Connection Pool for access to the database with which WebSphere Commerce works.

Port Number
Enter the port address that WebSphere Application Server is listening on. You can accept the default unless you specified a different port when starting the WebSphere Application Server.

JDBC Driver Location
Enter the location of the `db2java.zip` file on your system or accept the default.

Stores Web Application
Select this if you want the default Stores web application configured for you under the WebSphere Commerce Server in WebSphere Application Server.

Tools Web Application
Select this if you want the default Tools web application configured for you under the WebSphere Commerce Server in WebSphere Application Server.

Tools Port Number
The port number used for accessing WebSphere Commerce administration tools. The default port number is 8000. If you are using a Domino Web Server you must change this to port number 443.

WebSphere Catalog Manager
If this check box is selected the WebSphere Catalog Manager WebEditor will be installed. It will be accessible at: `https://host_name:8000/wcm/webeditor`. It is installed by default.

Payment Manager

Hostname
Enter the fully qualified host name of the Web server machine. This defaults to the WebSphere Commerce host name. If you have installed Payment Manager or your Web server remotely from WebSphere Commerce, you must ensure that this field contains the fully qualified host name of the Web server machine that Payment Manager uses.

Profile Path
The full path name of the directory where the Standard WebSphere Commerce Payment Manager Cashier Profiles are to be stored. The

default value is
`drive:\WebSphere\CommerceServer\instances\`*`instance_name`*`\xml\`
`payment`

Use non-SSL Payment Manager Client

Enable this check box if you want WebSphere Commerce to use the non-SSL Payment Manager client to communicate with the Payment Manager server. This allows the WebSphere Commerce to communicate with Payment Manager without using SSL.

Web Server Port

Enter the Web server TCP port that Payment Manager uses. If you have selected the Use non-SSL Payment Manager Client check box, the default value for this field is 80 (the non-secure port). If the Use non-SSL Payment Manager Client check box has not been enabled, the default value for this field is 443 (the SSL port).

Use Socks Server

Enable this check box if WebSphere Commerce must go through a socks server in order to reach Payment Manager.

Socks Hostname

This field is enabled if the **Use Socks Server** check box is selected. Enter the fully-qualified host name of your socks server.

Socks Port Number

This field is enabled if the **Use Socks Server** check box is selected. Enter the port number that your socks server uses.

Log System

Trace File Location

This is the location of the file collecting debugging information. It contains debug messages in English. Note: if the Trace File Location is the same as the Message File Location then the contents of the files will be merged.

Trace File Size

This is the maximum size of the trace file in MB. Once the trace file reaches this size, another trace file will be created.

Message File Location

This is the location of the file collecting messages, describing the state of the WebSphere Commerce system. Messages are locale-sensitive. Note: if the Trace File Location is the same as the Message File Location then the contents of the files will be merged.

Message File Size

This is the maximum size of the message file in MB. Once the message file reaches this size, an additional message file will be created.

Activity log Cache Size

Enter the maximum size of the activity log's cache.

Notification Enabled

Select this check box if you want to be notified of error level messages. You must also modify the notification information in the WebSphere Commerce Administration Console to recieve these messages.

Messaging

User Template File

This is the name of the XML message template definition file that allows you to add new inbound XML messages to be supported by your system. An outline should be added to this file for each new XML message that you want to support. It is recommended that you use the default user_template.xml which is stored in the template path directory.

Inbound Message DTD Path

This is the path where all the DTD files for inbound XML messages are stored. The default is
`drive`:\WebSphere\CommerceServer\xml\messaging

WebController User ID

This is the ID used by WebSphere Commerce to execute all the WebSphere Commerce MQSeries® Adapter inbound messages. It should be an ID that has Site Administrator authority. The default is `wcsadmin`. Ensure that only authorized persons have the authority to update the User Template File and System Template File since the inbound XML messages can be mapped to execute WebSphere Commerce commands using this ID.

System Template File

This is the name of the XML message template definition file that contains the outline of all inbound XML messages supported by the WebSphere Commerce MQSeries Adapter. This file defines the data fields for each message, mapping the message to the appropriate WebSphere Commerce Controller Command, and mapping each field within the message to the appropriate parameter for that command. It is recommended that you use the default `sys_template.xml` which is stored in the template path directory.

Template Path

This is the path where the User Template File and System Template File are stored. The default is
`drive`:\WebSphere\CommerceServer\xml\messaging

Inbound Message DTD Files
This is the list of the DTD and include files for inbound XML messages. If you add a new inbound XML message, you need to add it in this field.

Auction

Enable Auction
Select the **Enable** checkbox to enable Auctions.

SMTP Server
Define the SMTP server that is used to receive email messages.

Reply Email
Define the sender's email information

Starting the instance creation

Once you have filled in the necessary information on all the panels, the **Finish** button is enabled. Click **Finish** to create your WebSphere Commerce instance.

Depending on the speed of your system, it will take several minutes to several hours for your instance to be created. The progress bar that displays when you start creating the instance will indicate when the process has finished. After your instance has been created WebSphere Commerce will attempt to start the WebSphere Commerce Server associated with the instance. When this has successfully completed click **Ok** to close the Instance Creation wizard, then restart your computer.

Verifying the instance creation

To verify that the instance has been properly created, check the following files:

- *drive*:\WebSphere\CommerceServer\instances*instance_name*\xml\ *instance_name.xml*. This file contains all of the configuration information about your WebSphere Commerce instance.
- *drive*:\WebSphere\CommerceServer\instances*instance_name*\logs\ createdb.log. This file contains information about the WebSphere Commerce database creation.
- *drive*:\WebSphere\CommerceServer\instances*instance_name*\logs\ populatedb.log. This file contains information about the WebSphere Commerce database population process .
- *drive*:\WebSphere\CommerceServer\instances*instance_name*\logs\ WASConfig.log. This file contains information about the installation and configuration of your new WebSphere Commerce instance, within WebSphere Application Server.
- *drive*:\WebSphere\CommerceServer\instances*instance_name*\logs\ sec_check.log. This file contains information about potential security exposures.

- *drive*:\WebSphere\CommerceServer\instances*instance_name*\logs\wcs.log. This file describes the operation of the WebSphere Commerce application server. Use this log to ensure that the server has started correctly.

Start and stop your instance

Once your instance has been created, it will be started automatically. If you modify your instance at a later time you will need to stop and restart it in the WebSphere Application Server Administrative Console. To accomplish this, please complete the following steps:

1. Open the WebSphere Application Server Administration Console from the Start menu.
2. Expand **WebSphere Administrative Domain**.
3. Expand **Nodes**.
4. Expand your hostname.
5. Expand **Application Servers**.
6. Select **WebSphere Commerce Server —** *instance_name* and right-click. Select **Start** or **Stop** as appropriate.

Additional configuration options

Once you have created and started your basic instance, you can configure additional aspects of WebSphere Commerce through the following nodes:

Instance Properties

All panels that were available in the Instance Creation wizard appear under the Instance Properties node of the Configuration Manager. The following panels are either new or modified from the Instance Creation wizard panels:

Database
Use the Database panel of the Configuration Manager to configure WebSphere Commerce to work with your database. Complete the fields as follows:

Database administrator name
> Enter the name of your database administrator.

Database administrator password
> Enter the password of the database administrator.

Database name
> Enter the name of the database that you want to create for this instance, or enter the name of an existing database that you want to associate with the instance that you are creating.

Database type
> Select the product you will be using as your database management system.

Database user name
> Enter the user name for this database.

Database user password
> Enter the password associated with the user name for this database.

Run database performance wizard
> Select this check box to perform DB2 Universal Database optimization.

Use staging server
> Select this check box if you want to use this database for your staging server.

Set as active database
> Select this check box if this database is the database you want to use with your WebSphere Commerce instance. After you have created your instance you can create additional databases and select the one that you want to use for your instance.

Use remote database
> Enable this check box if your database server is on a different node than WebSphere Commerce.

> **Note:** If you have installed your database server on a different node than WebSphere Commerce, you *must* select this check box. For example, if you are configuring a two or three tier environment.

Database Server Host name
> This field is enabled if you select **Use Remote Database**. Enter the fully-qualified hostname of the node on which your database resides.

Database Server Port
> This field is enabled if you select **Use Remote Database**. The default port for DB2 is 50000.

Database Node Name
> This field is enabled if you select **Use Remote Database** and if you are using DB2 as your database. If you have not already cataloged a node for your remote database, the Configuration Manager will catalog a node for you.

WebSphere
Use the WebSphere panel of the Configuration Manager to configure the way that WebSphere Application Server interacts with WebSphere Commerce. Complete the fields as follows:

Data source name
> Used to set up the Connection Pool for access to the database with which WebSphere Commerce works.

Port number

Enter the port address to which WebSphere Application Server is connected. You can accept the default unless you specified a different port when starting the WebSphere Application Server.

JDBC driver location

Enter the location of the db2java.zip file on your system.

Stores Web Application

Select this if you want the default Stores Web application configured for you under the WebSphere Commerce Server in WebSphere Application Server.

Tools Web Application

Select this if you want the default Tools Web application configured for you under the WebSphere Commerce Server in WebSphere Application Server.

Tools Port Number

The port number used for accessing WebSphere Commerce administration tools. The default port number is 8000. If you are using a Domino Web Server you must change this to port number 443.

WebSphere Catalog Manager

If this check box is selected the WebSphere Catalog Manager WebEditor will be installed. It will be accessible at: http://*host_name*:8000/webeditor. It is installed by default.

Web server

The General tab of the Web server panel contains the same parameters as the version of the panel that appears in the Instance Creation wizard.

Use the Web server panel of the Configuration Manager to configure WebSphere Commerce to use your Web server. Complete the fields as follows:

Use Remote Web server

Select this check box if you are installing your Web server on a separate machine from your WebSphere Commerce server. If this box is selected, your Web server will not be configured by the Configuration Manager. If you select this check box, you must manually configure your Web server machine as described in Chapter 8, "Post-configuration steps" on page 83.

Note: If you have installed your Web server on a different node than WebSphere Commerce, you *must* select this check box. For example, if you are configuring a three tier environment.

Hostname

Type the fully qualified host name of your WebSphere Commerce instance (`hostname.domain.com` is fully qualified). Ensure that you do

not enter www in the Hostname field. The default is the fully qualified host name of the machine where your Web server is installed.

Web Server Type
From the drop-down list, select the web server to be used.

Primary Document Root
Accept the default, or type the path of your Web server document root. The path you type must already exist.

Server port
Enter the port number on which your Web server is running. The default value is 80.

Authentication Mode
Select the authentication mode that you would like to use for this WebSphere Commerce instance. The choices are as follows:

- Basic Authentication will be performed using a custom certificate.
- X509 Authentication will be performed using the X509 certificate standard.

Secure Server Configuration Path
Enter the directory path to the obj.conf files for your secure Web server (port 443). This field only displays if you use Netscape iPlanet as your Web server. This field does not appear if you are using a remote Web server.

Non-secure Server Configuration Path
Enter the directory path to the obj.conf files for your non-secure Web server (port 80). This field only displays if you use Netscape iPlanet as your Web server. This field does not appear if you are using a remote Web server.

Secure Tools Server Configuration Path
This field is only visible if you have selected Netscape iPlanet as your Web server (port 8000). Enter the full path to your Netscape iPlanet secure tools server obj.conf file. This field does not appear if you are using a remote Web server.

The **Advanced** tab contains a list of all Web server aliases. To add a new alias, select the Advanced tab, right-click and select **Add row**. To delete an alias, select the alias that you want to delete, right-click and select **Delete row**.

Instance
The Instance panel of the Configuration Manager is used to specify basic information about the instance. If creating multiple instances ensure that each instance has a different name and root path.

Instance Name
Enter the name that you want to call your WebSphere Commerce

instance. You can also accept the default name "demo." You will not be able to modify this name later, so ensure that you choose a name carefully.

Instance's Root Path

Enter the path where you want to store all files related to your WebSphere Commerce instance. You cannot change this path once the instance is created. The default path is:

`drive:\WebSphere\CommerceServer\instances\instance_name`

PDI encrypt

Select this check box to encrypt the information specified in the ORDPAYINFO and ORDPAYMTHD tables. By selecting this check box, payment information will be stored in the database in encrypted format.

PVC header enabled

Reserved for future releases.

URL mapping file

Enter the path to the file you will be using for URL mapping. You can also accept the default
file:`drive:\WebSphere\CommerceServer\properties\urlmapper.xml`

Payment Manager

Hostname

Enter the domain qualified host name of the Web server machine. This defaults to the WebSphere Commerce host name. If you have installed Payment Manager on a remote machine, you must ensure that this field contains the fully-qualified host name of your Web server machine.

Profile Path

The full path name of the directory where the Standard WebSphere Commerce Payment Manager Cashier Profiles are to be stored. The default value is
`drive:\WebSphere\CommerceServer\instances\instance_name\xml\payment`

Use non-SSL Payment Manager Client

Enable this check box if you want WebSphere Commerce to use the non-SSL Payment Manager client to communicate with the Payment Manager server. This allows the WebSphere Commerce Server to communicate with Payment Manager without using SSL.

Web Server Port

Enter the Web server TCP port that Payment Manager uses. If you have enabled Use non-SSL Payment Manager Client the default value

for this field is 80 (the non-secure port). If this check box has not been
enabled the default value for this field is 443 (the SSL port).

Use Socks Server
Enable this check box if WebSphere Commerce must go through a
socks server in order to reach Payment Manager.

Socks Hostname
This field is enabled if the **Use Socks Server** check box is selected.
Enter the fully-qualified host name of your socks server.

Socks Port Number
This field is enabled if the **Use Socks Server** check box is selected.
Enter the port number that your socks server uses.

Member Subsystem
Use the Member Subsystem panel of the Configuration Manager to configure
WebSphere Commerce to use a directory server.

Authentication mode
Select LDAP, Database or Other to select an alternate mode of
authentication. If you select LDAP the rest of the fields on this panel
will be enabled.

LDAP Version
The version of the LDAP protocol that the WebSphere Commerce
Server will use to communicate with the LDAP server.

LDAP Type
Select the Directory Server software you are using with WebSphere
Commerce. The choices are SecureWay Directory Server (which is
included with WebSphere Commerce), Netscape's Directory Server
software, Microsoft Active Directory, or Lotus Domino.

Single Sign-on
Select this check box to allow users who have already been
authenticated by WebSphere Application Server to be recognized by
WebSphere Commerce. Single Sign-on is not supported by WebSphere
Commerce at this time.

Host The fully qualified host name specifying where the LDAP server is
installed.

Port The port used by the LDAP server. The default port is 389.

Administrator Distinguished Name
The distinguished name of the LDAP server administrator.

Administrator Password
The LDAP server administrator's password.

Confirm Password

>Re-enter the LDAP administrator's password.

LDAP Authentication Mode

>Specifies the authentication mechanism that the LDAP server uses. **None** means that WebSphere Commerce does not authenticate to the LDAP server. **Simple** means that WebSphere Commerce uses a distinguished name and password to authenticate to the LDAP server.

Time out

>The time in seconds before an LDAP search times out.

Entry File Name

>The entry file used for LDAP server initialization.

Messaging

User Template File

>This is the name of the XML message template definition file that allows you to add new inbound XML messages to be supported by your system. An outline should be added to this file for each new XML message that you want to support. It is recommended that you use the default user_template.xml which is stored in the template path directory.

Inbound Message DTD Path

>This is the path where all the DTD files for inbound XML messages are stored. The default is
>*drive*:\WebSphere\CommerceServer\xml\messaging

WebController User ID

>This is the ID used by WebSphere Commerce to execute all the WebSphere Commerce MQSeries Adapter inbound messages. It should be an ID that has Site Administrator authority. The default is wcsadmin. Ensure that only authorized persons have the authority to update the User Template File and System Template File since the inbound XML messages can be mapped to execute WebSphere Commerce commands using this ID.

System Template File

>This is the name of the XML message template definition file that contains the outline of all inbound XML messages supported by the WebSphere Commerce MQSeries Adapter. This file defines the data fields for each message, mapping the message to the appropriate WebSphere Commerce Controller Command, and mapping each field within the message to the appropriate parameter for that command. It is recommended that you use the default sys_template.xml which is stored in the template path directory.

Template Path

This is the path where the User Template File and System Template File are stored. The default is
drive:\WebSphere\CommerceServer\xml\messaging

Inbound Message DTD Files

This is the list of the DTD and include files for inbound XML messages. If you add a new inbound XML message, you need to add it in this field.

Session Management

The Session Management panel of the Configuration Manager has two tabs:

General tab:

Enable cookies

This check box specifies that the site uses cookies for session management. This is always enabled for WebSphere Commerce.

Enable URL rewriting

Select this check box to use URL rewriting for session management.

Cookie acceptance test

Select this check box to check if the shopper's browser accepts cookies for a site that only supports cookies.

Cookie session manager

You can select whether you want WebSphere Commerce or WebSphere Application Server to manage your cookies. The default is WebSphere Commerce.

Advanced tab:

Cookie path

Specifies the path for the cookie, which is the subset of URLs to which a cookie should be sent.

Cookie age

This field should not be altered. The default is for a cookie to expire when the browser is closed.

Cookie domain

Specifies a domain restriction pattern. A domain specifies the servers that should see a cookie. By default the cookie is only sent back to the WebSphere Commerce server that issued them.

Security

Security can be configured through the Configuration Manager.

Enable security

Select this checkbox to enable EJB security.

Note: You must enable Global Security Settings within the WebSphere Application Server before selecting this checkbox.

Authentication mode
Determine which type of registry to use to authenticate users : Operating system user registry, LDAP user registry

User ID
Enter the user name that allows access to EJBs.

User password
Enter the password associated with the above user ID.

Password Invalidation
Use the Password Invalidation node of the Configuration Manager to enable or disable the password invalidation feature. This feature, when enabled, requires WebSphere Commerce users to change their password if the user's password has expired. In that case, the user is redirected to a page where they are required to change their password. Users are not able to access any secure pages on the site until they have changed their password. To enable this feature:

1. Go to the Password Invalidation node in the Configuration Manager, which can be found under *instance_name* → **Instance Properties**
2. To activate the password invalidation feature, click the **Enable** check box.
3. To apply your changes to your instance, click **Apply**.
4. Upon successfully updating the configuration for your instance, you will receive a message indicating a successful update.

Login Timeout
Use the Login Timeout node of the Configuration Manager to enable or disable the login timeout feature. When this feature is enabled, a WebSphere Commerce user that is inactive for an extended period of time is logged off the system and requested to log back on. If the user subsequently logs on successfully, WebSphere Commerce runs the original request that was made by the user. If the user logon fails, the original request is discarded and the user remains logged off the system. To enable this feature:

1. Open the Configuration Manager and go to the Login Timeout node for your instance as follows:

   WebSphere Commerce → *host_name* → **Instance List** → *instance_name* → **Instance Properties** → **Login Timeout**
2. To activate the login timeout feature, click the **Enable** check box.
3. Enter the login timeout value, in seconds, in the Login Timeout Value field.
4. To apply your changes to your instance, click **Apply**.

5. Upon successfully updating the configuration for your instance, you will receive a message indicating a successful update.

Password Protected Commands

Use the Password Protected Commands node of the Configuration Manager to enable or disable the password protected commands feature. When this feature is enabled, WebSphere Commerce requires registered users to enter their password before continuing a request that runs designated WebSphere Commerce commands. To enable this feature:

1. Open the Configuration Manager and go to the Password Protected Commands node for your instance as follows: **WebSphere Commerce** → *host_name* → **Instance List** → *instance_name* → **Instance Properties** → **Password Protected Commands**

2. In the General tab:
   a. To activate the password protected commands feature, click **Enable**.
   b. Enter number of retries in the **Retries** field. (The default number of retries is 3.)

3. In the Advanced tab:
   a. Select a WebSphere Commerce command you want to protect from the list in the Password Protected Command List window and click **Add**. The command you have selected is listed in the Current Password Protected List window.
   b. If you want to disable password protection for any WebSphere Commerce command, select the command in the Current Password Protected Command list window and click **Remove**.

4. To apply your changes to your instance, click **Apply**.

5. Upon successfully updating the configuration for your instance, you will receive a message indicating a successful update

Note: WebSphere Commerce will only display the commands that are designated as "authenticated' in the CMDREG table in the list of available commands.

Cross Site Scripting Protection

Use the Cross Site Scripting Protection node of the Configuration Manager to enable or disable the cross site scripting protection feature. When enabled, this feature rejects any user requests that contain attributes or characters that are designated as not allowable. You can specify the disallowed attributes and characters in this node of the Configuration Manager. To enable this feature:

1. Open the Configuration Manager and go to the Cross Site Scripting Protection node for your instance as follows:

   WebSphere Commerce → *host_name* → **Instance List** → *instance_name* → **Instance Properties** → **Cross Site Scripting Protection**

2. Use the General tab to activate the cross site scripting protection feature, as follows:
   a. Click **Enable**.
   b. To add attributes that you want to disallow for WebSphere Commerce commands, right-click on the Prohibited Attributes table and select **Add row**. Add the attributes that you want to disallow, separated by commas (,). For example, user_id, passwd.
   c. To remove attributes from the Prohibited Attributes table, highlight and right-click the line containing the attribute in the table and select **Delete row**.
   d. To add characters that you want to disallow for WebSphere Commerce commands, right-click on the Prohibited Characters table and select **Add row**. Add the character that you want to disallow, separated by commas (,). For example, <, >.
   e. To remove characters from the Prohibited Characters table, highlight and right-click the line containing the character in the Prohibited Characters table and select **Delete row**.
3. Use the Advanced tab to disable cross site scripting protection for specified attributes of selected WebSphere Commerce commands, as follows:
   a. Select the commands from the Command List box.
   b. Type in a list of attributes, separated by commas, for which prohibited characters are allowed in the List of Excepted Attributes window and click **Add**.
   c. To remove a command along with its attributes, select the command from the List of Excepted Commands window and click **Remove**.

   You can also remove specific attributes from a command by selecting the attribute and clicking **Remove**.
4. To apply your changes to Configuration Manager, click **Apply**.
5. Upon successfully updating the configuration for your instance, you will receive a message indicating a successful update.

Trading
Trading can be configured through the Configuration Manager.

XML Path
   The Path where xml files for trading component are stored.

DTD Path
   The Path where dtd files for trading component are stored.

DTD File Name
   The dtd file name for the trading component.

Collaboration – SameTime

Lotus Sametime enables Customer Care collaboration. It provides customer service real-time support via synchronous text interface (instant messaging - IM) using Lotus Sametime between customer service representative and store customers or buyers.

Enable

Select this check box if you want Customer Care collaboration function available to your site.

Host Name

Type the fully qualified host name of your Sametime server (hostname.domain.com is fully qualified). Ensure that you do not enter www in the Hostname field. The default is the fully qualified host name of the machine where your WebSphere Commerce server is installed.

Registration URL

Type the Registration URL of your Sametime server. A Site Administrator can register Customer Service Representatives on the Sametime server using the WebSphere Commerce Administration Console's User list - ″Register Customer Care″ button.

Applet CodeBase URL

Type the Applet CodeBase URL to where all the applet codes are located. Ensure that the applet codes are installed on the Sametime server machine.

Monitor Type

Select the type of monitoring that you want to use in Customer Care applet.

- Monitor Waiting Queue.
- Monitor All Shoppers in Store.
- Monitor Waiting Queue and All Shoppers in Store.

The default is Monitor Waiting Queue.

Initiation Type

Select who can initiates help request during the Customer Care collaboration.

- Shoppers initiate help.
- Both Customers and CSR initiate help.

Help Session Limit

Type the value to set how many help sessions a Customer Service Representative can open at one time. The value must be a positive integer. The default value is 7.

CollaborativeWorkspaces – DirectoryAccess

> Business

You must designate LDAP as the authentication mode for Member Subsystem in order to properly configure directory access.

BaseDN
> This is the LDAP suffix used in the WebSphere Commerce Member Subsystem (e.g. o=root organization).

CollaborativeWorkspaces – QuickPlace

> Business

QuickPlace is a self-service Web tool that is used for team collaboration. QuickPlace enables the creation of a secure, central workspace on the Web instantly. Structured for immediate participation, teams may use QuickPlace to do the following:

- Coordinate: people, tasks, plans, and resources.
- Collaborate: share ideas and discussion, resolve issues, coauthor documents, exchange files, and manage due diligence.
- Communicate: actions and decisions, key findings and lessons, and publish knowledge to a broader base of readership.

Teams use QuickPlace for project management, rapid response to ad-hoc initiatives, and to facilitate discrete business processes that span the extended enterprise and value chain.

Domain
> The domain of your QuickPlace server.

Host Name
> The hostname of your QuickPlace server.

Administrator Login
> The login name of your Domino administrator, with `/domain` appended to the end.

Administrator Password
> The password of your Domino administrator.

Collaboration Administrator
> The login name of the super user of the Collaborative Workspaces feature, with `/domain` appended to the end.

Collaboration Admin Password
> The password of the Collaborative Workspaces super user.

Locale The locale of the QuickPlace server.

Components

The components node contains a list of all components that have been created for your WebSphere Commerce instance. You can enable or disable any of these components by selecting it and selecting the Enable Component check box. For more information on individual components, please refer to the WebSphere Commerce online help.

You can also create or delete components through this node. To Remove a component select it, right-click and select **Remove Component**. To add a component, select **Components**, right-click and select **Create Component**. Enter the name that you want to call the component, the class that you want to associate with this component, and select **Enable Component**.

Protected Parameters

Protected parameters are those parameters whose values will not be exposed in plain text in the trace files generated by WebSphere Commerce. They include sensitive information such as credit card numbers and user passwords. The Protected Parameters panel of the Configuration Manager displays a list of all parameters that are currently protected.

To add a parameter to the list, complete the following steps:

1. On the Protected Parameters panel, right-click and select **Add row**.
2. In the table row that is created, enter the name of the parameter that you want protected.
3. Click **Apply**.

To remove a parameter from the list, right-click the parameter and select **Delete row**.

Registries

A registry is normally used to cache relatively static information that is stored in the database. During the initialization of the RequestServlet, the registry manager will initialize all registries that are defined through the Configuration Manager as well as WebSphere Commerce's internally defined registries. Database information is cached in a registry for performance improvement.

To create a registry, right-click **Registries** and select **Create Registry**. This will launch the Registry Creation wizard. Complete the fields as follows:

Registry Name
> Enter the name that you want to assign to the registry that you are creating.

Registry Class Name
> Enter the name of the class that you want associated with the new registry.

Auction

Enable Auction
>   Select the **Enable** checkbox to enable Auctions.

SMTP Server
>   Define the SMTP server that is used to receive email messages.

Reply Email
>   Define the sender's email information

External Server List

The External Server List contains the default LikeMinds server address. It also contains a list of listener classes that process external events.

The LikeMinds listener is added by default. This listener will add the external event into the LikeMinds server.

Commerce Accelerator

The Commerce Accelerator node of the Configuration Manager allows you to configure the Business Intelligence component of WebSphere Commerce, and integrate it with WebSphere Commerce Analyzer. Commerce Analyzer is an optional software package that accompanies WebSphere Commerce. For more information on installing and configuring Commerce Analyzer, please see the *WebSphere Commerce Additional Software Guide*.

To configure Business Intelligence, complete the following fields:

Statistic source
>   Enter the fully qualified host name of the machine where your statistics data is kept. This can be either a production server or a staging server. The default value is the machine on which WebSphere Commerce is installed.

Is WebSphere Commerce Analyzer Installed?
>   Select **Yes** if you have installed and configured Commerce Analyzer and you want to use it with WebSphere Commerce.

Reports Document Root
>   Enter the path where you want the reports generated by Commerce Analyzer to be stored. The path entered in this field is appended to the end of the the instance directory root. The default path is
>   `drive:\WebSphere\CommerceServer\instances\`*instance_name*

Log System

The General tab of the Log System node contains all the parameters that were contained in the Instance Creation wizard. The Advanced tab allows you to choose which components you want to appear in the trace file, as well as the level of defect tracking that you want the trace file to contain. Select the components you want traced and the trace level, and then click **Apply**.

For more information on individual components, please see the WebSphere Commerce online help.

Caching Subsystem

The Cache node of the Configuration Manager allows you to configure the cache, add a command to the cache, remove key sets from a command, and remove keys from a key set.

Configure the cache by selecting the Cache node and entering the appropriate values. Additional information on these values can be found by clicking **Help** in the Configuration Manager, or in the online help under `Caching Parameters`.

To add a command to cache, use the Cache wizard. This can be launched by right-clicking **Cache** and selecting **Add a command to cache**. Complete all fields on the three panels, and click **Finish** when you entered all parameters. To remove a command from cache, select the command that you want to remove, right-click and select **Remove a command from cache**.

To delete a key set, select the key set that you want to delete, right-click and select **Remove key set from this cached command**. To delete a key, select the associated key set. On the **Advanced** tab, select the key you want to delete, right-click and select **Delete row**.

Configure Store Services

Store Services allows you to quickly create a store archive based on a sample provided with WebSphere Commerce. For additional information on using Store Services, please refer to the WebSphere Commerce online help.

The Configure Store Services node of the Configuration Manager allows you to configure three parameters of Store Services:

Temporary Path
> This is the directory that Store Services uses to copy temporary files during publishing. This directory will be automatically purged of these files once publishing has completed. The default directory is: `drive:\WebSphere\CommerceServer\tools\devtools\temp`

Maximum Errors
> This is the maximum number of errors that the publishing process will allow while loading the store data. If this number is exceeded, the publish will stop and rollback. The default value is 1.

Commit Count
> This number is used during publishing. The database gets committed after each commit count number of records gets loaded. If there are errors in the data, the database gets rolled back to the last commit point. Modify this number depending on the amount of data you are

loading - setting the commit count to a number greater than the number of rows in the archive will ensure that if a rollback occurs, the entire archive will be rolled back. The default value is 1000.

Transports

By default, the e-mail transport system is enabled. However the mail host must be set to prevent errors from occurring. To set the e-mail host, complete the following steps:

1. Expand **Transports**, **Outbound**, **JavaMail** and select **ConnectionSpec**.
2. Select the **Advanced** tab.
3. In the value field of the host row, enter the fully qualified host name of your SMTP mail server.
4. In the value field of the protocol row, ensure that the value listed is smtp.
5. Click **Apply**.
6. Stop and restart the WebSphere Commerce Server in the WebSphere Application Server Administration Console.

The Configuration Manager cannot be used to configure outbound transports or interaction specifications for inbound transports. Please refer to the online help for transport-related tasks.

To configure inbound transport connection specifications, select the **Advanced** tab of the connection specification panels and modify the information as needed. Please see the online help for additional information regarding transport parameters.

License User Management

Use the License User Management (LUM) panel to enter the number of store licenses you have purchased for WebSphere Commerce. Complete the fields as follows:

Store Licenses
> Enter the number of licenses purchased.

Hard Stop
> Enable Hard Stop if you want WebSphere Commerce to prevent you from exceeding the number of licenses purchased.

Soft Stop
> Enable Soft Stop if you want WebSphere Commerce to display a message warning you that you have exceeded the number of licenses purchased.

The next step

After you have configured and started your WebSphere Commerce instance, you need to complete the steps in Chapter 8, "Post-configuration steps" on page 83 in order to finish setting up your system. If you do not complete the steps in that chapter you will not be able to quickly access the WebSphere Commerce Accelerator or WebSphere Commerce Administration Console.

Chapter 8. Post-configuration steps

This chapter contains all the steps that you may need to complete in order to finish your WebSphere Commerce configuration. The following tasks are described in this chapter:

- "One and two tier post-configuration steps" on page 83
- "3-tier post-configuration steps" on page 91

One and two tier post-configuration steps

This chapter contains all the steps that you may need to complete in order to finish your WebSphere Commerce configuration in a one or two tier environment. The following tasks are described in this chapter:

- Completing your Microsoft IIS configuration (all Microsoft IIS users)
- Completing an iPlanet Web Server installation (all iPlanet Web Server users)
- Configuring Payment Manager to work with WebSphere Commerce (all users)
- Configuring your Payment Manager settings (all users)
- Compiling the JavaServer Pages files (all users)
- Running the Security Checker Tool (optional)

Completing your Microsoft IIS configuration

Once you have sucessfully installed WebSphere Commerce and created your WebSphere Commerce instance, proceed with the following steps.

Note: After installing WebSphere Commerce and creating WebSphere Commerce instance you must start all Microsoft IIS web related services and applications including the IIS Admin Service, the Default Web Site, the Default FTP Site, and the Default SMTP Virtual Server. See Microsoft IIS documentation for instructions on how to start these services.

1. Install a secure certificate signed by a certifying authority, according to Microsoft documentation.
2. Create aliases for the Microsoft IIS Server. To create aliases for the Microsoft IIS Server, do the following:
   a. Depending on your operating system, do the following:
      - For Windows NT, do the following:
         1) From the Start Menu, select **Programs** → **Windows NT 4.0 Option Pack** → **Microsoft Internet Information Server** → **Internet Services Manager**.

2) Expand **Internet Information Server**.

3) Expand *host_name*.

- For Windows 2000, do the following:

1) Select **Programs** → **Administrative Tools** → **Computer Management**.

2) Expand **Internet Information Services**.

b. Select **Default Web Site**.

c. Select **Action** → **New** → **Virtual Directory**.

d. The **Alias Generation Wizard** displays. Click **Next** and enter the alias name and directory name as shown in the following table. Give execute permission to each alias below.

> **Note:** You must repeat step 2b to 2d for each alias that you want to create.

Table 4.

Alias Name	Directory	Default Filename
accelerator	*drive*:\WebSphere\AppServer\installedApps\ WC_Enterprise_App_*instance_name*.ear\ wctools.war\tools\common	accelerator.html
storeservices	*drive*:\WebSphere\AppServer\installedApps\ WC_Enterprise_App_*instance_name*.ear\ wctools.war\tools\devtools	storeservices.html
orgadminconsole	*drive*:\WebSphere\AppServer\installedApps\ WC_Enterprise_App_*instance_name*.ear\ wcstores.war\tools\buyerconsole	wcsbuyercon.html
wcsstore	*drive*:\WebSphere\AppServer\installedApps\ WC_Enterprise_App_*instance_name*.ear\ wcstores.war	
adminconsole	*drive*:\WebSphere\AppServer\installedApps\ WC_Enterprise_App_*instance_name*.ear\ wctools.war\tools\adminconsole	wcsadmincon.html
wcs	*drive*:\WebSphere\AppServer\installedApps\ WC_Enterprise_App_*instance_name*.ear\ wctools.war	
wcsdoc	*drive*:\WebSphere\CommerceServer\web\ doc\	
wcshelp	*drive*:\WebSphere\CommerceServer\web\ doc*<locale>*	

Table 4. (continued)

| webeditor | `drive:\WebSphere\AppServer\installedApps\` `WC_Enterprise_App_instance_name.ear\` `wcwebeditor.war` | |

    e. Select **Default Web Site**.

    f. Select **Action** → **Properties**.

    g. Select the **Document** tab.

    h. Click the **Add** button and add the following documents to the corresponding alias:

        • `accelerator.html`

        • `storeservices.html`

        • `wcsadmincon.html`

        • `wcsbuyercon.html`

    i. Click **Apply**.

    j. Repeat step 2f to step 2i for each file.

3. To add SSL port 8000, do the following:

    a. Right click the Default Web Site and select **Properties**.

    b. On the **Web Site** tab click the **Advanced** button.

    c. Click **Add**.

    d. Add SSL port 8000, and click **OK**.

4. Restart your machine.

5. Restart the WebSphere Application Server.

If you plan to install and configure Payment Manager after you install WebSphere Commerce you must perform some additional configuration steps. To configure Microsoft IIS to work with IBM WebSphere Payment Manager 3.1.2 you must do the following:

1. Select **Programs** → **Administrative Tools** → **Internet Services Manager**.

2. Expand the hostname.

3. Right–click on **Default Web Site**.

4. Select **Properties** to open the properties page for the Default Web Site.

5. Select the **Directory Security** tab from **Properties** notebook.

6. Click the **Edit** button on the right to bring up the **Authentication Methods** dialog box.

7. Ensure that the checkbox for **Anonymous Access** is selected and that the other options are not selected.

8. Click **OK** to complete the change.

Completing your iPlanet Web Server installation

Once you have created or updated a WebSphere Commerce instance that uses iPlanet Web Server, you need to apply the changes you have made to the `obj.conf` file for your secure servers and your non-secure server.

1. Launch your iPlanet Web Server administrator, by entering the following URL in a browser:

   `http://host_name:8888/`

2. Select your non-secure server from the list of available servers and click **Manage**.

   Note: Depending on the configuration of your iPlanet Web Server, a warning message may appear. Click **OK**.

3. Click **Apply** in the upper right-hand corner.

4. Click **Load Configuration Files**. A message displays stating that you were successful. Click **OK**.

5. Select the server from the dropdown list again, and click **Apply** in the upper right-hand corner.

6. Click **Apply Changes**. A message displays stating that you were successful. Click **OK**.

7. Repeat steps 1 through 5 for each of your secure servers (port 8000, and port 443).

Configuring Payment Manager to work with WebSphere Commerce

To configure Payment Manager to work with WebSphere Commerce, you must do the following:

1. Open the WebSphere Application Server Administration Console.

2. Create an alias by doing the following:

   a. Expand **WebSphere Administrative Domain**.

   b. Select **Virtual Hosts**.

   c. Select default_host in the right-hand panel.

   d. On the **General** tab, click **Add**.

   e. Enter `*:443` in the Alias field, and click **Apply**.

   Note: If you do not enable SSL, you must configure the WebSphere Commerce server to use the non-SSL Payment Manager client in the Payment Manager setting page of the WebSphere Commerce Configuration Manager when creating a WebSphere Commerce instance. You can change the Payment Manager settings after the instance is created, however, you must restart the instance for your changes to take effect.

3. Open a command window and change to the following directory:

   `drive:\WebSphere\AppServer\bin`

4. Enter the following command:

   ```
   GenPluginCfg.bat -adminNodeName node_name
   ```

   Where *node_name* is the short logical name of the node.
5. Stop the WebSphere Application Server. To stop the WebSphere Application Server, do the following:

   Note: Step 5 to 7 are only required if Payment Manager is installed on the same machine as WebSphere Commerce.

   a. Exit the WebSphere Application Server Administration Console.
   b. From the **Services** window, select **IBM WS AdminServer 4.0**.
   c. Click **Stop**.
6. Open the following file in a text editor:

   ```
   drive:\WebSphere\AppServer\config\plugin-cfg.xml
   ```
7. Add the following line directly below `<Config>` in the `plugin-cfg.xml` file:

   ```
   <Property name="CacheLibrary" value="drive:\WebSphere\CommerceServer\
   bin\wccache.dll" />
   ```
8. Stop and restart your Web server. If you are using IBM HTTP Server refer to "Starting and Stopping IBM HTTP Server" on page 148 for additional information.
9. Start the WebSphere Application Server. To start the WebSphere Application Server, do the following:

   a. From the **Services** window, select **IBM WS AdminServer 4.0**.
   b. Click **Start**.
   c. Open the WebSphere Application Server Administration Console.

Important

It is recommended that you log into the WebSphere Commerce Administration Console at least once before using Payment Manager. To log into the WebSphere Commerce Administration Console, select **Programs** → **IBM WebSphere Commerce** → **Administration Console** from the Start menu. Enter the default Administration Console user ID (`wcsadmin`), and the default password (`wcsadmin`). You will be asked to change your password the first time you log in.

Payment Manager Administrator role

When you install Payment Manager, the WebSphere Commerce Administrator ID, `wcsadmin`, is automatically assigned the Payment Manager Administrator role. The Payment Manager Administrator role enables an ID to control and administer Payment Manager.

Notes:

1. Do not delete or rename the logon user ID wcsadmin, and do not change the preassigned Payment Manager role of wcsadmin. Doing so will stop some of the functions in WebSphere Commerce related to Payment Manager integration from working.

2. If you assign a Payment Manager role to a WebSphere Commerce administrator and then later want to delete or rename the logon user ID of this administrator, you must remove the administrator's Payment Manager role before deleting or renaming it.

> **Important**
>
> In addition to the wcsadmin user ID, Payment Manager has preassigned the Payment Manager Administrator role to two administrator IDs:
>
> - admin
> - ncadmin
>
> To prevent a user from inadvertently obtaining this Payment Manager Administrator role, you can:
>
> - Create the above administrator ID in WebSphere Commerce using the WebSphere Commerce Administration Console.
> - In the Payment Manager User Interface, select **Users**.
>   - Remove the Payment Manager Administrator role from this ID.

Setting up your Payment Manager machine

To configure your Payment Manager machine, please see the "Getting Started" chapter of the *IBM WebSphere Payment Manager Administrator's Guide*. This section will guide you through the processes of:

- Starting the Payment Manager user interface
- Creating a Payment Manager merchant and authorizing a cassette
- Assigning user roles
- Creating an account
- Managing Payment Processing

Before you log on to the Payment Manager User Interface, ensure that WebSphere Commerce is running and that the Payment Manager application server has also been started and initialized. For more information, see "Starting and Stopping Payment Manager" on page 150.

> **Important**
>
> You must ensure that the host name listed in the **Payment Manager Settings** panel of the Payment Manager user interface is a fully qualified host name. If not, you must change the host name field to the fully qualified host name, click **Update**, click **Disable Payment Manager**, and then click **Enable Payment Manager**.
>
> Update the Payment node in Configuration Manager for the WebSphere Commerce instance, as described in "Payment Manager" on page 61, if this has not already been done.
>
> Note that you can also access the Payment Manager administration functions from the WebSphere Commerce Administration Console through the Site Manager's Payment Manager menu.

Compiling the JavaServer Pages files

It is recommended that you Compile your JavaServer Pages files at this time. Compiling the JavaServer Pages files will significantly reduce the amount of time needed to load the WebSphere Commerce tools. To batch compile JavaServer Pages (JSP) files, do the following:

1. From a command prompt, switch to
   drive:\WebSphere\CommerceServer\bin.

2. Run the following command:

   Note: This command is case sensitive, please enter the information exactly as it appears below. If your *enterpriseApp,* *webModule,* or *nameServerHost* names contain any spaces you **must** surround them with double quotation marks, as shown below.

   ```
   WCSJspBatchCompiler -enterpriseApp "WebSphere
     Commerce Enterprise Application - instance_name"
    -webModule  "WCS Tools" -nameServerHost short_host_name
     -nameServerPort port_number
   ```

   where *instance_name* is the name of your WebSphere Commerce instance (the default is demo), *short_host_name* is the name of your WebSphere Commerce machine, and *port_number* is the WebSphere Application Server bootstrap port (the default is 900).

Several errors may be logged when you perform these compiles. These may be safely ignored.

Running the Security Checker tool

This section describes how to check your system's security with WebSphere Commerce's security checking tool. The security checker tool inspects your

system for potential security exposures, identifies files that should be deleted, verifies permission and ownership of files that contain confidential information, and checks security level within the IBM HTTP Server, and WebSphere Application Server.

To access the security checking tool, do the following:

1. From the Start Menu select **Programs** → **IBM WebSphere Commerce** → **Administration Console**. Enter the default Administration Console user ID (wcsadmin), and the default password (wcsadmin). You will be asked to change your password the first time you log in.
2. Select **Site** from the Site/Store selection page, and click **OK** to continue.
3. On the Site Administration Console, from the Security menu select **Security Checker**.
4. The Security Checker contains a **Launch** button that launches the Security Checker, and displays the results of the most recent security check. If the Configuration Manager parameters are configured correctly, the "No security exposures found" message will display.
5. Click **OK** when you have finished running the tool.

The following log is created by running the Security Checker tool:

- *drive*:\WebSphere\CommerceServer\instances*instance_name*\logs\ sec_check.log. This file contains information about potential security exposures.

The next step

After you have finished all of the steps required to complete your configuration of WebSphere Commerce, you can continue by doing one or more of the following:

- Create and publish your own store using Store Services. For information on using Store Services, refer to the WebSphere Commerce online help. Information on accessing WebSphere Commerce online help is available in Appendix E, "Where to find more information" on page 173.
- Publish the demonstration store, InFashion, provided with WebSphere Commerce to see how a typical store is built. Publish InFashion using Store Services. For information on using Store Services, refer to the WebSphere Commerce online help. Information on accessing WebSphere Commerce online help is available in Appendix E, "Where to find more information" on page 173.
- Configure additional options, such as:
  - Chapter 12, "Enabling SSL for production with IBM HTTP Server"
  - Chapter 9, "Create Multiple WebSphere Commerce Instances"
  - Chapter 13, "Enabling WebSphere Application Server security"

- Additional software is included with WebSphere Commerce. Information on installing and configuring the following products is included in the *IBM WebSphere Commerce Additional Software Guide*:
  - IBM DB2 Text Extender 7.1
  - WebSphere Commerce Analyzer
  - Using Lightweight Directory Access Protocol (LDAP) with WebSphere Commerce.
  - SilkPreview
  - LikeMinds Personalization Server
  - Sametime
  - QuickPlace

3-tier post-configuration steps

This chapter contains all the steps that you may need to complete in order to finish your WebSphere Commerce configuration in a 3-tier environment. The following tasks are described in this chapter:

- Completing your remote IBM HTTP Server configuration (all IBM HTTP Server users)
- Completing an iPlanet Web Server installation (all iPlanet Web Server users)
- Copying assets to your Web server (all users)
- Completing your Microsoft IIS configuration (all Microsoft IIS users)
- Configuring Payment Manager to work with WebSphere Commerce (all users)
- Compiling the JavaServer Pages files (all users)
- Running the Security Checker Tool (optional)

Configuring your IBM HTTP Server in a 3–tier environment

> **Important**
>
> If you install your Web server remotely from your WebSphere Commerce machine, ensure that both products are installed to the same drive letter. For example, if you install your Web server software to drive C: on your remote Web server machine, install WebSphere Commerce to drive C: on your WebSphere Commerce machine.

In a 3-tier configuration, the httpd.conf file located on the Web server machine has not been configured. A winaliases.txt file is located on the WebSphere Commerce Disk 2 CD, in the drive:\Software_Patches directory. This file lists the alias that you need to configure your httpd.conf file. You must manually edit the httpd.conf file, by doing the following:

1. Stop your IBM HTTP Server.

2. On your Web server machine, backup your httpd.conf.

3. Open the httpd.conf file in a text editor.

4. Uncomment the line that begins with #LoadModule ibm_ssl_module modules/IBMModuleSSL128.dll. To uncomment the line remove the # character.

5. Uncomment the line that begins with #Listen 443. To uncomment the line remove the # character.

6. Below the line that begins with Listen 443, add the following lines:

   Note: All the lines shown below have been formatted for readability purposes only. Each line, starting with Alias or containing a path (for example, *drive*:\WebSphere\CommerceServer/web/doc) must appear on a single line in the httpd.conf file.

```
########## IBM WebSphere Commerce (Do not edit this section)############
Listen 8000
########## End of IBM WebSphere Commerce (Do not edit this section) ####
## VirtualHost: Allows the daemon to respond to requests for more than
## one server address, if your server machine is configured to accept IP
## packets for multiple addresses. This can be accomplished with the
## ifconfig alias flag, or through kernel patches like VIF.
#
## Any httpd.conf or srm.conf directive may go into a VirtualHost command.
## See also the BindAddress entry.
#
########## IBM WebSphere Commerce ################
#Instance name : instance_name
<VirtualHost webserver_IP_address>
ServerName fully_qualified_webserver_name
DocumentRoot "drive:/WEBSPH~1/HTTPSE~1/htdocs"
Alias /wcsdoc "drive:\WebSphere\CommerceServer/web/doc"
Alias /wchelp "drive:\WebSphere\CommerceServer/web/doc/en_US"
Alias /storeservices
"drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wctools.war/tools/
devtools/storeservices.html"
Alias /adminconsole
"drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wctools.war/tools/
adminconsole/wcsadmincon.html"
Alias /wcsstore "drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wcstores.war"
Alias /accelerator
"drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wctools.war/tools/
common/accelerator.html"
Alias /orgadminconsole
"drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wctools.war/tools/
buyerconsole/wcsbuyercon.html"
Alias /wcs "drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wctools.war"
```

```
Alias /webeditor "drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wcwebeditor.war"
</VirtualHost>
<VirtualHost webserver_IP_address:443>
SSLEnable
SSLClientAuth 0
ServerName fully_qualified_webserver_name
DocumentRoot "drive:/WEBSPH~1/HTTPSE~1/htdocs"
Alias /wcsdoc "drive:\WebSphere\CommerceServer\web\doc"
Alias /wchelp "drive:\WebSphere\CommerceServer\web\doc\en_US"
Alias /storeservices
"drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wctools.war/tools/
devtools/storeservices.html"
Alias /adminconsole
"drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wctools.war/tools/
adminconsole/wcsadmincon.html"
Alias /wcsstore "drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wcstores.war"
Alias /accelerator
"drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wctools.war/tools/
common/accelerator.html"
Alias /orgadminconsole
"drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wctools.war/tools/
buyerconsole/wcsbuyercon.html"
Alias /wcs "drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wctools.war"
Alias /webeditor "drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wcwebeditor.war"
</VirtualHost>
<VirtualHost webserver_IP_address:8000>
SSLEnable
SSLClientAuth 0
ServerName fully_qualified_webserver_name
DocumentRoot "drive:/WEBSPH~1/HTTPSE~1/htdocs"
Alias /wcsdoc "drive:\WebSphere\CommerceServer\web\doc"
Alias /wchelp "drive:\WebSphere\CommerceServer\web\doc\en_US"
Alias /storeservices
"drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wctools.war/tools/
devtools/storeservices.html"
Alias /adminconsole
"drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wctools.war/tools/
adminconsole/wcsadmincon.html"
Alias /wcsstore "drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wcstores.war"
Alias /accelerator
"drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wctools.war/tools/
common/accelerator.html"
Alias /orgadminconsole
```

```
"drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wctools.war/tools/
buyerconsole/wcsbuyercon.html"
Alias /wcs "drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wctools.war"
Alias /webeditor "drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wcwebeditor.war"
</VirtualHost>
######### End of IBM WebSphere Commerce #########
```

7. Above the line that begins # *drive*:/WEBSPH~1/HTTPSE~1/cgi-bin, add the following:

```
######### IBM WebSphere Commerce ################
#Instance name : instance_name
<Directory "drive:/WEBSPH~1/HTTPSE~1/htdocs">
Options Indexes
AllowOverride None
order allow,deny
allow from all
</Directory>
<Directory drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wctools.war>
<Files *.jsp>
order allow,deny
deny from all
</Files>
</Directory>
<Directory drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wcstores.war>
<Files *.jsp>
order allow,deny
deny from all
</Files>
</Directory>
<Directory drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear/wcwebeditor.war>
<Files *.jsp>
order allow,deny
deny from all
</Files>
</Directory>
######### End of IBM WebSphere Commerce#########
```

8. Uncomment the line that begins with #Keyfile "*drive*:/WebSphere/HTTPServer/ssl/keyfile.kdb". To uncomment the line remove the # character.

9. Save the file.

10. To ensure that your httpd.conf file does not contain syntax errors, change to the *drive*:\WebSphere\HTTPServer directory and run the following command:

    apache -t

11. Start the IBM HTTP Server as described in "Starting and Stopping IBM HTTP Server" on page 148.

Completing your iPlanet Web Server installation

> **Important**
>
> If you install your Web server remotely from your WebSphere Commerce machine, ensure that both products are installed to the same drive letter. For example, if you install your Web server software to drive C: on your remote Web server machine, install WebSphere Commerce to drive C: on your WebSphere Commerce machine.

Once you have created or updated a WebSphere Commerce instance that uses iPlanet Web Server, you need to apply the changes you have made to the `obj.conf` file for your secure servers and your non-secure server.

1. Launch your iPlanet Web Server administrator, by entering the following URL in a browser:

   `http://host_name:8888/`

2. Select your non-secure server from the list of available servers and click **Manage**.

   Note: Depending on the configuration of your iPlanet Web Server, a warning message may appear. Click **OK**.

3. Click **Apply** in the upper right-hand corner.
4. Click **Load Configuration Files**. A message displays stating that you were successful. Click **OK**.
5. Select the server from the dropdown list again, and click **Apply** in the upper right-hand corner.
6. Click **Apply Changes**. A message displays stating that you were successful. Click **OK**.
7. Repeat steps 1 through 5 for each of your secure servers (port 8000, and port 443).

Remote iPlanet Web Server configuration

If you are using an iPlanet Web Server which is installed remotely from the WebSphere Commerce server, complete the following steps:

1. Open the `obj.conf` file for the Web server on port 8000 in a text editor (the default path to this file is `drive:\Netscapeserver4\https-hostname-https-8000\config\obj.conf`).
2. Search for the `<Object name="default">` tag.
3. Add the following below this line:

   ```
   ########## IBM WebSphere Commerce ##########
   NameTrans fn="pfx2dir" from="/wcsdoc" dir="drive:\WebSphere\CommerceServer\
   web\doc"
   NameTrans fn="pfx2dir" from="/wchelp" dir="drive:\WebSphere\CommerceServer\
   ```

```
web\doc\<locale>"
NameTrans fn="pfx2dir" from="/storeservices"
dir="drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear\wctools.war\tools\devtools\
storeservices.html"
NameTrans fn="pfx2dir" from="/adminconsole"
dir="drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear\wctools.war\tools\
adminconsole\wcsadmincon.html"
NameTrans fn="pfx2dir" from="/accelerator"
dir="drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear\wctools.war\tools\common\
accelerator.html"
NameTrans fn="pfx2dir" from="/wcs"
dir="drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear\wctools.war"
NameTrans fn="pfx2dir"from="/webeditor"
dir="drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear\wcwebeditor.war"
 ########## End of IBM WebSphere Commerce #######
```

4. Save the file.

5. Open the obj.conf file for the Web server on port 443 in a text editor (the default path to this file is *drive*:\Netscapeserver4\https-hostname-https-443\config\obj.conf).

6. Search for the <Object name="default"> tag.

7. Add the following below this line:

```
########## IBM WebSphere Commerce ##########
NameTrans fn="pfx2dir" from="/wcsstore"
dir="drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear\wcstores.war"
NameTrans fn="pfx2dir" from="/orgadminconsole"
dir="drive:\WebSphere\AppServer\installedApps
\WC_Enterprise_App_instance_name.ear\wctools.war\tools\buyerconsole\
wcsbuyercon.html"
NameTrans fn="pfx2dir" from="/wcs"
dir="drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear\wctools.war"
NameTrans fn="pfx2dir"from="/webeditor"
dir="drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear\wcwebeditor.war"
 ########## End of IBM WebSphere Commerce #######
```

8. Add aliases to the configuration files for the servers on ports 80:

    a. Open the obj.conf file for each Web server in a text editor (the default path to this file is *drive*:\Netscapeserver4\https-hostname-https-80\config\obj.conff).

    b. Search for the <Object name="default"> tag.

    c. Add the following information below this tag:

```
NameTrans fn="pfx2dir" from="/wcsstore"
dir="drive:\WebSphere\AppServer\installedApps\
```

Copying assets to your Web server

If your Web server is installed remotely from WebSphere Application Server and WebSphere Commerce, you must copy certain files from the WebSphere Commerce machine to the Web server.

1. Copy over the contents of the following directory, including sub directories, from the WebSphere Application Server machine to the Web server machine:

   drive:\WebSphere\AppServer\WSsamples

   It may be necessary to create the directories on your Web server machine.

2. Copy over the contents of the following directory, including sub directories, from the WebSphere Commerce machine to the Web server machine:

   drive:\WebSphere\CommerceServer\web

   It may be necessary to create the directories on your Web server machine.

   Note: This is necessary each time you change the web assets on your WebSphere Commerce machine.

3. Copy over the contents of the following directory, including sub directories, from the WebSphere Commerce machine to the Web server machine:

   - *drive*:\WebSphere\AppServer\installedApps\
     WC_Enterprise_App_*instance_name*.ear\wcwebeditor.war
   - *drive*:\WebSphere\AppServer\installedApps\
     WC_Enterprise_App_*instance_name*.ear\wcstores.war
   - *drive*:\WebSphere\AppServer\installedApps\
     WC_Enterprise_App_*instance_name*.ear\wcstools.war

   It may be necessary to create the directories on your webserver machine.

   Note: This is necessary each time you change the web assets on your WebSphere Commerce machine.

4. Copy over the contents of the following directory, including sub directories, from the WebSphere Commerce machine to the Web server machine:

   drive:\WebSphere\CommerceServer\instances*instance_name*\xml

   It may be necessary to create this directory on your Web server machine.

5. Copy over the following file, from the WebSphere Commerce machine to the Web server machine:

   drive:\WebSphere\CommerceServer\instances\wcs_instances

   It may be necessary to create the directory on your Web server machine.

6. On your Web server machine, delete all jsp, sar and xml files found in the following directories:

```
drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear\
wcstores.wardrive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear\wcstools.war
drive:\WebSphere\AppServer\installedApps\
WC_Enterprise_App_instance_name.ear\wcwebeditor.war
```

> **Note:** This is necessary each time you change the web assets on your WebSphere Commerce machine.

Setting up your Web server cache

Setting up the Web server cache is only necessary if one or more of your cacheable Web addresses are session independent. If all of your cacheable Web addresses are session dependent, skip this section.

You can set up the cache daemon so that requests are made directly from a Web server cache client on your Web server machine to a cache daemon running on your WebSphere Application Server machine. If you do not set up a cache client on each Web server machine as described in this section, cache pages will still be served using application server cache clients on your WebSphere Application Server machine communicating with the cache daemon (also running on the WebSphere Application Server machine).

Given that the code path to any Application server cache client is longer than the path to any Web server cache client, the Web server cache client can serve session independent cacheable requests faster and using fewer system resources. (For more information, see the WebSphere Commerce Suite online documentation for a discussion on session dependency of cache requests.)

The following instructions explain how to set up a Web server cache client on your Web server machine:

1. Open the following file in a text editor:

   `drive:\WebSphere\AppServer\config\plugin-cfg.xml`

2. Add the following line directly below <Config> in the plugin-cfg.xml file:

   ```
   <Property name="CacheLibrary" value="drive:\WebSphere\CommerceServer\
   bin\wccache.dll" />
   ```

Verifying the Cache Plug-in is working

Before proceeding, ensure that you have successfully published a store.

1. Ensure that the following line appears in the plugin-cfg.xml file:

   ```
   <Property name="CacheLibrary" value="drive:\WebSphere\CommerceServer\
   bin\wccache.dll" />
   ```

   Restart the web server.

2. Set the WCS_CACHE_PLUGIN environment variable on your Web server machine. Click **Start ➤ Settings ➤ Control Panel ➤ System ➤ Environment** tab. Under **System Variables**, add the WCS_CACHE_PLUGIN variable and set it to a value of *drive*:\temp\cache.txt. After updating the variable, you need to restart your machine.

3. Start your Web server.

   If you are using IBM HTTP Server, use the command line version of the startup command instead of starting it as a service. From the *drive*:\WebSphere\IBM HTTP Server directory, type:

   apache

   If you are using Netscape iPlanet, use the command line version of the startup command for your server instead of starting it as a service. From the subdirectory for your secure and non-secure servers, run the startsrv.bat command.

4. Request a product display page from your store, and then request it once again (for the same product).

5. You should see verification in the cache.txt file by the presence of a CACHE HIT entry for the second product display request.

6. Remove the WCS_CACHE_PLUGIN enviroment variable from your **System Variables**.

Completing your Microsoft IIS configuration

> **Important**
>
> If you install your Web server remotely from your WebSphere Commerce machine, ensure that both products are installed to the same drive letter. For example, if you install your Web server software to drive C: on your remote Web server machine, install WebSphere Commerce to drive C: on your WebSphere Commerce machine.

Once you have sucessfully installed WebSphere Commerce and created your WebSphere Commerce instance, proceed with the following steps.

Note: After installing WebSphere Commerce and creating WebSphere Commerce instance you must start all Microsoft IIS web related services and applications including the IIS Admin Service, the Default Web Site, the Default FTP Site, and the Default SMTP Virtual Server. See Microsoft IIS documentation for instructions on how to start these services.

1. Install a secure certificate signed by a certifying authority, according to Microsoft documentation.

2. Create aliases for the Microsoft IIS Server. To create aliases for the Microsoft IIS Server, do the following:

a. Depending on your operating system, do the following:
- For Windows NT, do the following:
  1) From the Start Menu, select **Programs** → **Windows NT 4.0 Option Pack** → **Microsoft Internet Information Server** → **Internet Services Manager**.
  2) Expand **Internet Information Server**.
  3) Expand *host_name*.
- For Windows 2000, do the following:
  1) Select **Programs** → **Administrative Tools** → **Computer Management**.
  2) Expand **Internet Information Services**.

b. Select **Default Web Site**.

c. Select **Action** → **New** → **Virtual Directory**.

d. The **Alias Generation Wizard** displays. Click **Next** and enter the alias name and directory name as shown in the following table. Give execute permission to each alias below.

Note: You must repeat step 2b to 2d for each alias that you want to create.

Table 5.

Alias Name	Directory	Default Filename
accelerator	*drive*:\WebSphere\AppServer\installedApps\ WC_Enterprise_App_*instance_name*.ear\ wctools.war\tools\common	accelerator.html
storeservices	*drive*:\WebSphere\AppServer\installedApps\ WC_Enterprise_App_*instance_name*.ear\ wctools.war\tools\devtools	storeservices.html
orgadminconsole	*drive*:\WebSphere\AppServer\installedApps\ WC_Enterprise_App_*instance_name*.ear\ wcstores.war\tools\buyerconsole	wcsbuyercon.html
wcsstore	*drive*:\WebSphere\AppServer\installedApps\ WC_Enterprise_App_*instance_name*.ear\ wcstores.war	
adminconsole	*drive*:\WebSphere\AppServer\installedApps\ WC_Enterprise_App_*instance_name*.ear\ wctools.war\tools\adminconsole	wcsadmincon.html
wcs	*drive*:\WebSphere\AppServer\installedApps\ WC_Enterprise_App_*instance_name*.ear\ wctools.war	

Table 5. (continued)

wcsdoc	*drive*:\WebSphere\CommerceServer\web\doc\	
wcshelp	*drive*:\WebSphere\CommerceServer\web\doc*<locale>*	
webeditor	*drive*:\WebSphere\AppServer\installedApps\WC_Enterprise_App_*instance_name*.ear\wcwebeditor.war	

    e. Select **Default Web Site**.

    f. Select **Action → Properties**.

    g. Select the **Document** tab.

    h. Click the **Add** button and add the following documents to the corresponding alias:
- accelerator.html
- storeservices.html
- wcsadmincon.html
- wcsbuyercon.html

    i. Click **Apply**.

    j. Repeat step 2f to step 2i for each file.

3. To add SSL port 8000, do the following:

    a. Right click the Default Web Site and select **Properties**.

    b. On the **Web Site** tab click the **Advanced** button.

    c. Click **Add**.

    d. Add SSL port 8000, and click **OK**.

4. Restart your machine.

5. Restart the WebSphere Application Server.

If you plan to install and configure Payment Manager after you install WebSphere Commerce you must perform some additional configuration steps. To configure Microsoft IIS to work with IBM WebSphere Payment Manager 3.1.2 you must do the following:

1. Select **Programs → Administrative Tools → Internet Services Manager**.

2. Expand the hostname.

3. Right–click on **Default Web Site**.

4. Select **Properties** to open the properties page for the Default Web Site.

5. Select the **Directory Security** tab from **Properties** notebook.

6. Click the **Edit** button on the right to bring up the **Authentication Methods** dialog box.

+ 7. Ensure that the checkbox for **Anonymous Access** is selected and that the
+ other options are not selected.
+ 8. Click **OK** to complete the change.

+ **Remote Microsoft IIS configuration**
+ If you are using a Microsoft IIS Web server which is installed remotely from
+ the WebSphere Commerce server, complete the following steps:
+ 1. Depending on your operating system, do the following:
+ • For Windows NT, do the following:
+ a. From the Start Menu, select **Programs** → **Windows NT 4.0 Option**
+ **Pack** → **Microsoft Internet Information Server** → **Internet Services**
+ **Manager**.
+ b. Expand **Internet Information Server**.
+ c. Expand *host_name*.
+ • For Windows 2000, do the following:
+ a. Select **Programs** → **Administrative Tools** → **Computer Management**.
+ b. Expand **Internet Information Services**.
+ 2. Navigate to **WSsamples**, and select **Action > Properties**.
+ 3. On the **Documents** tab, select **Enable Default Document**, and click **Add**.
+ 4. Enter index.html and click **OK**.
+ 5. Click **OK** again.
+ 6. Navigate to **Theme**, and select **Action > Properties**.
+ 7. On the **Virtual Directory** tab click **Browse**. Select
+ *drive*:\WebSphere\AppServer\WSsamples\image, and click **OK**.
+ 8. Click **OK** again.

Configuring Payment Manager to work with WebSphere Commerce

To configure Payment Manager to work with WebSphere Commerce, you
must do the following:
1. Open the WebSphere Application Server Administration Console.
2. Create an alias by doing the following:
   a. Expand **WebSphere Administrative Domain**.
   b. Select **Virtual Hosts**.
   c. Select default_host in the right-hand panel.
   d. On the **General** tab, click **Add**.
   e. Enter *:443 in the Alias field, and click **Apply**.

   Note: If you do not enable SSL, you must configure the WebSphere
   Commerce server to use the non-SSL Payment Manager client in the
   Payment Manager setting page of the WebSphere Commerce
   Configuration Manager when creating a WebSphere Commerce

instance. You can change the Payment Manager settings after the instance is created, however, you must restart the instance for your changes to take effect.

3. Open a command window and change to the following directory:

    drive:\WebSphere\AppServer\bin

4. Enter the following command:

    GenPluginCfg.bat -adminNodeName *node_name*

    Where *node_name* is the short logical name of the node.

5. Stop the WebSphere Application Server. To stop the WebSphere Application Server, do the following:

    Note: Step 5 to 7 are only required if Payment Manager is installed on the same machine as WebSphere Commerce.

    a. Exit the WebSphere Application Server Administration Console.

    b. From the **Services** window, select **IBM WS AdminServer 4.0**.

    c. Click **Stop**.

6. Open the following file in a text editor:

    drive:\WebSphere\AppServer\config\plugin-cfg.xml

7. Add the following line directly below <Config> in the plugin-cfg.xml file:

    <Property name="CacheLibrary" value="*drive*:\WebSphere\CommerceServer\
    bin\wccache.dll" />

+ 8. Copy the plugin-cfg.xml file to your Web server machine.

9. Stop and restart your Web server. If you are using IBM HTTP Server refer to "Starting and Stopping IBM HTTP Server" on page 148 for additional information.

10. Start the WebSphere Application Server. To start the WebSphere Application Server, do the following:

    a. From the **Services** window, select **IBM WS AdminServer 4.0**.

    b. Click **Start**.

    c. Open the WebSphere Application Server Administration Console.

> **Important**
>
> It is recommended that you log into the WebSphere Commerce Administration Console at least once before using Payment Manager. To log into the WebSphere Commerce Administration Console, select **Programs → IBM WebSphere Commerce → Administration Console** from the Start menu. Enter the default Administration Console user ID (wcsadmin), and the default password (wcsadmin). You will be asked to change your password the first time you log in.

Additional Payment Manager configuration steps

Payment Manager requires additional configuration steps when WebSphere Commerce is installed in a 3–tier environment. To complete the additional Payment Manager configuration, do the following:

1. Ensure that the Payment Manager Application Server is stopped within the WebSphere Application Server Administration Console.

2. On your Payment Manager machine, navigate to the following directory:

   `drive:\Program Files\IBM\PaymentManager`

3. Open the `WCSRealm.properties` file in a text editor.

4. Ensure that the `WCSHostName` entry contains the fully qualified hostname of your Web server machine.

5. Save the file.

6. On your WebSphere Commerce machine, navigate to the following directory:

   `drive:\WebSphere\CommerceServer\instances\instance_name\xml`

7. Open the `instance_name.xml` file in a text editor.

8. Ensure that the `HostName` within the `PaymentManager` section of the xml file contains the fully qualified hostname of your Web server machine.

9. Save the file.

10. Open the WebSphere Application Server Administration Console.

11. Expand **WebSphere Administrative Domain** ➜ **Nodes** ➜ *node_name* ➜ **Application Servers** ➜ **WebSphere Payment Manager**.

12. Select the **JVM Settings** tab.

13. In the **System Properties** box, set `wpmui.PaymentServerHostname`, and change the value to the fully qualified hostname of your Web server machine.

14. Click **Apply**.

15. Start the Payment Manager Application Server.

Payment Manager Administrator role

When you install Payment Manager, the WebSphere Commerce Administrator ID, `wcsadmin`, is automatically assigned the Payment Manager Administrator role. The Payment Manager Administrator role enables an ID to control and administer Payment Manager.

Notes:

1. Do not delete or rename the logon user ID `wcsadmin`, and do not change the preassigned Payment Manager role of `wcsadmin`. Doing so will stop some of the functions in WebSphere Commerce related to Payment Manager integration from working.

2. If you assign a Payment Manager role to a WebSphere Commerce administrator and then later want to delete or rename the logon user ID of this administrator, you must remove the administrator's Payment Manager role before deleting or renaming it.

Important

In addition to the `wcsadmin` user ID, Payment Manager has preassigned the Payment Manager Administrator role to two administrator IDs:

- `admin`
- `ncadmin`

To prevent a user from inadvertently obtaining this Payment Manager Administrator role, you can:

- Create the above administrator ID in WebSphere Commerce using the WebSphere Commerce Administration Console.
- In the Payment Manager User Interface, select **Users**.
  - Remove the Payment Manager Administrator role from this ID.

Setting up your Payment Manager machine

To configure your Payment Manager machine, please see the "Getting Started" chapter of the *IBM WebSphere Payment Manager Administrator's Guide*. This section will guide you through the processes of:

- Starting the Payment Manager user interface
- Creating a Payment Manager merchant and authorizing a cassette
- Assigning user roles
- Creating an account
- Managing Payment Processing

Before you log on to the Payment Manager User Interface, ensure that WebSphere Commerce is running and that the Payment Manager application server has also been started and initialized. For more information, see "Starting and Stopping Payment Manager" on page 150.

> **Important**
>
> You must ensure that the host name listed in the **Payment Manager Settings** panel of the Payment Manager user interface is a fully qualified host name. If not, you must change the host name field to the fully qualified host name, click **Update**, click **Disable Payment Manager**, and then click **Enable Payment Manager**.
>
> Update the Payment node in Configuration Manager for the WebSphere Commerce instance, as described in "Payment Manager" on page 61, if this has not already been done.
>
> Note that you can also access the Payment Manager administration functions from the WebSphere Commerce Administration Console through the Site Manager's Payment Manager menu.

Compiling the JavaServer Pages files

It is recommended that you Compile your JavaServer Pages files at this time. Compiling the JavaServer Pages files will significantly reduce the amount of time needed to load the WebSphere Commerce tools. To batch compile JavaServer Pages (JSP) files, do the following on your WebSphere Commerce machine:

1. From a command prompt, switch to *drive*:\WebSphere\CommerceServer\bin.

2. Run the following command:

   Note: This command is case sensitive, please enter the information exactly as it appears below. If your *enterpriseApp*, *webModule*, or *nameServerHost* names contain any spaces you **must** surround them with double quotation marks, as shown below.

```
WCSJspBatchCompiler -enterpriseApp "WebSphere
   Commerce Enterprise Application - instance_name"
  -webModule  "WCS Tools" -nameServerHost short_host_name
   -nameServerPort 900
```

Several errors may be logged when you perform these compiles. These may be safely ignored.

Running the Security Checker tool

This section describes how to check your system's security with WebSphere Commerce's security checking tool. The security checker tool inspects your system for potential security exposures, identifies files that should be deleted, verifies permission and ownership of files that contain confidential information, and checks security level within the IBM HTTP Server, and WebSphere Application Server.

To access the security checking tool, do the following:

1. From the Start Menu select **Programs** → **IBM WebSphere Commerce** → **Administration Console**. Enter the default Administration Console user ID (`wcsadmin`), and the default password (`wcsadmin`). You will be asked to change your password the first time you log in.
2. Select **Site** from the Site/Store selection page, and click **OK** to continue.
3. On the Site Administration Console, from the Security menu select **Security Checker**.
4. The Security Checker contains a **Launch** button that launches the Security Checker, and displays the results of the most recent security check. If the Configuration Manager parameters are configured correctly, the "No security exposures found" message will display.
5. Click **OK** when you have finished running the tool.

The following log is created by running the Security Checker tool:

- *drive*:\WebSphere\CommerceServer\instances*instance_name*\logs\ sec_check.log. This file contains information about potential security exposures.

The next step

After you have finished all of the steps required to complete your configuration of WebSphere Commerce, you can continue by doing one or more of the following:

- Create and publish your own store using Store Services. For information on using Store Services, refer to the WebSphere Commerce online help. Information on accessing WebSphere Commerce online help is available in Appendix E, "Where to find more information" on page 173.
- Publish the demonstration store, InFashion, provided with WebSphere Commerce to see how a typical store is built. Publish InFashion using Store Services. For information on using Store Services, refer to the WebSphere Commerce online help. Information on accessing WebSphere Commerce online help is available in Appendix E, "Where to find more information" on page 173.
- Configure additional options, such as:
  - Chapter 12, "Enabling SSL for production with IBM HTTP Server"
  - Chapter 9, "Create Multiple WebSphere Commerce Instances"
  - Chapter 13, "Enabling WebSphere Application Server security"
- Additional software is included with WebSphere Commerce. Information on installing and configuring the following products is included in the *IBM WebSphere Commerce Additional Software Guide*:
  - IBM DB2 Text Extender 7.1
  - WebSphere Commerce Analyzer

- Using Lightweight Directory Access Protocol (LDAP) with WebSphere Commerce.
- SilkPreview
- LikeMinds Personalization Server
- Sametime
- QuickPlace

Part 3. Advanced Configuration

This section contains information on how to perform advanced configuration tasks for WebSphere Commerce. This section describes how to create multiple instances, and perform vertical and horizontal cloning.

The following topics are covered:

Chapter 9. Create Multiple WebSphere Commerce Instances

WebSphere Commerce 5.4 supports the creation of multiple WebSphere Commerce instances. That is, with WebSphere Commerce, you can run two or more instances of WebSphere Commerce concurrently by using a different host name for each WebSphere Commerce instance. In this case, a customer can access *host1.domain.com* and *host2.domain.com*. This method involves the use of *virtual host names*.

Notes:

1. The following examples refer to *demo1*, *demo2*, *host1*, *host2*, *htdocs1*, and *htdocs2*. These examples represent the parameter values for your first and second instance and are intended to show that these values are unique between instances.

2. Normally, you will have an operational pre-existing WebSphere Commerce instance and you simply need to create an additional instance or instances. If you have a pre-existing instance, you do not have to modify any of the parameter values for that instance in order to add an additional instance. You can optionally modify some parameters of your original instance in order to better organize your multi-instance environment. For example, you could consider renaming your document root directory from `...\htdoc` to `...\htdoc1` to correspond to your first instance.

> **Important**
>
> For each additional WebSphere Commerce instance that is created, you must install and configure Payment Manager on a separate, unique machine.

Multiple Instances Using Virtual Host Names

This section shows you how to create multiple WebSphere Commerce instances using virtual host names.

Prerequisites

1. Normally, you require one Internet Protocol (IP) address for each instance, plus one additional IP address for the machine. For example, for two instances, you would normally require a total of three IP addresses. The three IP addresses must be valid on the network, with associated host names in the Domain Name System (DNS) server. The example that

follows assumes that you have a pre-existing instance and shows you how to create an additional instance. In this example, the IP addresses and host names for the instances are:

- *m.mm.mm.mmm* with host name *host1.domain.com* (pre-existing)
- *n.nn.nn.nnn* with host name *host2.domain.com* (for the additional instance)

- You can also use the IP address and host name of the machine for one of the instances. In this case, you need just two IP addresses for two instances.
- You cannot share host names between instance. Each instance requires a unique host name.

Note: IBM HTTP Server 1.3.19.1 does not allow underscore characters in the name of a virtual host.

2. The host name for each instance must resolve fully to separate IP addresses. For example, to verify that you can run Configuration Manager and create multiple instances, run the nslookup command on both the host name and IP address for each instance. The host name should resolve to its correct IP address, and the IP address should resolve to its correct host name:

```
nslookup host1.domain.com
nslookup m.mm.mm.mmm
nslookup host2.domain.com
nslookup n.nn.nn.nnn
```

3. There must be one valid document root for each instance. The simplest way to do this is to copy the existing document root and rename it.

   If you are using IBM HTTP Server, copy *drive*:\WebSphere\HTTPServer\htdocs and rename it to *drive*:\WebSphere\HTTPServer*htdocs2*. Optionally, you can copy *drive*:\WebSphere\HTTPServer\htdocs again, and rename it to *drive*:\WebSphere\HTTPServer*htdocs1*.

4. Before you create the second instance, ensure that the IBM WS AdminServer service is started in the Windows Services window.

5. For each additional instance, you should increase your machine memory by 512 MB.

Create the Multiple Instances

Assuming you have already created your first WebSphere Commerce instance, you can create each additional instance that you require by following the instructions in Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55. In the following table, the existing instance is represented by **Instance 1** and the new instance is represented by **Instance 2**. You do not have to modify the values for an existing instance. The

table lists the modified default values for the new instance. Replace these values with the actual values (such as your instance name, your host name, and so on) that you want to use for your instance.

Field in Configuration Manager	Instance 1	Instance 2
Instance - Instance name	*demo1*	*demo2*
Instance - Instance root path	*drive*:\WebSphere\ CommerceServer\ instances\demo1	*drive*:\WebSphere\ CommerceServer\ instances\demo2
Database - Database name	*mall1*	*mall2*
Webserver - hostname	*host1.domain.com*	*host2.domain.com*
Webserver - Primary Document Root (for IBM HTTP Server)	*drive*:\WebSphere\HTTPServer\ *htdocs1*	*drive*:\WebSphere\HTTPServer\ *htdocs2*
Payment Manager - hostname	*host1.domain.com*	*host2.domain.com*

If you are going to use caching with your instance, you need to modify the *instance_name*.xml file manually. Stop your instances in the WebSphere Application Server Administration Console, and then modify the following entries within the *instance_name*.xml file so that they contain the correct information for each instance:

```
Cache AutoPageInvalidation="true"

        CacheDaemonBindAddress="<IP_address_of_the_instance>"

        CacheDaemonPort="<port_number_of_the_instance>"
```

After you have made and saved these changes, restart your instance.

Start Your Instances

Once the WebSphere Commerce instances have been created:

1. Check that the following entries have been created in the WebSphere Application Server Administration Console:

   - `WebSphere Commerce Server demo1`
   - `WebSphere Commerce Server demo2`
   - `WebSphere Commerce DB2 DataSource demo1`

- WebSphere Commerce DB2 DataSource demo2
- WebSphere Commerce DB2 JDBC Driver demo1
- WebSphere Commerce DB2 JDBC Driver demo2
- default_host (corresponding to demo1)
- VH_demo2

2. If you are using IBM HTTP Server, check that the following `<VirtualHost>` sections exist in the Virtual Host section of the IBM HTTP Server configuration file (*drive*:\WebSphere\HTTPServer\conf\httpd.conf):

   Note: In a 3-tier configuration, you must manually add the following lines to your httpd.conf file.

   ```
   <VirtualHost m.mm.mm.mmm>
   ServerName host1.domain.com
   DocumentRoot "drive:/WebSphere/HTTPServer/htdocs1
   </VirtualHost>
   .
   .
   .
   <VirtualHost m.mm.mm.mmm:443>
   SSLEnable
   SSLClientAuth 0
   ServerName host1.domain.com
   DocumentRoot "drive:/WebSphere/HTTPServer/htdocs1"
   .
   .
   .
   <VirtualHost n.nn.nn.nnn>
   ServerName host2.domain.com
   DocumentRoot "drive:/WebSphere/HTTPServer/htdocs2
   </VirtualHost>
   .
   .
   .
   <VirtualHost n.nn.nn.nnn:443>
   SSLEnable
   SSLClientAuth 0
   ServerName host2.domain.com
   DocumentRoot "drive:/WebSphere/HTTPServer/htdocs2"
   ```

   Note that in the above example, the SSLClientAuth 0 directive represents the case where you have chosen Basic authentication mode in the Web server node of Configuration Manager for your instance. If you have selected X.509 authentication mode in the Web server node, the directive will be SSLClientAuth 2.

3. If you are using IBM HTTP Server, check that the following two `<Directory>` sections exist in the Document Root section of the IBM HTTP Server configuration file (*drive*:\WebSphere\HTTPServer\conf\httpd.conf:

```
<Directory "drive:/WebSphere/HTTPServer/htdocs1">
Options Indexes
AllowOverride None
order allow,deny
allow from all
</Directory>

<Directory "drive:/WebSphere/HTTPServer/htdocs2">
Options Indexes
AllowOverride None
order allow,deny
allow from all
</Directory>
```

4. Ensure that you are able to load the Web server home page for each instance (for example, `http://host1.domain.com` and `http://host2.domain.com`)

5. Ensure that you are able to load the secure Web server home page for each instance (for example, `https://host1.domain.com` and `https://host2.domain.com`)

6. Start each instance in the WebSphere Application Server Administration Console.

7. Ensure that you are able to load each instance's WebSphere Commerce Accelerator.

Chapter 10. Cloning

This chapter shows you how to use the WebSphere Application Server cloning mechanism assuming a 3–tier configuration (remote Web server and remote database). Note that you can also use the WebSphere Application Server cloning mechanism for simpler WebSphere Commerce configurations such as a single-tier or two-tier (that is, using a remote database) configuration. Read this chapter if you want to use WebSphere Application Server horizontal cloning model to add WebSphere Commerce machines for enhanced load sharing.

An excellent resource for this section are the IBM Redbooks. To obtain a copy of these books, see the IBM Redbook Web site at:

`http://www.redbooks.ibm.com/`

Horizontal cloning

Horizontal cloning refers to the traditional practice of defining clones of an application server on multiple physical machines, thereby allowing a single WebSphere application to span several machines while presenting a single system image. Horizontal cloning can provide increased throughput.

To configure a horizontal clone, do the following:

1. Install WebSphere Commerce in a 3–tier configuration.
   - Machine A is your Web server
   - Machine B is your database server
   - Machine C is your WebSphere Commerce Server
2. On the machine where you want to create a clone, install and configure WebSphere Commerce. This machine is called Machine D. You must select the following options during the installation:

   > **Important**
   > You must install Machine C and Machine D to the same drive letter, and with the same directory structure.

   a. On the **Setup Type** window, select **Custom**.
   b. On the **Custom Installation** window, select **The commerce server**.
   c. On the **Database and Web Server Selection** window, select **join an existing WebSphere Domain**.

d. Enter the fully qualified host name of your remote web server.

e. Enter remote database. You are prompted to enter the fully qualified host name of your database machine, and the your database name.

f. Complete the installation of WebSphere Commerce.

g. Before restarting your WebSphere Commerce machine, you must do the following:

   1) Open the Windows **Services** window and start the **DB2 Secure Server** and **DB2 JDBC Applet Server** services.

   2) Open a DB2 command line processor, and issue the following commands:

   ```
   catalog tcpip node node_name remote database_server_hostname
   server port_number
   attach to node_name user db2_user_ID using db2_userid_password
   catalog database WAS40 as WAS40 at node node_name
   catalog database MALL as MALL at node node_name
   quit
   ```

h. Reboot your machine.

3. Restart the WebSphere Application Server.

You must configure your WebSphere Commerce machines. To configure your machines, do the following:

1. Configure the datasource for Machine D:

   a. Ensure that the WebSphere Application Server has been started.

   b. Open the WebSphere Application Server Administration Console.

   c. Expand **WebSphere Administrative Domain → Resources → JDBC Providers**.

   d. Select **WebSphere Commerce DB2 JDBC Driver** *instance_name* and click the **Nodes** tab.

   e. Click **Set**, then **Install**.

   f. Click **Apply**.

2. Create a Server Group on Machine C.

   a. Start the WebSphere Application Server.

   b. Open the WebSphere Application Server Administration Console.

   c. Expand **WebSphere Administrative Domain → Nodes → *host_name* → Application Servers**.

   d. Stop the **WebSphere Commerce Server – *instance_name*** application server.

   e. Right click on the **WebSphere Commerce Server – *instance_name*** and select **Create Server Group** (unless a Server Group already exists).

   f. Enter the Server Group name and click **OK**.

3. Add a horizontal clone to the WebSphere Commerce Server Group.

a. Open the WebSphere Application Server Administration Console on
      Machine C.
   b. Expand **WebSphere Administrative Domain → Server Groups**.
   c. Right click the WebSphere Server Group.
   d. Select **New → Clone**.
   e. Enter the new clone name (for example, WebSphere Commerce –
      instance_name).
   f. Select the node on Machine D and click **Create**.
4. Copy the following directory from Machine C to Machine D:
   `drive:\WebSphere\AppServer\installedApps\`
   `WC_Enterprise_App_instance_name.ear`
5. Rename this directory, on Machine D, to match the following:
   `drive:\WebSphere\AppServer\installedApps\`
   `WebSphere_Commerce_Enterprise_Application_-_instance_name.ear`
+ 6. In order to differentiate WebSphere Commerce application server clones
+   on Machine D from those on Machine C, a unique *instancename* value
+   must be assigned for Machine D:
+   a. Edit the
+   `drive:\WebSphere\AppServer\installedApps\WebSphere_Commerce_Enterprise_`
+   `instance.ear\wcstores.war\WEB_INF\web.xml` file.
+   b. Search for the following line: `<param-name>instancename</param-`
+   `name>`
+   c. On the line immediately below, alter the parameter value (between
+   the *<param-value>* tags) to a unique name, different from those values
+   used on other WebSphere Commerce machines. A good choice would
+   be to use the host name of that node. This change is needed to allow
+   scheduled or broadcast commands to reach all clones.
+   d. The same change needs to be made to the
+   `drive:\WebSphere\AppServer\WebSphere_Commerce_Enterprise_Application_-_`
+   file.
7. Copy the following directory from Machine C to Machine D, overwriting
   the existing directories:
   `drive:\WebSphere\CommerceServer\instance`
8. On Machine D, open the following file in a text editor:
   `drive:\WebSphere\CommerceServer\instance\instance_name\xml\`
   `instance_name.xml`

   Change all occurrences of `WC_Enterprise_App_instance_name.ear` to
   `WebSphere_Commerce_Enterprise_Application_-_instance_name.ear`.
9. Enter the following command:
   `GenPluginCfg.bat -adminNodeName node_name`

Where *node_name* is the short logical name of the node.

10. Open the following file in a text editor:

    drive:\WebSphere\AppServer\config\plugin-cfg.xml

11. Add the following line directly below `<Config>` in the `plugin-cfg.xml` file:

    `<Property name="CacheLibrary" value="`*drive*`:\WebSphere\CommerceServer\`
    `bin\wccache.dll" />`

12. Copy the `plugin-cfg.xml` file to your Web server machine (Machine A) and to Machine D.

13. Restart your Web server (Machine A).

14. Open the WebSphere Application Server Administration Console, and start the Server Group.

Vertical cloning

Vertical cloning refers to the practice of defining multiple clones of an application server on the same physical machine. Experience has shown that a single application server, which is implemented by a single JVM process, cannot always fully utilize the CPU power of a large multiprocessor machine. Vertical cloning provides a straightforward mechanism to create multiple JVM processes, that together can fully utilize all the processing power available.

To configure a vertical clone, do the following:

1. Open the WebSphere Application Server Administration Console.

2. To create the WebSphere Commerce clone, do the following:

   a. Expand **WebSphere Administrative Domain → Nodes →** *host_name* **→ Application Servers**.

   b. Select **WebSphere Commerce Server →** *instance_name* and right-click. Select **Stop**.

   c. Right-click on **WebSphere Commerce Server →** *instance_name* and select **Create Server Group** (unless a Server Group has already exists).

   d. Enter the Server Group name (for example, WebSphere Commerce Server Group), and click OK.

   e. Expand the **WebSphere Administrative Domain → Server Groups**.

   f. Right-click on the new Server Group (for example, WebSphere Commerce Server Group), and select **New → Clone**.

   g. Enter a name for the cloned application server.

   h. Click **Create**.

3. Regenerate your WebSphere Application Server plug-in. To regenerate the plug-in, do the following:

   a. Open a command window and change to the following directory:

> *drive*:\WebSphere\AppServer\bin

   b. Enter the following command:

      `GenPluginCfg.bat -adminNodeName `*`node_name`*

      Where *node_name* is the short logical name of the node.

   c. Stop the WebSphere Application Server.

   d. Open the following file in a text editor:

      drive:\WebSphere\AppServer\config\plugin-cfg.xml

   e. Add the following line directly below `<Config>` in the `plugin-cfg.xml` file:

      `<Property name="CacheLibrary" value="`*`drive`*`:\WebSphere\CommerceServer\`
      `bin\wccache.dll" />`

> **Note:** If you are using a remote Web server, copy the `plugin-cfg.xml` from your WebSphere Application Server, to your Web server machine.

   f. Restart your Web server.

4. Start the WebSphere Application Server.

5. Open the WebSphere Application Server Administration Console.

6. Expand **WebSphere Administrative Domain → Server Groups →** *server_group_name*.

7. Right-click the server group, and select **Start**.

Part 4. Optional Configurations

This section contains information on how to use advanced configuration options with WebSphere Commerce. The following topics are covered:

- Chapter 11, "Creating a store from a sample store archive" on page 125
- Chapter 12, "Enabling SSL for production with IBM HTTP Server" on page 131
- Chapter 13, "Enabling WebSphere Application Server security" on page 135
- Chapter 14, "Single sign-on" on page 143

For a production server, chapters Chapter 5, "Installing IBM WebSphere Payment Manager 3.1.2" on page 39 and Chapter 12, "Enabling SSL for production with IBM HTTP Server" on page 131 must be completed. All other chapters are optional depending on your needs.

Chapter 11. Creating a store from a sample store archive

This chapter guides you through the process of creating a sample store from one of the store archives provided with WebSphere Commerce. For information on additional store creation methods and store customization, refer to the WebSphere Commerce online help.

In WebSphere Commerce, the fastest and easiest way to create an online store is to use one of the sample stores provided with WebSphere Commerce and the browser-based tools available in Store Services. Sample stores are provided as store archives.

A store archive is a compressed file that contains all the assets necessary (including Web and database assets) to create a store. In order to create your own store, you create a new store archive based on one of the sample store archives, using the tools in Store Services. Since your new store archive is based on the sample store archive, it is an exact copy of the assets in the sample store archive, saved under a new file name and directory structure.

At this point you have two options. You can publish the store archive to the commerce server to create a functional store based on one of the sample stores, or you can make changes to your new store archive first and then publish it to the server.

To change the database information in the store archive, edit the assets directly or use the tools in Store Services: the Store Profile notebook, the Tax notebook and the Shipping notebook.

To change the Web assets (store pages) contained in the store archive or to create new Web assets, use the tools in WebSphere Commerce Studio, or tools of your choice.

For more information on store creation, see the *IBM WebSphere Commerce Store Developer's Guide*.

To create a store using one of the sample stores, do the following:
1. Create a store archive.
2. Publish a store archive.

Creating a store archive

To create a store archive using one of the sample stores, do the following:

1. Ensure the following services are running:
   - DB2-DB2
   - DB2-DB2DAS00
   - IBM WS AdminServer 4.0
   - Websphere Commerce Server – *instance_name*
   - Any Web server related services

   Note: To ensure that the WebSphere Commerce Server *instance_name* is running check the WebSphere Application Server Administration Console.

2. Ensure the Payment Manager Application Server is started in the WebSphere Application Server Administration Console.

3. Start Payment Manager by doing the following:
   a. Open a command window and change directory to the directory where IBM Payment Manager is installed.
   b. Enter the following command:

      IBMPayServer

      If Payment Manager is installed remotely from your Web server, start it using the following command:

      IBMPayServer -pmhost *fully_qualified_Web_server_host_name*

   You are prompted to enter your Payment Manager password. This is the password of the user you specified to use when connecting to the Payment Manager database.

4. From the Start menu, select **Programs → IBM WebSphere Commerce → Store Services**. The **Store Services Logon** page displays. Enter your Instance Administrator user ID and password and click **Log on**. You will be asked to change your password the first time you log in.

5. The **Create Store Archive** page displays. In the **Store archive** field, type the name of your store archive. The extension .sar is added to the name you type, for example, *Mystore*.sar. This name becomes the filename for the store archive. When you finish creating your store archive, it is saved in the following location:

   drive:\WebSphere\CommerceServer\instances*instance_name*\sar

6. In the **Store directory** field, type the directory name for your store. The directory name defines the directory to which the web assets will be published on the server. When the store archive is published, it will be

published to the store directory defined here by default. For example, if you enter the directory name "Mystore" in the **Store directory** field, the following directory is created:

drive:\WebSphere\AppServer\installedApps\WC_Enterprise_App_
instance_name.ear\wcstores.war*Mystore*

7. ▶ Business From the **Store owner** drop-down list, select the organization that owns the store, for example Seller Organization.

   Note: The Default Organization is available for customers who do not have a buying organization. Do not select the default organization as your store owner.

8. From the **View** drop-down list, select which sample store you would like to view.

9. From the **Sample** list box, select the store archive on which you will base your store. A description of the sample displays in the Sample description box. To view the sample store first, click **Preview**.

10. Click **OK**.

11. A dialog box opens informing you that your store archive was created successfully. Click **OK**.

12. The Store Archive list displays. Note that the store archive you created displays in the list and that the name in the Store name field is the same as the name of the sample store. You can change this name using the Store Profile notebook.

You have now created a new store archive, based on a sample store. As a result, the new store archive contains all of the same information as the sample store. When you are creating your own store, you will want to change this information. For more details on changing this information, see the WebSphere Commerce online help and the *IBM WebSphere Commerce Store Developer's Guide*. For the purpose of this guide, do not change this information now.

Publish a store archive

Publishing a store archive to a WebSphere Commerce Server allows you to create a running store. You have two options for publishing a store archive:

- Publish a store archive from Store Services
- Publish a store archive from the command line

This section will only cover publishing from Store Services. Additional information on publishing is available in the WebSphere Commerce online help and *IBM WebSphere Commerce Store Developer's Guide*.

Publish a store archive from Store Services

Publishing a store archive to a WebSphere Commerce Server allows you to create a running store. To publish a store archive, complete the following steps:

1. Ensure the following services are running:
   - DB2-DB2
   - DB2-DB2DAS00
   - IBM WS AdminServer 4.0
   - Websphere Commerce Server – *instance_name*
   - Any Web server related services

   Note: To ensure that the WebSphere Commerce Server *instance_name* is running check the WebSphere Application Server Administration Console.

2. Ensure the Payment Manager Application Server is started in the WebSphere Application Server Administration Console.

3. If Payment Manager is not running, start IBM Payment Manager, by doing the following:
   a. Open a command window and change directory to the directory where IBM Payment Manager is installed.
   b. Enter the following command:

      IBMPayServer

      If Payment Manager is installed remotely from your Web server, start it using the following command:

      IBMPayServer -pmhost *fully_qualified_Web_server_host_name*

   You are prompted to enter your Payment Manager password. This is the password of the user you specified to use when connecting to the *payman* database.

4. Ensure that you have Site Administrator or Store Administrator access. If you have Store Administrator access, ensure that the access is for all stores.

5. From the **Store Archive** list in Store Services, select the check box beside the store archive you want to publish.

6. Click **Publish**. The Publish Store Archive page displays.

7. Select your desired publishing options. For more information on publishing options, click **Help**.

   Note: To create a fully functional store, select all publishing options, including the product data option, the first time you publish a store archive.

8. Click **OK**. While the store publishes you are returned to the Store Archive list page. The publishing state is reflected in the Publish status column. Depending on the speed of your system, it may take several minutes to complete the publishing process. Click **Refresh** to update the status.

9. Select the store archive from the list and click **Publish Summary** to see the results of the publish.

10. If your Web server is remote from your WebSphere Commerce machine, copy over the contents of the following directory, including sub directories, from the WebSphere Commerce machine to the Web server machine:

    ```
    drive:\WebSphere\AppServer\installedApps\
      WC_Enterprise_App_instance_name.ear\wcstores.war\Mystore
    ```

    On your Web server machine, delete all the JSP files within this directory.

11. When publishing is complete, click **Launch Store** to view and test your store. When you have finished, bookmark the site and close the browser.

Compiling the JavaServer Pages files

Compiling the JavaServer Pages files will significantly reduce the amount of time needed to load the load your store. To batch compile JavaServer Pages (JSP) files, do the following on your WebSphere Commerce machine:

1. From a command prompt, switch to `drive:\WebSphere\CommerceServer\bin`.

2. Run the following command:

   ```
   WCSJspBatchCompiler -enterpriseApp "WebSphere
     Commerce Enterprise Application - instance_name"
    -webModule  "WCS Stores" -nameServerHost "short_hostname"
     -nameServerPort 900
   ```

Several errors may be logged when you perform these compiles. These may be safely ignored

Important:

- Only one store archive can be published at a time. Concurrent publishing is not supported and may cause the publish of both stores to fail.
- During publish, the consistency checker confirms that the files referenced by the store archive exist. If the consistency check finds an error, the error will be written to the log. Publishing continues as normal.
- Before republishing a store, delete the files from following directory: `drive:\WebSphere\CommerceServer\instances\instance_name\cache`.

  While in the store development phase, you should disable caching. To do this, open the Caching panel of the Configuration Manager, and ensure that Enable Cache is deselected.

- When you launch the store from Store Services, you are logged into the store with the same user name and password that you used to log into Store Services. If you change your password in the store, you are also changing it for that user. Instead, to test the features in the store, including changing your password, bookmark the site, close the browser, then log on to the store again. You can also launch your store by entering the following URL in a browser:

  ```
  https://host_name/webapp/wcs/stores/servlet/store_directory/index.jsp
  ```

Placing a test order at your store

To place a test order at your store, do the following:

1. Open your store by doing the following:
   a. In the Store Services window, select your store and click **Publish Summary**.
   b. On the Publish Summary screen, select **Launch Store**.
   c. A window opens asking for the Web application Web path for the store. Enter the appropriate path (the default is /webapp/wcs/stores).
   d. Bookmark your store's location in your Web browser.
   e. Close all of your existing Web browsers, and open a new Web browser.
   f. Navigate to your Store's home page.
2. On the home page, select product. On the product page click **Add to shopping cart**.
3. Complete the order process. For testing purposes you can use the credit card number 0000000000000000 (16 zeros) for VISA. An order confirmation page displays, confirming that your order is complete.

Chapter 12. Enabling SSL for production with IBM HTTP Server

After you create your WebSphere Commerce instance with IBM HTTP Server, SSL is enabled for testing purposes. Before you open your site to shoppers, you must enable SSL for production by following the steps in this chapter.

About security

IBM HTTP Server provides a secure environment for your business transactions by using encryption technology. Encryption is the scrambling of information transactions on the Internet so that they cannot be read until they are unscrambled by the receiver. The sender uses an algorithmic pattern or key to scramble (encrypt) a transaction, and the receiver uses a decryption key. These keys are used by the Secure Sockets Layer (SSL) protocol.

Your Web server uses an authentication process to verify the identity of the person with whom you are conducting business (that is, to make sure they are whom they say they are). This involves obtaining a certificate signed by a trusted third party called a certification authority (CA). For IBM HTTP Server users, the CA may be Equifax® or VeriSign® Inc. Other CAs are available as well.

To create a production key file, complete the following steps:
1. Create a security key file for production.
2. Request a secure certificate from a certifying authority.
3. Set your production key file as the current key file.
4. Receive the certificate and test the production key file.

These steps are described in detail below.

Notes:
1. If you are already using a production key file signed by a certifying authority, you may be able to skip these steps. Read this chapter to make this determination.
2. As you perform these steps, your browser may display security messages. Review the information in each message carefully and decide how to proceed.

Create a security key file for production

To create a security key file for production, do the following on your web server machine:

1. Stop the IBM HTTP Server as described in "Starting and Stopping IBM HTTP Server" on page 148.
2. Change directory to *drive*:\WebSphere\HTTPServer\conf.
3. Create a backup copy of httpd.conf.
4. Open httpd.conf in a text editor.
5. Ensure that the following lines are uncommented for port 443:
   a. #LoadModule ibm_ssl_module modules/IBMModuleSSL128.dll
   b. #Listen 443
   c. #<VirtualHost host.some_domain.com:443>. You must also substitute your fully qualified host name in this line.
   d. #SSLEnable
   e. #</VirtualHost>
   f. Keyfile "*drive*:/WebSphere/HTTPServer/ssl/keyfile.kdb".
6. Ensure that the following lines are uncommented for port 8000:
   a. #Listen 8000
   b. #<VirtualHost host.some_domain.com:8000>. You must also substitute your fully qualified host name in this line.
   c. #SSLEnable
   d. #</VirtualHost>
7. Save your changes.
8. To ensure that your httpd.conf file does not contain syntax errors, change to the *drive*:\WebSphere\HTTPServer directory and run the following command:

   apache -t
9. Start the IBM HTTP Server as described in "Starting and Stopping IBM HTTP Server" on page 148.

Request a secure certificate from a certifying authority

To validate the security key file that you just created in the previous step, you need a certificate from a certifying authority (CA) such as Equifax or VeriSign. The certificate contains the server's public key, the Distinguished Name associated with the server's certificate, and the serial number and expiration date of the certificate.

If you want to use a different CA, contact it directly for information on the procedure to follow.

Equifax users

To request a secure server certificate from Equifax, refer to the following Web address and follow the instructions provided:

```
http://www.equifax.com
```

You should receive the secure server certificate through E-mail from Equifax in 2 to 4 business days.

VeriSign users

To request a secure server certificate from VeriSign, refer to the following URL and follow the instructions provided:

```
http://www.verisign.com
```

Follow the instructions provided. Once you submit your request, your certificate should arrive within three to five working days. When you receive it, create the production key file as described in the previous section, if you have not already done so.

Receive and set your production key file as the current key file

After the certificate arrives from the CA, you must make the Web server use your production key file. Perform the following steps:

1. Copy the *certificatename*.kdb, *certificatename*.rdb, and *certificatename*.sth files you received from the certificate authority into the *drive*:\WebSphere\HTTPServer\ssl directory, where *certificatename* is the certificate name you supplied with your certificate request.
2. Stop the IBM HTTP Server as described in "Starting and Stopping IBM HTTP Server" on page 148.
3. Open the Key Management Utility (ikeyman).
4. Open the *certificatename*.kdb file, and enter your password when prompted.
5. Select **Personal Certificates**, and click **Receive**.
6. Click **Browse**.
7. Select the folder where you have stored the files you received from the certificate authority. Select the *certificatename*.txt file and click **OK**.
8. The **Personal Certificates** list box should now list either VeriSign *certificatename* certificate or Equifax *certificatename* certificate.
9. Exit the Key Management Utility.
10. Change directory to *drive*:\WebSphere\HTTPServer\conf.
11. Create a backup copy of httpd.conf.
12. Open httpd.conf in a text editor.
13. Ensure that the lines listed in step 5 on page 132 are not commented.

14. Search for Keyfile "*drive*:/IBM/IBM HTTP SERVER/ssl/keyfile.kdb", and change the path name to point to the file created in the above steps.

15. Restart the IBM HTTP Server as described in "Starting and Stopping IBM HTTP Server" on page 148.

Test the production key file

To test the production key, do the following:

1. Go the following URL with your browser:

    https://*host_name*

    Notes:

    a. If you have customized your Web server, you may need to type the name of the Web server's front page after the host name.

    b. Be sure to type https, *not* http.

    If your key is defined correctly, you will see several messages about your new certificate.

2. On the **New Site Certificate** panel, if you want to accept this certificate, select the **Accept this certificate forever (until it expires)** radio button.

3. From your Web browser, restore your caching and proxy (or socks) server settings to their original states.

You have now enabled SSL on your server.

Chapter 13. Enabling WebSphere Application Server security

This chapter describes how to enable security for WebSphere Application Server. Enabling WebSphere Application Server security prevents all Enterprise JavaBean components from being exposed to remote invocation by anyone.

Note: When enabling WebSphere Application Server security it is strongly recommended that your machine meets the following requirements:

- A minimum machine memory of 1 GB.
- A minimum heap size of 384 MB, for the WebSphere Commerce application.

Before you begin

Before you begin to enable security, you will need to know how the WebSphere Application Server you are enabling security on validates user IDs. WebSphere Application Server can use either LDAP or the operating system's user registry as the WebSphere Application Server user registry.

Enabling security with an LDAP user registry

To enable WebSphere Application Server security when you are using LDAP as the WebSphere Application Server user registry, log into the system as a user with administrative authority and do the following steps:

1. Start the WebSphere Application Server Administration Server and open the WebSphere Application Server Administrator's Console.
2. In the Console, modify the global security settings as follows:
   a. From the Console menu, select **Security Center**.
   b. On the General tab, select the **Enable Security**.
   c. On the Authentication tab, select **Lightweight Third Party Authentication (LTPA)**. Fill in the LTPA settings, and uncheck the **Enable Single Sign On** check box if you do not want to use this functionality. Fill in the **LDAP Settings** tab as follows, depending on the type of directory server you are using:

Table 6. SecureWay Users

Field Name	Definition	Sample Values	Notes
Security Server ID	User ID	*user_ID*	• This must not be the LDAP administrator. • Do not use a user that has been specified as cn=xxx. • Ensure that the objectclass of this user is compatible with the objectclass specified in the User Filter field of the LDAP Advanced Properties window.
Security Server password	User Password	*password*	
Host	Host name of the LDAP server	*hostname.domain*	
Directory Type	Type of LDAP server	SecureWay	
Port	Port that the LDAP server is using		
Base Distinguished Name	Distinguished Name under which searching occurs	o=ibm,c=us	
Bind Distinguished Name	Distinguished Name for binding to the directory when searching		This field is not required
Bind Password	Password for the Bind Distinguished Name		This field is not required

Table 7. Netscape Users

Field Name	Definition	Sample Values	Notes
Security Server ID	User ID	*user_ID*	• This must not be the LDAP administrator. • Do not use a user that has been specified as cn=xxx. • Ensure that the objectclass of this user is compatible with the objectclass specified in the User Filter field of the LDAP Advanced Properties window.
Security Server password	User Password	*password*	
Host	Host name of the LDAP server	*hostname.domain*	
Directory Type	Type of LDAP server	Netscape	
Port	Port that the LDAP server is using		This field is not required
Base Distinguished Name	Distinguished Name under which searching occurs	o=ibm	
Bind Distinguished Name	Distinguished Name for binding to the directory when searching		This field is not required
Bind Password	Password for the Bind Distinguished Name		This field is not required

Table 8. Active Directory Users

Field Name	Definition	Sample Values	Notes
Security Server ID	sAMAccountName	*user_ID*	- User Logon Name of any ordinary user. - Do not use a user that has been specified as cn=xxx. - Ensure that the objectclass of this user is compatible with the objectclass specified in the User Filter field of the LDAP Advanced Properties window.
Security Server password	User Password	*password*	
Host	Host name of the LDAP server	*hostname.domain*	
Directory Type	Type of LDAP server	Active Directory	
Port	Port that the LDAP server is using		This field is not required
Base Distinguished Name	Distinguished Name under which searching occurs	CN=users, DC=domain1, DC=domain2, DC=com	
Bind Distinguished Name	Distinguished Name for binding to the directory when searching	CN=*user_ID*, CN=users, DC=domain1, DC=domain2, DC=com	The *user_ID* value is the Display Name. This is not necessarily the same as the User Logon Name.
Bind Password	Password for the Bind Distinguished Name	*bind_password*	This should be the same as the Security Server Password.

    d. On the Role Mapping tab, select WebSphere Commerce Enterprise
       Application and click **Edit Mappings**.

> 1) Select the WCSecurityRole and click the **Select** button.
>
> 2) Select the Select users/groups check box, enter the user ID that was used in step 2c on page 135 into the Search field, and click **Search**. Select that user from the Available Users/Groups list and click **Add** to add it to the Selected Users/Groups list. Then click **OK** on each panel until you exit the Security Center.

  e. The first time you select LTPA as the user registry, you will be prompted for an LTPA password. Enter a password for LTPA.

3. Open the WebSphere Commerce Configuration Manager and select **Instance List → *instance_name* → Instance Properties→ Security** and select the **Enable Security** check box. Select **Operating System User Registry** for the authentication mode, and enter the user name and password that you entered in step 2c on page 135. Click **Apply** then exit Configuration Manager.

4. Stop and restart the WebSphere Application Server administration server. From now on, when you open the WebSphere Application Server Administrator's Console, you will be prompted for the Security Server ID and password.

Enabling security with an operating system user registry

To enable WebSphere Application Server security when you are using the operating system user validation as the WebSphere Application Server user registry, log in as a user with administrative authority and do the following steps:

1. In the WebSphere Application Server Administration Console, modify the global security settings as follows:

   a. From the Console menu, select **Security Center**.

   b. On the General tab, select the **Enable Security** checkbox.

2. Select the **Authentication** tab and select the **Local Operating System** radio button

3. Enter your security server ID in the **Security Server ID** field. Enter the user name you as follows:

Table 9.

Field Name	Sample Values	Notes

Table 9. (continued)

User ID	*user_ID*	The user ID with operating system administrative privileges that you logged in with. If the machine belongs to a domain, use the fully-qualified user ID. For example: DomainXYZ\user_id. Ensure that this account exists in the domain server and is a member of the Administrator's group.
Security Server Password	*password*	This is the password belonging to the user with operating system administrative privileges that you logged in with.

4. On the **Role Mapping** tab, select the WC enterprise application and click the **Edit Mappings** button.

   a. Select the WCSecurityRole and click the **Select** button.

   b. Select the Select users/groups check box, enter the user ID that was used in step 3 on page 139 into the Search field, and click **Search**. Select that user from the Available Users/Groups list and click **Add** to add it to the Selected Users/Groups list. Then click **OK** on each panel until you exit the Security Center.

5. Open the WebSphere Commerce Configuration Manager and select **Instance List** → *instance_name* → **Instance Properties** → **Security** and select the **Enable Security** check box. Select **Operating System User Registry** for the authentication mode, and enter the user name and password that you entered in step 3 on page 139. Click **Apply** then exit Configuration Manager.

6. Stop and restart the WebSphere Application Server administration server. From now on, when you open the WebSphere Application Server Administration Console, you will be prompted for the Security Server ID and password.

Disabling WebSphere Commerce EJB security

WebSphere Commerce allows you to disable EJB security. To disable WebSphere Commerce EJB Security, do the following:

1. Start the WebSphere Application Server Administration Console.

2. Click **Console** → **Security Center** and deselect the **Enable Security** check box on the **General** tab.

3. Open the WebSphere Commerce Configuration Manager and select
   Instance List → *instance_name* → **Instance Properties** → **Security** and clear
   the **Enable Security** check box.
4. Stop and restart the WebSphere Application Server administration server.

WebSphere Commerce security deployment options

WebSphere Commerce supports various security deployment configurations.
The following table illustrates the security deployment options available to
you.

Table 10. Single machine security scenarios

WebSphere Application Server security is enabled.	• Use the operating system as the WebSphere Application Server registry. • Use the database as the WebSphere Commerce registry.
	• Use LDAP as the WebSphere Application Server registry. • Use LDAP as the WebSphere Commerce registry.
	• Use LDAP as the WebSphere Application Server registry.
WebSphere Application Server security is disabled, and your WebSphere Commerce site is located behind a firewall.	• A WebSphere Application Server registry is not required. • Use the database as the WebSphere Commerce registry.
	• A WebSphere Application Server registry is not required. • Use LDAP the WebSphere Commerce registry.

Table 11. Multiple machine security scenarios

WebSphere Application Server security is enabled. LDAP is always deployed.	• Use LDAP as the WebSphere Application Server registry. • Use LDAP as the WebSphere Commerce registry.
	• Use LDAP as the WebSphere Application Server registry. • Use a database as the WebSphere Commerce registry. • You will need to set up LDAP, and place one administrative entry into the LDAP registry.
WebSphere Application Server security is disabled, and your WebSphere Commerce site is located behind a firewall.	• Use a database as the WebSphere Commerce registry. • A WebSphere Application Server registry is not required. • Single sign-on is not supported.
	• Use LDAP as the WebSphere Application Server registry. • A WebSphere Application Server registry is not required.

Note: If you operate your WebSphere Commerce site from behind a firewall, you can disable WebSphere Application Server security. You should only disable WebSphere Application Server security if you are sure that no malicious applications are running behind the firewall.

Chapter 14. Single sign-on

This chapter outlines how to set up single sign-on for WebSphere Commerce. For more information on single sign-on, see the *IBM WebSphere Commerce Security Guide, Version 5.4*.

Prerequisites

To enable single sign-on, you must meet the following requirements:

- There must be an existing LDAP server installed and configured. To configure an LDAP server see the *IBM WebSphere Commerce Version 5.4 Additional Software guide*.
- WebSphere Commerce must be installed and configured.
- WebSphere Application Server security must be enabled. To enable WebSphere Application Server security see Chapter 13, "Enabling WebSphere Application Server security" on page 135.

Enabling single sign-on

> **Limitations and Prerequisites**
>
> There are several key limitations of single sign-on when it is used with WebSphere Commerce. These limitations are:
>
> - The LPTA cookies may flow across different web server ports.
> - You may need to modify the ldapentry.xml file and add the object class ePerson. That is as an attribute of ldapocs element.
> - You need to modify the instance.xml and ensure that migration is "on" for user in the LDAP component.
> - The machines participating in the single sign-on configuration must have their system clocks synchronized.
> - Single sign-on is only supported between applications that can read and issue the WebSphere Application Server Light Weight Third Party Authentication (LTPA) token.

To enable single sign-on you must do the following:

1. Enable single sign-on within the WebSphere Application Server. For more information, search for "single sign-on" in the WebSphere Application Server InfoCenter available at:

   ```
   http://www.ibm.com/software/webservers/appserv/doc/v40/ae
     /infocenter/index.html
   ```

Select **Single Sign-On: WebSphere Application Server** and complete the following sections:

- **Configuring SSO for WebSphere Application Server**.
  - **Modify WebSphere Application Server security settings**.

    Note: The step that details how to fill in the LDAP fields can be safely ignored.
  - **Export the LTPA keys to a file**.

2. On your WebSphere Commerce machine, start the WebSphere Commerce Configuration Manager.

3. To configure the **Member Subsystem** node, do the following:

   a. Expand **WebSphere Commerce** → *host_name* → **Instance List** → *instance_name* → **Instance Properties** → **Member Subsystem**.

   b. In the **Authentication Mode** drop-down menu, select **LDAP**.

   c. Enable the **Single sign-on** checkbox.

   d. In the **Host** field, enter the fully qualified host name of your LDAP server.

   e. Enter the administrator's distinguished name in the **Administrator Distinguished Name** field. This should be the same name that was used on your LDAP server.

   f. In the **Administrator Password** field, enter the administrator's password. This should be the same password that was used on your LDAP server. Confirm the password in the **Confirm Password** field.

   g. Complete each of the remaining fields.

   h. Click **Apply**, then click **OK**.

4. Restart the WebSphere Application Server.

Part 5. Appendixes

Appendix A. Starting and Stopping Components

At various times during the installation process you will be required to start and stop components of WebSphere Commerce. Please follow the instructions below to start and stop the components successfully. To start and stop Oracle8i Database, iPlanet Web Server, or Microsoft IIS, please refer to the documentation that accompanies these products.

Opening the Windows Services panel

Some WebSphere Commerce components run as Windows services. In order to start and stop these components, you will need to open the Windows Services panel.

To open the Windows Services panel in Windows NT, do the following:
1. Select **Start ➔ Settings ➔ Control Panel**.
2. On the **Control Panel** window, double-click the **Services** icon.

To open the Windows Services panel in Windows 2000, select **Start ➔ Settings ➔ Control Panel ➔ Administrative Tools ➔ Services**.

Starting and Stopping the WebSphere Commerce Server

To start or stop your WebSphere Commerce instance, do the following:
1. Ensure that your database management system is started. Refer to "Starting and Stopping DB2 Universal Database" on page 149.
2. While logged on to a Windows user ID with Administrator authority, launch the WebSphere Application Server Administration Console.
3. Expand **WebSphere Administrative Domain**.
4. Expand **Nodes**.
5. Expand **Application Server**.
6. Expand your *node_name*.
7. Select **WebSphere Commerce Server —***instance_name* and right-click. Select **Start** or **Stop** as appropriate.

Starting and Stopping WebSphere Application Server

To start WebSphere Application Server do the following:

1. While logged in as a Windows user ID with Administrator authority, open the **Services** window. For instructions on opening the **Services** window, see "Opening the Windows Services panel" on page 147.
2. From the **Service** list, select **IBM WS AdminServer**.
3. Click **Start**.

To stop WebSphere Application Server do the following:
1. While logged in as a Windows user ID with Administrator authority, open the **Services** window. For instructions on opening the **Services** window, see "Opening the Windows Services panel" on page 147.
2. From the **Service** list, select **IBM WS AdminServer**.
3. Click **Stop**.

Starting and Stopping IBM HTTP Server

To start IBM HTTP Server, do the following:
1. While logged in as a Windows user ID with Administrator authority, open the **Services** window. For instructions on opening the **Services** window, see "Opening the Windows Services panel" on page 147.
2. From the **Service** list, select **IBM HTTP Server**.
3. Click **Start**.

To stop IBM HTTP Server, do the following:
1. While logged in as a Windows user ID with Administrator authority, open the **Services** window. For instructions on opening the **Services** window, see "Opening the Windows Services panel" on page 147.
2. From the **Service** list, select **IBM HTTP Server**.
3. Click **Stop**. When asked to confirm that you want to stop the service, click **Yes**.

Starting and Stopping the WebSphere Commerce Configuration Manager

To start the WebSphere Commerce Configuration Manager server, do the following:
1. While logged in as a Windows user ID with Administrator authority, open the **Services** window. For instructions on opening the **Services** window, see "Opening the Windows Services panel" on page 147.
2. From the **Service** list, select **IBM WC Configuration Manager Server**.
3. Click **Start**.

To stop the IBM WebSphere Commerce Configuration Manager Server, do the following:

1. While logged in as a Windows user ID with Administrator authority, open the **Services** window. For instructions on opening the **Services** window, see "Opening the Windows Services panel" on page 147.
2. From the **Service** list, select **IBM WC Configuration Manager Server**.
3. Click **Stop**.

Starting and Stopping the IBM HTTP Administrator

To start the IBM HTTP Administrator, do the following:

1. While logged in as a Windows user ID with Administrator authority, open the **Services** window. For instructions on opening the **Services** window, see "Opening the Windows Services panel" on page 147.
2. From the **Service** list, select **IBM HTTP Administrator**.
3. Click **Start**.

To stop the IBM HTTP Administrator, do the following:

1. While logged in as a Windows user ID with Administrator authority, open the **Services** window. For instructions on opening the **Services** window, see "Opening the Windows Services panel" on page 147.
2. From the **Service** list, select **IBM HTTP Administrator**.
3. Click **Stop**. When asked to confirm that you want to stop the service, click **Yes**.

Starting and Stopping DB2 Universal Database

To start DB2, do the following:

1. While logged in as a Windows user ID with Administrator authority, open the **Services** window. For instructions on opening the **Services** window, see "Opening the Windows Services panel" on page 147.
2. For each service in the **Service** list that begins with **DB2**, select the service and click **Start**. The **DB2–DB2** service must be the first one started.

To stop DB2, do the following:

1. Stop the WebSphere Application Server according to the instructions in "Starting and Stopping WebSphere Application Server" on page 147.
2. While logged in as a Windows user ID with Administrator authority, open the **Services** window. For instructions on opening the **Services** window, see "Opening the Windows Services panel" on page 147.
3. For each *started* service in the **Service** list that begins with **DB2**, select the service and click **Stop**. When asked to confirm that you want to stop the service, click **Yes**. The **DB2–DB2** service must be the last one stopped.

> **Note:** When you stop DB2 Security Server services a window opens informing you that this will also stop system will stop the Warehouse logger and Warehouse Server services. Click **OK**.

Starting and Stopping Payment Manager

After you have installed Payment Manager and restarted your system, start your database, WebSphere Application Server, and your Web server (if they are not already started), and then start Payment Manager.

To start WebSphere Payment Manager, do the following:

1. Open the control panel, click **Services**, and ensure the **IBM WS AdminServer** service is started.
2. Start the WebSphere Application Server Administration Console and make sure the WebSphere Payment Manager Application server is started.
3. Payment Manager requires a password so that it can both connect to the database and also decrypt any sensitive data that is stored in the database. Protection of this password is therefore critical to protecting the security of your payment data. When you start Payment Manager, you must specify the database password of the user you use to connect to the Payment Manager database. There are two ways to specify the Payment Manager password:
   - Enter the Payment Manager password directly from the command line. This method is recommended for optimal security.
   - Use a password file to run Payment Manager in unattended operation mode. This method allows Payment Manager to start when there is no user present to enter the password.

Starting Payment Manager by entering the password

To start Payment Manager in a one or two-tier environment, open a command window and change directory to the directory where Payment Manager is installed. Then, enter the following command:

```
IBMPayServer
```

You are prompted to enter your Payment Manager password. This is the password of the user you specified to use when connecting to the database.

To start Payment Manager in a three-tier environment, open a command window and change directory to the directory where Payment Manager is installed. Then, enter the following command:

```
IBMPayServer -pmhost webserver_hostname
```

Where *webserver_hostname* is the fully qualified hostname of your webserver machine.

You are prompted to enter your Payment Manager password. This is the password of the user you specified to use when connecting to the database.

Starting Payment Manager in unattended operation mode

If you need Payment Manager to be startable when there is no user present to enter the password, you need to create a password file. The default password file name is `.payment` and the file should reside in the same directory as the Payment Manager installation directory. The file should contain a single line as follows:

```
DBPassword=yourpassword
```

To start Payment Manager using this password file, open a command window and change directory to the Payment Manager installation directory. Then enter the following command:

```
IBMPayServer -file
```

Instead of prompting you for the password, Payment Manager reads the password directly from the `.payment` file.

Important

If you use a password file to start Payment Manager, be aware that you are making it easier for people to penetrate the security of your payment data. If they can read the password file, they can potentially obtain access to the database and decrypt the sensitive payment data it contains. To avoid this security limitation, you can either start Payment Manager by entering a password every time, or you can take measures to put extra security on your password file to make sure that no unauthorized users can read it. However, if you choose to protect the password file, you must ensure that at least the user who will start Payment Manager can both read and write to the file.

If you do not want to use the `.payment` file to start Payment Manager, you should delete the file from the Payment Manager install directory. This prevents the exposure of the Payment Manager database password to unauthorized personnel.

Starting the Payment Manager User Interface

After starting the WebSphere Application Server and Payment Manager, to start the Payment Manager user interface:

1. Point your web browser to:

   ```
   http://host_name/webapp/PaymentManager
   ```

   where *host_name* is the machine where you installed your Web server.

Note: As part of the installation, shortcuts are provided on the Windows Start menu. You can use these shortcuts to login to Payment Manager. If you configured Payment Manager to use SSL, you can point your browser to the following URL:

```
https://host_name/webapp/PaymentManager
```

2. On the Payment Manager Logon window, enter the Payment Manager administrator's user ID and password, and click **OK**. The default user ID and password are both `wcsadmin`.

If you are using Payment Manager with WebSphere Commerce, all WebSphere Commerce administrators are also Payment Manager users. However, only the administrator ID `wcsadmin` has been assigned the Payment Manager administrator role. In order to log in to the Payment Manager user interface you must use an administrator ID that has been assigned to one of the four Payment Manager roles:

- Payment Manager administrator
- Merchant administrator
- Supervisor
- Clerk

For information on the Payment Manager roles, see the *Payment Manager Administrator's Guide*.

To assign Payment Manager roles to other WebSphere Commerce administrators, log in to the Payment Manager user interface using the administrator ID `wcsadmin` and navigate to the **Users** administration screen. From there, you could assign any one of the four Payment Manager roles to other WebSphere Commerce adminstrators listed.

Before using the `wcsadmin` ID to log in to the Payment Manager user interface, you must have changed the default password of the ID by logging into the WebSphere Commerce Administration Console using the `wcsadmin` ID. At that time, you will be asked to change the password.

You can also access the Payment Manager administration functions from the WebSphere Commerce Administration Console.

Stopping the Payment Manager

To stop the Payment Manager, you need to:

- Stop Payment Manager
- Stop the Payment Manager application server under WebSphere Application Server

Stopping Payment Manager with the StopIBMPayServer command

To stop Payment Manager, open a command window and change directory to the directory where you installed Payment Manager. Then enter the following command:

```
StopIBMPayServer
```

You will be prompted to enter your Payment Manager password. This is the password of the user you specified to use when connecting to the database.

Stopping Payment Manager in unattended operation mode

If you need to stop Payment Manager when there is no user present to enter the password, you need a password file. To stop Payment Manager using this file, open a command window and change directory to the Payment Manager installation directory. Then, enter the following command:

```
StopIBMPayServer -file
```

Stopping Payment Manager Servlets Using WebSphere Application Server

When using WebSphere Application Server 4.0.2, you can stop all servlets by stopping the WebSphere Payment Manager application server. To stop the WebSphere Payment Manager application server:

1. Go to the WebSphere Application Server Administration Client. Click **Start → Programs → WebSphere Application Server → Administrator's Console**
2. Select the WebSphere Payment Manager application server.
3. Click **Stop** next to WebSphere Payment Manager application server.
4. Exit the Administration Client.

Appendix B. Administrative Tasks

This chapter contains a variety of tasks that an administrative user may have to perform during the installation and maintenance of WebSphere Commerce.

Changing the Configuration Manager Password

You can change the Configuration Manager password when you launch the Configuration Manager by clicking **Modify** in the window where you enter your user ID and password.

Alternately, to change the Configuration Manager user ID or password type the following in a command window:

```
cd drive:\WebSphere\CommerceServer\bin
config_env
java com.ibm.commerce.config.server.PasswordChecker -action [action type]
   -pwfile [password file] -userid [user ID]
   -password [userid password] [-newpassword [new userid password]]
```

where action types are Add, Check, Delete or Modify. The parameters are explained below:

pwfile
  The path to the file where the file will be stored. The default path is *drive*:\WebSphere\CommerceServer\bin. This parameter is always required.

userid
  Enter the user ID that you want to add, check, delete or modify. This parameter is always required.

password
  Enter the password that you want to create, check, delete or modify. This parameter must be used in conjunction with the userid parameter. This parameter is always required.

newpassword
  Use this parameter to change the password for a particular user ID. This parameter must be used in conjunction with the userid and password parameters. This parameter is required when you specify the action type Modify.

Updating a WebSphere Commerce instance

If you want to change any of the configuration settings for your WebSphere Commerce instance, you can do so from the Configuration Manager.

To update a WebSphere Commerce instance using the Configuration Manager, do the following:

1. Open Configuration Manager.
2. From the list of instances, select the instance you want to configure and select the node for which you want to alter the settings. Follow the guidelines in Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55 to determine which fields you need to change to update your instance.
3. After you update your instance, click **Apply** to apply your changes.

Deleting a WebSphere Commerce instance

If you need to remove a WebSphere Commerce instance, complete the following steps:

1. To back up your exisiting *instance_name.xml* file, do the following:
   a. Switch to the following directory:

      drive:\WebSphere\CommerceServer\instances*instance_name*\xml

   b. Copy the *instance_name.xml* file to a backup directory.
2. Start the WebSphere Application Server. For instructions on how to start the WebSphere Application Server see "Starting the WebSphere Application Server" on page 53.
3. From a command prompt, type the following:

   ```
   cd drive:\WebSphere\CommerceServer\bin
   rmCommerceServer host_name instance_name
   ```

   Where *host_name* is the short host name of your machine, and *instance_name* is the name of your WebSphere Commerce instance.
4. Delete the WebSphere Commerce instance by doing one of the following:
   - In the WebSphere Commerce Configuration Manager, right-click your instance and select **Delete instance**. Click **Yes** to confirm that you want to delete your instance. Click **OK** upon notification that your instance was successfully deleted.
   - In a command prompt window, run the command:

     ```
     cd drive:\WebSphere\CommerceServer\bin
     config_client.bat -startCmdLineConfig deleteInstance <instance_name>
     ```
5. To drop your WebSphere Commerce database, do the following::
   - If you are using DB2 locally, do the following:
     a. Open a DB2 Command Window.

    b. Type the following to drop your WebSphere Commerce database:

```
drop db db_name
```

      Where *db_name* is the name of the WebSphere Commerce database that you entered in the Configuration Manager.

- If you are using DB2 remotely, do the following:
  a. Open a DB2 Command Window.
  b. Type the following to attach your WebSphere Commerce remote node:

```
db2 attach to node_name user DB2_admin_ID using DB2_admin_password
```

      Where *node_name* is the name entered on the Database panel of the Instance Creation Wizard, *DB2_admin_ID* is your database administration ID, and *DB2_admin_password* is the database administration password.

  c. Type the following to drop your WebSphere Commerce database:

```
db2 drop db db_name
db2 uncatalog node node_name
```

      Where *db_name* is the name of the WebSphere Commerce database that you entered in the Configuration Manager and *node_name* is the name of the node you cataloged for for these databases. The default node name is the short version (that is, not fully qualified) of your machine's host name.

- After you have dropped the database, ensure that the following directory is empty:

```
drive:\db2inst1_home_dir\sqllib\function\routine\sqlproc\db_name
```

      where *db_name* is the name of the database you have dropped.

6. Delete the *drive*:\WebSphere\CommerceServer\instances*instance_name* directory.

7. Delete the following directory:

```
drive:\WebSphere\sqllib\function\routine\
sqlproc\db_name\schema_name
```

Other command line configuration tasks

Through the command line you can:

- Update an instance:

```
config_client -startCmdLineConfig updateInstance <xml_file>
```

- Delete an instance:

```
config_client -startCmdLineConfig deleteInstance <instance_name>
```

- List existing instances:

```
config_client -startCmdLineConfig getInstances
```

- Find information about an instance:

```
config_client -startCmdLineConfig getInstanceInfo <instance_name>
```

- Print configuration information for an instance to a file:

```
config_client -startCmdLineConfig getInstanceConfig
    instance_name print_to_file_name
```

Opening the WebSphere Application Server Administrative Console

To open the WebSphere Application Server Administrative Console, from the **Start** menu, select **Programs** → **IBM WebSphere** → **Application Server V4.0** → **Administrator's Console**.

Adding Port Host Aliases to WebSphere Application Server

Two port host aliases must be added to WebSphere Application Server: the non-secure server port (port 80) and the secure server port (port 443). The non-secure port is added automatically. To manually add the secure port host alias, perform the following steps:

1. Start the WebSphere Application Server Administrative Console.
2. Expand the **WebSphere Adminstrative Domain**.
3. Select **Virtual Host** on the left-hand console frame.
4. For a single instance environment, select **default_host**.
5. Select the **General** tab.
6. If the port number does not appear in the **Alias** field, click the **Add** button and add the port number.

   Note: You must add port 443 if it does not already exist.
7. When done click **Apply**.
8. Right-click on *node_name* and select **Regen WebServer Plugin**
9. If your WebSphere Commerce instance has already been created, you must do the following:

   a. Open the following file in a text editor:

   ```
   drive:\WebSphere\AppServer\config\plugin-cfg.xml
   ```

   b. Add the following line directly below in the plugin-cfg.xml file:

   ```
   <Property name="CacheLibrary" value="drive:\WebSphere\CommerceServer\
   bin\wccache.dll" />
   ```
10. Restart your Web server, and the WebSphere Application Server.

Connecting to the IBM HTTP Server Home Page

If you are using IBM HTTP Server, follow the steps below to connect to the Web server home page.

1. Click **Start** → **Settings** → **Control Panel**.
2. In the Control Panel window, double-click the **Services** icon.
3. In the Services window, look for the name **IBM HTTP Server**, and ensure that the status of the Web server is **Started**. If it is not started, select the Web server and click **Start**.
4. To access the Web server front page, enter the following Web address on your browser:

   `http://host_name`

   If you have customized your Web server, you may be required to type the name of your Web server's front page after the host name.

You have now successfully accessed the Web server front page.

Setting Your IBM HTTP Server Administrator Password

To set your IBM HTTP Server administrator password,

1. Switch to the following directory:

   `drive:\WebSphere\HTTPServer`

2. Type the following command:

   `htpasswd -b conf\admin.passwd user password`

   where *user* and *password* are the user ID and password that you want to have administrative authority for IBM HTTP Server.

You have now successfully set your IBM HTTP Server administration password.

Changing Your SSL Key File Password

If you are using IBM HTTP Server, follow the steps below to change your SSL key file password.

1. Click **Start Menu** → **Programs** → **IBM HTTP Server** → **Key Management Utility**.
2. From the **Key Database File** menu, select **Open**.
3. Switch to the following directory:

   `drive:\WebSphere\HTTPServer\ssl`

Your key file (which has the file extension .kdb) should be in this folder. If not, create a new key file by following the instructions outlined in Chapter 12, "Enabling SSL for production with IBM HTTP Server" on page 131.

4. From the **Key Database File** menu, select **Change Password**. The Change Password window displays.

5. Enter your new password, and enable **Stash the password to a file**.

6. Click **OK**. Your password has been changed.

You have now successfully changed your SSL key file administration password.

Cataloging a Remote DB2 Database

Enable the database client/server connection, and catalog the node and the database on the client by entering the following commands on a DB2 command window from the database client machine:

```
db2 catalog tcpip node node_name remote host_name server port_num
db2 attach to node_name user db2_user using db2_user_password
db2 catalog db db_name at node node_name
```

where the variable information is defined as follows:

node_name

A unique name of your choice that DB2 will use to identify the TCP/IP node. To ensure that your name is unique, you can enter the following command in a DB2 command window:

```
db2 list node directory
```

and look for the name in the response. If the name is *not* listed, you can use it as your node name.

host_name

The fully qualified host name of the machine on which the WebSphere Commerce database resides.

port_num

The port number that identifies the TCP/IP connection. To determine the port number, do the following from the database server machine:

1. On a DB2 command window on the machine running your database, enter the following command:

```
db2 get dbm cfg
```

and note the value of SVCENAME (which is also identified by the text TCP/IP Service Name).

2. On the machine running your database, open the file *drive*:\winnt\system32\drivers\etc\services and look for the line that begins with the name you noted in the previous step. The port number appears in the second column of the same line (with the string \tcp appended to it). The default port number for DB2 Universal Database is 50000.

db_name

The name of the database that your WebSphere Commerce instance is using. This is the name that you entered on the Database tab of the Configuration Manager.

Changing your WebSphere Commerce Database

To change the database that your WebSphere Commerce instance uses, do the following:

1. From the **Start Menu → Programs → IBM WebSphere Commerce → Configuration**
2. Enter the Configuration manager user ID and password.
3. Right —click the **Databases** node and select **Create Database**.

   Note: If you are using an Oracle database, you should drop the tablespace and user then delete the tablespace files for the instance. You must then create a new tablespace and user before you recreate the instance.

4. Enter the database information in the available fields. For more information, see Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55.
5. Make sure the **Set as active database** check box is selected.
6. Select **Finish**.
7. A Database created successfully message displays. Your WebSphere Commerce instance is configured to use the new database.

Generating WebSphere Commerce encrypted passwords

WebSphere Commerce allows you to generate encrypted passwords. To generate encrypted passwords, do the following:

1. Go to the *drive*:\WebSphere\CommerceServer\bin directory and run the following script from a command line:

   wcs_password.bat *password SALT merchant_key*

   where

   - *password* is the plain text password.

- *SALT* is a random string that is used in the generation of an encrypted password. This is found in the SALT column of the USERREG database table for the particular user whose password is being updated.
- *merchant_key* is the merchant key that was entered during instance creation.

Generating Payment Manager encrypted passwords

WebSphere Commerce allows you to generate encrypted passwords for Payment Manager. To generate encrypted passwords, do the following:

1. Go to the *drive*:\WebSphere\CommerceServer\bin directory and run the following script from a command line:

   ```
   wcs_pmpassword.bat password SALT
   ```

   where

   - *password* is the plain text password.
   - *SALT* is a random string that is used in the generation of an encrypted password. This is found in the SALT column of the USERREG database table for the particular user whose password is being updated.

Disabling WebSphere Application Server security

To disable WebSphere Application Server security, do the following:

1. Open the WebSphere Application Server Administration Console.
2. Click **Console ▸ Security Center** and deselect the **Enable Security** check box on the General tab.
3. Click **Finish**.
4. Click **OK**.
5. Restart the WebSphere Application Server administration server.

Appendix C. Uninstalling WebSphere Commerce components

If you encounter problems installing WebSphere Commerce, you may want to uninstall one or more components and start again. This appendix explains how to uninstall each component of WebSphere Commerce, and provides guidance on the reinstall process.

Uninstalling WebSphere Commerce components

Before you uninstall any WebSphere Commerce components, you must do the following:

1. Delete your WebSphere Commerce instance, as described in "Deleting a WebSphere Commerce instance" on page 156.

2. Stop the following services:

   a. Stop your WebSphere Commerce Configuration Manager Service, as described in "Starting and Stopping the WebSphere Commerce Configuration Manager" on page 148.

   b. Stop your IBM HTTP Server, as described in "Starting and Stopping IBM HTTP Server" on page 148.

   c. Stop your WebSphere Application Server, as described in "Starting and Stopping WebSphere Application Server" on page 147.

   d. Stop your DB2 Universal Database, as described in "Starting and Stopping DB2 Universal Database" on page 149.

3. If you created or customized any files in the `drive:\WebSphere\CommerceServer` directory or its subdirectories, and you want to retain them, back them up to a different directory.

4. If you want to uninstall any other WebSphere Commerce components you must to the following:

   - To uninstall the IBM HTTP Server, do the following:

     a. If you created or customized any files in the `drive:\WebSphere\HTTPServer` directory or its subdirectories, and you want to retain them, back them up to a different directory.

     b. If any IBM HTTP Server windows are open, ensure that you close them before attempting to uninstall the Web server.

     c. If you uninstall IBM HTTP Server, you must also uninstall WebSphere Application Server.

   - To uninstall the WebSphere Application Server, do the following:

Note: If you have installed WebSphere Application Server to a directory that contains a space (for example, Program Files) you may encounter problems uninstalling the WebSphere Application Server efixes. For more information, see WebSphere Application Server documentation.

   a. If you want to uninstall the WebSphere Application Server you must also uninstall the IBM HTTP Server.

   b. Uninstall IBM WebSphere Payment Manager 3.1.2, before uninstall the WebSphere Application Server. For more information see "Uninstalling Payment Manager" on page 166.

- To uninstall the DB2 Universal Database, do the following:

   a. If you want to save your database, back it up as described in the DB2 online information (see "DB2 Universal Database information" on page 175 for instructions on accessing the DB2 online information). After you have completed the backup, move the backed up database to a directory that is not used by WebSphere Commerce component.

   b. Delete all WebSphere Commerce databases, by doing the following:

      1) From a DB2 command window, list all databases by typing:

         db2 list db directory

      2) For each WebSphere Commerce database listed, type the following command:

         db2 drop db *db_name*

         where *db_name* is the name of the WebSphere Commerce database.

   c. Stop DB2 using the directions in "Starting and Stopping DB2 Universal Database" on page 149. If you are having trouble stopping services, type db2 force applications all in a DB2 command window.

   d. If you created or customized any files in the *drive*:\IBM\Sqllib or *drive*:\Db2 directories or their subdirectories, and you want to retain them, back them up to different directories.

5. To uninstall WebSphere Commerce, DB2 Universal Database, WebSphere Application Server, or IBM HTTP Server, do the following:

   a. While logged on to a Windows user ID with Administrator authority, click **Start** > **Programs** > **IBM WebSphere Commerce** > **Uninstall WebSphere Commerce Server**.

   b. The Information window displays. Click **OK** to continue.

   c. An uninstall panel opens. Select the components that you want to uninstall, and click **Remove**.

d. The Confirmation window displays. Click **Yes** to continue or **No** to cancel.

e. A window opens asking you to confirm that you want to uninstall. Click **Yes**.

f. When the uninstall program has completed, restart your machine.

g. Once the uninstall is complete, proceed to "Post uninstall steps".

Post uninstall steps

There are several uninstall steps that must be completed depending on the products that you have uninstalled. To complete the uninstall process you must do the following:

1. Delete the *drive*:\WebSphere\CommerceServer along with all its subdirectories and files.

2. If you have uninstalled any other WebSphere Commerce components you must to the following:

   - If you have uninstalled the IBM HTTP Server, do the following:

     a. Delete the *drive*:\WebSphere\HTTPServer directory, along with all its subdirectories and files (if not done for you during the uninstall process).

   - If you have uninstalled the WebSphere Application Server, do the following:

     a. If you have not uninstalled your database software, remove your WebSphere Application Server database by doing the following:

        DB2   Type the following in a DB2 command window:

        db2 drop db *db_name*

        where *db_name* is the name of your WebSphere Application Server database. The default name if the database was created automatically is WAS.

     b. Remove the *drive*:\WebSphere\AppServer directory.

     c. Remove the *drive*:\WebSphere\sqllib\function\routine\sqlproc*db_name* directory.

   Note: Any changes and customization you made to your Web server configuration file before installing WebSphere Application Server reside in a backup configuration file. To make these settings active again, you must transfer them from the backup file into the active Web server configuration file when you reinstall your Web server.

- If you have uninstalled DB2 Universal Database, do the following:
  a. Switch to the *drive*\winnt directory and delete any DB2-related files, including db2*.*.
  b. Remove the following directories:
     - *drive*:\DB2
     - *drive*:\DB2CTLSV
     - *drive*:\WebSphere\sqllib
3. Empty the Recycle Bin.
4. Continue uninstalling components or reinstall WebSphere Commerce as described in "Reinstalling WebSphere Commerce and its Components".

Uninstalling Payment Manager

To uninstall IBM Payment Manager 3.1.2, refer to your *IBM WebSphere Payment Manager for Multiplatforms Install Guide*. For details on where to find this document, refer to "Payment Manager information" on page 174.

Reinstalling WebSphere Commerce and its Components

If you are reinstalling the entire WebSphere Commerce package follow the instructions in Part 1, "Installing WebSphere Commerce 5.4" on page 1.

If you are reinstalling portions of WebSphere Commerce, follow these general rules:

- Install all components through the WebSphere Commerce install program. To do this insert the WebSphere Commerce Professional Edition CD and double-click setup.exe.
- Uninstall all the components that you want to uninstall, and then reinstall them all (rather than uninstalling and reinstalling one component at a time).
- You *cannot* uninstall and reinstall your Web server without uninstalling and reinstalling WebSphere Application Server.
- You will need to delete and recreate your instance following the instructions in Chapter 7, "Creating or modifying an instance with Configuration Manager" on page 55.

Appendix D. Troubleshooting

This appendix is divided into two sections:

- Downloadable tools
- Log files and how to use them
- Specific troubleshooting steps

Downloadable tools

WebSphere Commerce Installation and Configuration Checker

WebSphere Commerce Installation and Configuration Checker, or IC Checker
is a standalone, downloadable problem determination tool, which enables
users to verify the installation and configuration of WebSphere Commerce. IC
Checker gathers configuration data and logs, and performs simple
error-checking. The following are some details pertaining to WebSphere
Commerce IC Checker:

- Products currently supported include WebSphere Commerce Suite 5.1 Start
  and Pro, WebSphere Commerce 5.1 Business Edition, and WebSphere
  Commerce 5.4 Pro, and Business Edition.
- Platforms currently supported are Windows NT 4.0, Windows 2000, AIX,
  Solaris, and OS/400.
- The tool can be accessed and downloaded online from the following URL
  locations:

  ▶ Business

  ```
  www.ibm.com/software/webservers/commerce/whats_new_support.html
  www.ibm.com/software/webservers/commerce/wc_be/support-tools.html
  ```

  ▶ Professional

  ```
  www.ibm.com/software/webservers/commerce/whats_new_support.html
  www.ibm.com/software/webservers/commerce/wc_pe/support.html
  ```

Log files

WebSphere Commerce produces the following logs:

WASConfig.log
> Found in your
> *drive*:\WebSphere\CommerceServer\instances*instance_name*\logs

directory. This log describes WebSphere Application Server actions such as importing WebSphere Commerce entity beans and creating the data source.

createdb.log
Found in your *drive*:\WebSphere\CommerceServer\instances*instance_name*\logs directory. This log describes the WebSphere Commerce schema creation.

WCSconfig.log
Found in your *drive*:\WebSphere\CommerceServer\instances directory. This log describes what the Configuration Manager is doing. You can modify the level of detail in this log through the menu options in the Configuration Manager.

populatedb.log
Found in your *drive*:\WebSphere\CommerceServer\instances*instance_name*\logs directory. This log describes the population of the database that is created during instance creation.

populatedbnl.log
Found in your *drive*:\WebSphere\CommerceServer\instances*instance_name*\logs directory. This log describes the population of national language data into the database that is created during instance creation.

wcs.log
Found in your *drive*:\WebSphere\CommerceServer\instances*instance_name*\logs directory. This log describes the startup of the WebSphere Commerce application server.

Troubleshooting

WebSphere Commerce installation problems

The following section describes possible problems you may encounter when you install WebSphere Commerce 5.4.

- Configuration Manager error message for new customers: *Cannot create database.*

  One or more of the DB2 services are not running. The possible causes are:

  1. Your machine was only logged off instead of performing a complete restart when you installed WebSphere Commerce.

     Reboot the machine and recreate the WebSphere Commerce instance using the Configuration Manager.

2. The DB2 install failed and the services are not able to start. To install DB2, do the following:

   a. Uninstall DB2 by following the instructions in Appendix C, "Uninstalling WebSphere Commerce components" on page 163. Ensure the *drive*:\Db2 and *drive*:\WebSphere\sqllib directories have been deleted from the drive you are installing on.

   b. Reinstall DB2 from the DB2 Universal Database CD. To install DB2, see "Installing DB2 on a Remote Machine" on page 9.

   c. Recreate the WebSphere Commerce database using the Configuration Manager.

- The setup.exe program halts with an "UninstallShield is running" message.

  – Ensure that you have logged on to your Windows operating system with a user ID that has administrator authority.

WebSphere Application Server problems

- The IBM WS Admin Server service fails to start with a service specific error 10 message:

  A common cause of this problem is the presence of *stray* java processes which were not completely terminated when the IBM WS Admin Server service was previously stopped. Check for and delete these processes in Task Manager and restart the IBM WS Admin Server service.

  This problem may also result from database connection problems with the WebSphere Application Server repository database. Check the WebSphere Application Server tracefile found in the *drive*:\WebSphere Application Server\logs directory for more information. Also confirm that the admin.config file contains the correct com.ibm.ejs.sm.adminServer.dbUrl, and that the JDBC driver, db2java.zip is located the com.ibm.ejs.sm.adminserver.classpath.

  This problem can also be caused by a blank line at the end of the *drive*:\WebSphere\AppServer\bin\admin.config file. Delete the blank line and attempt to restart the service.

Database problems

The following describes possible problems you may encounter with DB2 Universal Database and WebSphere Commerce 5.4.

- If DB2 Universal Database does not appear to install properly (the progress indicator bar hangs at 95% during the install), check the db2.log file. If Error 106 appears near the end of the log, you should exit the installation and reinstall DB2 Universal Database by itself from the DB2 Universal Database CD. After DB2 Universal Database has been installed, attempt to install WebSphere Commerce again from the WebSphere Commerce Professional Edition CD.

- Your DB2 database services do not start when you reboot Windows.

Check the Windows Event Viewer (normally found under **Start Menu** —> **Programs** —> **Administrative Tools**). The failure of a DB2 service to start will normally generate an error report stating why the service could not be started.

Database instance problems

The following describes possible problems you may encounter with your DB2 Universal Database instance and WebSphere Commerce 5.4.

- The WebSphere Commerce server fails to start after configuration has completed.

  The possible causes are:

  1. The WebSphere Commerce server cannot connect to the database. The possible causes for not connecting to the database are:

     – The database user logon ID and password are incorrect or contain invalid characters. To check the database user logon or password, run the Configuration Manager. Ensure that the database user ID specified in the Configuration Manager has Administrator authority on the Windows machine.

     – The DB2 database for your WebSphere Commerce instance does not exist. Use the Configuration Manager to create a new database.

     – The DB2 database for your WebSphere Commerce instance is not cataloged. This may have been caused by uninstalling and then reinstalling DB2. Catalog the instance by typing the following command in a DB2 command window:

       `db2 catalog db db_name`

       where *db_name* is the name of your database.

     – DB2 services are not running.

  2. The WebSphere Commerce server has detected a back-level database. The following error message will be found in your db2.log:

     `The database has not been migrated to version 5.1 of`
     `WebSphere Commerce.`

     This problem occurs for existing WebSphere Commerce customers or new WebSphere Commerce customers with existing databases. The possible causes for the database not being migrated are:

     – The database user logon ID or password contains invalid characters. To correct this, do the following:

       a. Change the logon ID and password to one with administrative authority. Run the Configuration Manager and select **Settings** to correct the user ID and password on the Database page. Ensure that the database user logon ID specified in the Configuration Manager has Administrator authority on the Windows machine.

b. Start the WebSphere Commerce server from Windows Services Manager.

   – The WebSphere Commerce server detected a communication error as indicated in the log file. This error occurs for new WebSphere Commerce customers. The probable cause is an improper TCP/IP configuration for the machine. Configure TCP/IP within the Windows Network service, and then delete and create the WebSphere Commerce instance using the Configuration Manager.

- If you have uninstalled and reinstalled DB2 Universal Database, and you attempt to start an instance that was created before DB2 Universal Database was uninstalled, it initially appears that the instance still exists. When you look at this instance in the services menu it is listed as running, but in the Configuration Manager it is listed as being inactive. You must remove this instance and recreate it.

Web Server problems

The following describes possible problems you may encounter with your Web server and WebSphere Commerce 5.4.

- IBM HTTP Server will not start after you have installed WebSphere Application Server

  Try to start the IBM HTTP Server in debug mode. To do this, at a command prompt change to the *drive*:\WebSphere\HTTPServer directory and type Apache

  If the server will not start the error preventing the service from starting will be listed. Correct the error and attempt to run Apache.exe again until all errors are resolved.

- IBM HTTP Server will not start after you have installed WebSphere Application Server.

  Your httpd.conf may contain incorrect syntax. Check the syntax of your httpd.conf file by doing the following:

  1. Log in as a Windows user with Administrative authority..

  2. From a command prompt, enter the following commands:

     ```
     cd drive:\WebSphere\HTTPServer
     apache -t
     ```

- IBM HTTP Server will not start after you have installed WebSphere Application Server.

  You may be missing a line in your httpd.conf file. Open *drive*:\WebSphere\HTTPServer\conf\httpd.conf. Uncomment the following lines, or add them if they do not exist:

  ```
  LoadModule ibm_app_server_http_module
     drive:\WebSphere\AppServer\bin\mod_ibm_app_server_http.dll
  ```

  Alternately, the

```
LoadModule ibm_app_server_http_module
   drive:\WebSphere\AppServer\bin\mod_ibm_app_server_http.dll
```

and the

```
AddModule mod_app_server_http.c
   drive:\WebSphere\AppServer\bin\mod_ibm_app_server.dll
```

lines may have been switched during installation. Ensure that `LoadModule` precedes `AddModule` in the `httpd.conf` file.

> **Note:** All the LoadModule lines shown above have been formatted for readability purposes only. Each line, starting with `LoadModule` or `AddModule` and ending with `mod_ibm_app_server.dll` appears on a single line in the `httpd.conf` file.

WebSphere Commerce problems

- You cannot access a WebSphere Commerce JavaServer Pages (JSP) file.

  Ensure that the JSP file is in the correct location.

  Ensure that the WebSphere Commerce server has been started in the WebSphere Application Server Administrator's console.

- Response is slow.

  Check the system load using operating system utilities

  Check the Web server access logs to determine the user load on the system. For IBM HTTP Server, these can be found in the `drive:\WebSphere\HTTPServer\logs` directory.

  Enable the WebSphere Commerce performance monitor to identify accessed components. This component can be enabled through the Configuration Manager. See "Components" on page 78 for more information.

Appendix E. Where to find more information

More information about the WebSphere Commerce system and its components is available from a variety of sources in different formats. The following sections indicate what information is available and how to access it.

WebSphere Commerce information

The following are the sources of WebSphere Commerce information:
- WebSphere Commerce online help
- WebSphere Commerce portable document format (PDF) files
- WebSphere Commerce Web site

Using the online help

The WebSphere Commerce online information is your primary source of information for customizing, administering, and reconfiguring WebSphere Commerce. After you have installed WebSphere Commerce, you can access the information in either of the following ways:

Note: The WebSphere Commerce online information is only available if you selected the WebSphere Commerce documentation option during the installation process.

- Select **Start ￫ Programs ￫ IBM WebSphere Commerce ￫ Documentation**.
- Open your browser and type the following Web address:

  ```
  http://host_name/wchelp
  ```

  where *host_name* is the fully qualified TCP/IP name of the machine where you have installed WebSphere Commerce.

Locating the printable documentation

Some of the online information is also available on your system in PDF files, which you can view and print using Adobe® Acrobat® Reader. You can download Acrobat Reader for free from the Adobe Web site at the following Web address:

```
http://www.adobe.com
```

Viewing the WebSphere Commerce Web site

WebSphere Commerce product information is available at the WebSphere Commerce Web site:
- Business Edition:

  ```
  http://www.ibm.com/software/webservers/commerce/wc_be/lit-tech-general.html
  ```

- Professional Edition:

  `http://www.ibm.com/software/webservers/commerce/wc_pe/lit-tech-general.html`

A copy of this book, and any updated versions of this book, are available as
PDF files from the Library section of the WebSphere Commerce Web site. In
addition, new and updated documentation may also be available from the
Web site.

IBM HTTP Server information

IBM HTTP Server information is available at the following Web address:

`http://www.ibm.com/software/webservers/httpservers/`

The documents are in HTML format, PDF files, or both.

Payment Manager information

Additional Payment Manager information is available through the library link
on the Payment Manager Web site:

`http://www.ibm.com/software/webservers/commerce/payment`

Payment Manager documentation is available in the following locations:
- In the \docs*locale* directory of the IBM Payment Manager 3.1.2 CD.
- In the \docs*locale* directory of the IBM Payment Manager 3.1.2 Cassette
  CDs.
- Installed in the following location:

  drive:\WebSphere\AppServer\InstalledApps\PaymentManager.ear\
  PaymentManager.war*locale*

The following Payment Manager documentation is available:
- The *IBM WebSphere Commerce Payments for Multiplatforms Installation Guide*
  PDF file format (`paymgrinstall.pdf`)
- The *IBM WebSphere Commerce Payments Administrator's Guide* PDF file format
  (`paymgradmin.pdf`)
- The *IBM WebSphere Commerce Payments for Multiplatforms Pogrammer's Guide
  and reference* PDF file format (`paymgrprog.pdf`)
- The *IBM WebSphere Commerce Payments for Multiplatforms for SET Supplement*
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  Supplement* PDF file format (`paymgrvisanet.pdf`)
- The *IBM WebSphere Commerce Payments for Multiplatforms for CyberCash
  Supplement* , in PDF file format (`paymgrcyber.pdf`)

- The *IBM WebSphere Commerce Payments for Multiplatforms for BankServACH Supplement* , in PDF file format (`paymgrbank.pdf`)
- The WebSphere Commerce Payments README file, in HTML format (`readme.framework.html`)
- The IBM Cassette for SET README file, in HTML format (`readme.set.html`)
- The IBM Cassette for VisaNet README file, in HTML format (`readme.visanet.html`)
- The IBM Cassette for CyberCash README file, in HTML format (`readme.cybercash.html`)
- The IBM Cassette for BankServACH README file, in HTML format (`readme.bankservach.html`)

The *Secure Electronic Transactions* section of the WebSphere Commerce online help also contains Payment Manager information.

WebSphere Application Server

WebSphere Application Server information is available at the WebSphere Application Server Web site:

`http://www.ibm.com/software/webservers/appserv`

DB2 Universal Database information

DB2 information is available on your system after you install DB2. To access it, click **Start**, point to **Programs**, point to **DB2 for Windows NT** or **DB2 for Windows 2000**, and click **Information Center**.

For the most recent information, refer to the `RELEASE.TXT` file. This file is located in the directory where the product is installed.

For a complete list of the available DB2 documentation, and how to view or print it, refer to the *DB2 Quick Beginnings for Windows* book. Additional DB2 information is available at the following Web address:

`http://www.ibm.com/software/data/db2`

Other IBM publications

You can purchase copies of most IBM publications from your IBM authorized dealer or marketing representative.

Appendix F. Program specifications and specified operating environment

This version of WebSphere Commerce supports the following operating environments:

- Windows NT Server 4.0 with Service Pack 6a
- Windows 2000 Server or Advanced Server

WebSphere Commerce 5.4 includes the following components:

WebSphere Commerce Server

The WebSphere Commerce Server handles the store, and commerce-related functions, within your e-commerce solution. Functionality is provided by the following components:

- Tools (Store Services, Loader package, Commerce Accelerator, Administration Console)
- Subsystems (catalog, member, negotiation, order)
- Product Advisor
- Common server run time
- System management
- Messaging services
- WebSphere Application Server

Store Services

The Store Services provides a central location for creating, customizing, and maintaining certain operational features of a store.

Loader package

The Loader package allows the initial load of product information through ASCII and XML files, as well as incremental updates of complete or partial information. Online catalogs are updated using this tool.

WebSphere Commerce Accelerator

Once your store and product data have been created, use the WebSphere Commerce Accelerator to manage your store and to facilitate your business strategies. WebSphere Commerce Accelerator provides an integration point for all functionality that WebSphere Commerce delivers for operating an online store, such as store and product management, marketing, customer orders, and customer service.

WebSphere Commerce Administration Console

> The Administration Console allows a Site Administrator or Store Administrator to perform tasks related to site and store configuration, including the following:
>
> - User and group management (access control)
> - Performance monitoring
> - Messaging configuration
> - IBM WebSphere Payment Manager functions
> - IBM Payment Manager functions
> - Brokat Blaze Rules administration

The following products are bundled with, and supported by, WebSphere Commerce 5.4:

IBM DB2 Universal Database 7.1.0.55

> DB2 Universal Database is a full-feature relational database used by WebSphere Commerce as a repository for all of the information about the site. This includes product and category data, pointers to graphical elements for the pages, order status, address information, and many other types of data.

DB2 Extenders

> DB2 Extenders is an optional component for DB2 which provide additional search capabilities to your site. DB2 Text Extender adds the ability to support numerous search types by your customers including searching for synonyms, inexact matches and words in close proximity, as well as boolean and wildcard searches.

IBM HTTP Server 1.3.19.1

> IBM HTTP Server is a robust Web server that provides extensive management capabilities; support for Java deployment; proxy server services; and security features including support for SSL 3, such as client and server authentication, and data encryption.

IBM Payment Manager 3.1.2

> Payment Manager provides real-time Internet payment processing for merchants using a variety of methods including SET (Secure Electronic Transaction), and Merchant Initiated Authorization.

WebSphere Application Server 4.0.2

> WebSphere Application Server is a Java-based application environment for building, deploying and managing Internet and Intranet Web applications. This product includes the IBM Developer Kit for Windows, Java 2 Technology Edition, v1.3 .

IBM WebSphere Commerce Analyzer 5.4

> IBM WebSphere Commerce Analyzer is a new, optionally installed

feature of WebSphere Commerce. A WebSphere Commerce-specific entry edition of IBM WebSphere Commerce Analyzer provides reports for customer profiling and monitoring campaign performance. The reports cannot be customized. Note that you cannot install IBM WebSphere Commerce Analyzer without Brio Broadcast Server.

Brio Broadcast Server

The Brio Broadcast Server is a batch processing server that automates query processing and report distribution. Although the Brio Broadcast Server can deliver large amounts of data to many people, security safeguards are built into the product to enable administrators to tightly control database access and document distribution.

IBM SecureWay Directory Server 3.2.1

IBM SecureWay Directory provides a common directory for you to reduce the high costs associated with application-specific directories. IBM SecureWay Directory is an LDAP cross-platform, highly scalable, robust directory server for security, and e-business solutions. The version of SecureWay that was shipped with WebSphere Commerce was 3.1.1.5, however support is now offered for IBM SecureWay Directory Server 3.2.1, which is available for Web download.

Segue SilkPreview 1.0

Segue SilkPreview provides a repository of information to analyze and report results throughout application development.

WebSphere Commerce 5.4 Recommendation Engine powered by LikeMinds

Macromedia LikeMinds provides product recommendations and targeted promotions for each individual Web visitor. It is a personalization server based on collaborative filtering and market basket analysis.

WebSphere Commerce 5.4 also supports the following:
- Oracle Database 8.1.7, Enterprise Edition or Standard Edition
- Lotus Domino Web server, 5.0.5, 5.0.6, and 5.0.8
- iPlanet Web Server, Enterprise Edition 4.1.8
- Microsoft IIS 4.0

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