IBM® WebSphere® Commerce
for Solaris™ Operating Environment software

Installation Guide

for use with an Oracle Database

Version 54

IBM

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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 205.

Contents

Part 1. Before you begin

The chapters in this section give a basic description of WebSphere Commerce, and describe the prerequisite hardware, software, knowledge requirements and user authorities required to complete a successful installation of WebSphere Commerce. Ensuring that your system meets all the requirements stated in these chapters will significantly improve the ease with which your installation is completed.

The following chapters must be completed before you attempt to install any component of WebSphere Commerce:

- Chapter 1, "Welcome to WebSphere Commerce" on page 3
- Chapter 2, "Preinstallation requirements" on page 19

Chapter 1. Welcome to WebSphere Commerce

This book describes how to install and configure WebSphere Commerce 5.4 for the Solaris™ Operating Environment™ software, for use with an Oracle 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.
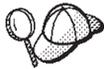
> This icon marks a Tip - additional information that can help you complete a task.

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:

/opt/WebSphere/CommerceServer
> The WebSphere Commerce installation path.

/opt/IBMHTTPD
> The IBM HTTP Server 1.3.19.1 installation path.

/opt/WebSphere/AppServer
> The WebSphere Application Server 4.0.2 installation path.

/opt/PaymentManager
> The IBM WebSphere Payment Manager 3.1.2 installation path.

Note: WebSphere Commerce is only supported in the default directory.

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, iPlanet Web Server, Enterprise Edition 4.1.8 and Lotus Domino Web Server 5.0.5, 5.0.6, and 5.0.8 are 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, Enterprise Edition or Standard Edition (also known as Oracle 8i release 3). If you choose to use DB2 Universal Database instead of Oracle Database

8.1.7, Enterprise Edition or Standard Edition, you need to refer to the *IBM WebSphere Commerce Installation Guide: Installing WebSphere Commerce 5.4 for use with a DB2 Database*.

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.

Single tier configurations

In these configurations, 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 your database as outlined in Chapter 3, "Installing and configuring Oracle8i Database" on page 27, ensuring that you install your database client on the same machine as the database server, and that you follow the instructions for creating the database locally.

2. Install IBM HTTP Server and WebSphere Application Server through the WebSphere Application Server install program as outlined in "Installing WebSphere Application Server and IBM HTTP Server on the same machine" on page 55.

3. Install WebSphere Commerce as outlined in Chapter 8, "Install WebSphere Commerce" on page 67. Ensure that you run the wc54efixunix.sh script to upgrade your software levels and apply all necessary fixes.

4. Install Payment Manager as outlined in Chapter 9, "Install IBM WebSphere Payment Manager" on page 71.

5. Complete the following tasks in Chapter 10, "Pre-configuration steps" on page 79:
   - Running the `wcpostinstall.sh` script
   - Pre-configuration steps for Oracle
   - Starting the WebSphere Application Server

6. Create your WebSphere Commerce instance as outlined in Chapter 11, "Creating or modifying an instance with Configuration Manager" on page 83.

7. Complete the following tasks in the "Post-configuration steps for a local Web server" section of Chapter 12, "Post-Configuration Steps" on page 111:
   - Enabling SSL for testing
   - Configuring Payment Manager to work with WebSphere Commerce
   - Compiling the JavaServer Pages™ files

iPlanet Web Server

1. Install your database as outlined in Chapter 3, "Installing and configuring Oracle8i Database" on page 27, ensuring that you install your database client on the same machine as the database server, and that you follow the instructions for creating the database locally.

2. Install iPlanet Web Server as outlined in Chapter 6, "Install iPlanet Web Server" on page 47.

3. Install WebSphere Application Server as outlined in "Installing WebSphere Application Server for use with an alternate or remote Web server" on page 59.

4. Install WebSphere Commerce as outlined in Chapter 8, "Install WebSphere Commerce" on page 67. Ensure that you run the `wc54efixunix.sh` script to upgrade your software levels and apply all necessary fixes.

5. Install Payment Manager as outlined in Chapter 9, "Install IBM WebSphere Payment Manager" on page 71.

6. Complete the following tasks in Chapter 10, "Pre-configuration steps" on page 79:
   - Running the `wcpostinstall.sh` script
   - Pre-configuration steps for Oracle
   - Starting the WebSphere Application Server

7. Create your WebSphere Commerce instance as outlined in Chapter 11, "Creating or modifying an instance with Configuration Manager" on page 83.

8. Complete the following tasks in the "Post-configuration steps for a local Web server" section of Chapter 12, "Post-Configuration Steps" on page 111:

- Completing your iPlanet Web Server configuration
- Enabling SSL for testing (use the instructions provided as a guideline – you must follow the instructions provided in your Web server's documentation to enable SSL)
- Configuring Payment Manager to work with WebSphere Commerce
- Compiling the JavaServer Pages files

Domino Web Server

1. Install your database as outlined in Chapter 3, "Installing and configuring Oracle8i Database" on page 27, ensuring that you install your database client on the same machine as the database server, and that you follow the instructions for creating the database locally.
2. Install Domino Web Server as outlined in Chapter 5, "Installing Domino Web Server" on page 43.
3. Install WebSphere Application Server as outlined in "Installing WebSphere Application Server for use with an alternate or remote Web server" on page 59.
4. Install WebSphere Commerce as outlined in Chapter 8, "Install WebSphere Commerce" on page 67. Ensure that you run the `wc54efixunix.sh` script to upgrade your software levels and apply all necessary fixes.
5. Install Payment Manager as outlined in Chapter 9, "Install IBM WebSphere Payment Manager" on page 71.
6. Complete the following tasks in Chapter 10, "Pre-configuration steps" on page 79:
   - Running the `wcpostinstall.sh` script
   - Modifying the file permissions for Domino Web Server
   - Pre-configuration steps for Oracle
   - Starting the WebSphere Application Server
7. Create your WebSphere Commerce instance as outlined in Chapter 11, "Creating or modifying an instance with Configuration Manager" on page 83.
8. Complete the following tasks in the "Post-configuration steps for a local Web server" section of Chapter 12, "Post-Configuration Steps" on page 111:
   - Completing your Domino Web Server configuration
   - Enabling SSL for testing (use the instructions provided as a guideline – you must follow the instructions provided in your Web server's documentation to enable SSL)
   - Configuring Payment Manager to work with WebSphere Commerce
   - Compiling the JavaServer Pages files

2-tier configurations:

In these configurations, the database server is installed on a separate machine from all other WebSphere Commerce components. To install this configuration, complete the steps outlined for your Web server:

IBM HTTP Server

1. Install your database as outlined in Chapter 3, "Installing and configuring Oracle8i Database" on page 27, ensuring that you install your database client on a separate machine from the database server, and that you follow the instructions for creating the database remotely.

2. Install IBM HTTP Server and WebSphere Application Server through the WebSphere Application Server install program as outlined in "Installing WebSphere Application Server and IBM HTTP Server on the same machine" on page 55. Ensure that you run the `wc54wasefixunix.sh` and `wc54jdkefixsun.sh` scripts to upgrade your software levels and apply all necessary fixes.

3. Install WebSphere Commerce as outlined in Chapter 8, "Install WebSphere Commerce" on page 67.

4. Install Payment Manager as outlined in Chapter 9, "Install IBM WebSphere Payment Manager" on page 71.

5. Complete the following tasks in Chapter 10, "Pre-configuration steps" on page 79:
   - Running the `wcpostinstall.sh` script
   - Pre-configuration steps for Oracle
   - Starting the WebSphere Application Server

6. Create your WebSphere Commerce instance as outlined in Chapter 11, "Creating or modifying an instance with Configuration Manager" on page 83.

7. Complete the following tasks in the "Post-configuration steps for a local Web server" section of Chapter 12, "Post-Configuration Steps" on page 111:
   - Enabling SSL for testing
   - Configuring Payment Manager to work with WebSphere Commerce
   - Completing a remote Oracle installation
   - Compiling the JavaServer Pages files

iPlanet Web Server

1. Install your database as outlined in Chapter 3, "Installing and configuring Oracle8i Database" on page 27, ensuring that you install your database client on a separate machine from the database server, and that you follow the instructions for creating the database remotely.

2. Install iPlanet Web Server as outlined in Chapter 6, "Install iPlanet Web Server" on page 47.

3. Install IBM HTTP Server and WebSphere Application Server through the WebSphere Application Server install program as outlined in "Installing WebSphere Application Server for use with an alternate or remote Web server" on page 59. Ensure that you run the `wc54wasefixunix.sh` and `wc54jdkefixsun.sh` scripts to upgrade your software levels and apply all necessary fixes.
4. Install WebSphere Commerce as outlined in Chapter 8, "Install WebSphere Commerce" on page 67.
5. Install Payment Manager as outlined in Chapter 9, "Install IBM WebSphere Payment Manager" on page 71.
6. Complete the following tasks in Chapter 10, "Pre-configuration steps" on page 79:
   - Running the `wcpostinstall.sh` script
   - Pre-configuration steps for Oracle
   - Starting the WebSphere Application Server
7. Create your WebSphere Commerce instance as outlined in Chapter 11, "Creating or modifying an instance with Configuration Manager" on page 83.
8. Complete the following tasks in the "Post-configuration steps for a local Web server" section of Chapter 12, "Post-Configuration Steps" on page 111:
   - Completing your iPlanet Web Server configuration
   - Enabling SSL for testing (use the instructions provided as a guideline – you must follow the instructions provided in your Web server's documentation to enable SSL)
   - Configuring Payment Manager to work with WebSphere Commerce
   - Completing a remote Oracle installation
   - Compiling the JavaServer Pages files

Domino Web Server
1. Install your database as outlined in Chapter 3, "Installing and configuring Oracle8i Database" on page 27, ensuring that you install your database client on a separate machine from the database server, and that you follow the instructions for creating the database remotely.
2. Install Domino Web Server as outlined in Chapter 5, "Installing Domino Web Server" on page 43.
3. Install IBM HTTP Server and WebSphere Application Server through the WebSphere Application Server install program as outlined in "Installing WebSphere Application Server for use with an alternate or remote Web server" on page 59. Ensure that you run the `wc54wasefixunix.sh` and `wc54jdkefixsun.sh` scripts to upgrade your software levels and apply all necessary fixes.

4. Install WebSphere Commerce as outlined in Chapter 8, "Install WebSphere Commerce" on page 67.

5. Install Payment Manager as outlined in Chapter 9, "Install IBM WebSphere Payment Manager" on page 71.

6. Complete the following tasks in Chapter 10, "Pre-configuration steps" on page 79:
   - Running the `wcpostinstall.sh` script
   - Modifying the file permissions for Domino Web Server
   - Pre-configuration steps for Oracle
   - Starting the WebSphere Application Server

7. Create your WebSphere Commerce instance as outlined in Chapter 11, "Creating or modifying an instance with Configuration Manager" on page 83.

8. Complete the following tasks in the "Post-configuration steps for a local Web server" section of Chapter 12, "Post-Configuration Steps" on page 111:
   - Completing your Domino Web Server configuration
   - Enabling SSL for testing (use the instructions provided as a guideline – you must follow the instructions provided in your Web server's documentation to enable SSL)
   - Configuring Payment Manager to work with WebSphere Commerce
   - Completing a remote Oracle installation
   - Compiling the JavaServer Pages files

3-tier configurations:

In these configurations, the database server and Web server are each installed on separate machines from the WebSphere Commerce server and WebSphere Application Server. To install this configuration, complete the steps outlined for your Web server:

IBM HTTP Server

1. Install your database as outlined in Chapter 3, "Installing and configuring Oracle8i Database" on page 27, ensuring that you install your database client on a separate machine from the database server, and that you follow the instructions for creating the database remotely.

2. Install IBM HTTP Server through the WebSphere Application Server install program as outlined in Chapter 4, "Install and Configure IBM HTTP Server remotely from WebSphere Commerce" on page 37. Ensure that you run the `wc54wasefixunix.sh` and `wc54jdkefixsun.sh` scripts to upgrade your software levels and apply all necessary fixes.

3. Install WebSphere Application Server through the WebSphere Application Server install program as outlined in "Installing WebSphere Application Server for use with an alternate or remote Web server" on page 59. Ensure

that you run the `wc54wasefixunix.sh` and `wc54jdkefixsun.sh` scripts to upgrade your software levels and apply all necessary fixes.

4. Install WebSphere Commerce as outlined in Chapter 8, "Install WebSphere Commerce" on page 67.

5. Install Payment Manager as outlined in Chapter 9, "Install IBM WebSphere Payment Manager" on page 71.

6. Complete the following tasks in Chapter 10, "Pre-configuration steps" on page 79:
   - Running the `wcpostinstall.sh` script
   - Pre-configuration steps for Oracle
   - Starting the WebSphere Application Server

7. Create your WebSphere Commerce instance as outlined in Chapter 11, "Creating or modifying an instance with Configuration Manager" on page 83.

8. Complete the following tasks in the "Post-configuration steps for a remote Web server" section of Chapter 12, "Post-Configuration Steps" on page 111:
   - Completing the IBM HTTP Server installation
   - Copying assets to your Web server
   - Enabling SSL for testing
   - Configuring Payment Manager to work with WebSphere Commerce
   - Completing a remote Oracle installation
   - Compiling the JavaServer Pages files

iPlanet Web Server

1. Install your database as outlined in Chapter 3, "Installing and configuring Oracle8i Database" on page 27, ensuring that you install your database client on a separate machine from the database server, and that you follow the instructions for creating the database remotely.

2. Install iPlanet Web Server as outlined in Chapter 6, "Install iPlanet Web Server" on page 47. Ensure that you run the `wc54wasefixunix.sh` and `wc54jdkefixsun.sh` scripts to upgrade your software levels and apply all necessary fixes.

3. Install IBM HTTP Server and WebSphere Application Server through the WebSphere Application Server install program as outlined in "Installing WebSphere Application Server for use with an alternate or remote Web server" on page 59. Ensure that you run the `wc54wasefixunix.sh` and `wc54jdkefixsun.sh` scripts to upgrade your software levels and apply all necessary fixes.

4. Install WebSphere Commerce as outlined in Chapter 8, "Install WebSphere Commerce" on page 67.

5. Install Payment Manager as outlined in Chapter 9, "Install IBM WebSphere Payment Manager" on page 71.

6. Complete the following tasks in Chapter 10, "Pre-configuration steps" on page 79:
   - Running the `wcpostinstall.sh` script
   - Pre-configuration steps for Oracle
   - Starting the WebSphere Application Server
7. Create your WebSphere Commerce instance as outlined in Chapter 11, "Creating or modifying an instance with Configuration Manager" on page 83.
8. Complete the following tasks in the "Post-configuration steps for a remote Web server" section of Chapter 12, "Post-Configuration Steps" on page 111:
   - Remote iPlanet Web Server configuration
   - Completing the iPlanet Web Server configuration
   - Copying assets to your Web server
   - Enabling SSL for testing (use the instructions provided as a guideline – you must follow the instructions provided in your Web server's documentation to enable SSL)
   - Configuring Payment Manager to work with WebSphere Commerce
   - Completing a remote Oracle installation
   - Compiling the JavaServer Pages files

Domino Web Server

1. Install your database as outlined in Chapter 3, "Installing and configuring Oracle8i Database" on page 27, ensuring that you install your database client on a separate machine from the database server, and that you follow the instructions for creating the database remotely.
2. Install Domino Web Server as outlined in Chapter 5, "Installing Domino Web Server" on page 43. Ensure that you run the `wc54wasefixunix.sh` and `wc54jdkefixsun.sh` scripts to upgrade your software levels and apply all necessary fixes.
3. Install IBM HTTP Server and WebSphere Application Server through the WebSphere Application Server install program as outlined in "Installing WebSphere Application Server for use with an alternate or remote Web server" on page 59. Ensure that you run the `wc54wasefixunix.sh` and `wc54jdkefixsun.sh` scripts to upgrade your software levels and apply all necessary fixes.
4. Install WebSphere Commerce as outlined in Chapter 8, "Install WebSphere Commerce" on page 67.
5. Install Payment Manager as outlined in Chapter 9, "Install IBM WebSphere Payment Manager" on page 71.
6. Complete the following tasks in Chapter 10, "Pre-configuration steps" on page 79:
   - Running the `wcpostinstall.sh` script

- Modifying the file permissions for Domino Web Server
- Pre-configuration steps for Oracle
- Starting the WebSphere Application Server

7. Create your WebSphere Commerce instance as outlined in Chapter 11, "Creating or modifying an instance with Configuration Manager" on page 83.

8. Complete the following tasks in the "Post-configuration steps for a remote Web server" section of Chapter 12, "Post-Configuration Steps" on page 111:
   - Completing your Domino Web Server configuration
   - Copying assets to your Web server
   - Enabling SSL for testing (use the instructions provided as a guideline – you must follow the instructions provided in your Web server's documentation to enable SSL)
   - Configuring Payment Manager to work with WebSphere Commerce
   - Completing a remote Oracle installation
   - Compiling the JavaServer Pages files

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)
2222	The default port through which you access WebSphere Application Server Administration Console as a non-root user.
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)

Locales used by WebSphere Commerce

WebSphere Commerce uses valid Java locales only. Ensure that your systems have the appropriate locale installed for your language. Ensure that any locale-related environment variables are set to include the WebSphere Commerce–supported locale. Locale codes supported by WebSphere Commerce are shown in the table below.

Language	Locale Code	LC_ALL value
German	de_DE	de_DE.ISO8859-1
English	en_US	en_US.ISO8859-1
Spanish	es_ES	es_ES.ISO8859-1
French	fr_FR	fr_FR.ISO8859-1
Italian	it_IT	it_IT.ISO8859-1
Japanese	ja_JP	ja_JP.eucJP
Korean	ko_KR	ko_KR.EUC
Brazilian Portugese	pt_BR	pt_BR.ISO8859-1
Simplified Chinese	zh_CN	zh_CN.GBK
Traditional Chinese	zh_TW	zh_TW.BIG5

To determine your locale, run the following command:
```
echo $LANG
```

If your locale is not supported, change your locale properties by running the following commands as root user:
```
LANG=xx_XX
export LANG
```

Where xx_XX is your four letter locale code with the same capitalization as shown in the above table.

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.

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`

> - 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 9, "Install IBM WebSphere Payment Manager" on page 71 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.

Chapter 2. Preinstallation requirements

This chapter describes the steps you need to perform before you install WebSphere Commerce.To perform the steps described in this publication, you must have `root` user access.

Knowledge requirements

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

- Your operating system
- The Internet
- Web server operation and maintenance
- Oracle database
- Basic operating system commands

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

- WebSphere Application Server
- Oracle 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.

Oracle knowledge

This section lists some of the important Oracle concepts that you should know before using Oracle with WebSphere Commerce. You can find information on these items in the *Oracle 8i Concepts* document provided with your Oracle system. *Before installing and setting up your Oracle system, it is highly recommended that you read and understand the Oracle documentation supplied with your purchase of Oracle, in particular, the Concepts, Administration, and Installation information.*

Some of the concepts that you need to understand before configuring your Oracle system to work with WebSphere Commerce include:

- An Oracle Instance

- Database structure and space management. This includes:
  - Logical database structure
    - Tablespaces
    - Schemas and schema Objects.
    - Data blocks, extents, and segments.
  - Physical database structure
    - Datafiles
    - Redo log files
    - Control files
- Structured Query Language (SQL)
- Memory structure and processes
  - System Global Area (SGA)
  - Program Global Area (PGA)
  - Oracle process architecture including server and background processes
- Communications Software and Net8
- The Program Interface
- Database Administrator user names
  - SYS
  - SYSTEM
- System Identifier (SID)
- Databases, tablespaces, and datafiles
  - The SYSTEM tablespace
  - Using multiple tablespaces
  - Space management in tablespaces
  - Online and offline tablespaces
  - Temporary tablespaces
  - Datafiles

Prerequisite hardware

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

- Any processor that supports Solaris 8 Operating Environment (SPARC platform edition) software, such as a Sun SPARC or UltraSPARC station, with the following:
  - A 400 MHz processor.
  - A minimum of 1GB of random access memory (RAM) per processor.
  - An additional 512 MB of RAM per WebSphere Commerce instance.

- A minimum of 6 GB of free disk space, if you install all of the required and optional components, with the following recommended allocated file sizes:
  - /opt: 4 GB
  - /export: 1 GB
  - temporary directory: 1 GB
- A minimum of 1 GB swap space per processor.
- A communication hardware adapter that uses the TCP/IP protocol stack to make network connections.
- A CD-ROM drive.
- A graphics capable monitor.

Note: Solaris 8 Operating Environment (Intel platform edition) software is *not* supported by WebSphere Commerce.

Prerequisite software

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

- Ensure that you have a Web browser installed on your system.
- WebSphere Commerce is supported in 32–bit mode only. 64–bit mode is not exploited, and 32-bit compatibility mode on 64-bit systems has not been tested.
- Ensure that you have Solaris 8 Operating Environment (SPARC platform edition) software with at least maintenance update 5 (MU5) and the most recent Solaris patch cluster.
- Ensure that you have the following Solaris patches installed at the indicated levels or higher:
  - 108940-14
  - 108652-27
  - 108921-11
  - 108434-01
  - 109147-06
  - 108827-01

You can check patch levels by using the showrev -p command. For information on using the showrev -p command, refer to your Solaris documentation.

Updating Solaris kernel configuration parameters

> **Important**
>
> You *must* set the Solaris kernel file parameters as described in the chart below. If you are using a multi-tier configuration, all machines must have these parameters set.
>
> Once you have set the Solaris kernel file parameters, you *must* restart your machine so that the changes take effect.

Log in as user ID root and use a text editor to add the following parameters to the Solaris kernel file, /etc/system. To set a kernel parameter, add a line at the end of the /etc/system file as follows:

set *parameter-name=value*

Do not leave any spaces at the end of any of the statements that you type into the kernel file. Select the values for the following parameters based on the configuration that applies to your system.

Table 1. Solaris Kernel Configuration Parameters (Recommended Values)

Kernel Configuration Parameter	Physical Memory			
	64 MB - 128 MB	128 MB - 256 MB	256 MB - 512 MB	512 MB+
msgsys:msginfo_msgmax	65535 (1)	65535 (1)	65535 (1)	65535 (1)
msgsys:msginfo_msgmnb	65535 (1)	65535 (1)	65535 (1)	65535 (1)
msgsys:msginfo_msgmap	130	258	258	258
msgsys:msginfo_msgmni	128	256	256	256
msgsys:msginfo_msgssz	16	16	16	16
msgsys:msginfo_msgtql	256	512	1024	1024
msgsys:msginfo_msgseg	8192	16384	32767 (2)	32767 (2)
shmsys:shminfo_shmmax	134217728 (3)	268435456(3)	536870912(3)	4294967295(3)
shmsys:shminfo_shmseg	16	16	16	16
shmsys:shminfo_shmmni	256	256	256	256
semsys:seminfo_semmni	300	300	300	300
semsys:seminfo_semmsl	250	250	250	250
semsys:seminfo_semmns	256	512	1024	2048
semsys:seminfo_semopm	200	200	200	200

Table 1. Solaris Kernel Configuration Parameters (Recommended Values) (continued)

Kernel Configuration Parameter	Physical Memory			
	64 MB - 128 MB	128 MB - 256 MB	256 MB - 512 MB	512 MB+
semsys:seminfo_seminfo	32767	32767	32767	32767

The values shown above are the minimum required for Oracle and Payment Manager. You may adjust them higher if you wish. .

Notes:

1. The parameters msgsys:msginfo_msgmnb and msgsys:msginfo_msgmax *must* be set to 65535 or larger.
2. The msgsys:msginfo_msgseg parameter must be set no higher than 32767.
3. The parameter shmsys:shminfo_shmmax should be set to the suggested value in the chart above or to 200% of the physical memory (in bytes), whichever is higher. For example, if you have 256 MB of physical memory in your system, set the shmsys:shminfo_shmmax parameter to 536870912 (256*1024*1024*2).

Note: You must restart the machine after updating the Solaris kernel parameters.

Other requirements

You must also do the following:

1. 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.
2. 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:

   nslookup *host_name*

   The desired result is a reply with your correct IP address.
3. 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.

Pre-install requirements check

A script is available on the WebSphere Commerce Disk 2 CD that will check your system to determine if you have the correct operating system, prerequisite software and pre-installed software. You should run this script before starting your installation to determine if your system meets all the needs of WebSphere Commerce. You can also run this script at various points during your installation to ensure that the software packages have been installed properly.

To run this script, perform the following steps:

1. Log on as user ID root.
2. If necessary, mount the WebSphere Commerce Disk 2 CD. To do this, type

   mount *CDROM_dir*

   where *CDROM_dir* is the directory that you want to specify as your mounted CD.
3. Go to the Software_Patches directory of the CD.
4. Run the script by typing:

   ./wc54sunpreq.sh

Part 2. Installing Oracle8i Database

WebSphere Commerce supports DB2® and Oracle databases. This book describes how to install WebSphere Commerce with an Oracle database; for information on installing WebSphere Commerce with DB2, please refer to the *Installing WebSphere Commerce for use with a DB2 Database*. You must install your database before installing other WebSphere Commerce components. The database can be installed on the same machine as other WebSphere Commerce components, or it can be installed on a remote machine. Select the appropriate chapters to install your database, and then continue to Part 3, "Install a Web server" on page 35:

Chapter 3. Installing and configuring Oracle8i Database

This chapter provides information on creating a WebSphere Commerce database schema using an Oracle8i Database. It does not provide detailed information on installing Oracle8i Database.

Notes:

1. WebSphere Commerce 5.4 only supports Oracle Database 8.1.7.2.0, Enterprise Edition or Standard Edition. The patch required to raise the level of Oracle 8.1.7 to 8.1.7.2.0 can be found at this location:

   `ftp://oracle-ftp.oracle.com/server/patchsets/`

2. You need advanced knowledge of Oracle (at the DBA level) to follow the instructions in this chapter.

3. For more information about Oracle, go to `http://www.oracle.com`. You can obtain copies of the Oracle documentation from `http://docs.oracle.com`. To obtain Oracle software, see `http://technet.oracle.com`. The Oracle installation and configuration information in this chapter is provided only as a guideline.

4. For additional information on Oracle terminology and concepts, see the *Oracle 8i Concepts* document provided with your purchase of Oracle.

Installing Oracle8i Database

If you want to use Oracle as your database management system instead of DB2, you must perform the following steps:

1. Select a custom install when installing Oracle and install the following Oracle products (recommended) from the Oracle CD-ROM:
   - For a 1–tier Oracle installation on a single machine:
     - Net8
     - Oracle8 Enterprise Server
     - Oracle UNIX® Installer
     - SQL*Plus
     - TCP/IP Protocol Adapter
     - JDBC™ Thin Driver
     - JDBC/OCI Driver
   - For the Oracle server machine in a 2–tier or 3–tier installation:
     - Net8
     - Oracle8 Enterprise Server
     - Oracle UNIX Installer

- SQL*Plus
- TCP/IP Protocol Adapter
- JDBC Thin Driver
- JDBC/OCI Driver
- For the Oracle client (WebSphere Commerce server) machine in a 2–tier or 3–tier installation:
  - Oracle8 Enterprise Client
  - SQL*Plus
  - JDBC Thin Driver
  - JDBC/OCI Driver

There are a number of optional components that you can install. Consult the Oracle installation documentation or your DBA to see if any of the optional items are required for your needs.

Note: For performance reasons, it is suggested that you select the Dedicated Server option when installing.

2. If you are installing your Oracle database remotely from the rest of WebSphere Commerce you need to install the Oracle client on your WebSphere Commerce machine.

Creating a database for WebSphere Application Server, WebSphere Commerce, and WebSphere Payment Manager

Create a database or databases for use with WebSphere Application Server, WebSphere Commerce, and Payment Manager. The applications can each have their own database or they can share a database. The number of databases you create depends on your systems and your requirements. To share a database, connect to the same database SID when creating the tablespaces as shown in the steps below.

The following are required for all databases to be used with WebSphere Application Server, WebSphere Commerce, and Payment Manager:
- They must use the UTF-8 character set
- They must have Compatible Parameter set to 8.1.0

The following are recommended settings for all development databases to be used with WebSphere Application Server, WebSphere Commerce, and Payment Manager:
- Shared Pool Size: 67108864
- Block Buffers: 16384
- Block Size: 4096
- Cursor_sharing: force

The following are recommended settings for all production databases to be used with WebSphere Application Server, WebSphere Commerce, and Payment Manager:

- Checkpoint Interval: 10000000
- Shared Pool Size: 67108864
- Block Buffers: 16384
- Log Buffer Size: 524288
- Block Size: 4096
- Processes: 150
- Redo log file size: 10MB

Notes:

1. For naming convention and character restriction information, consult your Oracle documentation.

2. Take note of the Oracle System Identifier (SID) for each database instance you create in this step. The SID will be required in later steps.

3. The Global Database Name and Oracle System Identifier (SID) for the WebSphere Commerce database must either be the same or of the form *SID.domain_name*, where *domain_name* is the fully qualified domain name of your Oracle server.

4. When you create a database, Oracle creates a file called init.*SID* or init*SID*.ora for each database, in the directory $ORACLE_BASE/admin/SID/pfile. init.*SID* is created for the first database your create and init*SID*.ora is created for each subsequent database you create.

Creating tablespace for WebSphere Application Server, WebSphere Commerce, and WebSphere Payment Manager

Creating a user ID and tablespace for WebSphere Commerce

Create a WebSphere Commerce Oracle user ID and a tablespace for WebSphere Commerce. The settings shown in the following steps are a suggestion *only*. The settings required for your WebSphere Commerce installation may differ from the ones used here.

The following variables are used in the commands that are part of this step:

full_path_to_wc_datafile
> The fully qualified path to the datafile of the WebSphere Commerce database. . This value must be enclosed in single quotation marks for the new datafile to be created.

wc_password
> The password you want the WebSphere Commerce Oracle user to

have. This password must follow all Oracle password rules and all WebSphere Commerce password rules.

wc_SID
> The Oracle System Identifier (SID) for the WebSphere Commerce database instance you are creating this user and tablespace for.

wc_tablespace
> The name of the WebSphere Commerce tablespace you are creating within the database.

wc_user_ID
> The ID you are assigning to the WebSphere Commerce Oracle user.

1. Log in to an Oracle DBA account and begin a SQL*Plus session by issuing the following command in a terminal window:

   ```
   sqlplus system/system_password@wc_SID
   ```

   Commands shown in the following steps are all issued from within this SQL*Plus session

2. Create the WebSphere Commerce tablespace by issuing the following command:

   ```
   CREATE TABLESPACE wc_tablespace
     DATAFILE full_path_to_wc_datafile
     SIZE 4M
     REUSE
     AUTOEXTEND ON NEXT 2M
     MAXSIZE UNLIMITED;
   ```

3. Create the WebSphere Commerce Oracle user by issuing the following command:

   ```
   CREATE USER wc_user_ID
     IDENTIFIED BY wc_password
     DEFAULT TABLESPACE wc_tablespace
     QUOTA UNLIMITED ON wc_tablespace;
   ```

4. Grant privileges to the WebSphere Commerce Oracle user you created issuing the following commands:

   ```
   GRANT create procedure to wc_user_ID;
   GRANT create sequence to wc_user_ID;
   GRANT create session to wc_user_ID;
   GRANT create synonym to wc_user_ID;
   GRANT create table to wc_user_ID;
   GRANT create trigger to wc_user_ID;
   GRANT create view to wc_user_ID;
   GRANT unlimited tablespace to wc_user_ID;
   GRANT create materialized view  to wc_user_ID;
   GRANT query rewrite to wc_user_ID;
   ```

Creating a user ID and tablespace for WebSphere Application Server *ejsadmin* **user**

Create an Oracle user ID for the WebSphere Application Server `ejsadmin` user and a tablespace for WebSphere Application Server. The settings shown in the following steps are a suggestion *only*. The settings required for your WebSphere Commerce installation may differ from the ones used here.

The following variables are used in the commands that are part of this step:

full_path_to_was_datafile
> The fully qualified path to the datafile of the WebSphere Application Server database.

ejsadmin_password
> The password you want the WebSphere Application Server `ejsadmin` Oracle user to have. This password must follow all Oracle password rules and all WebSphere Application Server password rules.

was_SID
> The Oracle System Identifier (SID) for the WebSphere Application Server database instance you are creating this user and tablespace for.

was_tablespace
> The name of the WebSphere Application Server tablespace you are creating. The default tablespace name used in this book is *WAS*.

1. Log in to an Oracle DBA account and begin a SQL*Plus session by issuing the following command in a terminal window:

   ```
   sqlplus system/system_password@was_SID
   ```

   Commands shown in the following steps are all issued from within this SQL*Plus session.

2. Create the WebSphere Application Server tablespace by issuing the following command:

   ```
   CREATE TABLESPACE was_tablespace
     DATAFILE full_path_to_was_datafile
     SIZE 4M
     REUSE
     AUTOEXTEND ON NEXT 2M
     MAXSIZE UNLIMITED;
   ```

3. Create the WebSphere Application Server EJSADMIN Oracle user by issuing the following command:

   ```
   CREATE USER ejsadmin
     IDENTIFIED BY ejsadmin_password
     DEFAULT TABLESPACE was_tablespace
     QUOTA UNLIMITED ON was_tablespace;
   ```

4. Grant privileges to the WebSphere Application Server Oracle user you created issuing the following commands:

```
GRANT dba, connect, resource TO ejsadmin;
```

Creating a user ID for WebSphere Application Server *ejb* user

Create an Oracle user ID for the WebSphere Application Server `ejb` user. The settings shown in the following steps are a suggestion *only*. The settings required for your WebSphere Commerce installation may differ from the ones used here.

The following variables are used in the commands that are part of this step:

ejb_password

> The password you want the WebSphere Application Server `ejb` Oracle user to have. This password must follow all Oracle password rules and all WebSphere Application Serverpassword rules. Refer to your Oracle documentation for information on the rules for forming passwords.

was_SID

> The Oracle System Identifier (SID) for the WebSphere Application Server database instance you are creating this user and tablespace for.

was_tablespace

> The name of the WebSphere Application Server tablespace you are created earlier.

1. Log in to an Oracle DBA account and begin a SQL*Plus session by issuing the following command in a terminal window:

   ```
   sqlplus system/system_password@was_SID
   ```

   Commands shown in the following steps are all issued from within this SQL*Plus session.

2. Create the WebSphere Application Server `ejb` Oracle user by issuing the following command:

   ```
   CREATE USER ejb
     IDENTIFIED BY ejb_password
     DEFAULT TABLESPACE was_tablespace
     QUOTA UNLIMITED ON was_tablespace;
   ```

3. Grant privileges to the WebSphere Application Server `ejb` Oracle user you created issuing the following commands:

   ```
   GRANT connect, resource TO ejb;
   ```

Creating a user ID and tablespace for Payment Manager

Create a WebSphere Payment Manager Oracle user ID and a tablespace for WebSphere Payment Manager. The settings shown in the following steps are a suggestion *only*. The settings required for your WebSphere Commerce installation may differ from the ones used here.

The following variables are used in the commands that are part of this step:

full_path_to_wpm_datafile
> The fully qualified path to the datafile of the Payment Manager database, enclosed in single quotes.

wpm_password
> The password you want the WebSphere™ Payment Manager Oracle user to have. This password must follow all Oracle password rules and all WebSphere Payment Manager password rules.

wpm_SID
> The Oracle System Identifier (SID) for the WebSphere Payment Manager database instance you are creating this user and tablespace for.

wpm_tablespace
> The name of the WebSphere Payment Manager tablespace you are creating within the database.

wpm_user_ID
> The ID you are assigning to the WebSphere Payment Manager Oracle user.

1. Log in to an Oracle DBA account and begin a SQL*Plus session by issuing the following command in a terminal window:

   ```
   sqlplus system/system_password@wpm_SID
   ```

   Commands shown in the following steps are all issued from within this SQL*Plus session

2. Create the WebSphere Payment Manager tablespace by issuing the following command:

   ```
   CREATE TABLESPACE wpm_tablespace
     DATAFILE full_path_to_wpm_datafile
     SIZE 4M
     REUSE
     AUTOEXTEND ON NEXT 2M
     MAXSIZE UNLIMITED;
   ```

3. Create the WebSphere Payment Manager Oracle user by issuing the following command:

   ```
   CREATE USER wpm_user_ID
     IDENTIFIED BY wpm_password
     DEFAULT TABLESPACE wpm_tablespace
     QUOTA UNLIMITED ON wpm_tablespace;
   ```

4. Grant privileges to the WebSphere Payment Manager Oracle user you created issuing the following commands:

   ```
   GRANT connect, resource TO wpm_user_ID;
   ```

Modifying the *initSID.ora* file

For the WebSphere Commerce SID you created, modify your init*SID*.ora file, where *SID* is the Oracle System Identifier (SID) for the database, as follows:

1. Change to the $ORACLE_BASE/admin/SID/pfile directory, where *SID* is the Oracle System Identifier (SID) for the database; for example, *wcs*. If you can not find the directory, look in $ORACLE_HOME/dbs.
2. Open the init*SID*.ora file in a text editor, where *SID* is the Oracle System Identifier (SID) for the database. For example, if the SID for your WebSphere Commerce server database is *wcs*, you would open the file initwcs.ora in a text editor.
3. Set cursor_sharing in the Oracle8i Database initialization file to force.
4. Set open_cursors in the Oracle8i Database initialization file to 1000.
5. Stop and restart the database instance so that these changes take effect.

Testing the Oracle8i Database installation

After installing Oracle you should be able to connect to the Oracle database successfully. Test this by doing the following :

Note: In a one-tier configuration, your Oracle client and Oracle server are the same machine.

1. On your Oracle server, start the Oracle listener by typing the following in a terminal window:

```
su - oracle
lsnrctl
start
quit
```

2. On your Oracle server, start the Oracle instance by typing the following in a terminal window:

```
su - oracle
svrmgrl
connect internal
startup
quit
```

3. On your Oracle client, enter the following commands in a terminal window:

```
su - oracle
sqlplus wcs_user_ID/wcs_password@wcs_SID
sqlplus ejsadmin/ejsadmin_password@was_SID
sqlplus ejb/ejb_password@was_SID
sqlplus wpm_user_ID/wpm_password@wpm_SID
```

The next step

Now that you have installed and configured Oracle8i Database, you are ready to continue with the installation process by installing a Web server. Follow the instructions outlined inPart 3, "Install a Web server" on page 35 to continue.

Part 3. Install a Web server

WebSphere Commerce supports either IBM HTTP Server, Domino Web Server, or iPlanet Web Server as its Web server. The Web server can be installed on the same machine as other WebSphere Commerce components, or it can be installed on a remote machine.

If you are installing IBM HTTP Server on the same machine as WebSphere Commerce, you can proceed to Part 4, "Install required WebSphere Commerce components" on page 53.

If you are installing IBM HTTP Server remotely from WebSphere Commerce, or if you are using Domino Web Server or iPlanet Web Server as your Web server, you must complete the appropriate chapter in this section before installing other WebSphere Commerce components. Install your Web server as described in the following chapter, and then continue to Part 4, "Install required WebSphere Commerce components" on page 53:

- Chapter 4, "Install and Configure IBM HTTP Server remotely from WebSphere Commerce" on page 37
- Chapter 5, "Installing Domino Web Server" on page 43
- Chapter 6, "Install iPlanet Web Server" on page 47

Chapter 4. Install and Configure IBM HTTP Server remotely from WebSphere Commerce

This chapter explains how to install IBM HTTP Server 1.3.19.1 remotely from WebSphere Commerce. If you are installing IBM HTTP Server on the same machine as WebSphere Application Server and WebSphere Commerce, you will install IBM HTTP Server through the WebSphere Application Server installation program; procede to Part 4, "Install required WebSphere Commerce components" on page 53.

To complete the steps in this chapter, you will need the WebSphere Application Server, Advanced Edition CD.

Installation procedures

To install IBM HTTP Server 1.3.19.1, do the following:

1. Ensure that the machine on which you are installing IBM HTTP Server does not have an underscore character (_) in its host name. IBM HTTP Server does not support host names with underscores.

2. Log in as user ID `root`.

3. If necessary, mount the WebSphere Application Server, Advanced Edition CD. To do this, type

   ```
   mount CDROM_dir
   ```

   where *CDROM_dir* is the directory that you want to specify as your mounted CD.

4. On a command line, switch to the install directory on the CD-ROM by typing:

   ```
   cd /CDROM_dir/sun
   ```

   where *CDROM_dir* is the directory on which your CD-ROM is mounted.

5. Type the following command to start the installation program:

   ```
   ./install.sh
   ```

6. The Welcome to the IBM WebSphere Application Server Setup program dialog box opens. Click **Next** to continue.

7. The Prerequisites Check window opens. Ensure that you have the correct prerequisites to install WebSphere Application Server and click **OK**.

8. The Install Options dialog box opens. Select **Custom Installation**, and click **Next**.

9. The Choose Application Server Components panel displays. Select the following packages:
   - IBM HTTP Server 1.3.19
   - Web Server Plugins

   When all packages have been selected, click **Next**.
10. The WebSphere plug-ins panel displays. Select the plug-in for IBM HTTP Server and click **Next.**
11. The Select Destination Directory dialog opens. Click **Next** to continue.
12. The Install Options Selected dialog box opens. Verify that the information is correct and click **Install** to complete the installation.
13. The Location of Configuration files dialog box opens and prompts you to enter the full path name to the specified Web server configuration file (/opt/IBMHTTPD/conf/httpd.conf)

    Important:

    Before entering this information, open another command window and type the following commands:

    ```
    cd /opt/IBMHTTPD/conf
    mv httpd.conf httpd.conf.orig
    cp httpd.conf.sample httpd.conf
    ```

    Enter the Web server configuration file and click **Next**.
14. The Setup Complete dialog box opens. To view the ReadMe file, ensure that Yes, I want to view the ReadMe File is selected and click **Finish**; the ReadMe file is displayed in a default browser window.

Create a password for IBM HTTP Server administrator

The Administration Server is installed with Authentication enabled for the directory containing all configuration forms. This means that after installation, the Administration Server will not service a page without a user ID and Password. This is done to protect the IBM HTTP Server Configuration file from unauthorized access immediately after successful installation of the IBM HTTP Server and the Administration Server. At installation, the password file (admin.passwd) is "empty", therefore until you supply a user ID and password in the Administration Server Password file (admin.passwd), you will not have access to the IBM HTTP Server Configuration pages through the Administration Server.

To create a user ID and password for IBM HTTP Server 1.3.19.1, perform the following steps:
1. Type cd /opt/IBMHTTPD/bin.
2. Type ./htpasswd –m ../conf/admin.passwd <user_ID>.

3. You will be prompted to supply a password, and then to verify this password.

This will be the user ID and Password that will allow access to the Administration Server Configuration GUI. This user ID should be unique for access to the Administration Server. The Administration Server directive "User" should *not* be the same user ID for access to the Administration Server.

Set up IBM HTTP Server

You have to run a setup script for IBM HTTP Server which creates a user ID and group, and changes the permissions for various configuration files. To set up IBM HTTP Server, perform the following steps:

1. Type `cd /opt/IBMHTTPD/bin`.
2. Run `./setupadm`.
3. Answer the prompts as follows:
   - Supply a user ID to run the Administration Server (the user ID will be created using the System Administration tools). Enter the user ID (which can not be the same as the on logon ID). Click **Enter**.
   - Supply a Group Name to run the Administration Server. (the Group will be created using the System Administration tools). Enter a group name and click **Enter**.
   - You are prompted to supply the directory containing the files for which a change in the permissions is necessary. The default is `/opt/IBMHTTPD/conf`. Either accept the default or enter the path to your IBM HTTP Server configuration files.
   - You are asked if you want to update the Administration Server Configuration file. CONTINUE Enter 1, QUIT Enter (default) 2.
   - You are asked if you want to run the Administrative Server and the IBM HTTP Server in a language other than English. CONTINUE Enter 1, QUIT (default) Enter 2. If you choose to use another language, you will be prompted to select that language.
4. The updates are performed and you exit the setupadm program.

Installing the WebSphere Application Server plug-in

To install the WebSphere Application Server plug-in for your Web server, do the following:

1. Ensure you are logged in as user ID `root`.
2. If necessary, mount the WebSphere Application Server, Advanced Edition CD.
3. On a command line, switch to the install directory on the CD-ROM by typing:

```
cd /CDROM_dir/sun
```

where *CDROM_dir* is the directory on which your CD-ROM is mounted.

4. Type the following command to start the installation program:
   ```
   ./install.sh
   ```
5. The Welcome to the IBM WebSphere Application Server Setup program dialog box opens. Click **Next** to continue.
6. The Prerequisites Check window opens. Ensure that you have the correct prerequisites to install WebSphere Application Server and click **OK**.
7. The Install Options dialog box opens. Select **Custom Installation**, and click **Next**.
8. The WebSphere Install Packages panel displays. Select the following package:
   - Web server Plugins

   and click **Next**.
9. The WebSphere Plugins panel displays. Select the plug-in for IBM HTTP Server and click **Next.**
10. The Install Options Selected dialog box opens. Verify that the information is correct and click **Install** to complete the installation.
11. The Location of Configuration files dialog box opens and prompts you to enter the full path name to the specified Web server configuration file:
    - IBM HTTP Server: /opt/IBMHTTPD/conf/httpd.conf

    Important:

    Before entering this information, open another command window and type the following commands:
    ```
    cd /opt/IBMHTTPD/conf
    mv httpd.conf httpd.conf.orig
    cp httpd.conf.sample httpd.conf
    ```

    Click **Next**.
12. The Setup Complete dialog box opens. To view the ReadMe file, ensure that Yes, I want to view the ReadMe File is selected and click **Finish**; the ReadMe file is displayed in a default browser window.
13. The WebSphere Application Server - First Steps dialog box opens. You can use this GUI to access product information in the InfoCenter, start the administrative server, launch the administrative console, or launch the application assembly tool. Because you must first start and possibly configure the Web server before using WebSphere, close this dialog for now. You can launch the First Steps GUI at a later time by running the firststeps.sh script located in the /opt/WebSphere/AppServer/bin directory.

14. Unmount the CD by typing,

```
cd /
umount CDROM_dir
```

where *CDROM_dir* is the directory that you specified as your mounted CD.
15. Remove the WebSphere Application Server, Advanced Edition CD.
16. Restart your Web server by running the following command:

```
/opt/IBMHTTPD/bin/apachectl restart
```

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

Installing the WebSphere Application Server eFixes

You must now upgrade your WebSphere Application Server to meet the requirements of WebSphere Commerce. To do this, do the following:

1. Ensure that all WebSphere Application Server eFixes that have been previously installed are removed.
2. Ensure that all processes associated with your Web server are stopped.
3. If necessary, mount the WebSphere Commerce Disk 2 CD. To do this, type

```
mount CDROM_dir
```

where *CDROM_dir* is the directory that you want to specify as your mounted CD.
4. Go to the `Software_Patches` directory of the CD, and run the following commands:

```
cp wc54wasefixunix.tar /tmp
cd /tmp
tar -xvf wc54wasefixunix.tar
./wc54wasefixunix.sh
```

5. Answer the following prompts appropriately:
   a. Enter the mount point for eFix, which is your CD drive directory.
   b. Enter the WebSphere Application Server home directory (the default is `/opt/WebSphere/AppServer`)
   c. When prompted for the software component, select option **4: WebServer**.
   d. Press Enter to continue.
   e. When prompted for the Web server, select option **1: IBM HTTP Server**.
   f. When asked if you want to install the eFixes, select Yes.
   g. When asked if you want to create the directory `/tmp/WebSphere/eFixes`, select yes.

6. Ensure that no errors are listed in `/tmp/wc54wasefixunix.log`.

Testing the installation

Start IBM HTTP Server by doing the following:

```
cd /opt/IBMHTTPD/bin
./apachectl start
```

To ensure that your Web server has been properly installed, you can test it by accessing the following URL:

```
http://host_name.domain
```

ensuring that there is no `www` preceeding the host name. The IBM HTTP Server home page should display.

The next step

Now that you have installed IBM HTTP Server 1.3.19.1, you are ready to install WebSphere Application Server 4.0.2 as described in Chapter 7, "Installing WebSphere Application Server" on page 55.

Chapter 5. Installing Domino Web Server

WebSphere Commerce supports Lotus Domino Web Server versions 5.0.5, 5.0.6, and 5.0.8.

Notes:

1. Caching and cgi-bypass are not available when you use Domino™ Web Server, so performance may be impacted.
2. Domino Web Server only supports one non-secure port and one secure port.

Installation procedures

To install Domino Web Server complete the following steps using Domino's documentation for assistance when necessary:

1. Ensure that your database has been installed.
2. Install the Domino server as instructed by Lotus.
3. 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.
4. Start the Domino server.
5. Launch the Lotus Domino Administrator.
6. Select **File → Open Server**.
7. Enter the Server name. For example, *host_name/domain_name*.
8. Click **OK** to continue.
9. Create a Key Ring.

Installing the WebSphere Application Server plug-in

To install the WebSphere Application Server plug-in for your Web server, do the following:

1. Ensure you are logged in as user ID `root`.

2. If necessary, mount the WebSphere Application Server, Advanced Edition CD.

3. On a command line, switch to the install directory on the CD-ROM by typing:

   cd /*CDROM_dir*/sun

   where *CDROM_dir* is the directory on which your CD-ROM is mounted.

4. Type the following command to start the installation program:

   ./install.sh

5. The Welcome to the IBM WebSphere Application Server Setup program dialog box opens. Click **Next** to continue.

6. The Prerequisites Check window opens. Ensure that you have the correct prerequisites to install WebSphere Application Server and click **OK**.

7. The Install Options dialog box opens. Select **Custom Installation**, and click **Next**.

8. The WebSphere Install Packages panel displays. Select the following package:
   - Web server Plugins

   and click **Next**.

9. The WebSphere Plugins panel displays. Select the plug-in for Domino Web Server and click **Next.**

10. The Install Options Selected dialog box opens. Verify that the information is correct and click **Install** to complete the installation.

11. The Location of Configuration files dialog box opens and prompts you to enter the full path name to the specified Web server configuration file:
    - Domino Web Server: /export/home/notes/notesdata/names.nsf

    Click **Next**.

12. In the Update WebSphereb AS Configuration File window, browse to the Domino Notes.jar file. The default location is:
    /opt/lotus/notes/latest/ibmpow/Notes.jar

13. The Setup Complete dialog box opens. To view the ReadMe file, ensure that Yes, I want to view the ReadMe File is selected and click **Finish**; the ReadMe file is displayed in a default browser window.

14. Unmount the CD by typing,

    cd /

    umount *CDROM_dir*

    where *CDROM_dir* is the directory that you specified as your mounted CD.

15. Remove the WebSphere Application Server, Advanced Edition CD.

16. Restart your Web server.
17. 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.

Configuring Domino Web Server

After the Domino Web Server and WebSphere Application Server plugins have been installed, you must configure Domino Web Server:

1. Open the Domino administrator.
2. Select the administrator database.
3. Select the Configuration tab.
4. Expand the server list and select **All Server Documents**.
5. Select the server you want to configure and click **Edit Server**.
6. Select the Internet Protocols tab.
7. Select the HTTP tab.
8. In the DSAPI Filter File Names field enter:
   `/opt/WebSphere/AppServer/bin/libdomino5_http.so`
9. Click **Save and Close**.
10. Restart the HTTP Service for the server that was updated.

Installing the WebSphere Application Server eFixes and FixPak

You only need to complete the steps in this section if you are installing WebSphere Application Server remotely from Domino Web Server. If you will be installing WebSphere Application Server on the same machine as Domino Web Server, you will upgrade WebSphere Application Server at a later time.

If Domino Web Server is installed remotely from WebSphere Application Server, you must now upgrade your WebSphere Application Server components to meet the requirements of WebSphere Commerce. This must be done after you have completed the steps in "Installing the WebSphere Application Server plug-in" on page 43. To do this, do the following:

1. Ensure that WebSphere Application Server and all processes associated with your Web server are stopped.
2. Ensure that all WebSphere Application Server eFixes that have been previously installed are removed.
3. If necessary, mount the WebSphere Commerce Disk 2 CD. To do this, type
   `mount CDROM_dir`

   where *CDROM_dir* is the directory that you want to specify as your mounted CD.

4. Go to the `Software_Patches` directory of the CD, and run the following commands:

```
cp wc54wasefixunix.tar /tmp
cd /tmp
tar -xvf wc54wasefixunix.tar
./wc54wasefixunix.sh
```

5. Answer the prompts appropriately.

   a. Enter the mount point for eFix, which is your CD drive directory.

   b. Enter the WebSphere Application Server home directory (the default is `/opt/WebSphere/AppServer`)

   c. When prompted for the software component, choose the following option: **4: WebServer**. Press Enter to continue.

   d. When prompted for the Web server, select option **3: Domino**.

6. Ensure that no errors are listed in `/tmp/wc54webefixunix.log`.

Upgrading your Sun JDK level

You must now upgrade your Sun JDK to meet the requirements of WebSphere Commerce. This must be done after you have installed the WebSphere Application Server eFixes and FixPak. To do this, do the following:

1. Ensure that WebSphere Application Server and all processes associated with your Web server are stopped.

2. If necessary, mount the WebSphere Commerce Disk 2 CD. To do this, type

   mount *CDROM_dir*

   where *CDROM_dir* is the directory that you want to specify as your mounted CD.

3. Go to the `Software_Patches` directory of the CD, and run the following commands:

```
cp wc54jdkefixsun.sh /tmp
cd /tmp
./wc54jdkefixsun.sh
```

The next step

Now that you have installed Domino Web Server, you are ready to install WebSphere Application Server 4.0.2 as described in Chapter 7, "Installing WebSphere Application Server" on page 55.

Chapter 6. Install iPlanet 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. If you are using iPlanet Web Server you *must* complete the appropriate steps in this chapter before installing the rest of WebSphere Commerce.

Install and configure iPlanet Web Server

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

1. Install iPlanet Web Server according to the instructions provided by iPlanet. Ensure that you install the following components:
   - iPlanet Web Server, Enterprise Server
   - Server Core
   - Java Runtime Environment
   - Java Support
   - SSJS Support
   - SSJS Database Support

   Do *not* select **Use Custom JDK™**.
2. Ensure that you create three Web servers: one server for non-SSL communication (on port 80), and two servers for SSL communication (on ports 443 and 8000).
3. Install a secure certificate signed by a certifying authority, according to iPlanet's instructions.

> **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 the WebSphere Application Server plug-in

To install the WebSphere Application Server plug-in for your Web server, do the following:

1. Ensure you are logged in as user ID root.

2. If necessary, mount the WebSphere Application Server, Advanced Edition CD.

3. On a command line, switch to the install directory on the CD-ROM by typing:

   cd /CDROM_dir/sun

   where *CDROM_dir* is the directory on which your CD-ROM is mounted.

4. Type the following command to start the installation program:

   ./install.sh

5. The Welcome to the IBM WebSphere Application Server Setup program dialog box opens. Click **Next** to continue.

6. The Prerequisites Check window opens. Ensure that you have the correct prerequisites to install WebSphere Application Server and click **OK**.

7. The Install Options dialog box opens. Select **Custom Installation**, and click **Next**.

8. The WebSphere Install Packages panel displays. Select the following package:

   • Web server Plugins

   and click **Next**.

9. The WebSphere Plugins panel displays. Select the plug-in for iPlanet Web Server and click **Next**.

10. The Select destination directory panel displays. Select the directory where you want the plug-in to be saved, and click **Next**. This window may incorrectly state that WebSphere Application Server will be installed to this directory; Please disregard this statement.

11. The Install Options Selected dialog box opens. Verify that the information is correct and click **Install** to complete the installation.

    Note: The WebSphere Application Server install program may incorrectly state that the database type is DB2 rather than Oracle. Please disregard this statement; the installation will proceed correctly if you selected Oracle when prompted for your database type during the install.

12. The Location of Configuration files dialog box opens and prompts you to enter the full path name to the specified Web server configuration file. For iPlanet Web Server the default is:

/usr/netscape/server4/*server_name*/config/obj.conf, where *server_name* is the name of the server you created for port 80. Click **Next**.

Important:

You must reinstall this plug-in for each server, starting with the server using port 80, followed by the servers on ports 443 and 8000.

13. The Setup Complete dialog box opens. To view the ReadMe file, ensure that Yes, I want to view the ReadMe File is selected and click **Finish**; the ReadMe file is displayed in a default browser window.

14. Repeat steps 4 on page 48 through 13 to install the plug-ins for the servers on ports 443 and 8000.

15. Unmount the CD by typing,

    cd /

    umount *CDROM_dir*

    where *CDROM_dir* is the directory that you specified as your mounted CD.

16. Remove the WebSphere Application Server, Advanced Edition CD.

17. Load the updated configuration file:

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

       http://*host_name*:8888/

    b. 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**.

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

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

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

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

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

18. Restart your Web server by typing:

    ./usr/netscape/server4/*server_name*/restart

19. Open a Web browser and ensure that you can launch the home page for your Web server.

Disabling the iPlanet Servlets

1. Start the iPlanet Web Server.
2. Disable the iPlanet Servlet:
   a. In the iPlanet Console, select the server that needs to be modified.
   b. Click **Manage**.
   c. Select the Servlets tab.
   d. For Activate Servlet Engine, select **No**.
   e. Click **OK**.
   f. Click **Save and Apply**.
   g. Repeat these steps for all iPlanet Web servers.
3. 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.

Installing the WebSphere Application Server eFixes and FixPak

You only need to complete the steps in this section if you are installing WebSphere Application Server remotely from iPlanet Web Server. If you will be installing WebSphere Application Server on the same machine as iPlanet Web Server, you will upgrade WebSphere Application Server at a later time.

If iPlanet Web Server is installed remotely from WebSphere Application Server, you must now upgrade your WebSphere Application Server components to meet the requirements of WebSphere Commerce. This must be done after you have completed the steps in "Installing the WebSphere Application Server plug-in" on page 48 for each of your Web servers. If you create additional Web servers after installing the eFixes in this section, you will need to modify the Web server configuration files as described in "Editing the obj.conf file to update the WebSphere Application Server plug-in settings" on page 183.

Complete the following steps:

1. Ensure that WebSphere Application Server and all processes associated with your Web server are stopped.
2. Ensure that all WebSphere Application Server eFixes that have been previously installed are removed.
3. If necessary, mount the WebSphere Commerce Disk 2 CD. To do this, type
   ```
   mount CDROM_dir
   ```

   where *CDROM_dir* is the directory that you want to specify as your mounted CD.

4. Go to the `Software_Patches` directory of the CD, and run the following commands:

```
cp wc54wasefixunix.tar /tmp
cd /tmp
tar -xvf wc54wasefixunix.tar
./wc54wasefixunix.sh
```

5. Answer the following prompts appropriately:

   a. Enter the mount point for eFix, which is your CD drive directory.

   b. Enter the WebSphere Application Server home directory (the default is `/opt/WebSphere/AppServer`)

   c. When prompted for the software component, choose the following option: **4: WebServer**. Press Enter to continue.

   d. When prompted for the Web server, select option **2: iPlanet Web Server**.

6. Ensure that no errors are listed in `/tmp/wc54wasefixunix.log`.

Upgrading your Sun JDK level

You must now upgrade your Sun JDK to meet the requirements of WebSphere Commerce. This must be done after you have installed the WebSphere Application Server eFixes and FixPak. To do this, do the following:

1. Ensure that WebSphere Application Server and all processes associated with your Web server are stopped.

2. If necessary, mount the WebSphere Commerce Disk 2 CD. To do this, type

   `mount CDROM_dir`

   where *CDROM_dir* is the directory that you want to specify as your mounted CD.

3. Go to the `Software_Patches` directory of the CD, and run the following commands:

```
cp wc54jdkefixsun.sh /tmp
cd /tmp
./wc54jdkefixsun.sh
```

The next step

Now that you have installed iPlanet Web Server, you are ready to install WebSphere Application Server 4.0.2 as described in Chapter 7, "Installing WebSphere Application Server" on page 55.

Part 4. Install required WebSphere Commerce components

Once you have installed your database and a Web server, you need to install WebSphere Application Server, WebSphere Commerce and Payment Manager. The following chapters describe how to complete these tasks:

- Chapter 7, "Installing WebSphere Application Server" on page 55
- Chapter 8, "Install WebSphere Commerce" on page 67
- Chapter 9, "Install IBM WebSphere Payment Manager" on page 71

Chapter 7. Installing WebSphere Application Server

This chapter describes how to install WebSphere Application Server for two different scenarios:

- Your IBM HTTP Server is on the same machine as the WebSphere Application Server and WebSphere Commerce – follow the directions in "Installing WebSphere Application Server and IBM HTTP Server on the same machine"
- Your IBM HTTP Server is remote from the WebSphere Application Server and WebSphere Commerce, or you are using Domino Web Server or iPlanet Web Server – follow the directions in "Installing WebSphere Application Server for use with an alternate or remote Web server" on page 59

To complete the steps in this chapter, you will need the WebSphere Application Server, Advanced Edition CD.

Chapter checklist

To ensure that you can successfully complete the steps in this chapter, ensure that you have met the following requirements:

__ 1. You must have a supported database system installed *before* beginning the steps in this chapter.

__ 2. If you are using Domino Web Server or iPlanet Web Server as your Web server, it must be installed prior to installing WebSphere Application Server. This Web server must be stopped manually before installing WebSphere Application Server.

__ 3. If you are installing IBM HTTP Server remotely from the WebSphere Application Server and WebSphere Commerce, it must be installed prior to installing WebSphere Application Server. This Web server must be stopped manually before installing WebSphere Application Server.

Installing WebSphere Application Server and IBM HTTP Server on the same machine

To install WebSphere Application Server on the same machine as your Web server, do the following:

1. Ensure you are logged in as user ID root.
2. Mount the WebSphere Application Server, Advanced Edition CD after inserting the CD in the CD-ROM drive of machine. To do this, type the following command in a terminal window:

   mount *CDROM_dir*

where *CDROM_dir* is the directory that you specified as the mount point when allocating a CD file system.

3. On a command line, switch to the install directory on the CD-ROM by typing:

   cd /*CDROM_dir*/sun

   where *CDROM_dir* is the directory on which your CD-ROM is mounted.

4. Type the following command to start the installation program:

   ./install.sh

5. The Welcome to the IBM WebSphere Application Server Setup program dialog box opens. Click **Next** to continue.

6. The Prerequisites Check window opens. Ensure that you have the correct prerequisites to install WebSphere Application Server and click **OK**.

7. The Install Options dialog box opens. Select **Custom Installation**, and click **Next**.

8. The Choose Application Server Components panel displays. Select the following packages:
   - Server
   - Admin
   - Samples
   - Application Assembly and Deployment Tools
   - IBM HTTP Server 1.3.19
   - Web Server Plugins

   When all packages have been selected, click **Next**.

9. The WebSphere plug-ins panel displays. Select the plug-in for your Web server and click **Next.**

10. The Database Options dialog opens. Complete the following set of instructions:

    a. In the Database Type field, select Oracle from the pull-down menu.

    b. If your database is on a separate machine from WebSphere Application Server, ensure that Remote DB is selected.

    c. In the Database Name (Database SID) field, type the name of the WebSphere Application Server database that you created in "Creating a database for WebSphere Application Server, WebSphere Commerce, and WebSphere Payment Manager" on page 28. For example: *was_SID*

    d. In the DB Home field, type the value of the ORACLE_HOME environment variable. This path should be the full path name of the directory you created to contain the Oracle software and to be the home directory of the user named oracle. Alternately, specify the full path name of the directory by using the Browse button.

e. In the DB URL field, accept the default value:

```
jdbc:oracle:thin:@host_name:port_number:database_name
```

or specify a different URL for accessing the database.

f. In the Server Name field, type the fully qualified host name of the machine on which the database is installed. This should be reflected in the DB URL field.

g. In the Port Number field, type the port number used to access the database.

h. In the Database User ID field, type the name of the database instance owner: EJSADMIN.

i. In the Database Password field, type the current password for the database instance owner.

j. Click **Next** to continue.

11. The Select Destination Directory dialog opens. Specify the directory where you will install WebSphere Application Server. You can either accept the default destination directory or specify a different one by typing the full path name or by clicking Browse. Note that if you've selected IBM HTTP Server for installation, you cannot modify the destination directory. Click **Next** to continue.

12. The Install Options Selected dialog box opens. Verify that the information is correct and click **Install** to complete the installation.

> **Note:** The WebSphere Application Server install program may incorrectly state that the database type is DB2 rather than Oracle. Please disregard this statement; the installation will proceed correctly if you selected Oracle when prompted for your database type during the install.

13. The Location of Configuration files dialog box opens and prompts you to enter the full path name to the specified Web server configuration file:

```
/opt/IBMHTTPD/conf/httpd.conf
```

Important:

Before entering this information, open another command window and type the following commands:

```
cd /opt/IBMHTTPD/conf
mv httpd.conf httpd.conf.orig
cp httpd.conf.sample httpd.conf
```

Click **Next**.

14. The Setup Complete dialog box opens. To view the ReadMe file, ensure that Yes, I want to view the ReadMe File is selected and click **Finish**; the ReadMe file is displayed in a default browser window.

15. Unmount the CD by typing,

    ```
    cd /
    umount CDROM_dir
    ```

    where *CDROM_dir* is the directory that you specified as your mounted CD.
16. Remove the WebSphere Application Server, Advanced Edition CD.
17. Restart IBM HTTP Server by running the following command:

    ```
    /opt/IBMHTTPD/bin/apachectl restart
    ```
18. Start a browser and enter the name of the local machine as the URL. If you see the IBM HTTP Server Web page, the server is installed and configured correctly.

Create a password for IBM HTTP Server Administrator

The Administration Server is installed with Authentication enabled for the directory containing all configuration forms. This means that after installation, the Administration Server will not service a page without a user ID and Password. This is done to protect the IBM HTTP Server Configuration file from unauthorized access immediately after successful installation of the IBM HTTP Server and the Administration Server. At installation, the password file (`admin.passwd`) is "empty", therefore until you supply a user ID and password in the Administration Server Password file (`admin.passwd`), you will not have access to the IBM HTTP Server Configuration pages through the Administration Server.

To create a user ID and password for IBM HTTP Server 1.3.19.1, perform the following steps:

1. Type `cd /opt/IBMHTTPD/bin`.
2. Type `./htpasswd –m ../conf/admin.passwd user_ID`.
3. You will be prompted to supply a password, and then to verify this password.

This will be the user ID and Password that will allow access to the Administration Server Configuration GUI. This user ID should be unique for access to the Administration Server.

Set up IBM HTTP Server administration server

You have to run a setup script for IBM HTTP Server which creates a user ID and group, and changes the permissions for various configuration files. To set up the IBM HTTP Server administration server, perform the following steps:

1. Change to the HTTP Server directory by typing `cd /opt/IBMHTTPD/bin`.
2. Run `./setupadm`.
3. Answer the prompts as follows:

a. Supply a user ID to run the Administration Server (the user ID will be created using the System Administration tools). Enter the user ID (which can not be the same as the logon ID). Click **Enter**.

b. Supply a Group Name to run the Administration Server (the Group will be created using the System Administration tools). Enter a group name and click **Enter**.

c. You are prompted to supply the directory containing the files for which a change in the permissions is necessary. The default is `/opt/IBMHTTPD/conf`. Either accept the default or enter the path to your IBM HTTP Server configuration files.

d. You are prompted to perform changes (enter 1), or Quit with no changes (Enter 2). Enter 1 to make the changes.

e. You are prompted to update the Administration Server Configuration file. Continue (enter 1) or exit (enter 2). Enter 1 to make the update.

f. You may be asked if you want to run the administrative server and the IBM HTTP Server in a language other than English. If yes enter 1, or exit (enter 2). If you choose to use another language, you will be prompted to select that language.

4. The updates are performed and you can exit the setupadm program.

Installing WebSphere Application Server for use with an alternate or remote Web server

To install WebSphere Application Server if your IBM HTTP Server is remote from the WebSphere Application Server and WebSphere Commerce, or if you are using Domino Web Server or iPlanet Web Server, do the following:

1. Ensure you are logged in as user ID `root`.

2. Mount the WebSphere Application Server, Advanced Edition CD after inserting the CD in the CD-ROM drive of machine. To do this, type the following command in a terminal window:

   ```
   mount CDROM_dir
   ```

   where *CDROM_dir* is the directory that you specified as the mount point when allocating a CD file system.

3. On a command line, switch to the install directory on the CD-ROM by typing:

   ```
   cd /CDROM_dir/sun
   ```

   where *CDROM_dir* is the directory on which your CD-ROM is mounted.

4. Type the following command to start the installation program:

   ```
   ./install.sh
   ```

5. The Welcome to the IBM WebSphere Application Server Setup program dialog box opens. Click **Next** to continue.

6. The Prerequisites Check window opens. Ensure that you have the correct prerequisites to install WebSphere Application Server and click **OK**.

7. The Install Options dialog box opens. Select **Custom Installation**, and click **Next**.

8. The Choose Application Server Components panel displays. Select the following packages:

   - Server
   - Admin
   - Samples
   - Application Assembly and Deployment Tools

   When all packages have been selected, click **Next**.

9. The Database Options dialog opens. Complete the following set of instructions:

   a. In the Database Type field, select Oracle from the pull-down menu.

   b. If your database is on a separate machine from WebSphere Application Server, ensure that Remote DB is selected.

   c. In the Database Name (Database SID) field, type the name of the WebSphere Application Server database that you created in "Creating a database for WebSphere Application Server, WebSphere Commerce, and WebSphere Payment Manager" on page 28. For example: `was_SID`

   d. In the DB Home field, type the value of the ORACLE_HOME environment variable. This path should be the full path name of the directory you created to contain the Oracle software and to be the home directory of the user named oracle. Alternately, specify the full path name of the directory by using the Browse button.

   e. In the DB URL field, accept the default value:

      `jdbc:oracle:thin:@host_name:port_number:database_name`

      or specify a different URL for accessing the database. If your database is on a different machine from WebSphere Application Server, enter the fully qualified host name of your database server.

   f. In the Server Name field, type the fully qualified host name of the machine on which the database is installed. This should be reflected in the DB URL field.

   g. In the Port Number field, type the port number used to access the database.

   h. In the Database User ID field, type the name of the database instance owner: `EJSADMIN`.

   i. In the Database Password field, type the current password for the database instance owner.

   j. Click **Next** to continue.

10. The Select Destination Directory dialog opens. Specify the directory where you will install WebSphere Application Server. You can either accept the default destination directory or specify a different one by typing the full path name or by clicking **Browse**. Note that if you've selected IBM HTTP Server for installation, you cannot modify the destination directory. Click **Next** to continue.

11. The Install Options Selected dialog box opens. Verify that the information is correct and click **Install** to complete the installation.

    Note: The WebSphere Application Server install program may incorrectly state that the database type is DB2 rather than Oracle. Please disregard this statement; the installation will proceed correctly if you selected Oracle when prompted for your database type during the install.

12. The Setup Complete dialog box opens. To view the ReadMe file, ensure that Yes, I want to view the ReadMe File is selected and click **Finish**; the ReadMe file is displayed in a default browser window.

13. Unmount the CD by typing,

    ```
    cd /
    umount CDROM_dir
    ```

    where *CDROM_dir* is the directory that you specified as your mounted CD.

14. Remove the WebSphere Application Server, Advanced Edition CD.

Complete the WebSphere Application Server configuration

WebSphere Application Server configuration for Oracle8i Database users

If you are using an Oracle database, some manual configuration steps are required to ensure that WebSphere Application Server has full functionality within WebSphere Commerce. Before starting these steps you will need to know the fully qualified path of your Oracle home directory. For example, /opt/oracle/u01/app/oracle/product/8.1.7.

To complete the manual configuration of WebSphere Application Server do the following:

1. Log in as root.
2. Change to the WebSphere Application Server bin directory by executing the following command in a terminal window:

   ```
   cd /opt/WebSphere/AppServer/bin
   ```

3. Copy startupServer.sh to startupServer.sh.orig.
4. Open startupServer.sh in a text editor.

5. Locate the following section of text (some lines may be formatted for readability):

```
if [ "${DB_TYPE}" != "DB2" ]
then
{
 LD_LIBRARY_PATH=$WAS_HOME/lib/odbc/lib:$WAS_HOME/bin:$WAS_HOME/lib:
   $JAVA_HOME/lib:$DB_INSTANCE_HOME/lib:$LD_LIBRARY_PATH
 export LD_LIBRARY_PATH

 ${JAVA_EXE?} \
  -classpath $WAS_HOME/lib/bootstrap.jar:$CLASSPATH \
  -Dws.ext.dirs=$WAS_EXT_DIRS \
  -Djavax.rmi.CORBA.UtilClass=com.ibm.CORBA.iiop.Util \
  -Dcom.ibm.CORBA.iiop.noLocalCopies=true \
  -DDER_DRIVER_PATH=$DER_DRIVER_PATH \
  -Dserver.root=$WAS_HOME \
  -Xbootclasspath/a:$JAVA_HOME/jre/lib/ext/ibmorb.jar \
  com.ibm.ws.bootstrap.WSLauncher \
  com.ibm.ejs.sm.util.process.Nanny $WAS_HOME/bin/admin.config
}
```

Change this section as shown below. New parts are indicated with bold text.

```
if [ "${DB_TYPE}" != "DB2" ]
then
{
  ORACLE_HOME=$DB_INSTANCE_HOME
  export ORACLE_HOME
 LD_LIBRARY_PATH=$WAS_HOME/lib/odbc/lib:$WAS_HOME/bin:$WAS_HOME/lib:
   $JAVA_HOME/lib:$DB_INSTANCE_HOME/lib:$LD_LIBRARY_PATH
 export LD_LIBRARY_PATH
 NLS_LANG=LANGUAGE_TERRITORY.UTF8
 export NLS_LANG
 ${JAVA_EXE?} \
  -classpath $WAS_HOME/lib/bootstrap.jar:$CLASSPATH \
  -Dws.ext.dirs=$WAS_EXT_DIRS \
  -Djavax.rmi.CORBA.UtilClass=com.ibm.CORBA.iiop.Util \
  -Dcom.ibm.CORBA.iiop.noLocalCopies=true \
  -DDER_DRIVER_PATH=$DER_DRIVER_PATH \
  -Dserver.root=$WAS_HOME \
  -Xbootclasspath/a:$JAVA_HOME/jre/lib/ext/ibmorb.jar \
  com.ibm.ws.bootstrap.WSLauncher \
  com.ibm.ejs.sm.util.process.Nanny $WAS_HOME/bin/admin.config
}
```

where *LANGUAGE_TERRITORY* is your language and territory as selected from the following list:

- AMERICAN_AMERICA
- BRAZILIAN PORTUGUESE_BRAZIL
- FRENCH_FRANCE
- GERMAN_GERMANY

- ITALIAN_ITALY
- JAPANESE_JAPAN
- KOREAN_KOREA
- SIMPLIFIED CHINESE_CHINA
- SPANISH_SPAIN
- TRADITIONAL CHINESE_TAIWAN

This value should match the `NLS_LANG` value in the Oracle user's `.profile`.

6. Save your changes and exit the text editor.

Installing the WebSphere Application Server eFixes and FixPak

If you are installing your Web server, WebSphere Application Server and WebSphere Commerce on the same machine, you do not need to complete the steps in this section.

If your Web server is on a remote machine, you must complete the steps in this section on your WebSphere Application Server machine.

Complete the following steps:

1. Ensure that WebSphere Application Server is stopped. To stop WebSphere Application Server, do the following:

   a. Start the WebSphere Application Server Administration Console by entering the following in a terminal window:
   ```
   export DISPLAY=fully_qualified_host_name:0.0
   cd /opt/WebSphere/AppServer/bin
   ./adminclient.sh
   ```

   b. In the WebSphere Application Server Administration Console, select the node with your short host name.

   c. Click the stop button. You will get a warning message similar to the following:

   You are trying to stop the node that the console is connected to. This will cause the console to exit after the node is stopped. Do you want to continue?

   Click **Yes** to continue.

   d. After the WebSphere Application Server Administration Console, confirm that all WebSphere Application Server–related processes have stopped by issuing the following command in a terminal window:
   ```
   ps -ef | grep AppServer | grep -v grep
   ```

   e. If this command returns any Java processes, stop them by issuing a kill command.

2. Ensure that all WebSphere Application Server eFixes that have been previously installed are removed.

3. If necessary, mount the WebSphere Commerce Disk 2 CD. To do this, type

   mount *CDROM_dir*

   where *CDROM_dir* is the directory that you want to specify as your mounted CD.
4. Go to the `Software_Patches` directory of the CD, and run the following commands:

   ```
   cp wc54wasefixunix.tar /tmp
   cd /tmp
   tar -xvf wc54wasefixunix.tar
   ./wc54wasefixunix.sh
   ```
5. When prompted for the source point of the eFix, enter the mount point for your CD.

To verify that the script upgraded your software with no errors, check the following error logs:

- `/tmp/wc54efixunix.log`
- `/opt/WebSphere/AppServer/eFix/PQ54291/Extractor.Log`
- `/opt/WebSphere/AppServer/eFix/PQ57814/Extractor.Log`
- `/opt/WebSphere/AppServer/eFix/PQ58443/Extractor.Log`

Upgrading your Sun JDK level

If you are installing your Web server, WebSphere Application Server and WebSphere Commerce on the same machine, you do not need to complete the steps in this section.

If your Web server is on a remote machine, you must complete the steps in this section.

Complete the following steps:

1. Ensure that WebSphere Application Server and all processes associated with your Web server are stopped.
2. If necessary, mount the WebSphere Commerce Disk 2 CD. To do this, type

   mount *CDROM_dir*

   where *CDROM_dir* is the directory that you want to specify as your mounted CD.
3. Go to the `Software_Patches` directory of the CD, and run the following commands:

   ```
   cp wc54jdkefixsun.sh /tmp
   cd /tmp
   ./wc54jdkefixsun.sh
   ```

Testing the installation

This section describes how to test the installation and configuration of your WebSphere Application Server system. These instructions assume that you have installed a supported Web server, database, and the WebSphere Application Server component.

Perform the following steps to test your WebSphere Application Server installation:

1. Ensure that you are logged into the machine with superuser (root) privileges.
2. Start the WebSphere administrative server by executing the startupServer script, as follows:

   ```
   cd /opt/WebSphere/AppServer/bin
   ./startupServer.sh &
   ```
3. Ensure that the administrative server has started successfully by checking the file named `tracefile` located in the `/opt/WebSphere/AppServer/logs` directory. The message `Server_adminServer open for e-business` appears in this file when the server has started successfully.
4. Start the Administrative Console by running the adminclient script, as follows:

   ```
   cd /opt/WebSphere/AppServer/bin
   ./adminclient.sh &
   ```
5. When the console displays the message `Console Ready`, administer the application server by performing the following steps:

   a. When the administrative console opens, a tree view is displayed. Click the plus sign (+) next to **WebSphere Administrative Domain** entry to expand the view.

   b. Expand the view of the **Nodes** entry.

   c. Identify the name of your host machine and expand the view of that entry.

   d. Expand the view of the **Application Servers** entry.

   e. Select the **Default Server** entry and click the **Start** icon located on the toolbar. An information window opens and indicates that the server has started. Click **OK** to close the information window.

   The default server will return to its previous state when you restart the WebSphere Application Server AdminServer; if it was stopped then it will remain stopped and if it was running then it will restart.

6. If your Web Server is installed on a different machine, copy `/opt/WebSphere/AppServer/config/plugin-cfg.xml` from the WebSphere Application Server machine to the Web Server machine.

   Important:

The default server is used for testing only. You can stop it or remove it after testing. It should never be left running on a production system, as it may pose a security hazard to your site.

7. Ensure that the Web server is running. If the Web server is not running, start it.

8. Start a browser and enter the URL for the snoop servlet, which is a sample servlet that is installed by default, as follows:

```
http://machine_name/servlet/snoop
```

Information about /servlet/snoop is displayed.

The next step

Now that you have installed WebSphere Application Server, you are ready to install WebSphere Commerce following the steps in Chapter 8, "Install WebSphere Commerce" on page 67.

Chapter 8. Install WebSphere Commerce

This chapter explains how to install WebSphere Commerce. To complete the steps in this chapter you will need the WebSphere Commerce Disk 1 CD and the WebSphere Commerce Disk 2 CD.

Important:

The following tasks must be completed before installing WebSphere Commerce 5.4:

- Ensure that you have installed:
  - A Web server
  - Oracle8i Database
  - WebSphere Application Server
  - Sun JDK
- It is strongly recommended that you run the Intallation and Configuration Checker at this time. This tool will ensure that you have the correct levels of software installed to support WebSphere Commerce. Download this tool from:

  The tool can be accessed and downloaded online from the following URL locations:

  ▶ Business

  `www.ibm.com/software/webservers/commerce/wc_be/support-tools.html`

  ▶ Professional

  `www.ibm.com/software/webservers/commerce/wc_pe/support-tools.html`

  Instructions for using the IC Checker are included with the downloaded package.

Installation procedures

To install WebSphere Commerce, do the following:

1. Log on as user ID `root`.
2. If necessary, mount the WebSphere Commerce Disk 1 CD.
3. From user ID `root`, start the administration tool by typing the following command:

   `/bin/admintool&`

4. From the **Browse** pull-down menu, select **Software**. The Admintool: Software window opens.

5. From the **Edit** pull-down menu, select **Add**. The Admintool: Set Source Media window opens.

6. If you have Volume Manager installed, select **CD with Volume Management** in the **Software Location** field. Then, in the **CD Path** field, type */cdrom_dir*/WebSphereCommerce, where *cdrom_dir* is the mount point for your CD-ROM driver. Click **OK**.

7. If you do not have Volume Manager installed, select **CD without Volume Management** in the **Software Location** field. In the **Mount Point** field, type */cdrom_dir*/WebSphereCommerce, where *cdrom_dir* is the mount point for your CD-ROM driver. Click **OK**.

8. Select the following from the list of packages:

   • WebSphere Commerce – runtime

   Note: WebSphere Commerce is *automatically* installed in /opt/WebSphere/CommerceServer, and is only supported in that directory.

9. Click **Add**. The Admintool: Add Software window opens to display a scrolling list of what is being installed.

10. When asked whether you want to proceed with the install of each package, respond y to each prompt.

11. When all packages are installed, press **Enter** and close all Admintool windows.

Installing the WebSphere Commerce documentation

To install the WebSphere Commerce documentation, complete the following steps:

1. Log on as user ID root.

2. If necessary, mount the WebSphere Commerce Disk 1 CD.

3. Copy the tarred and compressed documentation package from the CD to your system, and then uncompress and untar the package:

   Important:

   Copying this file to your system and uncompressing and untarring it will temporarily require approximately 1.2 GB of space; you can remove these files after the documenation is installed. Ensure that adequate space is available before beginning this task.

   ```
   cd cdrom_dir/WebSphereCommerce
   cp wcdocs.tar.Z /tmp
   cd /tmp
   uncompress wcdocs.tar.Z
   tar -xvf wcdocs.tar
   ```

where */tmp* is any directory on your system with at least 1.2 GB of space.

4. From user ID root, start the administration tool by typing the following command:

   /bin/admintool&

5. From the **Browse** pull-down menu, select **Software**. The Admintool: Software window opens.

6. From the **Edit** pull-down menu, select **Add**. The Admintool: Set Source Media window opens.

7. Select **Hard Disk** in the **Software Location** field. In the **Directory** field, type */tmp*. Click **OK**.

8. Select the following package:
   - WebSphere Commerce – docs

9. Click **Add**. The Admintool: Add Software window opens to display a scrolling list of what is being installed.

10. When asked whether you want to proceed with the install of each package, respond y to each prompt.

11. When all packages are installed, press **Enter** and close all Admintool windows.

12. Unmount and remove the WebSphere Commerce Disk 1 CD.

Upgrading your WebSphere Application Server and Sun JDK version

You should only complete the steps in this section if you have installed your Web server on the same machine as your WebSphere Commerce server. For all other installation scenarios these products have already been upgraded.

Complete the following steps:

1. If necessary, mount the WebSphere Commerce Disk 2 CD.

2. Ensure that WebSphere Application Server is stopped and all processes associated with your Web server are stopped.

3. Go to /opt/WebSphere/CommerceServer/bin

4. Type: ./wc54efixunix.sh

5. When prompted, enter the location of your CD drive.

6. When prompted, enter your WebSphere Application Server home directory (the default is /opt/WebSphere/AppServer).

7. Respond to the remaining prompts until the updates are complete.

To verify that the script upgraded your software with no errors, check the following error logs:

- /opt/WebSphere/CommerceServer/logs/wc54efixunix.log
- /opt/WebSphere/AppServer/eFix/PQ54291/Extractor.Log

- /opt/WebSphere/AppServer/eFix/PQ57814/Extractor.Log
- /opt/WebSphere/AppServer/eFix/PQ58443/Extractor.Log

The next step

Now that you have installed WebSphere Commerce, you are ready to install Payment Manager, as described in Chapter 9, "Install IBM WebSphere Payment Manager" on page 71.

Chapter 9. Install IBM WebSphere Payment Manager

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. To complete the steps in this chapter, you will need the IBM Payment Manager 3.1.2 CD.

For additional information on configuring Payment Manager, see the following:

- The *IBM WebSphere Payment Manager for Multiplatforms Install Guide, Version 3.1* on the Payment Manager CD.
- The*IBM WebSphere Payment Manager for Multiplatforms Administrator's Guide, Version 3.1* on the Payment Manager CD.
- Once you have completed your install, the WebSphere Commerce online help contains information on configuring Payment Manager to work with your WebSphere Commerce store.

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 72 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 listed below.

Software requirements

Payment Manager requires the following software to be installed:

1. A database product. IBM DB2 Universal Database 7.1.0.55 and Oracle8i Database are supported. You must have the database server or client installed on the machine where you are installing Payment Manager.
2. WebSphere Application Server 4.0.2
3. 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.

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/websphere/paymgr/support/index.html` and on the Payment Manager CD-ROM.
2. You should have created the Payment Manager database when you followed the steps in "Creating a user ID and tablespace for Payment Manager" on page 32. The Payment Manager database should be running.
3. Ensure that the WebSphere Application Server administration server is running at installation. Also, ensure WebSphere Application Server does not have an application server named `WebSphere Payment Manager` configured for another purpose. If so, rename or delete it.
4. If WebSphere Application Server security is enabled, disable it before installing Payment Manager or any payment cassettes. To check whether WebSphere Application Server security is enabled:
   a. Open the WebSphere Application Server Administration Console.
   b. From the Console menu, select **Console** and open the **Security Center** task.
   c. On the **General** tab, clear the **Enable Security** check box.

Install Payment Manager

To install IBM Payment Manager 3.1.2, do the following:

1. Log in as user ID `root`.
2. If necessary, mount the IBM Payment Manager 3.1.2 CD. To do this, type

   `mount CDROM_dir`

   where *CDROM_dir* is the directory that you want to specify as your mounted CD.
3. Run the `Install` command to launch the Payment Manager install program:

   `./Install`
4. On the Payment Manager Install screen, click **Next**.
5. Review the license agreement and if you agree to the terms, accept the agreement.
6. Accept the default destination directory or enter another directory.
7. If the installation program can not determine which Sun JDK that WebSphere Application Server is using, you will be asked to enter the location of the Sun JDK directory. If the location displayed is correct, click **Next**. If not, enter the correct location and click **Next**.
8. Select which database you will use with Payment Manager: **DB2 Universal Database** or **Oracle8i Database**, and click **Next**.

9. You will be prompted for the following:

- The Oracle JDBC Driver Classname. The default is
  `oracle.jdbc.driver.OracleDriver`
- The location of the JDBC classes. The default location for the JDBC
  classes is *Oracle_home*`/jdbc/lib/classes12.zip`
- The location of the JDBC shared library path. The default location for
  the JDBC shared library path is *Oracle_home*`/jdbc/lib`

where *Oracle_home* is your Oracle home directory. For example,
`/opt/oracle/u01/app/oracle/product/8.1.7`

10. When prompted for the name of the database , specify the database you
    created for use with Payment Manager. The database may be the same
    database as you are using as your WebSphere Commerce database or it
    may be a separate database.

11. On the Payment Manager Database Access Information screen, enter the
    appropriate values:

- Database owner user ID (see step "Creating a user ID and tablespace
  for Payment Manager" on page 32)
- Database administrator's user ID
- Database administrator's password
- Oracle System Identifier (SID) for the Payment Manager database
- Database Hostname (fully qualified)
- Database Service TCP Port

12. On the Payment Manager WebSphere Configuration Information screen,
    accept the default node name if it is correct for your machine, or enter
    the short host name if necessary. The node name should be the same as
    what is listed in the WebSphere Application Server Administration
    Console for node name of your machine.

13. 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.

14. You are asked if you want to read the ReadMe file. Select **Yes** and click
    Next.

15. Unmount the CD by typing the following:

```
cd /
umount CDROM_dir
```

where *CDROM_dir* is the directory that you specified as your mounted
CD.

16. Remove the IBM Payment Manager 3.1.2 CD.

CustomOffline and OfflineCard are installed automatically with Payment Manager; OfflineCard is configured automatically if Payment Manager is installed on the same machine as WebSphere Commerce. These cassettes can be used for testing, but cannot process online transactions.

The Payment Manager SET Cassette 3.1.2, Payment Manager Cassette for BankServACH 3.1.2, Payment Manager Cassette for VisaNet 3.1.2, and Payment Manager Cassette for CyberCash 3.1.2 are online transaction processing cassettes included with WebSphere Commerce 5.4, but are not installed by default. Before you open your site for production, you need to install the payment cassette, or cassettes, that you will be using to process online trasactions. For information on installing payment cassettes, refer to the cassette-specific supplement for the cassette you are installing. For details on where these documents can be found, refer to "Payment Manager information" on page 198. Note that before you install the cassettes, WebSphere Application Server should be running and the Payment Manager Application server should be stopped.

Configuring Payment Manager on a remote machine

When you install Payment Manager on a system with WebSphere Commerce, the WCSRealm class is automatically configured for your system. If you are installing Payment Manager on remote machine, then the PSDefaultRealm will be provided as the supporting default realm.

To use WCSRealm on a remote machine where Payment Manager is installed, you must manually configure Payment Manager through the WebSphere Application Server Administration Console. Do the following:

1. Open the WebSphere Application Server Administration Console on the Payment Manager machine.
2. Ensure the WebSphere Commerce application server is running.
3. Stop the Payment Manager aplication server:
    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 Payment Manager application server.
4. After the Payment Manager application server has stopped. Select the **JVM Settings** tab. 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**

5. If the Payment Manager system is enabled for SSL, add `*.443` entries to the default_host window in the WebSphere Application Server Administration Console as described in "Add port host aliases to WebSphere Application Server" on page 177.

   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.

6. Open the `WCSRealm.properties` file from your Payment Manager directory. This file contains definitions for the `WCSHostName` and `WCSWebPath`. For `WCSHostName`, enter the fully-qualified host name of the remote machine where WebSphere Commerce is installed. (The default is the host name of the system where Payment Manager is installed.) You do not have to change the property for the `WCSWebPath`.

7. Restart the Payment Manager application server from the WebSphere Application Server Administration Console.

The next step

Now that you have installed IBM Payment Manager 3.1.2, you can:

- Create a WebSphere Commerce instance by following the instructions in Part 5, "Configure a WebSphere Commerce instance" on page 77.

Part 5. Configure a WebSphere Commerce instance

Once you have installed all the required software and any optional software packages that you want to use, you can create a WebSphere Commerce instance. This instance can be created through the Configuration Manager.

This section contains the following chapters:
* Chapter 10, "Pre-configuration steps" on page 79
* Chapter 11, "Creating or modifying an instance with Configuration Manager" on page 83
* Chapter 12, "Post-Configuration Steps" on page 111

All users must complete the applicable steps in Chapter 10, "Pre-configuration steps" on page 79 and Chapter 12, "Post-Configuration Steps" on page 111, as well as Chapter 11, "Creating or modifying an instance with Configuration Manager" on page 83 in order to successfully create a WebSphere Commerce instance.

Chapter 10. 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:

- Running the `wcpostinstall.sh` script.
- Pre-configuration steps for Oracle (all Oracle database users)
- Modifying your file permissions to work with Domino Web Server
- Starting the WebSphere Application Server (all users)

Running the postinstall script

After you have installed WebSphere Commerce and all its required components, you must run the post install script. This will create the user ID `wasuser` that will allow you to run WebSphere Application Server, Payment Manager and WebSphere Commerce as a non-root user. To run the script complete the following steps:

1. Ensure that WebSphere Application Server is stopped and all processes associated with your Web server are stopped.
2. Go to `/opt/WebSphere/CommerceServer/bin`

   `cd /opt/WebSphere/CommerceServer/bin`
3. Type: `./wcpostinstall.sh`
4. Follow the onscreen prompts, ensuring that you select `yes` when asked if you want to run as a non-root user.

   Notes:
   a. If you choose to use an existing user rather than creating a new user, the home directory for this user must be `/export/home`.
   b. It is strongly suggested that you accept the default group and user names, and the default port number suggested by the `wcpostinstall.sh` script. If you choose different names and port numbers you must remember to substitute those names throughout the documentation.
   c. Group or user names must meet the following guidelines:
      - No more than eight characters
      - No special characters (alphanumeric characters only)
      - All lower case

Once you have run this script, you may have to specify the port number specified in this script when launching certain tools or starting and stopping certain applications. Details on this are included when these tasks are described in this book.

Updating the root user and wasuser profiles

After running the postinstall script, you must update the .profile files for both root and wasuser by adding the following information:

```
PATH=$PATH:/usr/ucb
export PATH
```

If you do not add this information WebSphere Commerce Configuration Manager may not start.

Pre-Configuration steps for Oracle8i Database

Before you begin

Before you complete the pre-configuration steps for Oracle8i Database, you should know the following things about your Oracle8i Database installation:

- Oracle8i Database home directory. For example, /opt/oracle/u01/app/oracle/product/8.1.7
- Oracle8i Database System Identifier (SID) for your WebSphere Commerce database. For example, o817

Refer to your Oracle8i Database documentation for instructions on where to find this information.

Set Oracle8i Database Environment Variables in `setenv.sh`

If you use Oracle8i Database as your database, you must make the following changes before configuring your WebSphere Commerce instance:

1. Log in as root.
2. Change to the WebSphere Commerce bin directory by entering the following command in a terminal window:

   ```
   cd /opt/WebSphere/CommerceServer/bin
   ```
3. Open setenv.sh in a text editor.
4. Search for the ORACLE_HOME line, and replace it with the following:

   ```
   export ORACLE_HOME=Oracle_home_directory
   ```

   where *Oracle_home_directory* is the home directory for your Oracle installation. For example, /opt/oracle/u01/app/oracle/product/8.1.7
5. Ensure that the following lines exist at the end of the file:

```
export NLS_LANG=LANGUAGE_LOCALE.UTF8
CLASSPATH=$ORACLE_HOME/jdbc/lib/classes12.zip:$CLASSPATH
CLASSPATH=$ORACLE_HOME/jdbc/lib/nls_charset12.zip:$CLASSPATH
export CLASSPATH
```

If they are missing, add them. The locale value must be one of the supported locales as listed in "Locales used by WebSphere Commerce" on page 15.

Modifying your file permissions to work with Domino Web Server

If you are using Domino Web Server, you need to modify the file permissions as listed below to prevent security exposures. These steps should be performed on your WebSphere Commerce machine:

1. In a command window, type /bin/admintool &
2. Select **Browse** → **Groups**. Select wasgroup from the list. Select **Edit** → **Modify**, and remove the Domino Web server user (the default is notes) from the Members list.
3. Go to the /opt/WebSphere/AppServer/logs directory, and run the following command: chmod 646 native.log
4. Go to the /opt/WebSphere directory, and run the following command: chmod 755 CommerceServer
5. If Domino Web Server is installed on the same machine as WebSphere Application Server, go to the directory, and run the following command: chmod 755 libwccache.so If Domino Web Server is installed remotely from WebSphere Application Server, this will be done in the Post-Configuration chapter.
6. Go to the /opt/WebSphere/AppServer/bin directory, and run the following command: chmod 755 libdomino5_http.so

Starting the WebSphere Application Server

To start WebSphere Application Server, type the following while logged in as user ID wasuser that was created in "Running the postinstall script" on page 79, and do the following

1. Ensure that your database server is running.
2. Ensure that your Web server is running.
3. Enter the following the commands in terminal window:

```
su - wasuser
DISPLAY=fully_qualified_host_name :0.0
export DISPLAY
cd /opt/WebSphere/AppServer/bin
./startupServer.sh &
```

where `fully_qualified_host_name` is either the hostname or the TCP/IP address of the workstation that you are currently using.

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 11, "Creating or modifying an instance with Configuration Manager" on page 83

Chapter 11. 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 10, "Pre-configuration steps" on page 79, 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 9, "Install IBM WebSphere Payment Manager" on page 71.

2. If you have made any customizations to the XMLConfig file normally located in the `/opt/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

- Your system must be using a supported locale as described in "Locales used by WebSphere Commerce" on page 15.
- You must be running the Korn shell.
- 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 WebSphere Application Server has been started.

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

Launching the Configuration Manager

To start the Configuration Manager, complete the following steps:

1. Open a terminal window.

2. Ensure that you are logged on as the WebSphere Application Server user created in "Running the postinstall script" on page 79:

   ```
   su - wasuser
   ```

3. Export your display, even if you are working on the WebSphere Commerce machine:

   ```
   export DISPLAY=fully_qualified_host_name:0.0
   ```

   If your system replies with `Can not open DISPLAY=`, run the following command on your WebSphere Commerce machine:

   ```
   xhost +host_name
   ```

   where *host_name* is the fully qualified host name of the machine from which you want to access the Configuration Manager.

4. Issue the following commands:

   ```
   cd /opt/WebSphere/CommerceServer/bin
   ./config_server.sh
   ```

   Notes:

   a. Do not close the terminal window you entered the `config_server.sh` command in or the Configuration Manager server will stop.

   b. Do not run the Configuration Manager server as a background process – this is a potential security risk.

5. Wait for the following message: `Registry created. CMServer bound in registry.`

6. Open another terminal window.

7. Ensure that you are logged on as the WebSphere Application Server user created in "Running the postinstall script" on page 79:

   ```
   su - wasuser
   ```

8. Export your display, even if you are working on the WebSphere Commerce machine:

   ```
   export DISPLAY=fully_qualified_hostname:0.0
   ```

9. Issue the following commands:

   ```
   cd /opt/WebSphere/CommerceServer/bin
   ./config_client.sh &
   ```

10. A window displays and you will be prompted to enter the Configuration Manager user ID and password. The default Configuration Manager user ID is webadmin, and the default password is webibm.

11. You will be asked to change your password the first time you log in.

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 /opt/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 /opt/WebSphere/CommerceServer/xml/mapping/urlmapper.xml

Database

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

For Oracle, enter the WebSphere Commerce Global Database name
that you defined during your Oracle installation (for example, o817).

Oracle SID

Enter the SID of the database you created for use by WebSphere
Commerce server in section "Creating a database for WebSphere
Application Server, WebSphere Commerce, and WebSphere Payment
Manager" on page 28.

Database type

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

Oracle instance user ID

Enter the system ID of the user who issues Oracle commands.

Database user name

For Oracle, use the Oracle user ID you created on Chapter 3,
"Installing and configuring Oracle8i Database" on page 27.

Database user password

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

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 197 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 Oracle is 1521.

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.

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, as specified in "Running the postinstall script" on page 79. The default is 2222.

JDBC Driver Location

. Enter the location of the JDBC file (called `classes12.zip`).

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
`/opt/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
/opt/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
/opt/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.

You are asked if you want to populate the Oracle database. Select **Yes** if you want your database to be populated, or **No** if you do not want your database to be populated.

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.

Verifying the instance creation

To verify that the instance has been properly created, check the following files:
- /opt/WebSphere/CommerceServer/instances/*instance_name*/xml/ *instance_name.xml*. This file contains all of the configuration information about your WebSphere Commerce instance.
- /opt/WebSphere/CommerceServer/instances/*instance_name*/logs/ createdb.log. This file contains information about the WebSphere Commerce database creation.
- /opt/WebSphere/CommerceServer/instances/*instance_name*/logs/ populatedb.log. This file contains information about the WebSphere Commerce database population process .
- /opt/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.
- /opt/WebSphere/CommerceServer/instances/*instance_name*/logs/ sec_check.log. This file contains information about potential security exposures.
- /opt/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.
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.

Oracle instance userid
This field is only enabled if you select Oracle as your database. Enter the system ID of the user who issues Oracle commands.

Database user name

Enter the user name for this database. If you are using Oracle as your database management system, enter the user name that you created when installing your database.

Database user password

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

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 Oracle is 1521.

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. Enter the port address that WebSphere Application Server is listening on, as specified in "Running the postinstall script" on page 79. The default is 2222. 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 JDBC file (called classes12.zip).

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. .

> **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:

`/opt/WebSphere/CommerceServer/instances/`*`instance_name`*

Merchant Key

This is the 16-digit hexadecimal number for the Configuration Manager to use as the encryption key. The Merchant Key must have at least one alphanumeric character (a to f) and at least one numeric character (0 to 9). Any alphanumeric character must be entered in lower case letters, and you cannot have the same character entered more than four times in a row. After you have created a store you must *not* change this key. **You *must* enter your own key in the Merchant Key field – even if a default key is already entered in the field.** Ensure that the key that you enter will be sufficient to protect your site, especially for a production server.

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:`/opt/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
`/opt/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.

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 `/opt/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 /opt/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
`/opt/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: `/opt/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 12, "Post-Configuration Steps" on page 111 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 12. Post-Configuration Steps

This chapter contains all the steps that you may need to complete in order to finish your WebSphere Commerce configuration. It is divided into two sections: one for configurations where the Web server is on the same machine as WebSphere Commerce, and one for configurations where the Web server is remote from WebSphere Commerce. Complete all the appropriate steps in the section that matches your configuration.

Post-configuration steps for a local Web server

The following tasks are described in this section:
- Completing your iPlanet Web Server configuration
- Completing your Domino Web Server configuration
- Enabling SSL for testing (all users)
- Configuring Payment Manager to work with WebSphere Commerce (all users)
- Completing a remote Oracle installation (if the Oracle database server is remote from WebSphere Commerce)
- Compiling the JavaServer Pages files (all users)

Completing your iPlanet Web Server configuration

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).

Completing your Domino Web Server configuration

If you are using Domino Web Server you must create aliases by completing the following steps using the Domino Administrator:

1. From the left panel, select **All Server Document**.
2. Select the *server_name*.
3. Click the **Web Server Configuration** button.
4. Select **Create URL Mapping/Redirection**.
5. Select the **Basics** tab
6. Select the **URL → Redirection URL** option from the **What do you want to setup** drop down box.
7. 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 1 to 7 for each alias you want to create.

Table 2.

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

In order to complete the configuration of Domino Web Server, complete the following steps in the Domino Administrator:

1. From the left panel, select **All Server Document**.
2. Select the *server_name*.
3. Click the **Web Server Configuration** button.

4. Select **Create URL Redirection/Mapping**.
5. Click the **Basics** tab.
6. Select **URL → Directory** from the **What do you want to set up** drop down box.
7. 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 3.

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

8. Select **Web → Web Server Configuration** in the left hand window.
9. Expanding *server_name* → **Domino Server** will list the aliases that have been added.
10. You must now restart Domino Web Server to apply your changes.

Create a security key file for testing

The security key file that you build in this section will *not* prevent shopper transactions from being viewed by unauthorized individuals, but it is required to create a store. Before you open your store to customers, follow the instructions in Chapter 14, "Enabling SSL for production with IBM HTTP Server" on page 139.

This section describes how to create a key file with IBM HTTP Server. If you are using another Web server refer to its documentation to determine how to enable SSL.

To create a security key file for testing, do the following:

1. Stop the IBM HTTP Server as described in "Starting and stopping IBM HTTP Server" on page 168.
2. Export JAVA_HOME by running the following commands:
   ```
   DISPLAY=host_name:0.0
   export DISPLAY
   JAVA_HOME=/opt/WebSphere/AppServer/java131
   export JAVA_HOME
   ```

   Where *host_name* is either the hostname or the TCP/IP address of your X Server workstation..
3. Open the Key Management Utility by typing:
   ```
   ikeyman
   ```
4. In the **IBM Key Management** window, click the **Key Database File** menu, and select **New**.
5. Enter the file name (keyfile.kdb) and the file location (/opt/IBMHTTPD/ssl) in the **New** window of IBM Key Management. Click **OK**.
6. The **Password Prompt** window appears.
7. Enter and confirm your IBM HTTP Server password, and enable **Stash the password to a file**. Click **OK**.
8. Click the **Create** menu, and select **New Self-Signed Certificate**.
9. On the window that appears, fill in all fields not listed as optional. Click **OK** and close the IBM Key Management utility.
10. Start the IBM HTTP Server as described in "Starting and stopping IBM HTTP Server" on page 168.

To test the key you have created, go to the following URL:
```
https://host_name.domain.com
```

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:
   ```
   su – wasuser
   export DISPLAY=fully_qualified_host_name:0.0
   cd /opt/WebSphere/AppServer/bin
   ./adminclient.sh host_name port_number
   ```

   Where *host_name* is the fully-qualified name of the machine you are using and *port_number* is the port through which you are accessing WebSphere Application Server as specified in "Running the postinstall script" on page 79. The default is 2222.
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. Regenerate the Web server plug-in:

   a. From a command line, go to the following directory:

      `/opt/WebSphere/AppServer/bin`

   b. Run the following command:

      `./GenPluginCfg.sh -adminNodeName` *node_name* `-nameServicePort` *port_number*

      Where *node_name* is the short logical name of the node and *port_number*
      is the port through which you are accessing WebSphere Application
      Server as specified in "Running the postinstall script" on page 79. (By
      default, the postinstall script uses port 2222.) .

4. Stop the WebSphere Application Server. To stop the WebSphere
   Application Server, follow the directions in "Starting and stopping
   WebSphere Application Server" on page 167.

   Note: Step 4 to 6 are only required if Payment Manager is installed on the
   same machine as WebSphere Commerce.

5. Open the following file in a text editor:

   `/opt/WebSphere/AppServer/config/plugin-cfg.xml`

6. Add the following line directly below `<Config>` in the `plugin-cfg.xml` file:

   ```
   <Property Name="CacheLibrary" value="/opt/WebSphere/CommerceServer/bin/
       libwccache.so" />
   ```

7. Stop and restart your Web server. If you are using IBM HTTP Server refer
   to "Starting and stopping IBM HTTP Server" on page 168for additional
   information.

8. Start the WebSphere Application Server. To start the WebSphere
   Application Server, do the following:

   ```
   su – wasuser
   export DISPLAY=fully_qualified_host_name:0.0
   cd /opt/WebSphere/AppServer/bin
   ./startupServer.sh
   ```

Configuration for Oracle on a separate machine

If you are running your Oracle8i Database server on a separate machine from WebSphere Commerce, complete the following steps:

1. On your WebSphere Commerce machine, go to the following directory:

   `/opt/WebSphere/CommerceServer/instances/`*instance_name*`/xml`

2. Open *instance_name*`.xml` in a text editor.

3. Ensure that `JDBCDriverLocation` in the `Websphere` section (which can be found in the `InstanceProperties` section) is set to the path to the Oracle JDBC driver: `$ORACLE_HOME/jdbc/lib/classes12.zip`

4. In the WebSphere Application Server Administrative Console, expand **Resources → JDBC Provider → WebSphere Commerce Oracle JDBC Driver** *instance_name*. Click Data Sources and change the URL property (in the Custom Properties table) to use the host name of the machine where your Oracle server is located. Click **Apply**.

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. Ensure that you are logged in as `wasuser`.

2. From a command prompt, switch to `/opt/WebSphere/CommerceServer/bin`.

3. Run the following command:

   Note: If your *enterpriseApp*, *webModule,* or *nameServerHost* names contain any spaces you **must** surround them with double quotation marks, as shown below.

   ```
   ./WCSJspBatchCompiler.sh -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 port specified in "Running the postinstall script" on page 79 (the default is 2222).

Several errors may be logged when you perform these compiles. These may be safely ignored.

Post-configuration steps for a remote Web server

The following tasks are described in this section:
- Enabling SSL for testing (all users)
- Completing the IBM HTTP Server installation (all IBM HTTP Server users)
- Completing your Domino Web Server configuration
- Remote iPlanet Web Server configuration (all iPlanet Web Server users)
- Completing the iPlanet Web Server configuration (all iPlanet Web Server users)
- Copying assets to your Web server (all users)
- Configuring Payment Manager to work with WebSphere Commerce (all users)
- Completing a remote Oracle installation (if the Oracle database server is remote from WebSphere Commerce)
- Compiling the JavaServer Pages files (all users)

Enabling SSL for testing

The security key file that you build in this section will *not* prevent shopper transactions from being viewed by unauthorized individuals, but it is required to create a store. Before you open your store to customers, follow the instructions in Chapter 14, "Enabling SSL for production with IBM HTTP Server" on page 139.

This section describes how to create a key file with IBM HTTP Server. If you are using another Web server refer to its documentation to determine how to enable SSL.

To create a security key file for testing, do the following:
1. Stop the IBM HTTP Server as described in "Starting and stopping IBM HTTP Server" on page 168.
2. If your IBM HTTP Server is installed remotely from WebSphere Application Server, modify your IBM HTTP Server configuration file by performing the following steps:
   a. Change directory to /opt/IBMHTTPD/conf.
   b. Create a backup copy of httpd.conf.
   c. Open httpd.conf in a text editor.
   d. Uncomment the following lines:
      1) #LoadModule ibm_ssl_module libexec/mod_ibm_ssl_*encryption-level*.so, where *encryption-level* is the appropriate level of encryption for your locale.
      2) #AddModule mod_ibm_ssl.c
      3) #Listen 443

4) #<VirtualHost host.some_domain.com:443>. You must also substitute your fully qualified host name in this line.

5) #SSLEnable

6) #</VirtualHost>

7) #SSLDisable

8) Keyfile "/opt/IBMHTTPD/keys/keyfile.kdb".

9) #SSLV2Timeout 100

10) #SSLV3Timeout 1000

   e. Save your changes.

3. Open the Key Management Utility by typing:

   ikeyman

4. In the **IBM Key Management** window, click the **Key Database File** menu, and select **New**.

5. Enter the file name (keyfile.kdb) and the file location (/opt/IBMHTTPD/keys) in the **New** window of IBM Key Management. Click **OK**.

6. The **Password Prompt** window appears.

7. Enter and confirm your IBM HTTP Server password, and enable **Stash the password to a file**. Click **OK**.

8. Click the **Create** menu, and select **New Self-Signed Certificate**.

9. On the window that appears, fill in all fields not listed as optional. Click **OK** and close the IBM Key Management utility.

10. Start the IBM HTTP Server as described in "Starting and stopping IBM HTTP Server" on page 168.

To test the key you have created, go to the following URL:

https://*host_name*.domain.com

Completing the IBM HTTP Server installation

If you are using IBM HTTP Server as your Web server on a separate machine from WebSphere Application Server, you must complete the steps in this section. In a 3-tier configuration, the httpd.conf file located on the Web server machine is not automatically configured. A sample file containing the aliases that you need (unixaliases.txt) is located on the WebSphere Commerce Disk 2 CD, in the Software_Patches directory. You must manually edit the httpd.conf file.

Stop the IBM HTTP Server, and create a backup of the /opt/IBMHTTPD/conf/httpd.conf file. Open the /opt/IBMHTTPD/conf/httpd.conf file and make the following changes, remembering to replace the:

• directories

- instance name
- language
- host name
- IP addresses

listed in the sample with the values for your system.

1. Replace:

```
<Directory>
Options FollowSymLinks
AllowOverride None
</Directory>
```

with:

```
########## IBM WebSphere Commerce ################
#Instance name : instance_name
<Directory "HTTP_dir/htdocs/en_US">
Options Indexes
AllowOverride None
order allow,deny
allow from all
</Directory>
<Directory WAS_dir/installedApps/WC_Enterprise_App_demo.ear/wctools.war>
<Files *.jsp>
order allow,deny
deny from all
</Files>
</Directory>
<Directory WAS_dir/installedApps/WC_Enterprise_App_demo.ear/wcstores.war>
<Files *.jsp>
order allow,deny
deny from all
</Files>
</Directory>
<Directory WAS_dir/installedApps/WC_Enterprise_App_demo.ear/wcwebeditor.war>
<Files *.jsp>
order allow,deny
deny from all
</Files>
</Directory>
```

2. 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, *WCS_dir*/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 "HTTP_dir/htdocs"
            Alias /wcsdoc      "WCS_dir/web/doc"
            Alias /wchelp      "WCS_dir/web/doc/en_US"
            Alias /storeservices "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
                /wctools.war/tools/devtools/storeservices.html"
            Alias /adminconsole   "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
                /wctools.war/tools/adminconsole/wcsadmincon.html"
            Alias /wcsstore      "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
              /wcstores.war"
            Alias /accelerator    "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
              /wctools.war/tools/common/accelerator.html"
            Alias /orgadminconsole "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
                /wcstores.war/tools/buyerconsole/wcsbuyercon.html"
            Alias /wcs        "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
              /wctools.war"
            Alias /webeditor     "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
              /wcwebeditor.war"
            </VirtualHost>
            <VirtualHost webserver_IP_address:443>
            SSLEnable
            SSLClientAuth 0
            ServerName fully_qualified_webserver_name
            DocumentRoot "HTTP_dir/htdocs"
            Alias /wcsdoc      "WCS_dir/web/doc"
            Alias /wchelp      "WCS_dir/web/doc/en_US"
            Alias /storeservices "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
                /wctools.war/tools/devtools/storeservices.html"
            Alias /adminconsole   "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
                /wctools.war/tools/adminconsole/wcsadmincon.html"
            Alias /wcsstore      "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
              /wcstores.war"
            Alias /accelerator    "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
              /wctools.war/tools/common/accelerator.html"
            Alias /orgadminconsole "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
                /wcstores.war/tools/buyerconsole/wcsbuyercon.html"
            Alias /wcs        "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
              /wctools.war"
            Alias /webeditor     "WAS_dir/installedApps/WC_Enterprise_App_demo.ear/
              wcwebeditor.war"
            </VirtualHost>
            <VirtualHost webserver_IP_address:8000>
            SSLEnable
            SSLClientAuth 0
            ServerName fully_qualified_webserver_name
            DocumentRoot "HTTP_dir/htdocs"
```

```
Alias /wcsdoc      "WCS_dir/web/doc"
Alias /wchelp      "WCS_dir/web/doc/en_US"
Alias /storeservices "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
    /wctools.war/tools/devtools/storeservices.html"
Alias /adminconsole  "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
    /wctools.war/tools/adminconsole/wcsadmincon.html"
Alias /wcsstore    "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
    /wcstores.war"
Alias /accelerator   "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
    /wctools.war/tools/common/accelerator.html"
Alias /orgadminconsole "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
    /wcstores.war/tools/buyerconsole/wcsbuyercon.html"
Alias /wcs         "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
    /wctools.war"
Alias /webeditor   "WAS_dir/installedApps/WC_Enterprise_App_demo.ear
    /wcwebeditor.war"
</VirtualHost>
########## End of IBM WebSphere Commerce ##########
```

Completing your Domino Web Server configuration

If you are using Domino Web Server you must create alias by completing the following steps in the Domino Administrator:

1. From the left panel, select **All Server Document**.
2. Select the *server_name*.
3. Click the **Web Server Configuration** button.
4. Select **Create URL Mapping/Redirection**.
5. Select the **Basics** tab
6. Select the **URL → Redirection URL** option from the **What do you want to setup** drop down box.
7. 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 1 to 7 for each alias you want to create.

Table 4.

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

Table 4. (continued)

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`

In order to complete the configuration of Domino Web Server, complete the following steps in the Domino Administrator:

1. From the left panel, select **All Server Document**.
2. Select the *server_name*.
3. Click the **Web Server Configuration** button.
4. Select **Create URL Redirection/Mapping**.
5. Click the **Basics** tab.
6. Select **URL → Directory** from the **What do you want to set up** drop down box.
7. 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 5.

Alias Name	Incoming URL	Target server directory

wcs	/wcs	`opt/WebSphere/AppServer/installedApps/`
		`WC_Enterprise_App_instance_name.ear/`
		`wctools.war`

wcsstore	/wcsstore	`opt/WebSphere/AppServer/installedApps/`
		`WC_Enterprise_App_instance_name.ear/`
		`wcstores.war`

webeditor	/webeditor	`opt/WebSphere/AppServer/installedApps/`
		`WC_Enterprise_App_instance_name.ear/`
		`wcwebeditor.war`

wcsdoc	/wcsdoc	`opt/WebSphere/CommerceServer/web/` `doc/locale`
wcshelp	/wcshelp	`opt/WebSphere/CommerceServer/web/` `doc/locale`

8. Select **Web → Web Server Configuration** in the left hand window.

9. Expanding *server_name* → **Domino Server** will list the aliases that have been added.

10. You must now restart Domino Web Server to apply your changes.

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 `/usr/netscape/server4/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="/wcs" dir="/opt/WebSphere/AppServer/installedApps
    /WC_Enterprise_App_demo.ear/wctools.war"
NameTrans fn="pfx2dir" from="/wcsdoc" dir="/opt/WebSphere/CommerceServer/web/doc"
NameTrans fn="pfx2dir" from="/wchelp" dir="/opt/WebSphere/CommerceServer/
    web/doc/en_US"
NameTrans fn="pfx2dir" from="/storeservices" dir="/opt/WebSphere/AppServer/
    installedApps/WC_Enterprise_App_demo.ear/wctools.war/tools/devtools
    /storeservices.html"
NameTrans fn="pfx2dir" from="/adminconsole" dir="/opt/WebSphere/AppServer/
    installedApps/WC_Enterprise_App_demo.ear/wctools.war/tools/adminconsole
    /wcsadmincon.html"
NameTrans fn="pfx2dir" from="/wcsstore" dir="/opt/WebSphere/AppServer
    /installedApps/WC_Enterprise_App_demo.ear/wcstores.war"
NameTrans fn="pfx2dir" from="/accelerator" dir="/opt/WebSphere/AppServer
    /installedApps/WC_Enterprise_App_demo.ear/wctools.war/tools/common
    /accelerator.html"
NameTrans fn="pfx2dir"from="/webeditor" dir="/opt/WebSphere/AppServer
    /installedApps/WC_Enterprise_App_demo.ear/wcwebeditor.war"
 ########## End of IBM WebSphere Commerce #######
```

> **Note:** These aliases use the default WebSphere Application Server home directory (`/opt/WebSphere/AppServer`). If you specified a different WebSphere Application Server home direcotory, please make the necessary changes.

4. Open the `obj.conf` file for the Web server on port 443 in a text editor (the default path to this file is `/usr/netscape/server4/https-hostname-https-443/config/obj.conf`).

5. Search for the `<Object name="default">` tag.

6. Add the following below this line:

```
########## IBM WebSphere Commerce ##########
NameTrans fn="pfx2dir" from="/orgadminconsole" dir="/opt/WebSphere/AppServer
    /installedApps/WC_Enterprise_App_demo.ear/wcstores.war/tools/buyerconsole
    /wcsbuyercon.html"
```

```
NameTrans fn="pfx2dir" from="/wcs" dir="/opt/WebSphere/AppServer/installedApps/
    WC_Enterprise_App_demo.ear/wctools.war"
########### End of IBM WebSphere Commerce #######
```

7. Add aliases to the configuration files for the servers on ports 80 and 443:

   a. Open the obj.conf file for each Web server in a text editor (the default path to these files are /usr/netscape/server4/https-hostname-https-80/config/obj.conf and /usr/netscape/server4/https-hostname-https-443/config/obj.conf).

   b. Search for the <Object name="default"> tag.

   c. Add the following information below this tag:

```
########### IBM WebSphere Commerce ##########
NameTrans fn="pfx2dir" from="/wcsstore" dir="/opt/WebSphere/AppServer
    /installedApps/WC_Enterprise_App_ instance_name.ear/wcstores.war"
NameTrans fn="pfx2dir" from="/wcsdoc" dir="/opt/WebSphere/CommerceServer
    /web/doc"
NameTrans fn="pfx2dir" from="/wchelp" dir="/opt/WebSphere/CommerceServer
    /web/doc/en_US"
########### End of IBM WebSphere Commerce #######
```

8. Search for the following line in the obj.conf file for all three servers:

```
service fn="as_handler"
```

   Replace this line with the following:

```
Service root=/usr/netscape/server4/docs fn="as_handler"
```

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).

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. When the files have been copied to the Web server, ensure that all directories and files have 755 permissions.

1. Copy over the contents of the following directory, including sub directories, from the WebSphere Commerce machine to the Web server machine. This directory contains the WebSphere Commerce documentation for all supported languages. If you do not want the documentation for all languages, copy over the sub-directories for your language as well as for English (the English directory contains reference information not available in other languages).

    /opt/WebSphere/CommerceServer/web

    It may be necessary to create the directories on your Web server machine.

    Note: This is nescessary each time you change the Web assets on your WebSphere Commerce machine.

2. Copy over the contents of the following directories, including sub directories, from the WebSphere Commerce machine to the Web server machine:

    /opt/WebSphere/AppServer/web

    /opt/WebSphere/AppServer/WSsamples

    It may be necessary to create the directories on your Web server machine.

3. Copy the .war directories in the following directory, from the WebSphere Commerce machine to the Web server machine:

    /opt/WebSphere/AppServer/installedApps/WC_Enterprise_App_*instance_name*.ear

    It may be necessary to create the directories on your Web server machine. Copying over additional files from this directory may pose a security risk.

    Note: This is nescessary each time you change the Web assets on your WebSphere Commerce machine.

4. Copy over the following file, from the WebSphere Commerce machine to the Web server machine:

    /opt/WebSphere/CommerceServer/bin/libwccache.so

    It may be necessary to create the directory on your Web server machine.

5. Copy over the contents of the following directory, including sub directories, from the WebSphere Commerce machine to the Web server machine:

```
/opt/WebSphere/CommerceServer/instances/instance_name/xml
```

It may be necessary to create this directory on your Web server machine.

6. Copy over the following file, from the WebSphere Commerce machine to the Web server machine:

```
/opt/WebSphere/CommerceServer/instances/wcs_instances
```

It may be necessary to create the directory on your Web server machine.

7. On your Web server machine, delete all .jsp, .sar, and .xml files found in the following directory and its subdirectories:

```
/opt/WebSphere/AppServer/installedApps/
```

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:

```
su – wasuser
export DISPLAY=fully_qualified_host_name:0.0
cd /opt/WebSphere/AppServer/bin
./adminclient.sh host_name port_number
```

Where *host_name* is the fully-qualified name of the machine you are using and *port_number* is the port through which you are accessing WebSphere Application Server as specified in "Running the postinstall script" on page 79. The default is 2222.

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. Select the Payment Manager application server. On the JVM Settings tab, in the System Properties list, edit `wpmui.PaymentServerHostname` so that it refers to the fully qualified host name of your Web server, and click **Apply**.

4. In the Payment Manager directory (/opt/PaymentManager), edit the `WCSRealm.properties` file so that the `WCSHostname` parameter refers to the fully qualified host name of your Web server.

5. Ensure that the instance configuration file Payment Manager parameters point at the remote Web server:

   a. Open the following file in a text editor:

      ```
      /opt/WebSphere/CommerceServer/instances/instance_name
        /xml/instance_name.xml
      ```

   b. Search for the Payment Manager section.

   c. Within this section, ensure that the `<hostname>` directive points at the fully qualified host name of the Web server Payment Manager is using.

6. Regenerate the Web server plug-in:

   a. From a command line, go to the following directory:

      ```
      /opt/WebSphere/AppServer/bin
      ```

   b. Run the following command:

      ```
      ./GenPluginCfg.sh -adminNodeName node_name -nameServicePort port_number
      ```

      Where *node_name* is the short logical name of the node and *port_number* is the port through which you are accessing WebSphere Application Server as specified in "Running the postinstall script" on page 79. (By default, the postinstall script uses port 2222.) .

7. Stop the WebSphere Application Server. To stop the WebSphere Application Server, follow the directions in "Starting and stopping WebSphere Application Server" on page 167.

   Note: Step 7 to 9 are only required if Payment Manager is installed on the same machine as WebSphere Commerce.

8. Open the following file in a text editor:

   ```
   /opt/WebSphere/AppServer/config/plugin-cfg.xml
   ```

9. Add the following line directly below `<Config>` in the `plugin-cfg.xml` file:

   ```
   <Property Name="CacheLibrary" value="/opt/WebSphere/CommerceServer/bin/
   libwccache.so" />
   ```

10. Copy the updated configuration file from your WebSphere Commerce machine to your Web server:

    ```
    /opt/WebSphere/AppServer/config/plugin-cfg.xml
    ```

11. Stop and restart your Web server and Payment Manager. If you are using IBM HTTP Server refer to "Starting and stopping IBM HTTP Server" on page 168for additional information.

12. Start the WebSphere Application Server. To start the WebSphere Application Server, do the following:

```
su – wasuser
export DISPLAY=fully_qualified_host_name:0.0
cd /opt/WebSphere/AppServer/bin
./startupServer.sh
```

Configuration for Oracle on a separate machine

If you are running your Oracle8i Database server on a separate machine from WebSphere Commerce, complete the following steps:

1. On your WebSphere Commerce machine, go to the following directory:

   /opt/WebSphere/CommerceServer/instances/*instance_name*/xml

2. Open *instance_name*.xml in a text editor.

3. Ensure that JDBCDriverLocation in the Websphere section (which can be found in the InstanceProperties section) is set to the path to the Oracle JDBC driver: $ORACLE_HOME/jdbc/lib/classes12.zip

4. In the WebSphere Application Server Administrative Console, expand **Resources** → **JDBC Provider** → **WebSphere Commerce Oracle JDBC Driver** *instance_name*. Click Data Sources and change the URL property (in the Custom Properties table) to use the host name of the machine where your Oracle server is located. Click **Apply**.

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. Ensure that you are logged in as wasuser.

2. From a command prompt, switch to /opt/WebSphere/CommerceServer/bin.

3. Run the following command:

   Note: If your *enterpriseApp,* *webModule,* or *nameServerHost* names contain any spaces you **must** surround them with double quotation marks, as shown below.

```
./WCSJspBatchCompiler.sh -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 port specified in "Running the postinstall script" on page 79 (the default is 2222).

Several errors may be logged when you perform these compiles. These may be safely ignored.

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 C, "Where to find more information" on page 197.
- 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 C, "Where to find more information" on page 197.
- Configure additional options, such as:
  - Chapter 14, "Enabling SSL for production with IBM HTTP Server" on page 139
  - Chapter 15, "Create Multiple WebSphere Commerce Instances" on page 145
  - Chapter 16, "Enabling WebSphere Application Server security" on page 151
  - Chapter 17, "Cloning" on page 157
  - Chapter 18, "Single sign-on" on page 163

  Information on configuring additional options is available in Part 6, "Optional configuration" on page 131.
- 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*:
  - DB2 Text Extender
  - WebSphere Commerce Analyzer
  - Using Lightweight Directory Access Protocol (LDAP) with WebSphere Commerce.
  - SilkPreview
  - LikeMinds Personalization Server
  - Sametime

– QuickPlace

> **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, go to:
>
> `https://host_name :8000/adminconsole`
>
> 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.

Part 6. Optional configuration

Once you have configured a WebSphere Commerce instance, you may want to configure additional options. The following chapters describe how to complete these tasks:

- Chapter 13, "Creating a store from a sample store archive" on page 133
- Chapter 14, "Enabling SSL for production with IBM HTTP Server" on page 139
- Chapter 15, "Create Multiple WebSphere Commerce Instances" on page 145
- Chapter 16, "Enabling WebSphere Application Server security" on page 151
- Chapter 17, "Cloning" on page 157
- Chapter 18, "Single sign-on" on page 163

After configuring additional options, you can begin to create and publish your store using Store Services. You can also publish the sample stores provided with WebSphere Commerce to see how a typical store is built. For instructions on using Store Services, refer to the WebSphere Commerce online help. Information on accessing WebSphere Commerce online help is available in Appendix C, "Where to find more information" on page 197.

Chapter 13. 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 are running:
   - Oracle
   - All services required by your Web server
   - WebSphere Application Server
   - In the WebSphere Application Server Administration Console, ensure the following are started:
     – Websphere Commerce Server – *instance_name*
     – WebSphere Payment Manager
2. 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.
3. Start Store Services by opening Microsoft Internet Explorer 5.5 and typing the following URL:

   ```
   https://host_name.domain.com:8000/storeservices
   ```

   The **Store Services Logon** page displays. Enter the default Instance Administrator user ID (wcsadmin), and the default password (wcsadmin) and click **Log on**. You will be asked to change your password the first time you log in.
4. 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:

   ```
   /opt/WebSphere/CommerceServer/instances/instance_name/sar
   ```
5. 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:

```
/opt/WebSphere/AppServer/installedApps/WC_Enterprise_App_
instance_name.ear/wcstores.war/Mystore
```

6. `▶ 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.

7. From the **View** drop-down list, select which sample store you would like to view.

8. 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**.

9. Click **OK**.

10. A dialog box opens informing you that your store archive was created successfully. Click **OK**.

11. 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 are running:
   - Oracle
   - All services required by your Web server
   - WebSphere Application Server
   - In the WebSphere Application Server Administration Console, ensure the following are started:
     - Websphere Commerce Server – *instance_name*
     - WebSphere Payment Manager

2. 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.

3. Ensure that you have Site Administrator or Store Administrator access. If you have Store Administrator access, ensure that the access is for all stores.

4. From the **Store Archive** list in Store Services, select the check box beside the store archive you want to publish.

5. Click **Publish**. The Publish Store Archive page displays.

6. 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.

7. 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.

8. Select the store archive from the list and click **Publish Summary** to see the results of the publish.

9. 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:

```
/opt/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.

10. 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 /opt/WebSphere/CommerceServer/bin.

2. Run the following command:

```
./WCSJspBatchCompiler.sh -enterpriseApp "WebSphere
  Commerce Enterprise Application - instance_name"
 -webModule  "WCS Stores" -nameServerHost "short_host_name"
  -nameServerPort port_number
```

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: /opt/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. If your Web server is installed on a different machine from your WebSphere Commerce server, ensure that you have copied the published stores directories from your WebSphere Commerce to your Web server, and deletet all the JSPs before launching the store.

2. 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.

3. On the home page, select product. On the product page click **Add to shopping cart**.

4. 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 14. 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 168.
2. Change directory to `/opt/IBMHTTPD/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 libexec/mod_ibm_ssl_128.so`
   b. `#AddModule mod_ibm_ssl.c`
   c. `#Listen 443`
   d. `#<VirtualHost host.some_domain.com:443>`. You must also substitute your fully qualified host name in this line.
   e. `#SSLEnable`
   f. `#</VirtualHost>`
   g. `#SSLDisable`
   h. Keyfile "/opt/IBMHTTPD/ssl/keyfile.kdb".
   i. `#SSLV2Timeout 100`
   j. `#SSLV3Timeout 1000`
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 `/opt/IBMHTTPD/bin` directory and run the following command:
   `./httpd -t`
9. Start the IBM HTTP Server as described in "Starting and stopping IBM HTTP Server" on page 168.

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
```

Even though you are using the procedures for IBM HTTP Server, follow the link for **Internet Connection Secure Server** (ICSS). The subsequent page indicates that the procedures apply to the OS/2® and AIX® platforms. These instructions also apply for Solaris software. 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 /opt/IBMHTTPD/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 168.
3. Export JAVA_HOME by running the following commands:

```
DISPLAY=host_name:0.0
export DISPLAY
JAVA_HOME=/opt/WebSphere/AppServer/java131
export JAVA_HOME
```

where *host_name* is the fully qualified host name of the machine you are currently using.

4. Open the Key Management Utility (ikeyman).
5. Open the *certificatename*.kdb file, and enter your password when prompted.
6. Select **Personal Certificates**, and click **Receive**.
7. Click **Browse**.
8. Select the folder where you have stored the files you received from the certificate authority. Select the *certificatename*.txt file and click **OK**.
9. The **Personal Certificates** list box should now list either VeriSign *certificatename* certificate or Equifax *certificatename* certificate.
10. Exit the Key Management Utility.
11. Change directory to /opt/IBMHTTPD/conf.
12. Create a backup copy of httpd.conf.
13. Open httpd.conf in a text editor.
14. Ensure that the lines listed in step 5 on page 140 are not commented.
15. Search for Keyfile "/opt/IBMHTTPD/ssl/keyfile.kdb", and change the path name to point to the file created in the above steps.
16. Restart the IBM HTTP Server as described in "Starting and stopping IBM HTTP Server" on page 168.

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 15. Create Multiple WebSphere Commerce Instances

WebSphere Commerce 5.4 supports the creation of multiple WebSphere Commerce instances. That is, with WebSphere Commerce 5.4, 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 `.../htmldocs`, to `.../htdocs1` to correspond to your first instance.

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.

Note: IBM HTTP Server 1.3.19.1 does not allow underscore characters (_) in a host name.

To add another IP address to your machine by running the following commands in a terminal window:

```
ifconfig network_interface addif IP_address
ifconfig network_interface:interface_number IP_address
  netmask subnet_mask broadcast broadcast_address
ifconfig network_interface:interface_number up
```

where *network_interface* is the device name for your network interface card, *IP_address* is the IP address you want to add to your machine, *interface_number* is the number assigned by the system after running the first command, and *subnet_mask* is the subnet mask your machine uses. For example, if you wanted to add the address 129.42.16.99 to network device name hme0, you would enter the following command:

```
ifconfig hme0 addif 129.42.16.99
```

The system responds with a message similar to "Created new logical interface hme0:1". In this example, your interface number would be 1. If your network uses subnet mask 255.255.255.0 and broadcast address 129.42.16.255, then the remaining commands would be:

```
ifconfig hme0:1 129.42.16.99 netmask 255.255.255.0 broadcast 129.42.16.255
ifconfig hme0:1 up
```

For more information on the ifconfig command refer to your Solaris Operating Environment documentation.

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. Before you create the second instance, ensure that the WebSphere Application Server administration server is running.

4. For each additional instance, you should increase your machine memory by 512 MB and your swap space by 1GB per processor.

Create the multiple instances

Before creating your new instance, you must complete the following:

1. 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 /opt/IBMHTTPD/htdocs/*locale* (where *locale* is the locale code for the language environment your Web server machine uses) and rename it to /opt/IBMHTTPD/*htdocs2*. Optionally, you can copy /opt/IBMHTTPD/htdocs/*locale* again, and rename it to /opt/IBMHTTPD/*htdocs1*.

2. You will need to create a new Oracle tablespace for each new WebSphere Commerce instance you create.

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 11, "Creating or modifying an instance with Configuration Manager" on page 83. 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	/opt/WebSphere/CommerceServer /instances/demo1	/opt/WebSphere/CommerceServer /instances/demo2
Database - Database name	*mall1*	*mall2*
Web server - host name	*host1.domain.com*	*host2.domain.com*
Web server - Primary (for IBM HTTP Server)	/opt/IBMHTTPD/ *htdocs1*	/opt/IBMHTTPD/ *htdocs2*
Web server - Primary (for iPlanet Web Server)	/usr/Netscape/server4/*htdocs1*	/opt/Netscape/server4*htdocs2*

Field in Configuration Manager	Instance 1	Instance 2
Payment Manager - host name	*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
   - VH_demo1 (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 (/opt/IBMHTTPD/conf/httpd.conf):

```
<VirtualHost m.mm.mm.mmm>
ServerName host1.domain.com
DocumentRoot "/opt/IBMHTTPD/htdocs1/en_US"
</VirtualHost>
.
.
.
<VirtualHost m.mm.mm.mmm:443>
SSLEnable
SSLClientAuth 0
ServerName host1.domain.com
DocumentRoot "/opt/IBMHTTPD/htdocs1/en_US"
.
.
.
<VirtualHost m.mm.mm.mmm:8000>
```

```
SSLEnable
SSLClientAuth 0
ServerName host1.domain.com
DocumentRoot "/opt/IBMHTTPD/htdocs1/en_US"
   .
   .
   .
<VirtualHost n.nn.nn.nnn>
ServerName host2.domain.com
DocumentRoot "/opt/IBMHTTPD/htdocs2/en_US"
</VirtualHost>
   .
   .
   .
<VirtualHost n.nn.nn.nnn:443>
SSLEnable
SSLClientAuth 0
ServerName host2.domain.com
DocumentRoot "/opt/IBMHTTPD/htdocs2/en_US"
   .
   .
   .
<VirtualHost n.nn.nn.nnn:8000>
SSLEnable
SSLClientAuth 0
ServerName host2.domain.com
DocumentRoot "/opt/IBMHTTPD/htdocs2/en_US"
```

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 (/opt/IBMHTTPD/conf/httpd.conf):

```
<Directory "/opt/IBMHTTPD/htdocs1">
Options Indexes
AllowOverride None
order allow,deny
allow from all
</Directory>

<Directory "/opt/IBMHTTPD/htdocs2">
Options Indexes
AllowOverride None
order allow,deny
allow from all
</Directory>
```

4. Modify your Web server configuration file for your instances so that any Web server entries point at the fully qualifed host name of the Web server being used by that instance.

5. 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*)

6. 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*)

7. Ensure that you have run the Postinstall script as described in "Running the postinstall script" on page 79 for each instance, entering the correct information specific to each instance. This includes (but is not limited to) the locale of the second instance, the Web server document root directory, and the host name of the Web server for each instance.

8. Start each instance in the WebSphere Application Server Administration Console.

9. Ensure that you are able to load each instance's WebSphere Commerce Accelerator.

Chapter 16. 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 `wasuser` 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

    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 151 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 151. 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 use the operating system as a user registry, WebSphere Application Server needs to be run as root. To run WebSphere Application Server as root perform the following steps:

1. Login as root.

2. Start the WebSphere Application Server and launch the WebSphere Application Server Administration Console while logged in as root:

```
export DISPLAY=fully_qualifed_host_name:0.0
cd /opt/WebSphere/AppServer/bin
./startupServer.sh &
./adminclient.sh remote_WAS_host_name port
```

where *fully_qualifed_host_name* is the name of the computer you are using to access the WebSphere Application Server Administration Console, *remote_WAS_host_name* is the fully-qualified host name of the WebSphere Application Server, and port is the port through which you are accessing the WebSphere Application Server (the default port is 2222).

3. 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.

4. Select the **Authentication** tab and select the **Local Operating System** radio button

5. Enter your security server ID in the **Security Server ID** field. Enter the user name you as follows:

Table 7.

Field Name	Sample Values	Notes
User ID	*user_ID*	A user ID that is root or has root authority.
Security Server Password	*password*	This is the password belonging to the user with operating system administrative privileges that you logged in with.

6. 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 5 on page 153 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.

7. 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 5 on page 153. Click **Apply** then exit Configuration Manager.

8. 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 8. 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 9. 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.

Table 9. Multiple machine security scenarios (continued)

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 17. 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 complete the following steps on Machine D:

   a. Install your database client as decribed in Chapter 3, "Installing and configuring Oracle8i Database" on page 27 on Machine D, pointing at the remote database server and Web server where appropriate. You must also apply the patchset to raise the level of Oracle as outlined in the beginning of that chapter.

   b. Install WebSphere Application Server on Machine D as described in "Installing WebSphere Application Server for use with an alternate or remote Web server" on page 59, pointing at the remote database server and Web server where appropriate. You must also apply the WebSphere Application Server eFixes and FixPak, and the JDK upgrade as described in that chapter.

c. In the /opt/WebSphere/AppServer/bin directory, edit the admin.config file. Ensure that the following values are set to false:

```
install.initial.config=false
com.ibm.ejs.sm.adminServer.createTables=false
```

d. Install WebSphere Commerce on Machine D as described in Chapter 8, "Install WebSphere Commerce" on page 67.

e. Run the postinstall script as outlined in "Running the postinstall script" on page 79. You *must* ensure that the user and port specified when running this script are identical to the ones specified the first time the script was run during the inital installation on Machine C..

f. Copy the following file from Machine C to Machine D:

```
/opt/WebSphere/AppServer/config/plugin-cfg.xml
```

g. Start the WebSphere Application Server on Machine C and Machine D.

h. Open the WebSphere Application Server Administration Console. Nodes for both WebSphere Application Server machines should appear.

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 → WebSphere Commerce Oracle JDBC Driver** *instance_name*.

   d. In the right-hand pane, select the Nodes tab, and click **Install New**.

   e. Select the node on which you want to install the new driver, click **Specify Driver**, click **Add** and search for the correct JDBC driver in the window that opens (classes12.zip). Ensure that you are using JDBC2 driver in the java12 subdirectory.

   f. Click **Set**, then **Install**.

   g. 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:

   ```
   /opt/WebSphere/AppServer/installedApps/
   WC_Enterprise_App_instance_name.ear
   ```

5. Rename this directory, on Machine D, to match the following:

   ```
   /opt/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
      ```
      /opt/WebSphere/AppServer/installedApps/WebSphere_Commerce_Enterprise_App
      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
      ```
      /opt/WebSphere/AppServer/WebSphere_Commerce_Enterprise_Application_-_in
      file.
      ```

7. Copy the following directory from Machine C to Machine D, overwriting the existing directories:

   ```
   /opt/WebSphere/CommerceServer/instance
   ```

8. On Machine D, open the following file in a text editor:

   ```
   /opt/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. Regenerate the Web server plugin:

a. From a command line, go to the following directory:

    /opt/WebSphere/AppServer/bin

b. Run the following command:

    ./GenPluginCfg.sh -adminNodeName *node_name* -nameServicePort
    port_number

    Where *node_name* is the short logical name of the node and
    port_number is the port through which you are accessing WebSphere
    Application Server as specified in "Running the postinstall script" on
    page 79. (By default, the postinstall script uses port 2222.)

10. Open the following file in a text editor:

    /opt/WebSphere/AppServer/config/plugin-cfg.xml

11. Add the following line directly below `<Config>` in the `plugin-cfg.xml`
    file:

    <Property name="CacheLibrary" value="/opt/WebSphere/CommerceServer/bin/
        libwccache.so" />

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:

`/opt/WebSphere/AppServer/bin`

b. Enter the following command:

`/GenPluginCfg.sh -adminNodeName` *node_name* `-nameServicePort` *port_number*

Where *node_name* is the short logical name of the node, and *port_number* is the port WebSphere Application Server is using (the default is 2222).

c. Stop the WebSphere Application Server.

d. Open the following file in a text editor:

`/opt/WebSphere/AppServer/config/plugin-cfg.xml`

e. Add the following line directly below `<Config>` in the `plugin-cfg.xml` file:

`<Property Name="CacheLibrary" value="/opt/WebSphere/CommerceServer/bin/`
`libwccache.so" />`

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**.

Chapter 18. 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 16, "Enabling WebSphere Application Server security" on page 151.

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 7. Administrative tasks

Chapter 19. Starting and stopping WebSphere Commerce components

This appendix explains how to start and stop each product that is provided as part of the WebSphere Commerce package. Use this information if you need to restart any component.

Starting and stopping WebSphere Commerce

To start or stop your WebSphere Commerce instance, do the following:

1. Ensure that your database management system and WebSphere Application Server are started. If you are using Oracle, refer to Oracle's documentation. For WebSphere Application Server, refer to "Starting and stopping WebSphere Application Server".

2. Launch the WebSphere Application Server Administration Console by entering the following in a terminal window:

   ```
   su – wasuser
   export DISPLAY=fully_qualified_host_name:0.0
   cd /opt/WebSphere/AppServer/bin
   ./adminclient.sh host_name port_number
   ```

3. Expand **WebSphere Administrative Domain**.

4. Expand **Nodes**.

5. Expand your host name.

6. Expand **Application Servers**.

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. Ensure that your database management system is started.

2. Type the following commands in a terminal window:

   ```
   su – wasuser export DISPLAY=fully_qualified_host_name:0.0 cd
     /opt/WebSphere/AppServer/bin ./startupServer.sh &
   ```

   where `fully_qualified_host_name` is either the hostname or the TCP/IP address of the workstation that you are currently using.Check the `/opt/WebSphere/AppServer/logs/tracefile` to ensure that WebSphere Application Server started successfully.

To stop WebSphere Application Server, do the following:

1. Start the WebSphere Application Server Administration Console by entering the following in a terminal window:

```
su – wasuser
export DISPLAY=fully_qualified_host_name:0.0
cd /opt/WebSphere/AppServer/bin
./adminclient.sh host_name port_number
```

2. In the WebSphere Application Server Administration Console, select the node with your short host name.

3. Click the stop button. You will get a warning message similar to the following:

   You are trying to stop the node that the console is connected to. This will cause the console to exit after the node is stopped. Do you want to continue?

   Click **Yes** to continue.

4. After the WebSphere Application Server Administration Console, confirm that all WebSphere Application Server–related processes have stopped by issuing the following command in a terminal window:

```
ps -ef | grep AppServer | grep -v grep
```

5. If this command returns any Java processes, stop them by issuing a kill command.

Starting and stopping IBM HTTP Server

IBM HTTP Server has two servers that can be started and stopped:
- IBM HTTP Server
- IBM HTTP Administration Server

To start IBM HTTP Server, enter the following commands in a terminal window:

```
su – root
cd /opt/IBMHTTPD/bin
./apachectl start
```

To stop IBM HTTP Server, do the following:

1. Ensure that WebSphere Commerce and WebSphere Application Server are stopped.

2. Enter the following commands in a terminal window:

```
su – root
cd /opt/IBMHTTPD/bin
./apachectl stop
```

To start IBM HTTP Administration Server, enter the following commands in a terminal window:

```
su – root
cd /opt/IBMHTTPD/bin
./adminctl start
```

To stop IBM HTTP Administration Server, enter the following commands in a
terminal window:

```
su – root
cd /opt/IBMHTTPD/bin
./adminctl stop
```

Starting and stopping Payment Manager

Starting Payment Manager

To start Payment Manager:
1. Ensure your database is started.
2. Start your Web server.
3. Ensure WebSphere Application Server is started.
4. Start the Payment Manager application server in the WebSphere
   Application Server Administration Console as described in "Starting the
   Payment Manager application server".
5. Start the Payment Manager as described in "Starting Payment Manager".

Starting the Payment Manager application server

When using WebSphere Application Server 4.0.2, you can start all servlets by
starting the Payment Manager application server. To start the Payment
Manager application server:
1. Open the WebSphere Application Server Administration Console.
2. Expand **WebSphere Administrative Domain**.
3. Expand **Nodes**.
4. Expand the node where Payment Manager is installed.
5. Expand **Application Servers**.
6. Right-click **WebSphere Payment Manager** and select **Start**.

Starting Payment Manager

When you start Payment Manager using the IBMPayServer script, you will
need to specify the database administrator password.

Enter the following commands from a terminal window:

```
su - wasuser
export DISPLAY=fully_qualified_host_name:0.0
cd /opt/PaymentManager
./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 will be prompted for your Payment Manager password.

Alternately, you can start Payment Manager using the password file that was created for you automatically during the Payment Manager installation (the .payment file). The command to start Payment Manager would have the following syntax:

```
./IBMPayServer -file
```

Since this file contains your Payment Manager password in clear text, if you do not plan to use this method of starting Payment Manager, it is strongly suggested that you delete this file.

Start the Payment Manager user interface

After starting Payment Manager and the Payment Manager application server, to start the Payment Manager user interface:

1. Point your web browser to:

   ```
   http://host_name/webapp/PaymentManager/
   ```

   where *host_name* is the fully qualified host name of your Web server.

2. On the Payment Manager Logon window, enter the Payment Manager administrator's user ID and password, and click **OK**. The default user ID is wcsadmin and the password is your wcsadmin password (the default is wcsadmin, and must be changed the first time you log on to any components of WebSphere Commerce through the wcsadmin user ID).

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 initially. In order to login to the Payment Manager user interface you must use an administrator ID that has been assigned 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*.

Before using the wcsadmin ID to login 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`
user ID. At that time, you will be asked to change the password.

You can also access Payment Manager adminstration functions from the
WebSphere Commerce Administration Console.
Stopping Payment Manager

To stop Payment Manager, you need to:
1. Ensure your database is started.
2. Ensure WebSphere Application Server is started.
3. Stop Payment Manager
4. Stop the Payment Manager application server under WebSphere
   Application Server

Stopping Payment Manager

You can stop Payment Manager using the `StopIBMPayServer` command:
1. Change to the `/opt/PaymentManager` directory.
2. Type: `./StopIBMPayServer`. There are no arguments to the
   `StopIBMPayServer` script.
3. Enter the Payment Manager password when prompted.

Stopping the Payment Manager application server

When using WebSphere Application Server, you can stop all servlets by
stopping the Payment Manager application server. To stop the Payment
Manager application server:
1. Open the WebSphere Application Server Administration Console.
2. Expand **WebSphere Administrative Domain**.
3. Expand **Nodes**.
4. Expand the node where Payment Manager is installed.
5. Expand **Application Servers**.
6. Right-click **WebSphere Payment Manager** and select **Stop**.

Chapter 20. Set and change passwords

Most components in WebSphere Commerce Suite use user IDs and passwords that are validated by the operating system. For information on changing those passwords, refer to you operating system documentation. This chapter covers how to set and change passwords for WebSphere Commerce Suite components that do not validate user IDs and passwords through the operating system.

Change your 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 commands in a command window:

```
cd /opt/WebSphere/CommerceServer/bin
./config_env.sh
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 /opt/WebSphere/CommerceServer/bin. This parameter is always required.

userid
>   Enter the user ID that you want to add, create, delete or modify. This parameter is always required.

password
>   Enter the password that you want to check, create, 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.

Determine the encrypted WebSphere Commerce Administration Console password

For security reasons, the WebSphere Commerce Administration Console system-assigned password is encrypted. If you need to determine the encrypted password, do the following:

1. Open a terminal window.
2. Type the following:

   ```
   cd /opt/WebSphere/CommerceServer/bin
   ./wcs_encrypt.sh wcsadmin_password [merchant_key]
   ```

   where *merchant_key* is the merchant key you used when you configured WebSphere Commerce on the Instance panel of the Configuration Manager. Note that the command responds with two character strings, one in ASCII and one in hexadecimal.

Update the WebSphere Commerce Administration Console password

When using database creation scripts from a command line, the administrator cannot log in with the WebSphere Commerce Administration Console password unless the password is included in double quotation marks.

If you encounter a password problem while logging into WebSphere Commerce Administration Console, do the following:

1. While logged in as your Oracle instance ID, connect to the database by typing the following:

   ```
   sqlplus wc_user_ID/wc_password@wc_SID
   ```

   where the variables are defined as follows:

   wc_user_ID
   > The ID you are assigning to the WebSphere Commerce Oracle user.

   wc_password
   > The password you want the WebSphere Commerce Oracle user to have. This password must follow all Oracle password rules and all WebSphere Commerce password rules.

   wc_SID
   > The Oracle System Identifier (SID) for the WebSphere Commerce database instance you are creating this user and tablespace for.

2. Verify that the USERREG table WebSphere Commerce Administration Console password matches the wcs_encrypt encrypted string (ASCII) by typing the following command:

   ```
   select logonpassword from userreg where logonid='wcsadmin';
   ```

3. Type the following command:

```
cd /opt/WebSphere/CommerceServer/bin
./wcs_password.sh password SALT merchant_key
```

where *password* is the plain text password, *SALT* is the SALT that is used with the password. This is found in the SALT column of the USERREG database table for the particular user whose password is being updated, and *merchant_key* is the merchant key you used when you created a WebSphere Commerce instance.

The following is an example of what the output from the command should look like:

```
IBM*
 Licensed Materials - Property of IBM
 5697-A16
 (C) Copyrights by IBM and by other(s) 1978, 1997. All Rights Reserved.
 * Trademark of International Business Machines Corp.
 === WCS Encrypted Password ===
 ASCII Format: pArp97jT4NOXN6MyWswTQpwaPbIFsEWQGwfeu08yIyM=
 Hex Format: 7041727039376a54344e4f584e364d79577377545170776d
```

Update the password using this encrypted value. For example, type the following:

```
update USERREG set
      LOGONPASSWORD='7041727039376a54344e4f584e364d79577377545170776d'
      where LOGONID='wcsadmin';
commit;
```

Please note that the value of LOGONPASSWORD should be the encrypted string (Hex).

Change the WebSphere Commerce Administration Console password

You can change your password using the WebSphere Commerce Administration Console.

To change your password using WebSphere Commerce Administration Console, do the following:

1. Start the WebSphere Commerce Administration Console.
2. From the Logon page, type your Administration Console logon user name and password that were created during installation. Initially, the user name and password are both set to wcsadmin.
3. Select the **Change password** check box and click **Log On**. The Change Password page displays.
4. In the **Old Password** field, type your current Administration Console logon password. This field accepts up to 128 alphanumeric characters.
5. In the **New Password** field, type a new logon password. This field accepts up to 128 alphanumeric characters.

6. In the **Password confirmation** field, re-type the password.
7. Click **Change** to save the new password. The Select Store and Language page displays.
8. Exit the WebSphere Commerce Administration Console.

Set your IBM HTTP Server Administrator password

To set your IBM HTTP Server administrator password,

1. Switch to the following directory:
   /opt/IBMHTTPD/bin
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.

Change your SSL key file password

If you are using IBM HTTP Server, follow the steps below to change your SSL key file password.

1. Open the Key Management Utility by typing:
   cd /opt/IBMHTTPD/ssl
   ./ikeyman
2. From the **Key Database File** menu, select **Open**.
3. Switch to the following directory:
   /opt/IBMHTTPD/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 14, "Enabling SSL for production with IBM HTTP Server" on page 139.
4. From the **Key Database File** menu, select **Change Password**. The Change Password window appears.
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.

Chapter 21. General administrative tasks

This chapter describes some of the general administrative tasks you may need to perform as you use WebSphere Commerce.

Add 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 **WebSphere Adminstrative Domain**.
3. Select **Virtual Host** on the left-hand console frame.
4. For a single instance environment, select **default_host**. For a multi-instance environment, select **virtual_host**_instance_name_.
5. Select the General tab.
6. If the port number does not appear in the Alias field, click **Add** and add the port number.
7. When done click **Apply**.
8. Select **WebSphere Commerce Server** on the left-hand console frame.
9. Right-click and select **Stop** to stop the WebSphere Commerce server. A dialog box will appear when the server has successfully been stopped.
10. Right-click and select **Start** to restart the WebSphere Commerce server.

Access Configuration Manager

To start the Configuration Manager, complete the following steps:

1. Open a terminal window.
2. Ensure that you are logged on as the WebSphere Application Server user created in "Running the postinstall script" on page 79:

   ```
   su - wasuser
   ```
3. Export your display, even if you are working on the WebSphere Commerce machine:

   ```
   export DISPLAY=fully_qualified_host_name:0.0
   ```

   If your system replies with `Can not open DISPLAY=`, run the following command on your WebSphere Commerce machine:

   ```
   xhost +host_name
   ```

where *host_name* is the fully qualified host name of the machine from which you want to access the Configuration Manager.

4. Issue the following commands:

```
cd /opt/WebSphere/CommerceServer/bin
./config_server.sh
```

   Notes:

   a. Do not close the terminal window you entered the `config_server.sh` command in or the Configuration Manager server will stop.

   b. Do not run the Configuration Manager server as a background process – this is a potential security risk.

5. Wait for the following message: `Registry created. CMServer bound in registry.`

6. Open another terminal window.

7. Ensure that you are logged on as the WebSphere Application Server user created in "Running the postinstall script" on page 79:

```
su - wasuser
```

8. Export your display, even if you are working on the WebSphere Commerce machine:

```
export DISPLAY=fully_qualified_hostname:0.0
```

9. Issue the following commands:

```
cd /opt/WebSphere/CommerceServer/bin
./config_client.sh &
```

10. A window displays and you will be prompted to enter the Configuration Manager user ID and password. The default Configuration Manager user ID is `webadmin`, and the default password is `webibm`.

11. You will be asked to change your password the first time you log in.

Update a WebSphere Commerce instance

If you wish to change any of the configuration settings for your WebSphere Commerce instance, you can do so from the Configuration Manager, or from the command line.

To update a WebSphere Commerce instance using the Configuration Manager, do the following:

1. Open Configuration Manager as described in the previous section.

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 11, "Creating or modifying an instance with Configuration Manager" on page 83 to determine which fields you need to change to update your instance.

3. After you update your instance, click **Apply** to apply your changes.

Delete a WebSphere Commerce instance

If you need to remove a WebSphere Commerce instance, complete the following steps:

1. In the WebSphere Application Server Administrative Console, do the following:

   a. Expand **Application Servers**

   b. Right-click the WebSphere Commerce Application Server that corresponds the instance you are deleting and select **Stop**.

   c. Expand **Enterprise Applications**.

   d. Right-click **WebSphere Commerce Enterprise Application -** *instance_name* and select **Stop** and then right-click it again and select **Remove**.

   e. Right-click the WebSphere Commerce Application Server that corresponds the instance you are deleting and select **Remove**.

   f. Expand **Resources**.

   g. Expand **JDBC Providers**.

   h. Expand the appropriate JDBC driver for your instance, and click **Data Sources**.

   i. In the right-hand panel, right-click the datasource and select **Remove**.

   j. Right-click the JDBC Driver and select **Remove**.

   k. Click **Virtual Hosts**.

   l. In the right-hand pane, right-click **VH_***instance_name* and select **Remove**.

   m. In the right-hand pane, right-click **VH_***instance_name*_**tools** and select **Remove**.

   n. Expand **Nodes**.

   o. Right-click *host_name* and select **Regen Webserver Plugin**.

   p. Restart your Web server as described in "Starting and stopping IBM HTTP Server" on page 168 or your Web server documentation.

2. Delete the WebSphere Commerce instance by doing one of the following:

   - In the WebSphere Commerce Configuration Manager, right-click your instance and select **Delete**.

   - In a terminal window, run the commands:

     ```
     cd /opt/WebSphere/CommerceServer/bin
     ./config_server.sh
     ```

     In another terminal window, run the following commands:

     ```
     cd /opt/WebSphere/CommerceServer/bin
     ./config_client.sh -startCmdLineConfig deleteInstance <instance_name>
     ```

3. Drop your WebSphere Commerce database (if you are going to recreate your WebSphere Commerce instance using the same database this step is not necessary):

   a. Log in as the Oracle user.

   b. From a terminal window, start an SQL*Plus session by issuing the following command:

      ```
      sqlplus system/system_password@wcs_SID
      ```

      where *wcs_SID* is the Oracle System Identifier (SID) for your WebSphere Commerce database as specified in "Creating a database for WebSphere Application Server, WebSphere Commerce, and WebSphere Payment Manager" on page 28.

   c. Issue the following commands in the SQL*Plus session:

      ```
      DROP USER wcs_Oracle_user_ID CASCADE;
      DROP TABLESPACE wcs_tablespace_name INCLUDING CONTENTS;
      EXIT;
      ```

   d. You must also remove the actual tablespace files you created in Chapter 3, "Installing and configuring Oracle8i Database" on page 27.

4. Delete the /opt/WebSphere/CommerceServer/instances/*instance_name* directory.

5. Delete the following file:

   ```
   /opt/WebSphere/AppServer/installedApps/WC_Enterprise_App_instance_name.ear
   ```

   where *instance_name* is the name of the WebSphere Commerce instance name you are deleting.

Command line configuration tasks

Through the command line you can:

- Update an instance:

  ```
  ./config_client.sh -startCmdLineConfig updateInstance <xml_file>
  ```

- Delete an instance:

  ```
  ./config_client.sh -startCmdLineConfig deleteInstance <instance_name>
  ```

- List existing instances:

  ```
  ./config_client.sh -startCmdLineConfig getInstances
  ```

- Find information about an instance:

  ```
  ./config_client.sh -startCmdLineConfig getInstanceInfo <instance_name>
  ```

- Print configuration information for an instance to a file:

  ```
  ./config_client.sh -startCmdLineConfig getInstanceConfig
      instance_name print_to_file_name
  ```

Open the WebSphere Application Server Administrative Console

To access WebSphere Application Server Administration Console complete the following steps:

```
su - wasuser
export DISPLAY=fully_qualififed_host_name:0.0
cd /opt/WebSphere/AppServer/bin
./adminclient.sh remote_WAS_host_name port
```

Where *fully_qualifed_host_name* is the name of the computer you are using to access the WebSphere Application Server Administration Console, *remote_WAS_host_name* is the fully-qualified host name of the WebSphere Application Server, and port is the port through which you are accessing the WebSphere Application Server (the default port is 2222).

Start the WebSphere Commerce Administration Console

To launch the WebSphere Commerce Administration Console, do the following:

1. Ensure that the WebSphere Commerce instance is started. You can start the instance from the WebSphere Application Server Administration Console.
2. Open Internet Explorer and enter the URL: `https://host_name:8000/adminconsole`, where *host_name* is the fully qualified host name of your WebSphere Commerce server.
3. Log onto the Administration Console as follows:
   - To log on and change your Administration Console logon password, do the following:
     a. From the Logon page, type your Administration Console logon user name and password that were created during installation. Initially, the user name and password are both set to `wcsadmin`.
     b. Select the **Change password** check box and click **Log On**. The Change Password page displays.
     c. In the **Old Password** field, type your current Administration Console logon password. This field accepts up to 128 alphanumeric characters.
     d. In the **New Password** field, type a new logon password. This field accepts up to 128 alphanumeric characters.
     e. In the **Password confirmation** field, re-type the password.
     f. Click **Change** to save the new password. The Select Store and Language page displays.
   - To log on without changing your Administration Console logon password, do the following:
     a. From the Logon page, type your Administration Console logon user name and password that were created during installation and then

click **Log On**. Initially, the user name and password are both set to wcsadmin. If you are authorized to work with more than one store or language, the Select Store and Language page displays. If you are authorized to work with a single store and language, the Administration Console home page displays. Tasks that you are authorized to perform display in the Administration Console home page.

4. From the Select Store and Language page, select the store name and preferred language in which to work. If you are authorized to work with a single store, the store is pre-selected. If you are authorized to work with a single language, the language is pre-selected. The Administration Console home page displays. Tasks that you are authorized to perform display in the Administration Console home page.

Connect 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. Ensure that IBM HTTP Server is started by by logging on as user ID root and entering the following commands in a terminal window:

```
cd /opt/IBMHTTPD/bin
./apachectl start
```

2. Start your Web browser, disable and clear all disk and memory cache, and disable all proxy servers. (In some browsers, proxy servers are called *socks servers*.)

3. To access the Web server front page, enter the following URL on your Web 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.

Use a virtual host name with IBM HTTP Server

By using a virtual host name rather than the real server host name you can increase security by hiding the file structure, and create a more professional-looking Web site.

To create a virtual host name, perform the following steps:

1. Switch to user ID wasuser
2. Switch to the /opt/IBMHTTPD/conf directory.
3. Open httpd.conf file in a text editor.

4. Search for `DirectoryIndex index.html`. Replace `index.html` with your store's home page name.
5. Search for `#ServerName new.host.name`. Uncomment this line and replace `new.host.name` with the virtual host name.
6. Search for `<VirtualHost machine.name.com:443>`. Replace `machine.name.com` with your registered host name.
7. Search for `DocumentRoot "/opt/IBMHTTPD/htdocs/`*`locale`*`"` where *locale* is locale code for the language environment your Web server machine uses. For a list of supported locale codes, see "Locales used by WebSphere Commerce" on page 15. Change the path so that it points to the store's HTML subdirectory.
8. Click **File**, and then **Save**.

Adding database privledges to the wasuser user ID

If wasuser requires access to the database, or if this user ID will be using tools such as IDResGen, MassLoad, or IDResolve, you will need to add database privledges to this user ID. To do this, complete the following steps:
1. Ensure that the ORACLE_HOME variable is set.
2. Ensure that `ORACLE_HOME/bin` is in the system PATH variable.

Editing the obj.conf file to update the WebSphere Application Server plug-in settings

If you create additional iPlanet Web servers after installing the eFixes in "Upgrading your Sun JDK level" on page 51, you will need to modify the Web server configuration files. Open the `obj.conf` file in an editor and make the following changes:

- After `Init fn="load-types" mime-types="mime.types"`, add:

```
Init fn="load-modules" funcs="as_init,as_handler,as_term"
  shlib="/opt/WebSphere/AppServer/bin/libns41_http.so"
Init fn="as_init" bootstrap.properties="/opt/WebSphere/AppServer
  /config/plugin-cfg.xml"
```

- After `<Object name="default">`, add:

```
service fn="as_handler"
NameTrans from="/IBMWebAS" fn="pfx2dir"
  dir="/opt/WebSphere/AppServer/web"
NameTrans from="/WSsamples" fn="pfx2dir"
  dir="/opt/WebSphere/AppServer/WSsamples"
```

Directives are shown on multiple lines for presentation purposes only.

Setting up Payment Manager

Using Payment Manager Cassettes

As part of the SET functions, you can use IBM Payment Manager 3.1.2. The information provided here is merely intended as an overview of the Payment Manager process and requirements. Additional instructions on SET, Payment Manager, and the Configuration Manager are provided in the online information. For more information about Payment Manager, refer to the *IBM WebSphere Payment Manager Administrator's and User's Guide*. Refer to "Payment Manager information" on page 198 for information on where to find Payment Manager documentation.

To set up IBM Payment Manager, you need to do the following:

1. Arrange for an acquiring institution to perform payment processing. The acquiring institution will provide you with configuration details and the required certificate.
2. Configure SET using the information provided by the acquiring institution. This step is performed using the Payment Manager user interface. As part of configuring the Acquirer and Brand for the merchant, the SET certificate for the merchant is obtained.
3. When you create your home page, include information that your shoppers need in order to obtain a wallet. The acquiring institution should provide this information. You can use of the Merchant Originated Payment (MOP) feature of Payment Manager if a wallet is not readily available to shoppers. For additional information on the MOP support, refer to the WebSphere Commerce online help.

The 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 169.

> **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 89, 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.

Part 8. Appendixes

Appendix A. 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. As a general rule, you should uninstall components in the reverse order that they were installed. Thus, if you have installed all mandatory software, you would uninstall it in this order:

1. Payment Manager
2. WebSphere Commerce
3. WebSphere Application Server
4. IBM HTTP Server
5. Oracle8i Database

Uninstalling Payment Manager

To uninstall Payment Manager, do the following on a machine with a graphical terminal:

1. Switch to user ID root.
2. Stop the Payment Manager engine and the Payment Manager Application Server as outlined in "Starting and stopping Payment Manager" on page 169.
3. At the shell prompt, switch to the Payment Manager install directory by typing the following:

   ```
   cd /opt/PaymentManager
   ```

4. Uninstall the Payment Manager cassettes first by running the appropriate command for your cassettes:

   ```
   ./UninstallCyberCash.sh
   ./UninstallSET.sh
   ./UninstallBankServACH.sh
   ./UninstallVisaNet.sh
   ```

5. Uninstall the Payment Manager framework:

   ```
   ./UninstallFramework.sh
   ```

If you are planning on reinstalling Payment Manager, or if the Payment Manager uninstallation program did not remove all Payment Manager components, you may need to follow the instructions under "Emergency uninstall procedure" in Chapter 12 of the *Payment Manager Installation Guide*.

Uninstalling WebSphere Commerce

Before you uninstall WebSphere Commerce, save any customized components and WebSphere Commerce related data in a directory other than /opt/WebSphere/CommerceServer, otherwise they may be deleted.

To uninstall WebSphere Commerce, do the following:

1. Log on as user ID root.
2. If you plan to reinstall WebSphere Commerce, ensure that you back up the directory that contains any customized files for stores that you have previously created.
3. Stop WebSphere Commerce in the WebSphere Application Server administrative console.
4. Delete your WebSphere Commerce instance through the Configuration Manager.
5. Start the administration tool by typing /bin/admintool&. The Admintool: Users window appears.
6. From the **Browse** pull-down menu, select **Software**. The Admintool: Software window appears.
7. From the list of packages, select the following packages:
   - **WebSphere Commerce – runtime**
   - **WebSphere Commerce – docs**
8. From the **Edit** pull-down menu, select **Delete**. The Admintool: Warning window appears.
9. Click **Delete**. The Admintool: Delete Software window appears.
10. Respond y to the confirmation messages to delete the package that you selected.
11. After the package is deleted, press **Enter**. The Admintool: Delete Software window closes.
12. On the Admintool: Software window (which should still be open), select **Exit** from the **File** pull-down menu to exit the Admintool program.
13. Switch to the /opt directory and remove the /opt/WebSphere/CommerceServer directory, if it exists.
14. Remove any WebSphere Commerce–specific information from your Web server's configuration file. For IBM HTTP Server has three WebSphere Commerce sections while iPlanet Web Server has one. These sections appear similar to the following:

```
########## IBM WebSphere Commerce Suite (Do not edit this section) ################
.
.
.
########## End of IBM WebSphere Commerce Suite (Do not edit this section) ##########
```

Uninstalling WebSphere Application Server

To uninstall WebSphere Application Server, do the following:

1. Stop your Web server.
2. Stop WebSphere Application Server, as described in "Starting and stopping WebSphere Application Server" on page 167.
3. If you have created or customized any files in the /opt/WebSphere/AppServer directory or its subdirectories, and you wish to retain them, back them up to a different directory.
4. Change to the /opt/WebSphere/AppServer directory.
5. Start the uninstall program by typing ./uninstall.sh.
6. When the uninstall window opens, click **Uninstall** to remove WebSphere Application Server from your system.
7. If the /opt/WebSphere/AppServer directory still exists, remove it by typing the following:

   ```
   cd /opt/WebSphere
   rm -r AppServer
   ```

Note: Any changes and customization you made to your Web server configuration file before installing WebSphere Application Server reside in the backup configuration file. To make these settings active again, you must transfer them from the backup file into the active Web server configuration file.

Uninstalling IBM HTTP Server

Notes:

1. If you uninstall IBM HTTP Server, you must also uninstall WebSphere Application Server.
2. If you reinstall IBM HTTP Server and WebSphere Application Server, you must install IBM HTTP Server *before* reinstalling WebSphere Application Server.

To uninstall IBM HTTP Server, do the following:

1. Log on as user ID root.
2. Stop IBM HTTP Server by typing the following commands:

   ```
   cd /opt/IBMHTTPD/bin
   ./apachectl stop
   ```

3. Start the administration tool by typing /bin/admintool&. The Admintool: Users window appears.
4. From the **Browse** pull-down menu, select **Software**. The Admintool: Software window appears.

5. From the list of packages, select all those with HTTP Server in their name, as well as Certificate and SSL Base Runtime (gsk5bas).

6. From the **Edit** pull-down menu, select **Delete**. The Admintool: Warning window appears.

7. Click **Delete**. The Admintool: Delete Software window appears.

8. Respond yes to the confirmation messages to delete the packages that you selected.

9. After all packages are deleted, press Enter. The Admintool: Delete Software window closes.

10. On the Admintool: Software window (which should still be open), select **Exit** from the **File** pull-down menu to exit the Admintool program.

Important:

When you reinstall IBM HTTP Server, you will have to manually enable SSL.

Reinstalling WebSphere Commerce Components

If you are reinstalling the entire WebSphere Commerce package follow the instructions in Part 2, "Installing Oracle8i Database" on page 25.

If you are reinstalling portions of WebSphere Commerce, follow these general rules:

- Install all components in the order they are listed in this book using the appropriate chapters for each component.
- 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 reinstallingWebSphere Application Server.
- If you reinstall your Web server you will need to enable SSL manually. Please see Chapter 14, "Enabling SSL for production with IBM HTTP Server" on page 139 for guidance.

Appendix B. 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
> /opt/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 /opt/WebSphere/CommerceServer/instances/*instance_name*/logs directory. This log describes the WebSphere Commerce schema creation.

WCSconfig.log
Found in your /opt/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 /opt/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 /opt/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 /opt/WebSphere/CommerceServer/instances/*instance_name*/logs directory. This log describes the startup of the WebSphere Commerce application server.

Troubleshooting

WebSphere Application Server problems

- Running startupServer.sh as wasuser results in an error similar to:

  /tmp/sh27350.13:cannot create

  This occurs becuase wasuser does not have the correct permissions for the temporary directory. Set permissions for the temporary directory to 777.

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.

Your `httpd.conf` may contain incorrect syntax. Check the syntax of your `httpd.conf` file by doing the following:

1. Log in as `root`.
2. In a terminal window, enter the following commands:

   ```
   cd /opt/IBMHTTPD/bin/httpd -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 `/opt/IBMHTTPD/conf/httpd.conf`. Uncomment the following lines, or add them if they do not exist:

  ```
  LoadModule ibm_app_server_http_module
      /opt/WebSphere/AppServer/bin/mod_ibm_app_server_http.so
  ```

  Alternately, the

  ```
  LoadModule ibm_app_server_http_module
      /opt/WebSphere/AppServer/bin/mod_ibm_app_server_http.so
  ```

  and the

  ```
  AddModule mod_app_server_http.c
      /opt/WebSphere/AppServer/bin/mod_ibm_app_server.so
  ```

  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.so` 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 `/opt/IBMHTTPD/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 106 for more information.

Payment Manager problems

- If you install Payment Manager immediately after installing WebSphere Commerce, you should not encounter any problems. However, if you install Payment Manager after running the Postinstall script (as outlined in "Running the postinstall script" on page 79), you will encounter problems both when installing and uninstalling Payment Manager. If you receive an error stating that "WPMinstall cannot detect that WebSphere Application Server is running", complete the following steps:

  1. Stop all WebSphere Application Server and Java processes and all WebSphere Commerce related processes.
  2. Edit the `/opt/WebSphere/AppServer/bin/admin.config` file and remove the `com.ibm.ejs.sm.adminServer.bootstrapPort=`*port_number* directive, where *port_number* is the WebSphere Application Server non-root port (the default value is 2222).
  3. Also, remove the `lsdPort=`*port_number* directive if it was added earlier in testing.
  4. Restart the WebSphere Application Server as the root user and rerun the Payment Manager installation program.
  5. Once Payment Manager is installed, stop WebSphere Application Server and all WebSphere Commerce related services including the Web server (if it is on the same machine as WebSphere Application Server), and rerun the `/opt/WebSphere/CommerceServer/bin/wcpostinstall.sh` script, selecting the non-root option.
  6. If you have already created a WebSphere Commerce instance, you also need to run the following commands:

     ```
     su - wasuser
     cd /opt/WebSphere/CommerceServer/instances/instance_name/xml
     chmod ugo+rx payment
     cd payment
     chmod ugo+r *
     exit
     ```

- Ensure that the correct `Listen` directive (either Listen 80 or Listen 443) is not commented out in the `httpd.conf` file. You can determine which directive is needed by looking at the Payment Manager tab of the WebSphere Commerce Configuration Manager.

Appendix C. 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 topics in the online information by visiting the following URL:

```
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 Payment Manager directory of the WebSphere Application Server installation directory after Payment Manager is installed.

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* , in PDF file format (paymgrset.pdf)
- The *IBM WebSphere Commerce Payments for Multiplatforms Cassette for VisaNet 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`

Solaris Operating Environment software information

For Solaris software support and other Solaris software information, visit the following Web site:

`http://www.sun.com/solaris`

Other IBM publications

You can purchase copies of most IBM publications from your IBM authorized dealer or marketing representative.

Appendix D. Program specifications and specified operating environment

This version of WebSphere Commerce supports the following operating environments:

- Solaris 8 Operating Environment (SPARC platform edition) software with the most recent Solaris Patch Cluster

Note: Solaris 8 Operating Environment (Intel platform edition) software is *not* supported by WebSphere Commerce as an operating environment.

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 Sun JDK 1.3.1.01.

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

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