

IBM® WebSphere® Commerce
for Linux for IBM eServer zSeries and S/390®



Installation Guide

Version 54

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for Linux for IBM eServer zSeries and S/390®



Installation Guide

Version 54

Note:

Before using this information and the product it supports, be sure to read the general information under "Notices" on page 173.

First Edition (September 2002)

This edition applies to version 5.4 of IBM® WebSphere Commerce Business Edition for Linux for IBM eServer zSeries and S/390® and to all subsequent releases and modifications until otherwise indicated in new editions. Make sure you are using the correct edition for the level of the product.

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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 9

Chapter 1. Welcome to WebSphere Commerce

This book describes how to install and configure WebSphere Commerce 5.4 for Linux for IBM eServer zSeries and S/390. 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

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.

`/usr/IBMDB2/V7.1`

The IBM DB2 Universal Database 7.1.0.67 installation path.

`/opt/IBMHTTPServer`

The IBM HTTP Server 1.3.19.3 installation path.

`/opt/WebSphere/AppServer`

The WebSphere Application Server 4.0.4 installation path.

`/usr/IBMDB2tx/V7.1`

The IBM DB2 Text Extender 7.1 installation path.

`/opt/Payments`

The IBM WebSphere Commerce Payments 3.1.3 installation path.

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 7.1.0.67
- IBM HTTP Server 1.3.19.3
- WebSphere Application Server 4.0.4
- IBM WebSphere Commerce Payments 3.1.3, which includes:
 - WebSphere Commerce Payments Cassette for CyberCash 3.1.3
 - WebSphere Commerce Payments Cassette for VisaNet 3.1.3
 - WebSphere Commerce Payments Cassettefor BankServACH 3.1.3
- 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

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

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
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 [™]
9000	WebSphere Application Server Location Server
16999	WebSphere Commerce Cache Daemon (default)
50000	DB2 [®] connect (default)
50001	DB2 interrupt (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. The only Locale code supported by WebSphere Commerce on Linux for IBM eServer z900 and S/390 is "en_US"

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.

WebSphere Commerce Payments Administrator

When you install WebSphere Commerce Payments, the WebSphere Commerce Administrator ID, `wcsadmin`, is automatically assigned the WebSphere Commerce Payments Administrator role. Follow the instructions in Chapter 7, “Install IBM WebSphere WebSphere Commerce Payments” on page 47 to switch the WebSphere Commerce Payments Realm Class to `WCSRealm` if it has not already been done.

The WebSphere Commerce Payments Administrator role enables a user ID to control and administer WebSphere Commerce Payments.

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
- DB2 Universal Database
- Basic operating system commands

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

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

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

Prerequisite hardware

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

You require a zSeries or S/390 server running the Linux operating system, that meets the following specifications:

- A minimum of 768MB of random access memory (RAM) per Linux instance
- A minimum of 2 GB of paging space per Linux instance
- 1 full volume (3300 cylinders) free disk space for the Linux system
- 1 full volume (3300 cylinders) free disk space for WebSphere Commerce Suite, WebSphere Application Server, and DB2 UDB

- A local area network (LAN) adapter that supports the TCP/IP protocol
- A Windows NT, Windows 2000 or Linux machine with a graphics capable monitor and a CD-ROM drive

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.
- SuSE Linux Enterprise 7 for S/390 (kernel 2.4 only). You may download the proper version of the Linux operating system from the following FTP site:
`ftp://ftp.suse.com/pub/suse/s390`
- Ensure the following packages are available on your system.
 - `pdcksh-5.2.14-248`

You can check their availability by issuing the following command:

```
rpm -qa | grep package_name
```

If these packages have not been installed, you must install them before proceeding with the WebSphere Commerce installation.

- If the machine you are using to administer your WebSphere Commerce site is running the Windows NT, or Windows 2000 operating system, ensure that an X Server is installed.

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: The desired result is a reply with your correct IP address.
3. When 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.
4. If you have previously install the Apache Web server on your system, it must be uninstalled. To determine if Apache is on your system, run the following command from a command prompt:

```
rpm -qa|grep apache
```

The system will list any Apache packages that are on your system. To uninstall these packages, run the following command for each listed package:

```
rpm -e --nodeps package_name
```

where *package_name* is the exact name that appeared in the output of the first command.

Part 2. Install DB2 Universal Database

WebSphere Commerce for Linux only supports DB2 databases. You must install DB2 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. Complete the chapter to install your database, and then continue to Part 3, “Install IBM HTTP Server” on page 25:

- Chapter 3, “Install IBM DB2 Universal Database 7.1.0.67” on page 15

Chapter 3. Install IBM DB2 Universal Database 7.1.0.67

This chapter explains how to install IBM DB2 Universal Database 7.1.0.67 and create a database for WebSphere Application Server. To complete the steps in this chapter you will require the DB2 Universal Database CD.

Pre-installation steps

Before you install the DB2 Universal Database check the following:

- If you have uninstalled a previous version of DB2 from this machine, ensure that all DB2 files have been deleted. If there is any DB2 information or any DB2-related files left on the system, you may be unable to successfully install DB2 or create the instance.
- If you intend to use a remote database configuration, ensure the following:
 - The ports used by DB2 are available for use. The default ports for DB2 are 50000 and 50001.
 - The database instance owner's user name and password are the same on both the DB2 client and DB2 server machines.
- If you have a previous version of DB2 Universal Database installed on your machine, ensure that the version is 7.1.0.67. If your DB2 Universal Database is less than 7.1.0.67, ensure that you install the DB2 Universal Database FixPak. To install the FixPak, see "Installing the DB2 FixPak" on page 19.
- On SuSE Linux Enterprise Server 7(SLES 7), for IBM eServer ZSeries and S/390, the patch SLES-7-PatchCD-1-s390-20020522.iso is required for DB2 Version 7.2 for zSeries. Ensure the patch is applied before installing DB2. For more information, refer to the following Web page:

www.ibm.com/software/data/db2/linux/validate

Installation procedures

To install DB2, do the following:

1. Insert the DB2 Universal Database CD into the CD-ROM drive on your Windows or Unix machine, and do the following:
 - a. If you are using a Unix or Linux machine, ensure that you are logged on as the root user.
 - b. Use a file compression utility such as winzip, pkzip, or tar to compress the entire contents of the DB2 Universal Database CD into a single file named DB2_V72_EE_LNX390_NLV.zip or DB2_V72_EE_LNX390_NLV.tar.

- c. Using FTP (File Transfer Protocol) copy the DB2_V72_EE_LNX390_NLV file to your Linux/390 machine.

Put this file into a separate, dedicated directory. Ensure that you set the transfer type to "bin" before issuing the put or mput command.

2. Log in to your Linux machine as user ID root.
3. Switch to the directory where you installed the DB2_V72_EE_LNX390_NLV file and uncompress it using one of the following commands:

```
unzip DB2_V72_EE_LNX390_NLV.zip
```

or

```
tar -xvf DB2_V72_EE_LNX390_NLV.tar
```

Note: If the DB2_V72_EE_LNX390_NLV file was compressed on a Microsoft Windows machine, you must run the following command:

```
chmod 755 -R *
```

4. To install DB2, start the db2setup utility by entering the following command in a terminal window:

```
./db2setup
```

Notes:

- a. The db2setup utility works with the Bourne Again (bash), Bourne, and Korn shells. Other shells are not supported.
 - b. The db2setup utility can generate a trace log to record errors during installation. To generate a trace log, enter the `./db2setup -d` command instead of the `./db2setup` command. The `./db2setup -d` command generates a log in `/tmp/db2setup.trc`.
5. The DB2 Installer starts. If you already have DB2 components installed on your system, select **Install**. After making your selection, the db2setup program scans your system for information about your current configuration.

Note: If this is your first installation of DB2, the scan for information about your current system configuration begins after starting the db2setup program. You do not need to select **Install** in the DB2 Installer window.

6. Highlight your selections and press **Enter** to select them as follows:
 - a. If this machine is a WebSphere Commerce server only with the DB2 Universal Database installed on a remote Linux for zSeries machine, select the **DB2 Run-Time Client**.
 - b. If you want to run a WebSphere Commerce database on this machine, select **DB2 UDB Enterprise Edition** and **DB2 Application Development Client**.

- c. If you want to use DB2 Universal Database for OS/390 and z/OS as a remote WebSphere Commerce database, select **DB2 Connect Enterprise Edition**.
- d. If you want DB2 messages displayed in a language other than English, select **Customize** beside **DB2 Product Messages** to open the DB2 Messages window. Then highlight your language code, press the space bar, highlight **OK**, and press **Enter**.
- e. If you want to install the DB2 publications in HTML format in a language other than English, highlight **Customize** beside **DB2 Product Library** and press **Enter** to open the DB2 Product Library window. Then highlight your language code, press the space bar, highlight **OK**, and press **Enter**.

Selected options within the DB2 Installer are indicated by an asterisk (*).

7. When you have made your selections, highlight **OK**, and press **Enter**.
8. The Create DB2 Services window displays. Highlight Create a DB2 Instance and press **Enter**. The DB2 Instance sub-window displays.
9. Complete the fields as follows:

User Name

Type the DB2 instance ID that you want to use. (The instance ID *db2inst1* is used as an example in this book.) The instance ID *must* meet the following criteria:

- It cannot be more than 8 characters in length.
- It can contain only the characters A to Z, a to z, 0 to 9, @, #, \$, and _.
- It cannot begin with an underscore (_).
- It cannot be any of the following, in upper, lower, or mixed case: USERS, ADMINS, GUESTS, PUBLIC, LOCAL.
- It cannot begin with any of the following in upper, lower, or mixed case: IBM, SQL, SYS.

Group Name

Type a group name that you are not currently using for any other user ID. This group will automatically become the system administration group for the DB2 instance, and it will be given administration authority.

Password

Type a password that meets the following criteria:

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

Verify Password

Type the same password again.

Accept the defaults for all other fields, highlight **OK**, and press **Enter**.

10. If you chose to install *only* the DB2 Connect Enterprise Edition, go to step 11.
11. If you chose to install DB2 UDB Enterprise Edition, follow these steps:
 - a. The Fenced User window is displayed. Accept all the defaults by highlighting **OK** and pressing **Enter**.
 - b. A Notice window is displayed advising you that a system generated password will be used. Highlight **OK** and press **Enter**.
 - c. The DB2 Warehouse Control Database window displays. Select **Do not set up DB2 Warehouse Control Database** then highlight **OK** and press **Enter**.
 - d. The Create DB2 Services window is displayed. Highlight **OK** and press **Enter**.
 - e. Ignore the warning message that indicates that the Administration Server is not created by highlighting **OK** and pressing **Enter**.
11. A summary report displays, listing the components that will be installed. Highlight **Continue** and press **Enter**.
12. The db2setup program installs your components and creates your instance ID in the group you specified. Depending on the speed of your processor, this can take several minutes. When the installation program completes, a Notice window informs you whether it was successful. Highlight **OK** and press **Enter**.
13. Scan the Status Report to ensure that all components were installed successfully and that the DB2 instance ID was created successfully. Highlight **OK** and press **Enter**.

Important:

If db2setup fails to create the DB2 instance ID automatically, set up the DB2 instance manually by doing the following:

- a. Remove all DB2 Universal Database users and groups that may have been created, as well as their home directories.
- b. Type:

```
cd /home/  
rm -r db2*
```

Ensure that all DB2 Universal Database files have been deleted.

- c. Run db2setup from the DB2 Universal Database CD. Select **Create an Instance** instead of installing the product, and complete the required steps as outlined above.

If you view the installation log, there may be a message stating that a trial license for DB2 has been installed. This license will be replaced automatically when you install WebSphere Commerce.

14. To close the DB2 Installer window, highlight **Close** and press **Enter**.
15. Ignore the message that indicates that the Administration Server is not created by highlighting **OK** and pressing **Enter**.
16. To confirm that you want to exit DB2 Installer, highlight **OK** and press **Enter**.

Next Step

If you have a previous version of DB2 Universal Database installed on your machine, ensure that the version is 7.1.0.67. If your DB2 Universal Database is less than 7.1.0.67, ensure that you install the DB2 Universal Database FixPak. To install the FixPak, see “Installing the DB2 FixPak”. If your DB2 Database version is currently 7.1.0.67, see “Installing the DB2 Universal Database eFix” on page 20.

Installing the DB2 client

If your DB2 server is on a separate machine from WebSphere Commerce, you need to install the DB2 Administration Client on your WebSphere Commerce machine. To do this, follow the steps outlined in “Installation procedures” on page 15, selecting the **DB2 Connect Enterprise Edition** and **DB2 Application Development Client** rather than the database server in step 6 on page 16.

Important:

The instance ID and password must be the same on both the WebSphere Commerce and DB2 server machine.

Installing the DB2 FixPak

Before you create any databases, you must upgrade the level of DB2 on both your client and server machines using the following steps:

1. Change to the db2inst1 user and stop DB2:

```
su - db2inst1
. /home/db2inst1/sqllib/db2profile
db2 force application all
db2 terminate
db2stop
db2licd end
exit
```

2. Ensure that no DB2 processes are still running by running the following command:

```
ps -ef|grep db2
```

If any processes are running, terminate them using the `kill` command.

3. Insert the WebSphere Commerce Disk 2 CD into your CD-ROM drive and FTP the following files to your Linux machine from the `/Software_Patches/DB2_FP7` directory:

```
FP7_MI00041.tar
```

Put these files into a separate, dedicated directory. Ensure that you set the transfer type to "bin" before issuing the `put` or `mput` command.

4. Log in to your Linux machine as user ID root.
5. Switch to the directory where you put the `FP7_MI00041.tar` file and `untar` it using the following command:

```
tar -xvf FP7_MI00041.tar
```

6. Switch to the `delta_install` directory and execute the following commands:

```
cd delta_install
./installFixPak
```

7. Update your DB2 instance:

```
/usr/IBMDB2/V7.1/instance/db2iupdt db2inst1
```

8. If you are going to be using a WebSphere Application Server or WebSphere Commerce database that was created before installing the FixPak, you must bind the files for each existing database:

```
su - db2inst1
db2start
cd /usr/IBMDB2/V7.1/bnd
db2 terminate
db2 CONNECT TO db_name
db2 BIND @db2ubind.lst BLOCKING ALL GRANT PUBLIC
db2 BIND @db2cli.lst BLOCKING ALL GRANT PUBLIC
db2 terminate
```

9. Restart DB2:

```
su - db2inst1
db2start
```

Installing the DB2 Universal Database eFix

To install the DB2 Universal Database eFix, do the following:

1. Insert the WebSphere Commerce Disk 2 CD into your CD-ROM drive and FTP the following files to your Linux machine from the `/Software_Patches/DB2_eFix` directory:

```
psmgtp.pak
```

Put these files into a separate, dedicated directory. Ensure that you set the transfer type to "bin" before issuing the `put` or `mput` command.

2. Log in to your Linux machine as user ID root.

3. Switch to the directory where you put the `psmgtp.bnd` file and run it using the following command:

```
cp psmgtp.bnd /usr/IBDb2/V7.1/bnd
```

4. Run the following commands:

```
chmod 444 /usr/IBDb2/V7.1/bnd/psmgtp.bnd
chown bin:bin /usr/IBDb2/V7.1/bnd/psmgtp.bnd
su - db2inst1
db2 force applications all
db2stop
db2licd end
exit
/usr/IBDb2/V7.1/instance/db2iupdt db2inst1
su - db2inst1
db2start
exit
```

Creating the WebSphere Application Server database

You must create the WebSphere Application Server database before installing the WebSphere Application Server. Depending on whether your DB2 server is on the same machine as WebSphere Commerce or if you will be installing WebSphere Commerce remotely from DB2, follow the steps in the appropriate section below.

Creating your database locally

To create the database with a DB2 server on the same machine as WebSphere Commerce, complete the following steps:

1. In a terminal window type the following:

```
su - db2inst1
db2 create database WAS
```

Where *WAS* is the name of the WebSphere Application Server database you are creating.

2. Set the application heap size by using the **db2 update db config** command, as follows:

```
db2 update db config for WAS using applheapsz 512
```

3. When the database creation has finished, stop and start DB2 by typing the following:

```
db2stop
db2start
```

4. Determine the TCP/IP service name by typing the following:

```
db2 get dbm cfg | grep -i svc
```

5. Catalog the WebSphere Application Server database as if it were a remote database by typing the following:

```
db2 catalog tcpip node node_name remote full_host_name server
      TCP/IP_service_name
db2 catalog database WAS as WASLOOP at node node_name
```

Where *node_name* is the name you are assigning to this node, and *full_host_name* is the fully qualified host name of your database server. These commands are presented on separate lines for readability only; ensure that you type each one on a single line.

Creating your database remotely

To create the database if the DB2 server is remote from WebSphere Commerce, complete the following steps:

1. On your WebSphere Application Server machine, open a terminal window.
2. Enter the following commands in the terminal window:

```
su - db2inst1
db2 catalog tcpip node node_name remote db_server_name server
      DB2_server_port
db2 attach to node_name user user_id using password
db2 create db WAS
db2 update db cfg for WAS using applheapsz 512
```

where *node_name* is the name you are assigning to this node, *db_server_name* is the fully qualified host name of your database server, *DB2_server_port* is the port you are using to connect to DB2 (the default DB2 server port is 50000). These commands are presented on separate lines for readability only; ensure that you type each one on a single line.

3. On your DB2 server machine, run the following commands:

```
su - db2inst1
db2set DB2_RR_TO_RS=yes
db2set DB2BID1=yes
db2set DB2_STPROC_LOOKUP_FIRST=true
```

4. Restart the DB2 server on your DB2 server machine by typing the following in a terminal window:

```
db2stop
db2start
```

Verifying connectivity to the WebSphere Application Server database

To verify the connectivity to the WebSphere Application Server database, complete the following steps on the DB2 server machine:

1. Ensure that you are logged in as the DB2 instance owner, db2inst1.
2. Connect to the database named *wasloop* by using the db2 connect command, as follows:

```
db2 connect to WASLOOP user db2inst1 using db2inst1_password
```

3. Correct output resembles the following:

```
Database Connection Information
Database server      = DB2/LINUX390 7.2.5
SQL authorization ID = DB2INST1
Local database alias = WASLOOP
```

4. To disconnect from a database and log out as the DB2 instance owner, type

```
db2 connect reset
exit
```

at the command prompt.

The next step

Now that you have installed IBM DB2 Universal Database 7.1.0.67, turn to Part 3, “Install IBM HTTP Server” on page 25 in order to install your Web server.

Part 3. Install IBM HTTP Server

WebSphere Commerce for Linux only supports IBM HTTP 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 your Web server on a machine other than your WebSphere Commerce machine, follow the instructions in Chapter 4, “Install and Configure IBM HTTP Server remotely from WebSphere Commerce” on page 27.

If you are installing your Web server on the same machine as WebSphere Commerce, it will be installed with WebSphere Application Server. Complete the steps in “Installing WebSphere Application Server and IBM HTTP Server on the same machine” on page 35 when installing WebSphere Application Server, and do not complete the steps in Part 3, “Install IBM HTTP Server”.

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

This chapter explains how to install IBM HTTP Server 1.3.19.3 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; proceed to Part 4, "Install required WebSphere Commerce components" on page 33.

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

Installation procedures

To install IBM HTTP Server 1.3.19.3, 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. Insert the WebSphere Application Server, Advanced Edition CD into the CD-ROM drive on your Windows or Unix machine, and do the following:
 - a. Use a file compression utility such as winzip, pkzip, or tar to compress the entire contents of the WebSphere Application Server, Advanced Edition CD into a single file named was40_ae_zlinux.zip or was40_ae_zlinux.tar.
 - b. Using FTP (File Transfer Protocol) copy the was40_ae_zlinux file to your Linux/390 machine.

Put this file into a separate, dedicated directory. Ensure that you set the transfer type to "bin" before issuing the put or mput command.

3. Log in to your Linux machine as user ID root.
4. Switch to the directory where you installed the was40_ae_zlinux file and uncompress it using one of the following commands:

```
unzip was40_ae_zlinux.zip
```

or

```
tar -xvf was40_ae_zlinux.tar
```

Note: If the was40_ae_zlinux file was compressed on a Microsoft Windows machine, you must run the following command:

```
chmod 755 -R *
```

5. To install WebSphere Application Server, do the following:

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

Where `fully_qualified_host_name` is either the hostname or the TCP/IP address of your X Server workstation. If your system replies with a `Can not open DISPLAY=` message, run the following command on your X Server workstation machine:

```
xhost +
```

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

```
./install.sh
```
7. The Welcome to the IBM WebSphere Application Server Setup program dialog box opens. Click **Next** to continue.
8. The Prerequisites Check window opens. Ensure that you have the correct prerequisites to install WebSphere Application Server and click **OK**.
9. The Install Options dialog box opens. Select **Custom Installation**, and click **Next**.
10. The Choose Application Server Components panel displays. Select the following packages:
 - IBM HTTP Server 1.3.19
 - Web Server PluginsWhen all packages have been selected, click **Next**.
11. The WebSphere plug-ins panel displays. Select the plug-in for IBM HTTP Server and click **Next**.
12. The Select Destination Directory dialog opens. Click **Next** to continue.
13. The Install Options Selected dialog box opens. Verify that the information is correct and click **Install** to complete the installation.
14. 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/IBMHTTPServer/conf/httpd.conf`)

Important::

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

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

Enter the Web server configuration file and click **Next**.

15. 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 1.3.19.3, perform the following steps:

1. Type `cd /opt/IBMHTTPServer/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/IBMHTTPServer/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/IBMHTTPServer/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 FixPak

Before installing the FixPak or eFixes, the following must be done:

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

1. 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
```

Where `fully_qualified_host_name` is either the hostname or the TCP/IP address of your X Server workstation.

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

```
ps -ef | grep startupServer
```

- Ensure that IBM HTTP Server is stopped:

```
cd /opt/IBMHTTPServer/bin
./apachectl stop
```

Complete the following steps to install the WebSphere Application Server FixPak:

1. Insert the WebSphere Commerce Disk 2 CD into your CD-ROM drive and FTP the following file to your Linux machine from the `/Software_patches/WAS_PTF4` directory:

```
was40_ae_ptf_4_linux.zSeries.tar
```

Ensure that you set the transfer type to "bin" before issuing the put or mput command.

2. Log in to your Linux machine as user ID root.
3. Switch to the directory where you installed the was40_ae_ptf_4_linux.zSeries.tar file and untar it using the following commands:

```
tar -xvf was40_ae_ptf_4_linux.zSeries.tar
```
4. Run the following command:

```
./install.sh
```
5. Install the WebSphere Application Server FixPak but do not update the Apache Web Server. Answer **yes** to all additional questions.

The next step

Now that you have installed IBM HTTP Server 1.3.19.3, you are ready to install WebSphere Application Server 4.0.4 as described in Chapter 5, "Installing WebSphere Application Server" on page 35.

Part 4. Install required WebSphere Commerce components

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

- Chapter 5, “Installing WebSphere Application Server” on page 35
- Chapter 6, “Install WebSphere Commerce 5.4” on page 45
- Chapter 7, “Install IBM WebSphere WebSphere Commerce Payments” on page 47

You must have a supported database and Web server installed before completing the tasks in this section.

Chapter 5. 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 a remote Web server” on page 39

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 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. Insert the WebSphere Application Server, Advanced Edition CD into the CD-ROM drive on your Unix or Linux machine, and do the following:
 - a. Ensure that you are logged on as the root user.
 - b. Use a file compression utility such as `pkzip`, or `tar` to compress the entire contents of the WebSphere Application Server, Advanced Edition CD into a single file named `was40_ae_zlinux.zip` or `was40_ae_zlinux.tar`.
 - c. Using FTP (File Transfer Protocol) copy the `was40_ae_zlinux` file to your Linux/390 machine.

Put this file into a separate, dedicated directory. Ensure that you set the transfer type to "bin" before issuing the put or mput command.

2. Log in to your Linux machine as user ID root.
3. Switch to the directory where you installed the was40_ae_zlinux file and uncompress it using one of the following commands:

```
unzip was40_ae_zlinux.zip
```

or

```
tar -xvf was40_ae_zlinux.tar
```

4. To install WebSphere Application Server, do the following:

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

Where `fully_qualified_host_name` is either the hostname or the TCP/IP address of your X Server workstation. If your system replies with a Can not open DISPLAY= message, run the following command on your X Server workstation machine:

```
xhost +
```

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:

- 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**.

10. The WebSphere plug-ins panel displays. Select the plug-in for the IBM HTTP Server and click **Next**.
11. The Database Options dialog opens. Complete the following set of instructions:
 - a. In the Database Type field, select DB2 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. For example: WASL00P
 - d. In the DB Home field, type the full path name of the home directory of the DB2 instance owner, */home/db2inst1*, or specify the full path name of the home directory by using the Browse button.
 - e. The DB URL, Server Name, and Port Number fields cannot be edited.
 - f. In the Database User ID field, type the name of the database instance owner: *db2inst1*.
 - g. In the Database Password field, type the current password for the database instance owner.
 - h. Click **Next** to continue.
12. 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.
 13. The Install Options Selected dialog box opens. Verify that the information is correct and click **Install** to complete the installation.
 14. 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/IBMHTTPServer/conf/httpd.conf

Important:

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

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

Click **Next**.

15. 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.
16. Restart IBM HTTP Server by running the following command:
/opt/IBMHTTPServer/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.

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 1.3.19.3, perform the following steps:

1. Type `cd /opt/IBMHTTPServer/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/IBMHTTPServer/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/IBMHTTPServer/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.

Next Step

You must now install the WebSphere Application Server FixPak. To install the WebSphere Application Server FixPak, see “Installing the WebSphere Application Server FixPak” on page 41.

Installing WebSphere Application Server for use with a remote Web server

To install WebSphere Application Server if your IBM HTTP Server is remote from the WebSphere Application Server and WebSphere Commerce, do the following:

1. Insert the WebSphere Application Server, Advanced Edition CD into the CD-ROM drive on your Windows or Unix machine, and do the following:
 - a. Use a file compression utility such as winzip, pkzip, or tar to compress the entire contents of the WebSphere Application Server, Advanced Edition CD into a single file named was40_ae_zlinux.zip or was40_ae_zlinux.tar.
 - b. Using FTP (File Transfer Protocol) copy the was40_ae_zlinux file to your Linux/390 machine.

Put this file into a separate, dedicated directory. Ensure that you set the transfer type to “bin” before issuing the put or mput command.

2. Log in to your Linux machine as user ID root.
3. Switch to the directory where you installed the was40_ae_zlinux file and uncompress it using one of the following commands:

```
unzip was40_ae_zlinux.zip
```

or

```
tar -xvf was40_ae_zlinux.tar
```

4. To install WebSphere Application Server, do the following:


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

Where `fully_qualified_host_name` is either the hostname or the TCP/IP address of your X Server workstation. If your system replies with a Can not open DISPLAY= message, run the following command on your X Server workstation machine:

xhost +

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

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

10. The Database Options dialog opens. Complete the following set of instructions:
 - a. In the Database Type field, select DB2 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. For example: WASL00P if your database is on the same machine as WebSphere Application Server, or WAS if your database is remote from WebSphere Application Server.
 - d. In the DB Home field, type the full path name of the home directory of the DB2 instance owner, `/home/db2inst1`, or specify the full path name of the home directory by using the Browse button.
 - e. The DB URL, Server Name, and Port Number fields cannot be edited.
 - f. In the Database User ID field, type the name of the database instance owner: `db2inst1`.
 - g. In the Database Password field, type the current password for the database instance owner.
 - h. 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.
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.

Next Step

You must now install the WebSphere Application Server FixPak. To install the WebSphere Application Server FixPak, see “Installing the WebSphere Application Server FixPak”.

Installing the WebSphere Application Server FixPak

Before installing the FixPak or eFixes, the following must be done:

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

1. 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
```

Where *fully_qualified_host_name* is either the hostname or the TCP/IP address of your X Server workstation.

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 startupServer
```
5. If this command returns any Java processes, stop them by issuing a kill command.

- Ensure that IBM HTTP Server is stopped:

```
cd /opt/IBMHTTPServer/bin
./apachectl stop
```

Complete the following steps to install the WebSphere Application Server FixPak:

1. Insert the WebSphere Commerce Disk 2 CD into your CD-ROM drive and FTP the following file to your Linux machine from the /Software_patches/WAS_PTF4 directory:

```
was40_ae_ptf_4_linux.zSeries.tar
```

Ensure that you set the transfer type to "bin" before issuing the put or mput command.

2. Log in to your Linux machine as user ID root.
3. Switch to the directory where you installed the was40_ae_ptf_4_linux.zSeries.tar file and untar it using the following commands:

```
tar -xvf was40_ae_ptf_4_linux.zSeries.tar
```

4. Run the following command:

```
./install.sh
```
5. Install the WebSphere Application Server FixPak but do not update the Apache Web Server. Answer **yes** to all additional questions.

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 6, “Install WebSphere Commerce 5.4” on page 45.

Chapter 6. Install WebSphere Commerce 5.4

This chapter explains how to install WebSphere Commerce 5.4. To complete the steps in this chapter, you will need the WebSphere Commerce Disk 1 CD.

Ensure that you have installed your Web server, database, IBM SDK for Java, and WebSphere Application Server *before* you install WebSphere Commerce 5.4.

Prior to installing WebSphere Commerce, ensure that you have met all the pre-requirements described in Chapter 2, "Preinstallation requirements" on page 9.

Installation procedures

To install WebSphere Commerce 5.4, do the following:

1. Insert the WebSphere Commerce Disk 1 CD into your CD-ROM drive and FTP the following files to your Linux machine from the root directory:

```
wcbe54_zlinux.tar
```

Ensure that you set the transfer type to "bin" before issuing the put or mput command.

2. Log in to your Linux machine as user ID root.
3. Switch to the directory where you copied the wcbe54_zlinux.tar file and untar it using the following command:

```
tar -xvf wcbe54_zlinux.tar
```

4. Install WebSphere Commerce 5.4 by issuing the following command:

```
./install.sh
```

The next step

Now that you have installed WebSphere Commerce 5.4, you are ready to continue by installing IBM WebSphere Commerce Payments 3.1.3 as described in Chapter 7, "Install IBM WebSphere WebSphere Commerce Payments" on page 47.

Chapter 7. Install IBM WebSphere WebSphere Commerce Payments

This chapter describes how to install and configure WebSphere Commerce Payments 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 WebSphere Commerce Payments 3.1.3 CD.

For additional information on configuring WebSphere Commerce Payments, see the following:

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

Prerequisites for installation

If you are installing WebSphere Commerce Payments on your WebSphere Commerce machine, most of the prerequisites for installing WebSphere Commerce Payments are already met. You can proceed directly to “Before installing WebSphere Commerce Payments” on page 48 and install WebSphere Commerce Payments.

If you are installing WebSphere Commerce Payments 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

WebSphere Commerce Payments requires the following software to be installed:

1. A database product. IBM DB2 Universal Database 7.1.0.65 is supported. You must have the database server or client installed on the machine where you are installing WebSphere Commerce Payments.
2. WebSphere Application Server 4.0.4
3. A Web server. (IBM HTTP Server 1.3.19.3 is installed by default when you install WebSphere Application Server 4.0.4.) See the WebSphere Application Server documentation for supported Web servers.

Before installing WebSphere Commerce Payments

1. Read the latest readme file, `readme.framework.html`, accessed through documentation links on the WebSphere Commerce Payments Web site: <http://www.ibm.com/software/websphere/paymgr/support/index.html> and on the WebSphere Commerce Payments CD-ROM.
2. Change to your database user:

```
su - db2inst1
```
3. Create a database for WebSphere Commerce Payments (for example, *payman*):

```
db2 create db payman
```

If your database is on a remote machine, you can create the database using the following commands:

```
db2 attach to node_name user user_id using password  
db2 create db payman
```

This database must be running during WebSphere Commerce Payments installation.

4. Ensure that the application heap size for this database is at least 256 by typing the following in a DB2 command window:

```
db2 update db cfg for payman using APPLHEAPSZ 256
```
 5. If you install UDB and WebSphere Commerce Payments on the same machine, you must enter these commands from a DB2 prompt to circumvent a known DB2 problem:
 - `catalog tcpip node node_name remote host_name server service_name`
Where the value for *service_name* is the TCP/IP service name which can be determined by entering the following command from a DB2 command line:

```
db2 get dbm cfg
```
 - `catalog database db_name as db_alias at node node_name`
Where *db_name* is the database name for WebSphere Commerce Payments.
- If the hostname has more than 8 characters or has a special character such as "-", you should apply the following commands instead:
- `catalog tcpip node loop00 remote 127.0.0.1 server service_name`
 - `catalog database db_name as db_alias at node loop00`
6. When the database creation has finished, stop and start DB2 by typing the following:

```
db2stop  
db2start
```


7. Ensure that the WebSphere Application Server administration server and IBM HTTP Server are running at installation. Also, ensure WebSphere Application Server does not have an application server named WebSphere Commerce Payments configured for another purpose. If so, rename or delete it.
8. If WebSphere Application Server security is enabled, disable it before installing WebSphere Commerce Payments 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 WebSphere Commerce Payments

To install IBM WebSphere Commerce Payments 3.1.3, do the following:

1. Insert the IBM WebSphere Commerce Payments 3.1.3 CD into your CD-ROM drive and FTP the following files to your Linux machine:
zLinux.Frame.tar

Ensure that you set the transfer type to "bin" before issuing the put or mput command.

2. Log in to your Linux machine as user ID root.
3. Switch to the directory where you put the zLinux.Frame.tar file and untar it using the following command:

```
tar -xvf zLinux.FRAME.tar
```

4. To install WebSphere Application Server, do the following:
export DISPLAY=*fully_qualified_host_name*:0.0

Where *fully_qualified_host_name* is either the hostname or the TCP/IP address of your X Server workstation. If your system replies with a Can not open DISPLAY= message, run the following command on your X Server workstation machine:

```
xhost +
```

5. Run the Install command to launch the WebSphere Commerce Payments install program:

```
./Install
```

6. On the WebSphere Commerce Payments Install screen, click **Next**.
7. Accept the default destination directory or enter another directory.
8. If the installation program can not determine which IBM SDK for Java that WebSphere Application Server is using, you will be asked to enter

the location of the IBM SDK for Java directory. If the location displayed is correct, click **Next**. If not, enter the correct location and click **Next**.

9. Select which database you will use with WebSphere Commerce Payments: Select **DB2 Universal Database** and click **Next**.
10. The install program searches for JDBC[™] driver information automatically. When the installation finds the JDBC driver information, click **Next**.
11. When prompted for the name of the database, specify the database you created for use with WebSphere Commerce Payments. The database may be the same database as you are using as your WebSphere Commerce database or it may be a separate database.
12. On the WebSphere Commerce Payments Database Access Information screen, enter the appropriate values:
 - Database Owner User ID (default is db2inst1)
 - Database Administrator's User ID (default is db2inst1)
 - Database Administrator's Password
 - Commerce Payments Database Name (for example, payman)
 - DB2 instance name
 - Database server host name (fully qualified)
 - Database Service TCP Port
13. On the WebSphere Commerce Payments 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.
14. On the Installation Summary screen, review the chosen parameters. Click **Next** to continue the installation.

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

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

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

The WebSphere Commerce Payments Cassettefor BankServACH 3.1.3, WebSphere Commerce Payments Cassette for VisaNet 3.1.3, and WebSphere

Commerce Payments Cassette for CyberCash 3.1.3 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 transactions. 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 “WebSphere Commerce Payments information” on page 166. Note that before you install the cassettes, WebSphere Application Server should be running and the WebSphere Commerce Payments Application server should be stopped.

Configuring WebSphere Commerce Payments on a remote machine

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

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

1. Open the WebSphere Application Server Administration Console on the WebSphere Commerce Payments machine.
2. Ensure the WebSphere Commerce application server is running.
3. Stop the WebSphere Commerce Payments application server:
 - a. Expand **WebSphere Administrative Domain**.
 - b. Expand **Nodes**.
 - c. Expand *node_name*.
 - d. Expand **Application Servers**.
 - e. Select **WebSphere Commerce Payments**. Click the **Stop** button to stop the WebSphere Commerce Payments application server.
4. After the WebSphere Commerce Payments 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 WebSphere Commerce Payments 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 141.

Note: If you do not enable SSL, you must configure the WebSphere Commerce server to use the non-SSL WebSphere Commerce Payments client in the WebSphere Commerce Payments setting page of the WebSphere Commerce Configuration Manager when creating a WebSphere Commerce instance. You can change the WebSphere Commerce Payments 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 WebSphere Commerce Payments 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 WebSphere Commerce Payments is installed.) You do not have to change the property for the `WCSWebPath`.
7. Restart the WebSphere Commerce Payments application server from the WebSphere Application Server Administration Console.

The next step

Now that you have installed IBM WebSphere Commerce Payments 3.1.3, you can:

- Create a WebSphere Commerce instance by following the instructions in Part 5, “Configure a WebSphere Commerce instance” on page 53.

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 or through a command line interface. For your initial instance, it is suggested that you use the Configuration Manager.

This section contains the following chapters:

- Chapter 8, “Pre-configuration steps” on page 55
- Chapter 9, “Creating or modifying an instance with Configuration Manager” on page 57
- Chapter 10, “Post-Configuration Steps” on page 85

All users must complete the applicable steps in Chapter 8, “Pre-configuration steps” on page 55 and Chapter 10, “Post-Configuration Steps” on page 85, as well as one of Chapter 9, “Creating or modifying an instance with Configuration Manager” on page 57 in order to successfully create a WebSphere Commerce instance.

Chapter 8. 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 `wcb.sh` script.
- 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, WebSphere Commerce Payments 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. Ensure that your DB2 services have been stopped.
3. Go to `/opt/WebSphere/CommerceServer/bin`
`cd /opt/WebSphere/CommerceServer/bin`
4. Type: `./wcb.sh`
5. Follow the onscreen prompts, ensuring that you select `yes` when asked if you want to run as a non-root user. When prompted to install the DB2 Universal Database fixes, select **No**.

Notes:

- a. If you choose to use an existing user rather than creating a new user, the home directory for this user must be `/home`.
- b. It is strongly suggested that you accept the default group and user names, and the default port number suggested by the `./wcb.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 the WebSphere Application Server

Administration Client or starting and stopping certain applications. Details on this are included when these tasks are described in this book.

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 55, 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
export DISPLAY=fully_qualified_host_name:0.0
cd /opt/WebSphere/AppServer/bin
./startupServer.sh &
```

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 9, “Creating or modifying an instance with Configuration Manager” on page 57

Chapter 9. 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 8, “Pre-configuration steps” on page 55, you will not be able to create an instance.

Notes:

1. If you want to use IBM WebSphere Commerce Payments 3.1.3 to handle online transactions for your instance, you should install WebSphere Commerce Payments before creating your instance. Your instance will be configured to work with WebSphere Commerce Payments automatically. To install WebSphere Commerce Payments, see Chapter 7, “Install IBM WebSphere Commerce Payments” on page 47.
2. If you have made any customizations to the 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 4.0.4, a single WebSphere Commerce Server consists of an Installed EJB Module, and an Installed Web Module to serve client requests to one or more stores. In the WebSphere Commerce Configuration Manager, each WebSphere Commerce instance appears as a separate root category in the instances tree. In the WebSphere Application Server topology view, a WebSphere Commerce instance will appear under a node entry as a separate WebSphere Commerce application server.

Chapter checklist

- Ensure that your Database server is running.
- Ensure that your Web server is running, if it is installed on the same machine as WebSphere Commerce.
- Ensure that the 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 55:

```
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 X Server workstation 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 55:

```
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 administrator name

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

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

Database administrator password

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

Database Administrator home directory

The home directory of the Database Administrator. The default is /home/db2inst1

Database User home directory

The home directory of the Database User. The default is /home/db2inst1

Database name

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

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

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

Database type

This drop-down list shows the database management system that you are using. The only supported database is DB2 Universal Database.

Database user name

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

Database user password

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

Run Database Performance Wizard

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

Use staging server

If **Use staging server** is selected, the Configuration Manager defines this database as being for use by a staging server. For more information on staging servers, see the WebSphere Commerce online information. (See "Using the online help" on page 165 for guidance on accessing this information.)

Set as active database

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

Use remote database

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

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

Database Server Hostname

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

Database Server Port

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

Database Node Name

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

Languages

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

1. Select the appropriate language `.xml` file from the Available Languages window. The `.xml` file will be in the form of `wcs.bootstrap_multi_xx_XX.xml`, where `xx_XX` is the four letter locale code for the language you want to select.
2. Click the arrow that points to the Selected Languages window. The language you have chosen should now be listed in the Selected Languages window.
3. Repeat steps 1 and 2 for each language for which support is needed.

Note: If you plan to create stores that support more than one language, for example, a store that is available in either English or Spanish, you must select all languages your stores will support. In this case, you must have both English and Spanish in the Selected Languages window. The

sample stores provided with WebSphere Commerce support more than one language. If you select only one language on the Languages panel, then you will not see certain portions of the sample store that does support multiple languages.

Web Server

Use Remote Web Server

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

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 55. The default is 2222.

JDBC Driver Location

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

Stores Web Application

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

Tools Web Application

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

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.

WebSphere Commerce Payments**Hostname**

Enter the fully qualified host name of the Web server machine. This defaults to the WebSphere Commerce host name. If you have installed WebSphere Commerce Payments 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 WebSphere Commerce Payments uses.

Profile Path

The full path name of the directory where the Standard WebSphere Commerce WebSphere Commerce Payments Cashier Profiles are to be stored. The default value is
`/opt/WebSphere/CommerceServer/instances/instance_name/xml/
payment`

Use non-SSL WebSphere Commerce Payments Client

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

Web Server Port

Enter the Web server TCP port that WebSphere Commerce Payments uses. If you have selected the Use non-SSL WebSphere Commerce Payments Client check box, the default value for this field is 80 (the non-secure port). If the Use non-SSL WebSphere Commerce Payments 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 WebSphere Commerce Payments.

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 receive 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.

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 Administrator home directory

The home directory of the Database Administrator. The default is `/home/db2inst1`

Database User home directory

The home directory of the Database User. The default is /home/db2inst1

Database name

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

Database type

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

Database user name

Enter the user name for this database.

Database user password

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

Run database performance wizard

Select this check box to perform DB2 Universal Database optimization.

Use staging server

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

Set as active database

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

Use remote database

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

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

Database Server Host name

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

Database Server Port

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

Database Node Name

This field is enabled if you select **Use Remote Database** and if you

are using DB2 as your database. If you have not already cataloged a node for your remote database, the Configuration Manager will catalog a node for you.

WebSphere

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

Data source name

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

Port number

Enter the port address to which WebSphere Application Server is connected. Enter the port address that WebSphere Application Server is listening on, as specified in “Running the postinstall script” on page 55. 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 db2java.zip file on your system.

Stores Web Application

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

Tools Web Application

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

Tools Port Number

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

WebSphere Catalog Manager

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

Web server

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

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

Use Remote Web server

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

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

WebSphere Commerce Payments

Hostname

Enter the domain qualified host name of the Web server machine. This defaults to the WebSphere Commerce host name. If you have installed WebSphere Commerce Payments 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 WebSphere Commerce Payments Cashier Profiles are to be stored. The default value is
/opt/WebSphere/CommerceServer/instances/*instance_name*/xml/
payment

Use non-SSL WebSphere Commerce Payments Client

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

Web Server Port

Enter the Web server TCP port that WebSphere Commerce Payments uses. If you have enabled Use non-SSL WebSphere Commerce Payments 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 WebSphere Commerce Payments.

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 initiate 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

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

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 10, “Post-Configuration Steps” on page 85 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 10. 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:

- Enabling SSL for testing (all users)
- Configuring WebSphere Commerce Payments to work with WebSphere Commerce (all users)
- Compiling the JavaServer Pages™ files (all users)

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 12, “Enabling SSL for production with IBM HTTP Server” on page 105.

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. Change to root user:
`su - root`
2. If you have not already done so, set your PATH to where your Java or JRE executable resides by doing the following:
`export PATH=/opt/WebSphere/AppServer/java/bin:$PATH`
3. Switch to the IBM HTTP Server install directory and create a security key file with IKEYCMD command line interface. To create a security key file, do the following:

```
cd /opt/IBMHTTPServer/ssl
export PATH=/usr/local/ibm/gsk5/bin:$PATH
export CLASSPATH=/usr/local/ibm/gsk5/classes/cfwk.zip:/usr/local/ibm/
gsk5/classes/gsk5cls.jar:$CLASSPATH
java com.ibm.gsk.ikeyman.ikeycmd -keydb -create -db keyfile.kdb -pw wcs
```

```
-type cms -expire 365 -stash
java com.ibm.gsk.ikeyman.ikeycmd -cert -create -db keyfile.kdb -pw wcs
-size 512 -dn "CN=host_name,O=ibm,C=US" -label wcs -default_cert yes
```

Where *host_name* is the hostname of your zLinux server.

4. Start the IBM HTTP Server as described in “Starting and stopping IBM HTTP Server” on page 132.

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

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

Configuring WebSphere Commerce Payments to work with WebSphere Commerce

To configure WebSphere Commerce Payments 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 *fully_qualified_host_name* is either the hostname or the TCP/IP address of your X Server workstation, *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 55. 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 WebSphere Commerce Payments client in the WebSphere Commerce Payments setting page of the WebSphere Commerce Configuration Manager when creating a WebSphere Commerce instance. You can change the WebSphere Commerce Payments 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 55. (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 131.

Note: Step 4 to 6 are only required if WebSphere Commerce Payments 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 132 for 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
```

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 55 (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)
- Copying assets to your Web server (all users)
- Configuring WebSphere Commerce Payments to work with WebSphere Commerce (all users)
- 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 12, “Enabling SSL for production with IBM HTTP Server” on page 105.

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 132.
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/IBMHTTPServer/conf`.
 - b. Open `httpd.conf` in a text editor.
 - c. Uncomment the following lines:
 - 1) `#LoadModule ibm_ssl_module` , where *encryption-level* is the appropriate level of encryption for your locale.
 - 2) `#Listen 443`
 - 3) `#<VirtualHost host.some_domain.com:443>`. You must also substitute your fully qualified host name in this line.

- 4) #SSLEnable
 - 5) #</VirtualHost>
 - 6) #SSLDisable
 - 7) Keyfile "/opt/IBMHTTPServer/ssl/keyfile.kdb"
 - 8) #SSLV2Timeout 100
 - 9) #SSLV3Timeout 1000
- d. Save your changes.
3. Change to root user:


```
su - root
```
 4. If you have not already done so, set your PATH to where your Java or JRE executable resides by doing the following:


```
export PATH=/opt/WebSphere/AppServer/java/bin:$PATH
```
 5. Switch to the IBM HTTP Server install directory and create a security key file with IKEYCMD command line interface. To create a security key file, do the following:


```
cd /opt/IBMHTTPServer/ssl
export PATH=/usr/local/ibm/gsk5/bin:$PATH
export CLASSPATH=/usr/local/ibm/gsk5/classes/cfwk.zip:/usr/local/ibm/gsk5/classes/gsk5cls.jar:$CLASSPATH
java com.ibm.gsk.ikeyman.ikeycmd -keydb -create -db keyfile.kdb -pw wcs -type cms -expire 365 -stash
java com.ibm.gsk.ikeyman.ikeycmd -cert -create -db keyfile.kdb -pw wcs -size 512 -dn "CN=host_name,O=ibm,C=US" -label wcs -default_cert yes
```

Where *host_name* is the hostname of your zLinux server.

6. Start the IBM HTTP Server as described in “Starting and stopping IBM HTTP Server” on page 132.

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. You must manually edit the `httpd.conf` file.

Stop the IBM HTTP Server, and create a backup of the `/opt/IBMHTTPServer/conf/httpd.conf` file. Open the `/opt/IBMHTTPServer/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 #####

```

3. On your WebSphere Commerce machine, you need to configure the WebSphere virtual host to use a remote Web server:
 - a. Launch the WebSphere Commerce Administration Console.
 - b. Select the Virtual Hosts folder
 - c. In the Details pane, select **VH_instance_name**.
 - d. Change all the host aliases on the General tab to the remote Web server host name.
 - e. Select **VH_instance_name_tools**.
 - f. Change all the host aliases on the General tab to the remote Web server host name.
 - g. Click **Apply**.
4. Regenerate the Web server plugin settings:
 - a. Launch the WebSphere Commerce Administration Console.
 - b. In the left-hand panel, expand **Nodes**.
 - c. Right-click on your host name and select **Regen Web server plugin**.
5. Copy:

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

from your WebSphere Commerce machine to the following directory on your Web server:

```
/opt/WebSphere/CommerceServer/config
```

6. Copy the following two directories and all their contents from your WebSphere Commerce machine to your Web server:

```
/opt/WebSphere/CommerceServer/web
/opt/WebSphere/AppServer/installedApps/WC_Enterprise_App_instance_name.ear
```
7. On your Web server machine, delete all JSP files found in the following directory:

```
/opt/WebSphere/AppServer/installedApps/WC_Enterprise_App_instance_name.ear
```

8. Start your Web server.

Configuring WebSphere Commerce Payments to work with WebSphere Commerce

To configure WebSphere Commerce Payments 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 `fully_qualified_host_name` is either the hostname or the TCP/IP address of your X Server workstation, `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 55. 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 WebSphere Commerce Payments client in the WebSphere Commerce Payments setting page of the WebSphere Commerce Configuration Manager when creating a WebSphere Commerce instance. You can change the WebSphere Commerce Payments settings after the instance is created, however, you must restart the instance for your changes to take effect.

3. Select the WebSphere Commerce Payments 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 WebSphere Commerce Payments directory (`/opt/Payments`), 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 WebSphere Commerce Payments 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 WebSphere Commerce Payments section.
 - c. Within this section, ensure that the <hostname> directive points at the fully qualified host name of the Web server WebSphere Commerce Payments is using.
6. Stop the WebSphere Application Server. To stop the WebSphere Application Server, follow the directions in “Starting and stopping WebSphere Application Server” on page 131.

Note: Step 6 to 8 are only required if WebSphere Commerce Payments is installed on the same machine as WebSphere Commerce.

7. Open the following file in a text editor:
/opt/WebSphere/AppServer/config/plugin-cfg.xml
8. Add the following line directly below <Config> in the plugin-cfg.xml file:

```
<Property Name="CacheLibrary" value="/opt/WebSphere/CommerceServer/bin/libwccache.so" />
```
9. Copy the updated configuration file from your WebSphere Commerce machine to your Web server:
/opt/WebSphere/AppServer/config/plugin-cfg.xml
10. Stop and restart your Web server and WebSphere Commerce Payments. If you are using IBM HTTP Server refer to “Starting and stopping IBM HTTP Server” on page 132 for additional information.
11. Start the WebSphere Application Server. To start the WebSphere Application Server, do the following:

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 55 (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 165.
- 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 165.
- Configure additional options, such as:
 - Chapter 12, “Enabling SSL for production with IBM HTTP Server” on page 105
 - Chapter 13, “Create Multiple WebSphere Commerce Instances” on page 109
 - Chapter 14, “Enabling WebSphere Application Server security” on page 115
 - Chapter 15, “Cloning” on page 121
 - Chapter 16, “Single sign-on” on page 127

Information on configuring additional options is available in Part 6, “Optional Configuration” on page 97.

- 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 WebSphere Commerce Payments. 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 Suite instance, you may want to configure additional options. The following chapters describe how to complete these tasks:

- Chapter 11, “Creating a store from a sample store archive” on page 99
- Chapter 12, “Enabling SSL for production with IBM HTTP Server” on page 105
- Chapter 13, “Create Multiple WebSphere Commerce Instances” on page 109
- Chapter 14, “Enabling WebSphere Application Server security” on page 115
- Chapter 15, “Cloning” on page 121
- Chapter 16, “Single sign-on” on page 127

After configuring additional options, you can begin to create and publish your store using Store Services. You can also publish the demonstration store, InFashion, 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 165.

Chapter 11. Creating a store from a sample store archive

This chapter guides you through the process of creating a sample store from one of the store archives provided with WebSphere Commerce. For information on additional store creation methods and store customization, refer to the WebSphere Commerce online help.

In WebSphere Commerce, the fastest and easiest way to create an online store is to use one of the sample stores provided with WebSphere Commerce and the browser-based tools available in Store Services. Sample stores are provided as store archives.

A store archive is a compressed file that contains all the assets necessary (including Web and database assets) to create a store. In order to create your own store, you create a new store archive based on one of the sample store archives, using the tools in Store Services. Since your new store archive is based on the sample store archive, it is an exact copy of the assets in the sample store archive, saved under a new file name and directory structure.

At this point you have two options. You can publish the store archive to the commerce server to create a functional store based on one of the sample stores, or you can make changes to your new store archive first and then publish it to the server.

To change the database information in the store archive, edit the assets directly or use the tools in Store Services: the Store Profile notebook, the Tax notebook and the Shipping notebook.

To change the Web assets (store pages) contained in the store archive or to create new Web assets, use the tools in WebSphere Commerce Studio, or tools of your choice.

For more information on store creation, see the *IBM WebSphere Commerce Store Developer's Guide*.

To create a store using one of the sample stores, do the following:

1. Create a store archive.
2. Publish a store archive.

Creating a store archive

To create a store archive using one of the sample stores, do the following:

1. Ensure the following are running:
 - DB2
 - 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 WebSphere Commerce Payments
2. Start WebSphere Commerce Payments by doing the following:
 - a. Ensure that you are logged on as the WebSphere Application Server user created in “Running the postinstall script” on page 55:

```
su - wasuser
```
 - b. Open a command window and change directory to the directory where IBM WebSphere Commerce Payments is installed.
 - c. Enter the following command:

```
./IBMPayServer
```

If WebSphere Commerce Payments 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 WebSphere Commerce Payments password. This is the password of the user you specified to use when connecting to the WebSphere Commerce Payments 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. 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:
 - DB2
 - 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 WebSphere Commerce Payments
2. If WebSphere Commerce Payments is not running, start IBM WebSphere Commerce Payments, by doing the following:
 - a. Open a command window and change directory to the directory where IBM WebSphere Commerce Payments is installed.
 - b. Enter the following command:

```
./IBMPayServer
```

If WebSphere Commerce Payments 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 WebSphere Commerce Payments 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 delete 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 4111111111111111 (Four followed by 15 ones) for VISA. An order confirmation page displays, confirming that your order is complete.

Chapter 12. Enabling SSL for production with IBM HTTP Server

After you create your WebSphere Commerce instance with IBM HTTP Server, SSL is enabled for testing purposes. Before you open your site to shoppers, you must enable SSL for production by following the steps in this chapter.

About security

IBM HTTP Server provides a secure environment for your business transactions by using encryption technology. Encryption is the scrambling of information transactions on the Internet so that they cannot be read until they are unscrambled by the receiver. The sender uses an algorithmic pattern or key to scramble (encrypt) a transaction, and the receiver uses a decryption key. These keys are used by the Secure Sockets Layer (SSL) protocol.

Your Web server uses an authentication process to verify the identity of the person with whom you are conducting business (that is, to make sure they are whom they say they are). This involves obtaining a certificate signed by a trusted third party called a certification authority (CA). For IBM HTTP Server users, the CA may be Equifax[®] or VeriSign[®] Inc. Other CAs are available as well.

To create a production key file, complete the following steps:

1. Create a security key file for production.
2. Request a secure certificate from a certifying authority.
3. Set your production key file as the current key file.
4. Receive the certificate and test the production key file.

These steps are described in detail below.

Notes:

1. If you are already using a production key file signed by a certifying authority, you may be able to skip these steps. Read this chapter to make this determination.
2. As you perform these steps, your browser may display security messages. Review the information in each message carefully and decide how to proceed.

Create a security key file for production

To create a security key file for production, do the following on your web server machine:

1. Stop the IBM HTTP Server as described in “Starting and stopping IBM HTTP Server” on page 132.
2. Change directory to `/opt/IBMHTTPServer/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`
 - 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/IBMHTTPServer/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/IBMHTTPServer/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 132.

Request a secure certificate from a certifying authority

To validate the security key file that you just created in the previous step, you need a certificate from a certifying authority (CA) such as Equifax or VeriSign. The certificate contains the server's public key, the Distinguished Name associated with the server's certificate, and the serial number and expiration date of the certificate.

If you want to use a different CA, contact it directly for information on the procedure to follow.

Equifax users

To request a secure server certificate from Equifax, refer to the following Web address and follow the instructions provided:

<http://www.equifax.com>

You should receive the secure server certificate through E-mail from Equifax in 2 to 4 business days.

VeriSign users

To request a secure server certificate from VeriSign, refer to the following URL and follow the instructions provided:

<http://www.verisign.com>

Follow the instructions provided. Once you submit your request, your certificate should arrive within three to five working days. When you receive it, create the production key file as described in the previous section, if you have not already done so.

Receive and set your production key file as the current key file

After the certificate arrives from the CA, you must make the Web server use your production key file. Perform the following steps:

1. Copy the *certificatename.kdb*, *certificatename.rdb*, and *certificatename.sth* files you received from the certificate authority into the `/opt/IBMHTTPServer/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 132.
3. Open the Key Management Utility (ikeyman).
4. Open the *certificatename.kdb* file, and enter your password when prompted.
5. Select **Personal Certificates**, and click **Receive**.
6. Click **Browse**.

7. Select the folder where you have stored the files you received from the certificate authority. Select the *certificatename.txt* file and click **OK**.
8. The **Personal Certificates** list box should now list either VeriSign *certificatename* certificate or Equifax *certificatename* certificate.
9. Exit the Key Management Utility.
10. Change directory to `/opt/IBMHTTPServer/conf`.
11. Create a backup copy of `httpd.conf`.
12. Open `httpd.conf` in a text editor.
13. Ensure that the lines listed in step 5 on page 106 are not commented.
14. Search for `Keyfile "/opt/IBMHTTPServer/ssl/keyfile.kdb"`, and change the path name to point to the file created in the above steps.
15. Restart the IBM HTTP Server as described in "Starting and stopping IBM HTTP Server" on page 132.

Test the production key file

To test the production key, do the following:

1. Go the following URL with your browser:

`https://host_name`

Notes:

- a. If you have customized your Web server, you may need to type the name of the Web server's front page after the host name.
- b. Be sure to type `https`, *not* `http`.

If your key is defined correctly, you will see several messages about your new certificate.

2. On the **New Site Certificate** panel, if you want to accept this certificate, select the **Accept this certificate forever (until it expires)** radio button.
3. From your Web browser, restore your caching and proxy (or socks) server settings to their original states.

You have now enabled SSL on your server.

Chapter 13. 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 1.3.19.3 does not allow underscore characters (_) in a host name.

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

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 9, “Creating or modifying an instance with Configuration Manager” on page 57. 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	<i>demo1</i>	<i>demo2</i>
Instance - Instance root path		
Database - Database name	<i>mall1</i>	<i>mall2</i>
Web server - host name	<i>host1.domain.com</i>	<i>host2.domain.com</i>
Web server - Primary (for IBM HTTP Server)	<i>/opt/IBMHTTPServer/htdocs1</i>	<i>/opt/IBMHTTPServer/htdocs2</i>
WebSphere Commerce Payments - host name	<i>host1.domain.com</i>	<i>host2.domain.com</i>

If you are going to use caching with your instance, you need to modify the *instance_name.xml* file manually. Stop your instances in the WebSphere Application Server Administration Console, and then modify the following entries within the *instance_name.xml* file so that they contain the correct information for each instance:

```
Cache AutoPageInvalidation="true"
```

```
CacheDaemonBindAddress="<IP_address_of_the_instance>"
```

```
CacheDaemonPort="<port_number_of_the_instance>"
```

After you have made and saved these changes, restart your instance.

Start your instances

Once the WebSphere Commerce instances have been created:

1. Check that the following entries have been created in the WebSphere Application Server Administration Console:
 - WebSphere Commerce Server demo1
 - WebSphere Commerce Server demo2
 - WebSphere Commerce DB2 DataSource demo1
 - WebSphere Commerce DB2 DataSource demo2
 - WebSphere Commerce DB2 JDBC Driver demo1
 - WebSphere Commerce DB2 JDBC Driver demo2
 - 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/IBMHTTPServer/conf/httpd.conf):

```

<VirtualHost m.mm.mm.mmm>
ServerName host1.domain.com
DocumentRoot "/opt/IBMHTTPServer/htdocs1/en_US"
</VirtualHost>
.
.
.
<VirtualHost m.mm.mm.mmm:443>
SSLEnable
SSLClientAuth 0
ServerName host1.domain.com
DocumentRoot "/opt/IBMHTTPServer/htdocs1/en_US"
.
.
.
<VirtualHost m.mm.mm.mmm:8000>
SSLEnable
SSLClientAuth 0
ServerName host1.domain.com
DocumentRoot "/opt/IBMHTTPServer/htdocs1/en_US"
.
.
.
<VirtualHost n.nn.nn.nnn>
ServerName host2.domain.com
DocumentRoot "/opt/IBMHTTPServer/htdocs2/en_US"
</VirtualHost>
.
.
.
<VirtualHost n.nn.nn.nnn:443>
SSLEnable
SSLClientAuth 0
ServerName host2.domain.com
DocumentRoot "/opt/IBMHTTPServer/htdocs2/en_US"
.
.
.
<VirtualHost n.nn.nn.nnn:8000>
SSLEnable
SSLClientAuth 0
ServerName host2.domain.com
DocumentRoot "/opt/IBMHTTPServer/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/IBMHTTPServer/conf/httpd.conf):

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

<Directory "/opt/IBMHTTPServer/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 qualified 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 55 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 14. 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 1. SecureWay Users

Field Name	Definition	Sample Values	Notes
Security Server ID	User ID	<i>user_ID</i>	<ul style="list-style-type: none"> • 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	<i>password</i>	
Host	Host name of the LDAP server	<i>hostname.domain</i>	
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 115 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 115. Click **Apply** then exit Configuration Manager.
 4. Stop and restart the WebSphere Application Server administration server. From now on, when you open the WebSphere Application Server Administrator's Console, you will be prompted for the Security Server ID and password.

Enabling security with an operating system user registry

To enable WebSphere Application Server security when you are using the operating system user validation as the WebSphere Application Server user registry, log in as a user with administrative authority and do the following steps:

1. In the WebSphere Application Server Administration Console, modify the global security settings as follows:
 - a. From the Console menu, select **Security Center**.
 - b. On the General tab, select the **Enable Security** checkbox.
2. Select the **Authentication** tab and select the **Local Operating System** radio button
3. Enter your security server ID in the **Security Server ID** field. Enter the user name you as follows:

Table 2.

Field Name	Sample Values	Notes
User ID	<i>user_ID</i>	
Security Server Password	<i>password</i>	This is the password belonging to the user with operating system administrative privileges that you logged in with.

4. On the **Role Mapping** tab, select the WC enterprise application and click the **Edit Mappings** button.
 - a. Select the WCSecurityRole and click the **Select** button.

- b. Select the **Select users/groups** check box, enter the user ID that was used in step 3 on page 117 into the **Search** field, and click **Search**. Select that user from the **Available Users/Groups** list and click **Add** to add it to the **Selected Users/Groups** list. Then click **OK** on each panel until you exit the **Security Center**.
5. Open the **WebSphere Commerce Configuration Manager** and select **Instance List** → *instance_name* → **Instance Properties** → **Security** and select the **Enable Security** check box. Select **Operating System User Registry** for the authentication mode, and enter the user name and password that you entered in step 3 on page 117. Click **Apply** then exit **Configuration Manager**.
6. Stop and restart the **WebSphere Application Server** administration server. From now on, when you open the **WebSphere Application Server Administration Console**, you will be prompted for the **Security Server ID** and password.

Disabling WebSphere Commerce EJB security

WebSphere Commerce allows you to disable EJB security. To disable WebSphere Commerce EJB Security, do the following:

1. Start the **WebSphere Application Server Administration Console**.
2. Click **Console** → **Security Center** and deselect the **Enable Security** check box on the **General** tab.
3. Open the **WebSphere Commerce Configuration Manager** and select **Instance List** → *instance_name* → **Instance Properties** → **Security** and clear the **Enable Security** check box.
4. Stop and restart the **WebSphere Application Server** administration server.

WebSphere Commerce security deployment options

WebSphere Commerce supports various security deployment configurations. The following table illustrates the security deployment options available to you.

Table 3. Single machine security scenarios

WebSphere Application Server security is enabled.	<ul style="list-style-type: none"> • Use the operating system as the WebSphere Application Server registry. • Use the database as the WebSphere Commerce registry.
	<ul style="list-style-type: none"> • Use LDAP as the WebSphere Application Server registry. • Use LDAP as the WebSphere Commerce registry.
	<ul style="list-style-type: none"> • Use LDAP as the WebSphere Application Server registry.
WebSphere Application Server security is disabled, and your WebSphere Commerce site is located behind a firewall.	<ul style="list-style-type: none"> • A WebSphere Application Server registry is not required. • Use the database as the WebSphere Commerce registry.
	<ul style="list-style-type: none"> • A WebSphere Application Server registry is not required. • Use LDAP the WebSphere Commerce registry.

Table 4. Multiple machine security scenarios

WebSphere Application Server security is enabled. LDAP is always deployed.	<ul style="list-style-type: none"> • Use LDAP as the WebSphere Application Server registry. • Use LDAP as the WebSphere Commerce registry.
	<ul style="list-style-type: none"> • 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 4. Multiple machine security scenarios (continued)

<p>WebSphere Application Server security is disabled, and your WebSphere Commerce site is located behind a firewall.</p>	<ul style="list-style-type: none"> • Use a database as the WebSphere Commerce registry. • A WebSphere Application Server registry is not required. • Single sign-on is not supported.
	<ul style="list-style-type: none"> • 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 15. 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 described in Chapter 3, "Install IBM DB2 Universal Database 7.1.0.67" on page 15 on Machine D, pointing at the remote database server and Web server where appropriate. Catalog the database as described below:
 - 1) Enter the following commands in the terminal window:

```
su - db2inst1
db2 catalog tcpip node node_name remote db_server_name
server DB2_server_port
db2 attach to node_name user user_id using password
db2 catalog database WAS_db as WAS_db at node node_name
db2 catalog database WC_db as WC_db at node node_name
```

where *node_name* is the name you are assigning to this node, *db_server_name* is the fully qualified host name of your database server, *DB2_server_port* is the port you are using to connect to DB2 (the default DB2 server port is 50000), *WAS_db* and *WC_db* are the databases used by WebSphere Application Server and your WebSphere Commerce instance. These commands are presented on separate lines for readability only; ensure that you type each one on a single line.

You must then apply the DB2 upgrade as described in Chapter 3, “Install IBM DB2 Universal Database 7.1.0.67” on page 15.

- b. Install WebSphere Application Server on Machine D as described in “Installing WebSphere Application Server for use with a remote Web server” on page 39, pointing at the remote database server and Web server where appropriate.
- 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 6, “Install WebSphere Commerce 5.4” on page 45.
- e. Run the `postinstall` script as outlined in “Running the `postinstall` script” on page 55. 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 initial 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 DB2 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 (`db2java.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


```
/WebSphere/AppServer/installedApps/WebSphere_Commerce_Enterprise_Application_-_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 `/WebSphere/AppServer/installedApps/WebSphere_Commerce_Enterprise_Application_-_instance.ear/wctools.war/WEB_INF/web.xml` 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 55. (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:

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 16. 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 14, "Enabling WebSphere Application Server security" on page 115.

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. Edit the following file:
`/opt/WebSphere/CommerceServer/demo/xml/demo.xml`

Change `MigrateUserFromWCSdb="OFF"` to `MigrateUserFromWCSdb="ON"`.

5. Restart the WebSphere Application Server.

Part 7. Administrative tasks

Chapter 17. 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 DB2, refer to “Starting and stopping DB2 Universal Database” on page 133. 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 startupServer | 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/IBMHTTPServer/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/IBMHTTPServer/bin
./apachectl stop
```

To start IBM HTTP Administration Server, enter the following commands in a terminal window:

```
su - root
cd /opt/IBMHTTPServer/bin
./adminctl start
```

To stop IBM HTTP Administration Server, enter the following commands in a terminal window:

```
su - root
cd /opt/IBMHTTPServer/bin
./adminctl stop
```

Starting and stopping DB2 Universal Database

To start DB2 Universal Database, do the following:

1. Log on as your DB2 instance ID.
2. Type db2start.

To stop DB2, do the following:

1. Stop WebSphere Commerce according to the instructions in “Starting and stopping WebSphere Commerce” on page 131.
2. Stop WebSphere Application Server according to the instructions in “Starting and stopping WebSphere Application Server” on page 131.
3. While logged on as your DB2 instance ID, type db2stop. If any applications are connected to DB2, use the following command instead:
db2stop force

Starting and stopping WebSphere Commerce Payments

Starting WebSphere Commerce Payments

To start WebSphere Commerce Payments:

1. Ensure your database is started.
2. Start your Web server.
3. Ensure WebSphere Application Server is started.
4. Start the WebSphere Commerce Payments application server in the WebSphere Application Server Administration Console as described in “Starting the WebSphere Commerce Payments application server”.
5. Start the WebSphere Commerce Payments as described in “Starting WebSphere Commerce Payments” on page 134.

Starting the WebSphere Commerce Payments application server

When using WebSphere Application Server 4.0.4, you can start all servlets by starting the WebSphere Commerce Payments application server. To start the WebSphere Commerce Payments application server:

1. Open the WebSphere Application Server Administration Console.

2. Expand **WebSphere Administrative Domain**.
3. Expand **Nodes**.
4. Expand the node where WebSphere Commerce Payments is installed.
5. Expand **Application Servers**.
6. Right-click **WebSphere Commerce Payments** and select **Start**.

Starting WebSphere Commerce Payments

When you start WebSphere Commerce Payments 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/Payments
./IBMPayServer
```

If WebSphere Commerce Payments 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 WebSphere Commerce Payments password.

Alternately, you can start WebSphere Commerce Payments using the password file that was created for you automatically during the WebSphere Commerce Payments installation (the `.payment` file). The command to start WebSphere Commerce Payments would have the following syntax:

```
./IBMPayServer -file
```

Since this file contains your WebSphere Commerce Payments password in clear text, if you do not plan to use this method of starting WebSphere Commerce Payments, it is strongly suggested that you delete this file.

Start the WebSphere Commerce Payments user interface

After starting WebSphere Commerce Payments and the WebSphere Commerce Payments application server, to start the WebSphere Commerce Payments 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 WebSphere Commerce Payments Logon window, enter the WebSphere Commerce Payments 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 WebSphere Commerce Payments with WebSphere Commerce, all WebSphere Commerce administrators are also WebSphere Commerce Payments users. However, only the administrator ID "wcsadmin" has been assigned the "WebSphere Commerce Payments administrator" role initially. In order to login to the WebSphere Commerce Payments user interface you must use an administrator ID that has been assigned one of the four WebSphere Commerce Payments roles:

- WebSphere Commerce Payments administrator
- merchant administrator
- supervisor
- clerk

For information on the WebSphere Commerce Payments roles, see the *WebSphere Commerce Payments Administrator's Guide*.

Before using the wcsadmin ID to login to the WebSphere Commerce Payments 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 WebSphere Commerce Payments administration functions from the WebSphere Commerce Administration Console.

Stopping WebSphere Commerce Payments

To stop WebSphere Commerce Payments, you need to:

1. Ensure your database is started.
2. Ensure WebSphere Application Server is started.
3. Stop WebSphere Commerce Payments
4. Stop the WebSphere Commerce Payments application server under WebSphere Application Server

Stopping WebSphere Commerce Payments

You can stop WebSphere Commerce Payments using the StopIBMPayServer command:

1. Change to the /opt/Payments directory.
2. Type: ./StopIBMPayServer. There are no arguments to the StopIBMPayServer script.
3. Enter the WebSphere Commerce Payments password when prompted.

Stopping the WebSphere Commerce Payments application server

When using WebSphere Application Server, you can stop all servlets by stopping the WebSphere Commerce Payments application server. To stop the WebSphere Commerce Payments application server:

1. Open the WebSphere Application Server Administration Console.
2. Expand **WebSphere Administrative Domain**.
3. Expand **Nodes**.
4. Expand the node where WebSphere Commerce Payments is installed.
5. Expand **Application Servers**.
6. Right-click **WebSphere Commerce Payments** and select **Stop**.

Chapter 18. 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 your 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. 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 DB2 instance ID, connect to the database by typing the following:

```
db2 connect to db_name user user_name using password
```

where the variables are defined as follows:

db_name

The name of your WebSphere Commerce database. For example, **wcs**.

user_name

Your DB2 instance name.

password

The password for your DB2 instance name.

2. Verify that the USERREG table WebSphere Commerce Administration Console password matches the wcs_encrypt encrypted string (ASCII) by typing the following command:

```
db2 "select logonpassword from userreg where logonid='wcsadmin'"
```

3. Type the following command:

```
./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:

```
db2 "update USERREG set LOGONPASSWORD='pArp97jT4NOXN6MyWswTQpwaPbIFs
EWQGwfeu08yIyM='where LOGONID='wcsadmin'"
```

Please note that the value of LOGONPASSWORD should be the encrypted string (ASCII).

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/IBMHTTPServer/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/IBMHTTPServer/ssl`
`ikeyman`
2. From the **Key Database File** menu, select **Open**.
3. Switch to the following directory:
`/opt/IBMHTTPServer/ssl`

Your key file (which has the file extension `.kdb`) should be in this folder. If not, create a new key file by following the instructions outlined in Chapter 12, “Enabling SSL for production with IBM HTTP Server” on page 105.

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 19. 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 Administrative 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 55:

```
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 X Server workstation 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 55:

```
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 9, “Creating or modifying an instance with Configuration Manager” on page 57 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 132 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>
```

- Drop your WebSphere Commerce database (if you are going to recreate your WebSphere Commerce instance using the same database this step is not necessary):

- Type the following to drop your WebSphere Commerce database:

```
su - db2inst1
db2 drop db r<db_name>
db2 uncatalog db <db_name>
db2 uncatalog node <node_name>
```

Where *<db_name>* is the name of the WebSphere Commerce database that you entered in the Configuration Manager and *<node_name>* is the name of the node you cataloged for for these databases. The default node name is the short version (that is, not fully qualified) of your machine's host name. Stop and restart DB2 for your changes to take effect. After you have dropped the database, ensure that the following directory is empty:

```
export/home/db2inst1/sqllib/function/routine/sqlproc/db_name
```

where *db_name* is the name of the database you have dropped.

- Delete the `/opt/WebSphere/CommerceServer/instances/instance_name` directory.

- 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:

```
/opt/WebSphere/CommerceServer/bin/config_client -startCmdLineConfig
updateInstance <xml_file>
```

- Delete an instance:

```
/opt/WebSphere/CommerceServer/bin/config_client -startCmdLineConfig
deleteInstance <instance_name>
```

- List existing instances:

```
/opt/WebSphere/CommerceServer/bin/config_client -startCmdLineConfig
getInstances
```

- Find information about an instance:

```
/opt/WebSphere/CommerceServer/bin/config_client -startCmdLineConfig
getInstanceInfo <instance_name>
```

- Print configuration information for an instance to a file:


```
/opt/WebSphere/CommerceServer/bin/config_client -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_qualified_host_name:0.0  
cd /opt/WebSphere/AppServer/bin  
./adminclient.sh remote_WAS_host_name port
```

Where *fully_qualified_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 logging on as user ID `root` and entering the following commands in a terminal window:

```
cd /opt/IBMHTTPServer/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/IBMHTTPServer/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/IBMHTTPServer/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 6. Change the path so that it points to the store's HTML subdirectory.
8. Click **File**, and then **Save**.

Adding database privileges 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 privileges to this user ID. To do this, complete the following steps:

1. Execute the following DB2 profile for the user you want to become:
`db2_instance_home_directory/sql1lib/db2profile`

Setting up WebSphere Commerce Payments

Using WebSphere Commerce Payments Cassettes

As part of the SET™ functions, you can use IBM WebSphere Commerce Payments 3.1.3. The information provided here is merely intended as an overview of the WebSphere Commerce Payments process and requirements. Additional instructions on SET, WebSphere Commerce Payments, and the Configuration Manager are provided in the online information. For more information about WebSphere Commerce Payments, refer to the *IBM WebSphere Commerce Payments Administrator's and User's Guide*. Refer to "WebSphere Commerce Payments information" on page 166 for information on where to find WebSphere Commerce Payments documentation.

To set up IBM WebSphere Commerce Payments, 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 WebSphere Commerce Payments 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 WebSphere Commerce Payments if a wallet is not readily available to shoppers. For additional information on the MOP support, refer to the WebSphere Commerce online help.

The WebSphere Commerce Payments Administrator role

When you install WebSphere Commerce Payments, the WebSphere Commerce Administrator ID, `wcsadmin`, is automatically assigned the WebSphere Commerce Payments Administrator role. The WebSphere Commerce Payments Administrator role enables an ID to control and administer WebSphere Commerce Payments.

Notes:

1. Do not delete or rename the logon user ID `wcsadmin`, and do not change the preassigned WebSphere Commerce Payments role of `wcsadmin`. Doing so will stop some of the functions in WebSphere Commerce related to WebSphere Commerce Payments integration from working.
2. If you assign a WebSphere Commerce Payments 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 WebSphere Commerce Payments role before deleting or renaming it.

Important

In addition to the `wcsadmin` user ID, WebSphere Commerce Payments has preassigned the WebSphere Commerce Payments Administrator role to two administrator IDs:

- `admin`
- `ncadmin`

To prevent a user from inadvertently obtaining this WebSphere Commerce Payments Administrator role, you can:

- Create the above administrator ID in WebSphere Commerce using the WebSphere Commerce Administration Console.
- In the WebSphere Commerce Payments User Interface, select **Users**.
- Remove the WebSphere Commerce Payments Administrator role from this ID.

Setting up your WebSphere Commerce Payments machine

To configure your WebSphere Commerce Payments machine, please see the "Getting Started" chapter of the *IBM WebSphere Commerce Payments Administrator's Guide*. This section will guide you through the processes of:

- Starting the WebSphere Commerce Payments user interface
- Creating a WebSphere Commerce Payments merchant and authorizing a cassette
- Assigning user roles
- Creating an account
- Managing Payment Processing

Before you log on to the WebSphere Commerce Payments User Interface, ensure that WebSphere Commerce is running and that the WebSphere Commerce Payments application server has also been started and initialized. For more information, see "Starting and stopping WebSphere Commerce Payments" on page 133.

Important

You must ensure that the host name listed in the **WebSphere Commerce Payments Settings** panel of the WebSphere Commerce Payments 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 WebSphere Commerce Payments**, and then click **Enable WebSphere Commerce Payments**.

Update the Payment node in Configuration Manager for the WebSphere Commerce instance, as described in "WebSphere Commerce Payments" on page 63, if this has not already been done.

Note that you can also access the WebSphere Commerce Payments administration functions from the WebSphere Commerce Administration Console through the Site Manager's WebSphere Commerce Payments menu.

Part 8. Appendixes

Appendix A. Uninstall 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. WebSphere Commerce Payments
2. WebSphere Commerce
3. WebSphere Application Server
4. IBM HTTP Server
5. DB2 Universal Database

Uninstall WebSphere Commerce Payments

To uninstall WebSphere Commerce Payments, do the following:

1. Stop WebSphere Commerce Payments, as described in “Starting and stopping WebSphere Commerce Payments” on page 133.
2. If you have created or customized any files in the `/opt/PaymentManager` directory or its subdirectories, and you wish to retain them, back them up to a different directory.
3. Search for any WebSphere Commerce Payments products that are installed on your machine. This includes IBM WebSphere Commerce Payments 3.1.3, and any cassettes you may have installed.
4. Uninstall the WebSphere Commerce Payments cassettes first.
5. Uninstall the WebSphere Commerce Payments framework.

Uninstall WebSphere Commerce

To uninstall WebSphere Commerce, do the following:

1. Stop WebSphere Commerce, as described in “Starting and stopping WebSphere Commerce” on page 131.
2. Open a terminal and execute the following commands:

```
rpm -e wcbe-NLV-5.4-1
rpm -e wcbase-5.4-1
```
3. If the `/opt/WebSphere/CommerceServer` directory still exists, remove it by typing the following:

```
cd opt/WebSphere
rm -rf CommerceServer
```

Note: After you have uninstalled WebSphere Commerce, some softlinks may remain in your /opt/WebSphere/CommerceServer directory. Manually unlink these before you reinstall WebSphere Commerce.

Uninstall WebSphere Application Server and IBM SDK for Java

To uninstall WebSphere Application Server, do the following:

1. Stop WebSphere Application Server, as described in “Starting and stopping WebSphere Application Server” on page 131.
2. 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.
3. Uninstall the RPM packages by executing the commands:

```
cd /opt/WebSphere/AppServer
./uninstall.sh
```
4. If the /opt/WebSphere/AppServer directory still exists, remove it by typing the following:

```
rm -rf /opt/WebSphere/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.

Uninstall 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. Stop IBM HTTP Server, as described in “Starting and stopping IBM HTTP Server” on page 132.
2. If you have created or customized any files in the /opt/IBMHTTPServer directory or its subdirectories, and you wish to retain them, back them up to a directory that is not used by any WebSphere Commerce component.

3. If you want to save a copy of `/opt/IBMHTTPServer/conf`, copy it to a different name.
4. While logged on to user ID `root`, type:

```
cd /opt/IBMHTTPServer/  
./uninstall  
rpm -e gsk5bas-5.0-4.79  
rm -rf /opt/IBMHTTPServer
```
5. Uninstall WebSphere Application Server, as described in “Uninstall WebSphere Application Server and IBM SDK for Java” on page 154.
6. Reinstall IBM HTTP Server from the WebSphere Application Server, Advanced Edition CD.
7. Reinstall WebSphere Application Server from the WebSphere Application Server, Advanced Edition CD.
8. Follow the steps in Chapter 12, “Enabling SSL for production with IBM HTTP Server” on page 105.

Uninstall DB2 Universal Database

Attention: When you uninstall DB2, you are deleting all the information in the database..

To uninstall DB2 Universal Database, do the following:

1. If you want to save your database, back it up as described in the DB2 documentation. (See “DB2 Universal Database information” on page 167 for instructions on accessing the DB2 Web site for on-line DB2 documentation.) After you have completed the backup, move the backed up database to a directory that is not used by any WebSphere Commerce component.
2. Switch to your DB2 instance ID by typing the following command at a command prompt:

```
su - db2inst_ID
```

where `db2inst_ID` is your DB2 instance ID.

3. Once you have backed up your databases, do the following:
 - a. List all databases by typing the following command at a shell prompt:

```
db2 list db directory
```
 - b. Drop your DB2 databases, by typing the following commands:

```
db2 force application all  
db2 drop db db_name
```

For remote databases and the `wasloop` database, issue the following command:

```
db2 uncatalog db db_name
```

4. You must stop all DB2 instances before you remove DB2. To stop a DB2 instance, do the following:
 - a. To obtain a list of all the DB2 instances on your system, type the following commands:

```
cd /usr/IBMdb2/V7.1/bin
./db2ilist
```
 - b. Log in as the instance owner.
 - c. Run the following script:

```
. instance_home/sql1lib/db2profile
```

where *instance_home* is the home directory of the instance.
 - d. Stop the DB2 database manager by typing `db2stop` from a command line.
 - e. Repeat steps 4b to 4d for each instance.
5. You can optionally remove some or all of the DB2 Version 7 instances on your system. Once an instance is removed, all the DB2 databases owned by the instance, if any, will not be usable. Remove DB2 instances only if you are not planning to use DB2 Version 7 products, or if you do not want to migrate existing instances to a later version of DB2.

To remove an instance, do the following:

- a. Log in as the instance owner.
- b. Stop the instance by issuing the `db2stop` command.
- c. Back up files in the *instance_home/sql1lib* directory, if needed, where *instance_home* is the home directory of the instance owner.
- d. Log off as the instance owner.
- e. Log on as a user ID with root authority.
- f. Remove the instance by typing the following commands:

```
cd /usr/IBMdb2/V7.1/instance
./db2idrop instance_name
```

where *instance_name* is the logon name of the instance.

The `db2idrop` command removes the instance entry from the list of instances and removes the *instance_home/sql1lib* directory, where *instance_home* is the home directory of the instance.

6. Ensure that all DB2 processes are stopped before removing DB2.
7. To uninstall DB2, do the following:
 - a. Insert the WebSphere Commerce Disk 2 CD into your CD-ROM drive and FTP the following files to your Linux machine from the `/Software_Patches/DB2_FP7` directory:

```
FP7_MI00041.tar
```

Put these files into a separate, dedicated directory. Ensure that you set the transfer type to "bin" before issuing the put or mput command.

- b. Log in to your Linux machine as user ID root.
- c. Switch to the directory where you installed the FP7_MI00041.tar file and untar it using the following commands:

```
tar -xvf FP7_MI00041.tar
```
- d. Switch to the delta_install directory and execute the following commands:

```
cd delta_install
./db2_deinstall -n
```
- e. Remove any remaining DB2 files and directories as follows:
 - 1) If any files following the pattern /tmp/db2* exist, remove them by typing the following:

```
rm -rf /tmp/db2*
```
 - 2) If the /usr/IBMDB2/V7.1 directory exists, remove it by typing the following:

```
rm -rf /usr/IBMDB2/V7.1
```
 - 3) If any /home directories still exist for your DB2 instances, remove them as follows:

```
rm -rf /home/db2_instance_ID
```

where *db2_instance_ID* is any instance ID (such as db2inst1).

Reinstall WebSphere Commerce components

If you are reinstalling portions of WebSphere Commerce, follow these general rules:

- Uninstall all the components that you want to uninstall, and then reinstall them all (rather than uninstalling and reinstalling one component at a time).
- You *cannot* uninstall and reinstall your Web server without uninstalling and reinstalling WebSphere Application Server.
- If you reinstall your Web server you will need to enable SSL manually. Please see Chapter 12, "Enabling SSL for production with IBM HTTP Server" on page 105 for guidance.
- You will need to delete and recreate your instance following the instructions in Chapter 9, "Creating or modifying an instance with Configuration Manager" on page 57.

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 Commerce installation problems

The following section describes possible problems you may encounter when you install WebSphere Commerce 5.4.

- Configuration Manager error message for new customers: *Cannot create database.*

One or more of the DB2 services are not running. The possible causes are:

1. Your machine was only logged off instead of performing a complete restart when you installed WebSphere Commerce.
2. The DB2 install failed and the services are not able to start. To install DB2, do the following:

- a. Uninstall DB2 by following the instructions in Appendix A, “Uninstall WebSphere Commerce Components” on page 153. Ensure the /usr/IBMdb2/V7.1 been deleted from the drive you are installing on.
- b. Reinstall DB2 from the DB2 Universal Database CD. To install DB2, see Chapter 3, “Install IBM DB2 Universal Database 7.1.0.67” on page 15.
- c. Recreate the WebSphere Commerce database using the Configuration Manager.

WebSphere Application Server problems

- Running startupServer.sh as wasuser results in an error similar to:
/tmp/sh27350.13:cannot create

This occurs because wasuser does not have the correct permissions for the temporary directory. Set permissions for the temporary directory to 777.

Database problems

The following describes possible problems you may encounter with DB2 Universal Database and WebSphere Commerce 5.4.

- If DB2 Universal Database does not appear to install properly (the progress indicator bar hangs at 95% during the install), check the db2.log file. If Error 106 appears near the end of the log, you should exit the installation and reinstall DB2 Universal Database by itself from the DB2 Universal Database CD. After DB2 Universal Database has been installed, attempt to install WebSphere Commerce again from the WebSphere Commerce Professional Edition CD.

Database instance problems

The following describes possible problems you may encounter with your DB2 Universal Database instance and WebSphere Commerce 5.4.

- The WebSphere Commerce server fails to start after configuration has completed.

The possible causes are:

1. The WebSphere Commerce server cannot connect to the database. The possible causes for not connecting to the database are:
 - The database user logon ID and password are incorrect or contain invalid characters. To check the database user logon or password, run the Configuration Manager.
 - The DB2 database for your WebSphere Commerce instance does not exist. Use the Configuration Manager to create a new database.
 - The DB2 database for your WebSphere Commerce instance is not cataloged. This may have been caused by uninstalling and then

reinstalling DB2. Catalog the instance by typing the following command in a DB2 command window:

```
db2 catalog db db_name
```

where *db_name* is the name of your database.

2. The WebSphere Commerce server has detected a back-level database. The following error message will be found in your `db2.log`:

```
The database has not been migrated to version 5.1 of  
WebSphere Commerce.
```

This problem occurs for existing WebSphere Commerce customers or new WebSphere Commerce customers with existing databases. The possible causes for the database not being migrated are:

- The database user logon ID or password contains invalid characters. To correct this, do the following:
 - a. Change the logon ID and password to one with administrative authority. Run the Configuration Manager and select **Settings** to correct the user ID and password on the Database page.
 - The WebSphere Commerce server detected a communication error as indicated in the log file. This error occurs for new WebSphere Commerce customers. The probable cause is an improper TCP/IP configuration for the machine. Configure TCP/IP, and then delete and create the WebSphere Commerce instance using the Configuration Manager.
- If you have uninstalled and reinstalled DB2 Universal Database, and you attempt to start an instance that was created before DB2 Universal Database was uninstalled, it initially appears that the instance still exists. When you look at this instance in the services menu it is listed as running, but in the Configuration Manager it is listed as being inactive. You must remove this instance and recreate it.

Web Server problems

The following describes possible problems you may encounter with your Web server and WebSphere Commerce 5.4.

- IBM HTTP Server will not start after you have installed WebSphere Application Server.

You may be missing a line in your `httpd.conf` file. Open `/opt/IBMHTTPServer/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.

- If IBM HTTP Server fails to start after SSL has been enabled, run the following command:

```
echo $LD_LIBRARY_PATH | grep '/usr/local/ibm/gsk5/lib'
```

If no reply is received, run this command:

```
export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/usr/local/ibm/gsk5/lib
```

Restart IBM HTTP Server.

- If you can access the non-secure home page for IBM HTTP Server, but not the secure home page:
 - Ensure that all the lines that are supposed to be uncommented according to 2c on page 88.
 - Ensure that a keyfile exists in the /opt/IBMHTTPServer/ssl directory.
 - Ensure that the keyfile name and the keyfile name referenced in the httpd.conf file are the same.

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/IBMHTTPServer/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 80 for more information.

WebSphere Commerce Payments problems

- If you install WebSphere Commerce Payments immediately after installing WebSphere Commerce, you should not encounter any problems. However, if you install WebSphere Commerce Payments after running the Postinstall script (as outlined in “Running the postinstall script” on page 55), you will encounter problems both when installing and uninstalling WebSphere Commerce Payments. 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 `ltdPort=port_number` directive if it was added earlier in testing.
 4. Restart the WebSphere Application Server as the root user and rerun the WebSphere Commerce Payments installation program.
 5. Once WebSphere Commerce Payments 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/wcb.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 WebSphere Commerce Payments 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

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.

WebSphere Commerce Payments information

Additional WebSphere Commerce Payments information is available through the library link on the WebSphere Commerce Payments Web site:

<http://www.ibm.com/software/webservers/commerce/payment>

WebSphere Commerce Payments documentation is available in the following locations:

- In the directory of the IBM WebSphere Commerce Payments 3.1.3 CD.
- In the directory of the IBM WebSphere Commerce Payments 3.1.3 Cassette CDs.
- Installed in the WebSphere Commerce Payments directory of the WebSphere Application Server installation directory after WebSphere Commerce Payments is installed.

The following WebSphere Commerce Payments 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 Programmer's Guide and reference* PDF file format (paymgrprog.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 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 WebSphere Commerce Payments information.

WebSphere Application Server

WebSphere Application Server information is available at the WebSphere Application Server Web site:

<http://www.ibm.com/software/webservers/appserv>

DB2 Universal Database information

For a complete list of the available DB2 documentation, and how to view or print it, refer to the *DB2 Quick Beginnings for* book. Additional DB2 information is available at the following Web address:

<http://www.ibm.com/software/data/db2>

Other IBM publications

You can purchase copies of most IBM publications from your IBM authorized dealer or marketing representative.

Appendix D. Program specifications and specified operating environment

This version of WebSphere Commerce supports the following operating environments:

- SuSE Linux Enterprise Server 7 (SLES 7)

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
- Brokat Blaze Rules administration

The following products are bundled with, and supported by, WebSphere Commerce 5.4:

IBM DB2 Universal Database 7.1.0.67

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 1.3.19.3

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 WebSphere Commerce Payments 3.1.3

WebSphere Commerce Payments 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 4.0.4

WebSphere Application Server is a Java-based application environment for building, deploying and managing Internet and Intranet Web applications. This product includes the IBM Developer Kit for Linux, Java Technology Edition, v1.3.

IBM WebSphere Commerce Analyzer 5.4

IBM WebSphere Commerce Analyzer is a new, optionally installed feature of WebSphere Commerce. A WebSphere Commerce-specific entry edition of IBM WebSphere Commerce Analyzer provides reports for customer profiling and monitoring campaign performance. The

reports cannot be customized. Note that you cannot install IBM WebSphere Commerce Analyzer without Brio Broadcast Server.

Brio Broadcast Server

The Brio Broadcast Server is a batch processing server that automates query processing and report distribution. Although the Brio Broadcast Server can deliver large amounts of data to many people, security safeguards are built into the product to enable administrators to tightly control database access and document distribution.

IBM SecureWay Directory Server 3.2.1

IBM SecureWay[®] Directory provides a common directory for you to reduce the high costs associated with application-specific directories. IBM SecureWay Directory is an LDAP cross-platform, highly scalable, robust directory server for security, and e-business solutions. The version of SecureWay that was shipped with WebSphere Commerce was 3.1.1.5, however support is now offered for IBM SecureWay Directory Server 3.2.1, which is available for Web download.

Segue SilkPreview 1.0

Segue SilkPreview provides a repository of information to analyze and report results throughout application development.

WebSphere Commerce 5.4 Recommendation Engine powered by LikeMinds

Macromedia LikeMinds provides product recommendations and targeted promotions for each individual Web visitor. It is a personalization server based on collaborative filtering and market basket analysis.

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