IBM WebSphere Commerce Business Edition
IBM WebSphere Commerce Professional Edition

Installation Guide for OS/400

Version 5.5

Note:
Before using this information and the product it supports, be sure to read the general information under "Notices" on page 127.

First Edition, First Revision, February 2004

This edition applies to version 5.5 of the following products and to all subsequent releases and modifications until otherwise indicated in new editions:

- IBM WebSphere Commerce Business Edition for @server iSeries
- IBM WebSphere Commerce Professional Edition for @server iSeries

Ensure that you are using the correct edition for the level of the product.

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http://www.ibm.com/software/commerce/rcf.html

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About this book

Document description

This book describes how to install and configure the main components of IBM® WebSphere® Commerce Business Edition and IBM WebSphere Commerce Professional Edition on the OS/400® platform. It is intended for system administrators or for anyone else responsible for performing installation and configuration tasks.

Updates to this book

This Installation Guide, and any updated versions of this Installation Guide, are available as PDF files at the WebSphere Commerce Technical Library Web site:

`http://www.ibm.com/software/commerce/library/`

For additional information on your WebSphere Commerce edition, see the following WebSphere Commerce Web sites:

- Business Edition:

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

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

For additional support information, see the WebSphere Commerce Support site:

`http://www.ibm.com/software/commerce/support/`

To learn about last-minute changes to the product, see the updated product README file, which is also available from the WebSphere Commerce Technical Library Web site:

`http://www.ibm.com/software/commerce/library/`

If you are installing on a system that has an earlier version of WebSphere Commerce and supported products installed, see the *WebSphere Commerce Migration Guide*.

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 Used to emphasize words. Italics also indicate names for which you must substitute the appropriate values for your system.

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

Important
These sections highlight especially important information.

Attention
These sections highlight information intended to protect your data.

Business Indicates information specific to WebSphere Commerce Business Edition

Professional Indicates information specific to WebSphere Commerce Professional Edition.

Terminology used in this book

This book uses the following terms:

cell Cells are arbitrary, logical groupings of one or more nodes in a WebSphere Application Server distributed network that are managed together by a WebSphere Network Deployment Manager. In this definition, a *node* is a single occurrence of WebSphere Application Server and the applications that run inside the occurrence of WebSphere Application Server.

cluster
A group of occurrences of WebSphere Application Server running the same enterprise application. Clusters were known in previous releases as server groups or clones. The act of creating clusters is called *clustering*. Clustering was known as *cloning* in previous releases.

cluster member
A single occurrence of WebSphere Application Server in a cluster.

federate
To collect single occurrences of WebSphere Application Server into a cell to manage the occurrences together.

node Node has two different meanings in this book depending on the context in which it is used.

WebSphere Commerce installation
In the WebSphere Commerce installation instructions, a node is a single system or system partition on which you install one or more WebSphere Commerce components.

clustering
When discussing clustering, a node is a single occurrence or instance of WebSphere Application Server and the applications that run inside the occurrence of WebSphere Application Server. A node

in a cell may or may not be running the same enterprise application as other nodes in the same cell.

Variables used in this book

Some of the key variables used in this book are as follows:

host_name
This variable represents the fully qualified host name of your WebSphere Commerce server (for example, `server.mydomain.ibm.com` is fully qualified).

instance_name
This variable represents the name of the WebSphere Commerce instance with which you are working (for example, `mall`).

WAS_instance_name
This variable represents the name of the WebSphere Application Server with which your WebSphere Commerce instance is associated.

cell_name
This variable represents the name of the WebSphere Application Server cell.

payments_instance_name
This variable represents the name of the WebSphere Commerce Payments instance with which you are working.

Path variables

This Guide uses the following variables to represent directory paths:

Payments_installdir
The installation directory for WebSphere Commerce Payments on your system: `/QIBM/ProdData/CommercePayments/V55`.

Payments_userdir
The directory for all the data that is used by WebSphere Commerce Payments which can be modified or needs to be configured by the user: `/QIBM/UserData/CommercePayments/V55`.

WAS_installdir
The installation directory for WebSphere Application Server on your system: `/QIBM/ProdData/WebAS5/Base`.

WAS_ND_installdir
The installation directory for WebSphere Application Server Network Deployment on your system: `/QIBM/ProdData/WebAS5/ND`.

WAS_userdir
The directory for all the data that is used by WebSphere Application Server which can be modified or needs to be configured by the user: `/QIBM/UserData/WebAS5/Base/`*`WAS_instance_name`*.

WC_installdir
The installation directory for WebSphere Commerce. It contains all the WebSphere Commerce proprietary data on your system: `/QIBM/ProdData/CommerceServer55`.

WC_userdir
The directory for all the data that is used by WebSphere Commerce which can be modified or needs to be configured by the user: `/QIBM/UserData/CommerceServer55`.

Note: The above default installation paths cannot be altered or modified on iSeries™. The WebSphere Commerce for iSeries product expects the above directories to exist and will not function properly if they do not exist.

Knowledge requirements

This book should be read by system administrators or anyone else responsible for installing and configuring WebSphere Commerce.

People who are installing and configuring WebSphere Commerce should have knowledge in the following areas:

- IBM @server® iSeries and the OS/400 operating system
- IBM DB2 Universal Database™ for iSeries
- Basic Command Language commands
- Basic SQL commands
- The Internet

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

- WebSphere Application Server
- HTML and XML
- Structured Query Language (SQL)
- Java™ programming

For information on developing your store front and store data assets, refer to the *WebSphere Commerce Store Development Guide*. For information on developing or customizing your business logic (or back office business logic) see the *WebSphere Commerce Programming Guide and Tutorials* document.

Contents

Part 1. Getting ready to install WebSphere Commerce

Chapter 1. Welcome to WebSphere Commerce

This book describes how to install and configure WebSphere Commerce 5.5 for IBM @server iSeries on OS/400. 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 or WebSphere Commerce Version 5.4 installed, follow the migration steps described in the *WebSphere Commerce Migration Guide* for Version 5.1 or the *WebSphere Commerce Migration Guide* for Version 5.4, as appropriate. The Migration Guides are available from the WebSphere Commerce technical library:

`http://www.ibm.com/software/commerce/library/`

Important

If you have WebSphere Commerce Version 5.4 installed, you have two options available:

- Migrating your WebSphere Commerce Version 5.4 product to the WebSphere Commerce Version 5.5 product
- Installing WebSphere Commerce Version 5.5. Coexistence of the WebSphere Commerce Version 5.4 and WebSphere Commerce Version 5.5, on the same OS/400 system, is supported.

Products included with WebSphere Commerce

The following products are packaged with WebSphere Commerce:

- WebSphere Commerce:
  - WebSphere Commerce server, which includes:
    - LikeMinds client
    - Product Advisor
    - WebSphere Commerce Accelerator
    - WebSphere Commerce Administration Console
    - WebSphere Commerce Organization Administration Console
  - WebSphere Commerce Payments, which includes:
    - WebSphere Commerce Payments Cassette for VisaNet
    - WebSphere Commerce Payments Cassette for BankServACH
    - WebSphere Commerce Payments Cassette for Paymentech
    - WebSphere Commerce Payments CustomOffline Cassette
    - WebSphere Commerce Payments OfflineCard Cassette
  - Blaze Rules Server, version 4.5.5 and Blaze Innovator Runtime, Version 4.5.5
  - IBM WebSphere Commerce Analyzer 5.5
  - WebSphere Commerce 5.5 Recommendation Engine powered by LikeMinds
- WebSphere Application Server 5.0
- Business IBM Lotus® QuickPlace® 3.0
- IBM Lotus Sametime® 3.0

Important

All WebSphere Commerce components and the supporting software must run on the same operating system. The operating system must meet the requirements outlined in Chapter 2, "Preinstallation requirements," on page 7.

WebSphere Commerce does not support a heterogeneous operating environment — all nodes in a multiple node topology must run the same version and level of operating system as documented in Chapter 2, "Preinstallation requirements," on page 7.

The only exception to this is the WebSphere Commerce Configuration Manager client, which must run a Windows® workstation. The Configuration Manager client communicates with the Configuration Manager server running on the @server iSeries machine.

Supported Web browsers

You can only access the WebSphere Commerce tools and online help using Microsoft® Internet Explorer 6.0 from a machine running a Windows operating system on the same network as your WebSphere Commerce machine. You must use Internet Explorer full version 6.0 (also known as Internet Explorer 6.0 Service Pack 1 and Internet Tools) 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:

- AOL 7 or above for Windows
- Microsoft Internet Explorer:
  - Version 5.5 or higher for Windows
  - Version 5 or higher for Macintosh
- Mozilla Version 1.0 or higher
- Netscape Version 6.0 or higher
- Netscape Navigator Version 4.6 or higher

Port numbers used by WebSphere Commerce

The following is a list of the default port numbers used by WebSphere Commerce or its component products. 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.

For instructions for learning which ports are in use, refer to your operating system documentation.

Important

This section only lists ports required by the software provided with WebSphere Commerce. For port numbers required by non-IBM software, refer to the documentation for the non-IBM software package.

Port Number	Used By
21	FTP port. This port is required when creating a WebSphere Commerce or WebSphere Commerce Payments instance that uses a remote Web server.
80	IBM HTTP Server.
389	Lightweight Directory Access Protocol (LDAP) Directory Server.
443	IBM HTTP Server – secure port. This secure port requires SSL.
1099	WebSphere Commerce Configuration Manager server.
2001	IBM HTTP Server Administration port.
2010	IBM HTTP Server Administration SSL port.
2809	WebSphere Application Server Bootstrap address.
5432	WebSphere Commerce Payments non-secure server.
5433	WebSphere Commerce Payments secure server. This secure port requires SSL.
5557	WebSphere Application Server Internal Java Messaging Service server.
5558	WebSphere Application Server Java Messaging Service server queued address.
5559	WebSphere Application Server Java Messaging Service direct address.
7873	WebSphere Application Server DRS client address.
8000	WebSphere Commerce Tools. This secure port requires SSL.
8002	WebSphere Commerce Administration Console. This secure port requires SSL.
8004	WebSphere Commerce Organization Administration Console. This secure port requires SSL.
8880	WebSphere Application Server SOAP Connector address.
9043	WebSphere Application Server Administration Console Secure Port. This secure port requires SSL.
9080	WebSphere Application Server HTTP Transport.
9090	WebSphere Application Server Administration Console Port.
9501	WebSphere Application Server Secure Association Service.
9502	WebSphere Application Server Common Secure Port.
9503	WebSphere Application Server Common Secure Port.

Locales used by WebSphere Commerce

WebSphere Commerce only uses valid Java locales. 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.

Table 1. OS/400 locale codes supported by WebSphere Commerce

Language	Locale Code
German	de_DE

Table 1. OS/400 locale codes supported by WebSphere Commerce (continued)

English	en_US
Spanish	es_ES
French	fr_FR
Italian	it_IT
Japanese	ja_JP
Korean	ko_KR
Brazilian Portuguese	pt_BR
Simplified Chinese	zh_CN
Traditional Chinese	zh_TW

Chapter 2. Preinstallation requirements

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

Important
You *must* complete these preinstallation steps to ensure that installation is successful.

Prerequisite hardware

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

- Any of the following servers (recommended minimums):
  - AS/400e™ server Model 170 with processor feature 2385
  - AS/400e server Model 720 with processor feature 2062
  - @server iSeries server Model 270 with processor feature 2252
  - @server iSeries Server Model 810 with processor feature 2465 and a CPW of 750
  - @server iSeries server Model 820 with processor feature 2396
- 1.5 GB of memory (recommended minimum)

Note: Systems below these recommended minimums may be used in environments that support a limited number of users and where longer server initialization times can be tolerated.

Furthermore, you require the following:

- A workstation, running a Windows operating system and capable of running a Web browser such as Internet Explorer with a graphics-capable monitor
- A mouse or other pointing device
- A local area network (LAN) adapter that is supported by the Transmission Control Protocol/Internet Protocol (TCP/IP) protocol

Prerequisite software

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

- OS/400 Version 5 Release 2 (V5R2M0) or higher (5722SS1) which includes:
  - DB2 Universal Database for iSeries V5R2M0
  - Host Servers (5722SS1 option 12). You can start the host servers by using the Start Host Server (`STRHOSTSVR`) command by typing `STRHOSTSVR *ALL` on the OS/400 command line. The `QSERVER` subsystem must be running on the iSeries system.
  - QShell Interpreter (5722SS1 option 30)
  - Portable App Solutions Environment (5722SS1 option 33)
  - Digital Certificate Manager (5722SS1 option 34)

  - International Components for Unicode (5722SS1 option 39)
- IBM Java Developer Kit, Version 1.3 (5722JV1 option 5)
- IBM HTTP Server Powered by Apache (5722DG1).
- Crypto Access Provider 128-Bit for AS/400® (5722AC3)
- TCP/IP Connectivity Utilities (5722TC1)
- In addition, you may also want to install the following optional products:
  - iSeries Access (5722XW1 options *BASE and 1)
  - iSeries Access for Windows (5722XE1)
  - DB2® Query Manager and SQL Development Kit (5722ST1)
  - WebSphere Application Server Network Deployment (5733WS5 option 5)
  - LDAP Directory Services (5722SS1). The LDAP product is included with OS/400 V5R2M0, and will already be installed on your iSeries system.

Reviewing the README file

Reviewing the README file is an important prerequisite for installing WebSphere Commerce. The README file contains information about last-minute changes to the product. Last-minute changes may include additional fixes that must be installed before using WebSphere Commerce.

Failure to install any last minute fixes listed in the README file will result in WebSphere Commerce not functioning correctly.

The README file can be found in the root directory of the WebSphere Commerce Disk 1 CD. The README file name is:

`readme_`*`language_code`*`.htm`

where *language_code* is one of the following:

Language	Language code
German	de_DE
English	en_US
Spanish	es_ES
French	fr_FR
Italian	it_IT
Japanese	ja_JP
Korean	ko_KR
Brazilian Portuguese	pt_BR
Simplified Chinese	zh_CN
Traditional Chinese	zh_TW

Chapter 3. Understanding iSeries unique concepts

This chapter describes concepts that are unique to the IBM @server iSeries and the OS/400 operating system. It includes the following:

- A discussion of the different file systems within the Integrated File System (IFS)
- File organization for the WebSphere Commerce system

The OS/400 file systems used by WebSphere Commerce

It is important that you understand the *Integrated File System (IFS)* so that you can decide where to store your Web assets, such as JSP and HTML files, and how to configure the corresponding file servers.

A file system provides the support to access specific segments of storage that are organized as logical units. These logical units are files, directories, folders, libraries, and objects.

Each file system has a set of logical structures and rules for interacting with information in storage. These structures and rules may be different from one file system to another. From the perspective of structures and rules, the OS/400 support for accessing database files and various other object types through libraries can be thought of as a file system. Similarly, the OS/400 support for accessing documents (which are really stream files) through the folder structure behaves as a separate file system.

The Integrated File System treats the library support and folder support as separate file systems. Other types of OS/400 file management support, all with their own capabilities, function as separate file systems. The iSeries file systems that are used by WebSphere Commerce are described below. For information about other OS/400 file systems, refer to your OS/400 documentation.

WebSphere Commerce stores information in two different file systems within the Integrated File System: *QSYS.LIB* library file system and the *root* file system.

The QSYS.LIB file system

The `QSYS.LIB` library file system supports the iSeries library structure. This file system provides access to database files and all of the other iSeries object types that the library support manages.

The installation and configuration process creates the `QWEBCOMM55` library in the `QSYS.LIB` file system. It contains the following types of objects:

- `*MSGF` (A message file)
- `*PRDDFN` (A product definition object)

The root file system

The root, or `/`, file system takes full advantage of the hierarchical directory structure and stream file support of the Integrated File System. The root file system has the characteristics of the *DOS* and *OS/2®* file systems.

WebSphere Commerce uses a divided root file structure. All the data that is used by WebSphere Commerce which can be modified or needs to be configured by the user is placed in the UserData subdirectory, and all of the WebSphere Commerce proprietary data is placed in the ProdData subdirectory. This has been done to make a clear distinction between the two types of information, to make future migration as simple as possible, and to facilitate the servicing of files therein.

Notes:

1. You can only change the files that are contained in the instance root path, which by default is:

   WC_userdir/instances/*instance_name*

   Default values for *WC_userdir* are listed in "Path variables" on page v.
2. When the instance's Enterprise application is deployed, all of the JSP files and other assets are stored in:

   WAS_userdir/installedApps/*cell_name*/WC_*instance_name*.ear

   Files in this directory can be modified as well. Default values for *WAS_userdir* are listed in "Path variables" on page v.

When you configure WebSphere Commerce for a particular instance, the Configuration Manager copies all of the required files for the selected configuration option to the *WC_userdir* path. You should not change the original files, contained in the following path:

WC_installdir

Default values for *WC_installdir* and *WC_userdir* are listed in "Path variables" on page v.

Attention: Applying PTFs or reinstalling the product may delete or overwrite the files in the ProdData directory path. You should therefore not store any customized files in the ProdData directory path.

The table below lists the directories and stream files that are created by the WebSphere Commerce installation and configuration process and stored in the root file system. The directory path */instance_root/* refers to the directory path *WC_userdir*/instances/*instance_name*, where *instance_name* is the name you provide for your instance during configuration.

Path	Significance
/*instance_root*/xml/*instance_name*.xml	The instance configuration file. This file contains configuration settings for the WebSphere Commerce server.
/*instance_root*/web	The IBM HTTP Server document root directory.
/*instance_root*/conf	The directory containing the IBM HTTP Server configuration file (httpd.conf).
WAS_userdir/installedApps/*cell_name*/WC_*instance_name*.ear	The directory containing instance properties files. For exact location of customized assets, refer to the *WebSphere Commerce Programming Guide and Tutorials* document.

Path	Significance
/*instance_root*/logs	The directory containing WebSphere Commerce log files.
/*instance_root*/xml	The directory containing WebSphere Commerce instance configuration XML files.

Default values of *WAS_userdir* are listed in "Path variables" on page v.

Querying the layout of the database

You can query information about the database layout by using SQL statements. You can use either the DB2/400 Query Manager and the SQL development kit, or you can use iSeries Navigator. To use iSeries Access to perform database queries, do the following:

1. Start iSeries Navigator from the PC where it is installed.
2. Expand **Databases**, right-click the appropriate Relational Database, and select **Run SQL Scripts**. The **Run SQL Scripts** window opens.
3. Type the desired SQL statement in the window. For example,
   - To view a list of all the tables in the database, type (on one line, uppercase only):

     ```
     SELECT TABLE_NAME FROM QSYS2.SYSTABLES WHERE
            TABLE_SCHEMA='DB_SCHEMA_NAME'
     ```

   - To view a list of the columns in a particular table, type (on one line):

     ```
     SELECT * FROM QSYS2.SYSCOLUMNS WHERE TABLE_SCHEMA='DB_SCHEMA_NAME'
            AND TABLE_NAME='TABLE_NAME'
     ```

   - To view the records in a particular table, type:

     ```
     SELECT * FROM 'DB_SCHEMA_NAME'.'TABLE_NAME'
     ```

   where

   'DB_SCHEMA_NAME'
   is the name of the instance database.

   'TABLE_NAME'
   is the name of the database table that you want to query.

For more information about these and other SQL statements, refer to the *DB2 Universal Database for iSeries SQL Reference* which you can find at the following Web site:

`http://publib.boulder.ibm.com/html/as400/infocenter.html`

Part 2. Installing WebSphere Commerce

Chapter 4. Installing WebSphere Commerce

The instructions in this chapter will guide you through the installation and configuration of WebSphere Commerce on a single node. This installation has the following prerequisites:

- Your system meets all the hardware and software prerequisites outlined in Chapter 2, "Preinstallation requirements," on page 7.

The following installation options are available:

Quick Installation:
Perform™ a quick installation to install all WebSphere Commerce components on a single node. The node must have no WebSphere Commerce components or WebSphere Application Server installed. Instructions for completing a quick installation are covered in *WebSphere Commerce Quick Beginnings*.

Typical Installation:
Perform a typical installation to install all WebSphere Commerce software on a single node on which some WebSphere Commerce 5.5 software is already installed.

This will install all WebSphere Commerce software on a single node. This includes WebSphere Application Server, WebSphere Commerce Payments, and the WebSphere Commerce server.

Completing a typical installation is described in "Completing a typical installation" on page 16.

Custom Installation:
A custom installation can be used to install WebSphere Commerce components on different nodes. Perform a custom installation if you want WebSphere Commerce Payments to run remotely from WebSphere Commerce.

All nodes must be running the same operating system meeting the operating system requirements listed in Chapter 2, "Preinstallation requirements," on page 7.

This installation should only be attempted by users with advanced knowledge of WebSphere Commerce.

Perform a custom installation for any of the following reasons:

- You do not want to have the WebSphere Commerce installation wizard create a WebSphere Commerce instance and a WebSphere Commerce Payments instance. The quick installation option of the installation wizard creates a WebSphere Commerce instance and a WebSphere Commerce Payments instance.
- Your @server iSeries system already has WebSphere Application Server Version 5.0 installed.
- You want to install WebSphere Commerce Payments remotely from the WebSphere Commerce node.
- You want to install only certain components of WebSphere Commerce.

Completing a custom installation is described in Chapter 5, "Completing a custom installation," on page 23.

Note:
If your iSeries system does not have WebSphere Application Server Version 5.0 installed, it will be installed during a typical installation and for some components in a custom installation. The installation of the WebSphere Application Server 5.0 product also installs the WebSphere MQ classes for Java product (5639C34) on your iSeries system if it is not already installed.

The installation of the 5639C34 product will fail if your iSeries has subsystem `QMQM` active. Ensure that subsystem `QMQM` is ended prior to starting an installation of the WebSphere Commerce and WebSphere Application Server products.

IDs required during installation

To install and configure WebSphere Commerce, you must use an iSeries user profile with `USRCLS(*SECOFR)` or use the `QSECOFR` user profile. Refer to "Creating an iSeries user profile" on page 110 to either:

- Create a user profile.
- Ensure that your existing iSeries user profile has the correct localized settings.

Completing a typical installation

You can install the WebSphere Commerce 5.5 product on your iSeries system in two ways:

- From a Windows 2000 machine, or any version of a Windows machine that supports Universal Disk Format (UDF) CDs (recommended method):
  - The Windows machine needs to have a CD drive and be connected on the same TCP/IP network as your iSeries machine.
  - The GUI installation panels will guide you through the installation process. Depending on your network and iSeries machine, the installation time may take up to 3 hours.
  - This type of installation is called a *graphical install*.
- From an iSeries 5250 session (alternative method):
  - The OS/400 command line installation will guide you through the installation process.
  - Depending on your iSeries machine, the installation time may take 3 hours or longer.
  - This type of installation is called a *console install*.

For the detailed steps on the two types of installations, see the sections below.

Using the graphical install for a typical installation (recommended)

To perform a typical installation using a graphical install, do the following:

1. Insert the WebSphere Commerce CD 1 into the CD-ROM drive on the remote Windows system.
2. Navigate to the CD-ROM drive and double click on `iSeriesServer.bat` to launch the installer.

3. After a few moments, the iSeries Logon Information window is shown. Enter the System Name, User Profile, and Password for the iSeries system on which you are installing WebSphere Commerce. Ensure that you log on to your iSeries system as a user with `SECOFR` class authority. Click **Next**.
4. Select the installation language and click **OK**.
5. Read the Welcome panel and click **Next**.
6. The Software License Agreement panel displays. Review the terms of the license agreement.

   If you accept the terms of license agreement, select **I accept the terms in the license agreement** and click **Next**.

   If you decline the terms of the license agreement, select **I do not accept the terms in the license agreement** and click **Next**. A confirmation window is shown with the message: `Do you really wish to decline the license agreement?` Click **Yes** to exit the installation program *or* click **No** to be returned back to the Software License Agreement panel.
7. If you accept the terms of the license agreement, the Install Type panel displays. Select **Typical Installation** and click **Next**.

   Note: The following message will be posted if you have WebSphere Commerce Version 5.4 installed on your iSeries system:

   ```
   A previous version of WebSphere Commerce has been detected.
   Do you want both versions of WebSphere Commerce to coexist?
   ```

   Click **Yes** to proceed with the installation or click **No** to exit the installation. Refer to Chapter 1, "Welcome to WebSphere Commerce," on page 3 for information on coexistence.
8. The default destination directory for WebSphere Commerce displays; click **Next**.
9. Select the language of the documentation that you want installed, and then click **Next**.
10. Confirm your installation choices and click **Next**. (To modify your choices, click **Back**.)
11. If the WebSphere Application Server 5.0 product is already installed on your iSeries system, go to step 14 on page 18. Otherwise, insert the WebSphere Application Server for iSeries Disk 1 CD into the CD-ROM drive on the remote Windows system and click **Next**.

    A DOS window opens. The details of the WebSphere Application Server product installation display.
12. In this same DOS window, insert the WebSphere Application Server for iSeries Disk 2 CD into the CD-ROM drive on the Windows system, and then press **Enter** when the following message displays:

    ```
    Insert disk 2 of 2. Please press Enter key when ready.
    ```

    The following messages should appear when the installation is complete:

    ```
    Installation completed successfully.
    Please read the Installation and Initial Configuration documentation.
    Please press the Enter key to end the installation program.
    ```

    After you press **Enter**, the DOS window closes.
13. Navigate back to the **WebSphere Commerce** install screen. Wait until the screen shows:

    ```
    Insert the IBM WebSphere Commerce CD 1 CD into the CD-ROM drive
    ```

Remove the WebSphere Application Server CD from the drive and insert the WebSphere Commerce Disk 1 CD into the CD-ROM drive. Click **Next**.

14. The WebSphere Commerce installation begins. A window indicating the percentage that has been completed is shown in the bottom corner of the screen.
15. On the InstallShield Wizard panel, click **Next** to continue.
16. From the Installation Complete panel, you can access more information about WebSphere Commerce or exit the Installation Wizard by clicking **Finish**.

Note: After you have completed the typical installation, you need to apply the WebSphere Application Server PTFs and any applicable OS/400 product PTFs. Refer to the WebSphere Commerce product README file for information on applying these PTFs. The latest version of the README is available from the WebSphere Commerce Technical Library Web site (`http://www.ibm.com/software/commerce/library/`).

After completing the typical installation, go to "Verifying a typical installation" on page 19.

Using the console install for a typical installation

Before starting a console install, you should review "Usage notes for the console install" on page 117.

Completing the console install for a typical installation

To perform a typical installation using a console install, do the following:

1. Log on to the iSeries system where you will install WebSphere Commerce. Ensure that you log on as a user with `SECOFR` class authority.
2. Insert the WebSphere Commerce CD 1 in your iSeries CD-ROM drive
3. Enter the PASE shell using the following command:
   ```
   CALL QP2TERM
   ```
4. Start the installer by entering the following command:
   ```
   /qopt/WC55/setup.qsh
   ```

   Note: Enter the command only as shown. Entering the command by first navigating to the directory will cause the installation to fail.
5. Select the language to be used by the wizard.
6. The Welcome screen displays.
7. The Software Licensing Agreement displays.
8. Select **Typical Installation**.

   The WebSphere Commerce installation directory displays.
9. Select the Online Help languages that you want to install.

   The installation options summary displays.
10. If your iSeries system has WebSphere Application Server Version 5.0 installed, go to step 13 on page 19.

    If your iSeries system does not have WebSphere Application Server Version 5.0 installed, the following message is shown on the screen:
    ```
    Insert the IBM WebSphere Application Server CD into the CD-ROM drive
    ```

    Insert the WebSphere Application Server for iSeries Disk 1 CD into the iSeries CD-ROM drive.

11. When the following message is posted, remove Disk 1 from the CD-ROM drive and insert the WebSphere Application Server for iSeries Disk 2 CD and press **Enter**:

    ```
    Insert WebSphere Application Server disk 2 and press ENTER
    ```

12. After the installation of WebSphere Application Server has completed, the following message will be posted:

    ```
    Insert the IBM WebSphere Commerce Disk 1 CD into the CD-ROM drive
    ```

    Remove the WebSphere Application Server CD from the CD-ROM drive and insert the WebSphere Commerce Disk 1 CD. Press **Enter**.

13. The installation of WebSphere Commerce begins. The percentage that is complete is shown on the screen.
14. When the installation is complete, the following message is posted:

    ```
    The InstallShield Wizard has successfully installed WebSphere Commerce.
    ```

15. Exit the Wizard and then exit the `QP2TERM` session by pressing **F3**.

Note: After you have completed the typical installation, you need to apply the WebSphere Application Server PTFs and any applicable OS/400 product PTFs. Refer to the WebSphere Commerce product README file for information on applying these PTFs. The latest version of the README is available from the WebSphere Commerce Technical Library Web site (`http://www.ibm.com/software/commerce/library/`).

After completing the typical installation, go to "Verifying a typical installation."

Verifying a typical installation

To verify that your typical installation of WebSphere Commerce was successful, check the following:

1. The following libraries should exist on your iSeries system:
   - For WebSphere Commerce Server - library `QWEBCOMM55`
   - For WebSphere Commerce Payments - libraries `QCPYMS` and `QCPYMS55`
   - For WebSphere Application Server - library `QEJBAS5`
2. Check the Integrated File System (IFS) on your iSeries system for the following directories:
   - `/QIBM/ProdData/CommerceServer55`
   - `/QIBM/ProdData/CommercePayments/V55`
   - `/QIBM/ProdData/WebAS5`
3. Use iSeries Navigator to show what products have been installed on your iSeries system:
   a. On a PC where iSeries Navigator can be accessed, click **Start** → **Programs** → **IBM iSeries Access for Windows** → **iSeries Navigator**
   b. In the iSeries Navigator window, expand **Management Central** → **Endpoint Systems**
   c. Right-click on the applicable iSeries system and click **Inventory** → **Collect**
   d. A new window opens. Ensure that the Software box is checked. Click **OK** to start the collection
   e. Expand **Management Central** → **Task Activity** → **Inventory**
   f. In the right-hand panel, a task for your iSeries system should be listed. Press the **F5** key (refresh) until the Status shows '`Completed`'

g. Click **Management Central** → **Endpoint Systems** → *iSeries system*→ **Configuration and Service** → **Software Inventory** → **Installed Products**

h. The right-hand panel will show a listing of products. Scroll to the bottom to view the WebSphere Commerce products.

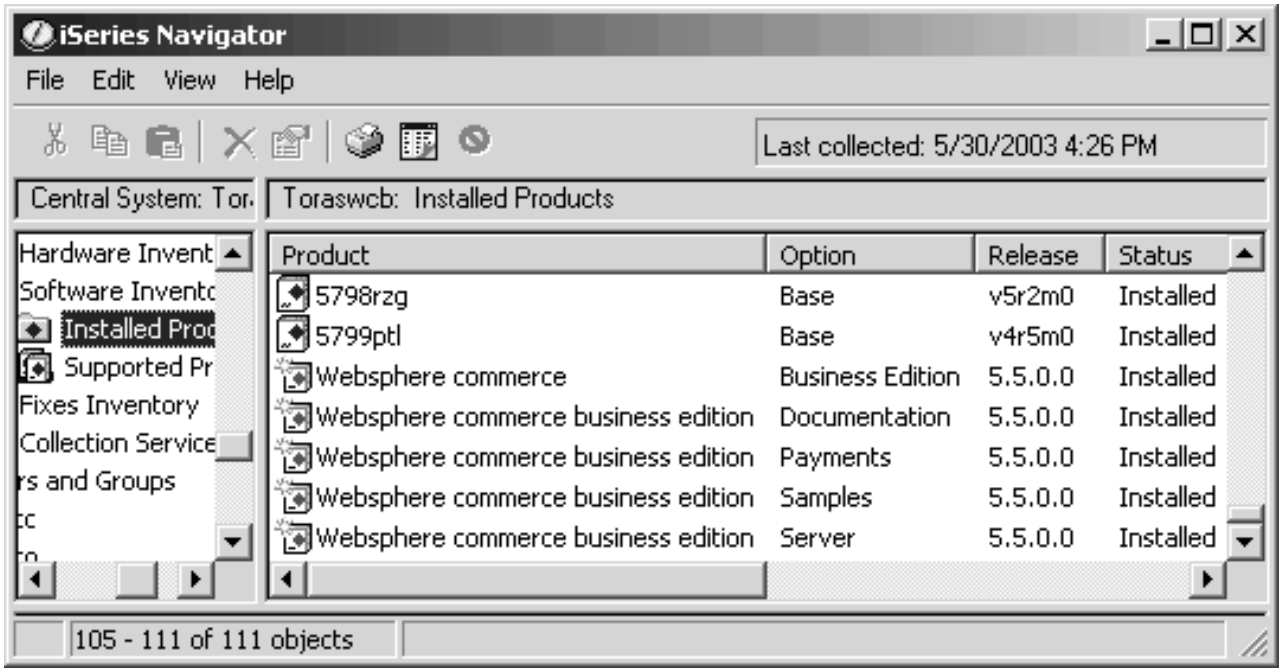


Figure 1. Products for a WebSphere Commerce Business Edition installation

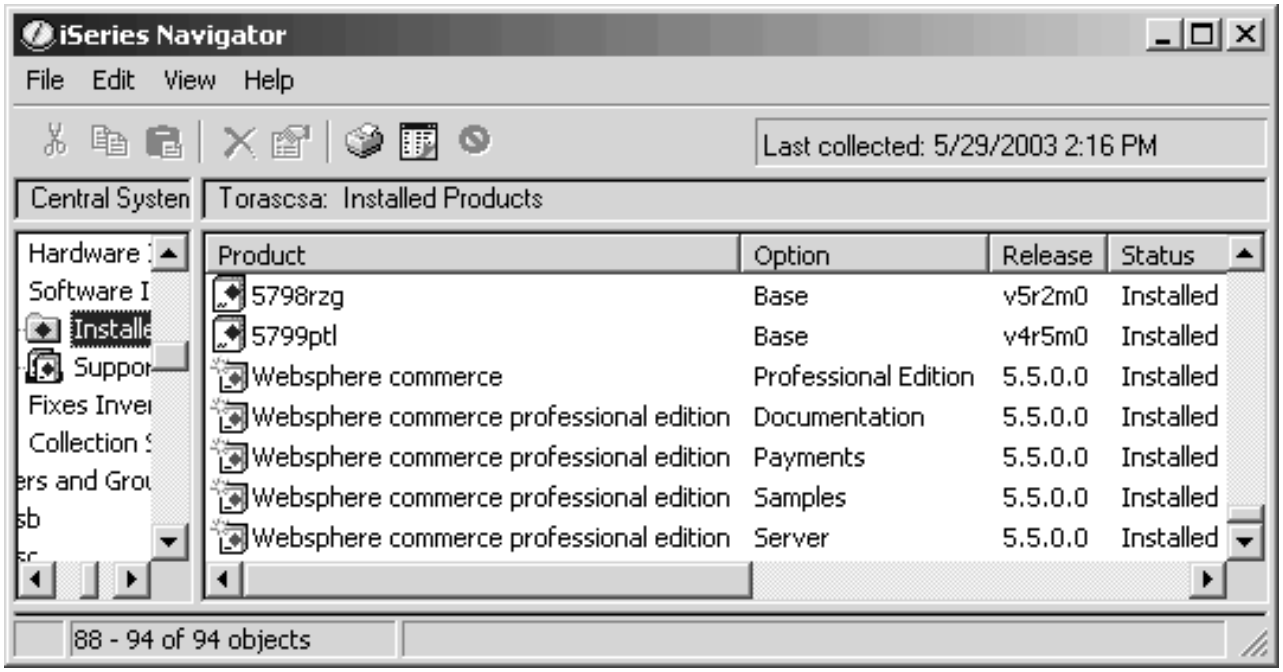


Figure 2. Products for a WebSphere Commerce Professional Edition installation

In the same panel, the WebSphere Application Server product can also be viewed. The diagram below shows this:

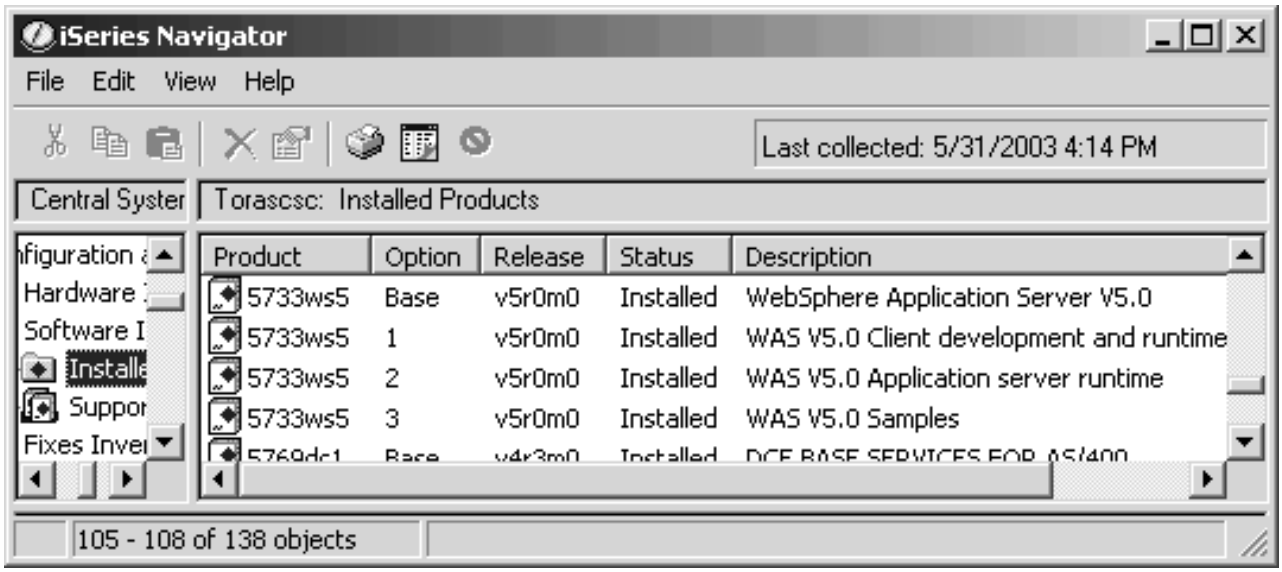


Figure 3. Products for a WebSphere Application Server Base installation

Proceed to Chapter 6, "Verifying your installation," on page 31.

Chapter 5. Completing a custom installation

A custom installation should only be attempted by users with advanced knowledge of WebSphere Commerce including:

- Advanced knowledge of WebSphere Application Server 5.0 configuration and operation in distributed environments.
- Experience in the creation of WebSphere Commerce instances in distributed environments.
- Experience in the configuration and administration of remote databases.
- Experience in the configuration of Web servers to work with remote applications.

When you perform a custom installation, each of the following components can be installed on a separate node:

WebSphere Commerce components

WebSphere Commerce Server
This component provides all of the function of WebSphere Commerce except for WebSphere Commerce Payments.

Selecting this component installs the following on the node:

- WebSphere Commerce server
- WebSphere Commerce Configuration Manager server
- WebSphere Commerce online help
- WebSphere Commerce sample stores
- WebSphere Application Server base product

If you plan to use a remote or local DB2 Universal Database with the WebSphere Commerce Server component, no extra steps are required when installing the WebSphere Commerce Server component.

WebSphere Commerce example files
This component provides various sample files, including those for Product Advisor, Web Services and Payments.

This component does not include the WebSphere Commerce sample stores.

WebSphere Commerce online help
This component installs the online help files for WebSphere Commerce (including WebSphere Commerce Payments). Installing this component copies the online help files to your iSeries system, but it does not install a Web server to view the files over HTTP — the files can only be viewed by opening the files from the node's file system.

If you are using a multiple node topology, install this component on the Web server node.

WebSphere Commerce Payments
This component installs all of the function of WebSphere Commerce Payments.

Selecting this component installs the following on the node:

- WebSphere Commerce Payments
- WebSphere Commerce Configuration Manager server
- WebSphere Commerce online help
- WebSphere Application Server base product

If you plan to use a remote or local DB2 Universal Database with the WebSphere Commerce Payments component, no extra steps are required when installing the WebSphere Commerce Payments component.

You can install WebSphere Commerce 5.5 components in two ways:

- From a Windows 2000 machine, or any version of a Windows machine that supports Universal Disk Format (UDF) CDs (recommended method):
  - The Windows machine needs to have a CD drive and be connected on the same TCP/IP network as your @server iSeries machine.
  - The GUI installation panels will guide you through the installation process. Depending on your network and @server iSeries machine, the installation time may take up to 3 hours.
  - This type of installation is called a *graphical install*.
- From an iSeries 5250 session (alternative method)
  - The OS/400 command line installation will guide you through the installation process.
  - Depending on your @server iSeries machine, the install time may take 3 hours or longer.
  - This type of installation is called a *console install*.

For the detailed steps on these types of installations, see the sections below.

Using the graphical install for a custom installation (recommended)

To perform a custom installation using the graphical install, do the following:

1. Insert WebSphere Commerce CD 1 into the CD-ROM drive on the remote Windows system.

   Select **Install Product** to start the installation wizard.

   Note: If you do not want to start the installation wizard from the LaunchPad, do the following:

   a. Start a command prompt session.
   b. Switch directories to the WebSphere Commerce - Express CD 1 CD-ROM drive.
   c. Enter the following command:

      ```
      iSeriesServer.bat
      ```

2. Navigate to the CD-ROM drive and double click on `iSeriesServer.bat` to launch the installer.
3. After a few moments, the @server iSeries Logon Information window displays. Enter the System Name, User Profile, and Password for the @server iSeries system on which you are installing WebSphere Commerce components. Ensure that you log on to your @server iSeries system as a user with `SECOFR` class authority. Click **Next**.

4. For National Language versions only, select the installation language and click **OK**. The software will be installed in this language, regardless of the language settings of your system.

   For the English language version, the selection panel does not appear; the installation language is English (en_US) by default.
5. Read the Welcome panel and click **Next**.
6. The Software License Agreement panel displays. Review the terms of the license agreement.

   If you accept the terms of the license agreement, select **I accept the terms in the license agreement** and click **Next** to accept the terms.

   If you decline the terms of the license agreement, select **I do not accept the terms in the license agreement** and click **Next**. A Confirmation window displays with the message: `Do you really wish to decline the license agreement?` Click **Yes** to exit the installation program, *or* click **No** to return to the Software License Agreement panel.
7. If you accept the terms of the license agreement, the Install Type panel displays. Select **Custom Installation** and click **Next**.
8. Select the component(s) you want to install on the node. Click **Next** to continue.

   Note: Descriptions of each component are provided at the beginning of this chapter.

   The default destination directory for WebSphere Commerce displays.

   If WebSphere Commerce Payments was selected, the default destination directory for WebSphere Commerce also displays.

   Click **Next** to continue.
9. If you are installing only WebSphere Commerce example files, go to step 11.
10. Select the language of the documentation that you want installed and click **Next**.
11. Confirm your installation choices and click **Next**. (To modify your choices, click **Back**.)
12. If you are installing only the WebSphere Commerce example files or the WebSphere Commerce online help, go to step 16 on page 26.
13. If you are installing the WebSphere Commerce Server component or WebSphere Commerce Payments and if the WebSphere Application Server Version 5.0 product is already installed on your **@server** iSeries system, go to step 16 on page 26. Otherwise, insert the WebSphere Application Server for **@server** iSeries Disk 1 CD into the CD-ROM drive on the Windows system and click **Next**. A DOS window opens. The details of the WebSphere Application Server product installation are displayed.
14. In the same DOS window, when the following message displays, insert the WebSphere Application Server for **@server** iSeries Disk 2 CD into the CD-ROM drive on the Windows system and then press **Enter**:

    ```
    Insert disk 2 or 2. Please press Enter key when ready.
    ```

    The following messages should appear when the installation is complete:

    ```
    Installation completed successfully.
    Please read the Installation and Initial Configuration documentation.
    Please press the Enter key to end the installation program.
    ```

After you press **Enter**, the DOS window closes.

15. Navigate back to the WebSphere Commerce install screen. Wait until the screen displays the following:

    ```
    Insert the IBM WebSphere Commerce - Express CD 1 and specify the location of
    the CD-ROM drive below.
    ```

    Remove the WebSphere Application Server CD from the drive and insert the WebSphere Commerce Disk 1 CD into the CD-ROM drive. Click **Next**.
16. The WebSphere Commerce installation begins. A window indicating the percentage that has been completed is shown in the bottom corner of the screen.
17. On the InstallShield Wizard panel, click **Next** to continue.
18. From the Installation Complete panel, you can access more information about WebSphere Commerce or exit the Installation Wizard by clicking **Finish**.

    The Express LaunchPad window is displayed. From the LaunchPad window, you can choose other options.

Note: After you have completed the custom installation, you must apply the WebSphere Application Server PTFs and any applicable OS/400 product PTFs. Refer to the WebSphere Commerce product README file for information on applying these PTFs. The latest version of the README is available from the WebSphere Commerce Technical Library Web site (`http://www.ibm.com/software/commerce/library/`).

After completing the custom installation, go to "Verifying a custom installation" on page 27.

Completing the console install for a custom installation

Before completing a console install, you should review "Usage notes for the console install" on page 117.

To perform a custom installation using a console install, do the following:

1. Log on to the @server iSeries system where you will install WebSphere Commerce. Ensure that you log on as a user with `SECOFR` class authority.
2. Insert WebSphere Commerce CD 1 in your @server iSeries CD-ROM drive.
3. Enter the PASE shell using the following command:

   ```
   CALL QP2TERM
   ```
4. Start the installer by entering the following command:

   ```
   /qopt/WC55/setup.qsh
   ```

   Note: Enter the command only as shown. Entering the command by first navigating to the directory will cause the installation to fail.
5. Select the language to be used by the wizard.
6. The Welcome screen displays.
7. The Software Licensing Agreement displays.
8. Select **Custom Installation**.
9. Choose one or more of the component(s) you wish to install.
10. The destination directories for the selected components display.

11. The components you have selected will determine what information and prompts are displayed. Navigate through the remaining panels following any instructions that are provided and inserting the WebSphere Application Server CDs if requested.
12. When the installation is complete, the following message is posted:
    `The InstallShield Wizard has successfully installed WebSphere Commerce`
13. Exit the Wizard and then exit the `QP2TERM` session by pressing **F3**.

Note: After you have completed the custom installation, you need to apply the WebSphere Application Server PTFs and any applicable OS/400 product PTFs. Refer to the WebSphere Commerce product README file for information on applying these PTFs. The latest version of the README is available from the WebSphere Commerce Technical Library Web site (`http://www.ibm.com/software/commerce/library/`).

After completing the custom installation, go to "Verifying a custom installation."

Verifying a custom installation

To verify that your custom installation of WebSphere Commerce was successful, check the following:

1. The following libraries should exist on your **@server** iSeries system:
   - For WebSphere Commerce Server, WebSphere Commerce example files or WebSphere Commerce online help - library `QWEBCOMM55`
   - For WebSphere Commerce Payments - libraries `QCPYMS` and `QCPYMS55`
   - For WebSphere Application Server - library `QEJBAS5`
2. Depending on the components installed, the Integrated File System (IFS) on your **@server** iSeries system will have one or more of the following directories:
   - `/QIBM/ProdData/CommerceServer55`
   - `/QIBM/ProdData/CommercePayments/V55`
   - `/QIBM/ProdData/WebAS5`
3. Use iSeries Navigator to show what products have been installed on your **@server** iSeries system:
   a. On a PC where iSeries Navigator can be accessed, click **Start** → **Programs** → **IBM iSeries Access for Windows** → **iSeries Navigator**
   b. In the iSeries Navigator window, expand **Management Central** → **Endpoint Systems**
   c. Right-click on the applicable iSeries system and click **Inventory** → **Collect**
   d. A new window opens. Ensure that the Software box is checked. Click **OK** to start the collection
   e. Expand **Management Central** → **Task Activity** → **Inventory**
   f. In the right-hand panel, a task for your iSeries system should be listed. Press the **F5** key (refresh) until the Status shows '`Completed`'
   g. Click **Management Central** → **Endpoint Systems** → *iSeries system* → **Configuration and Service** → **Software Inventory** → **Installed Products**
   h. The right-hand panel will show a listing of products. Scroll to the bottom to view the WebSphere Commerce products.

Note: All of the following diagrams show a Business Edition installation only. Similar views will also be seen for a Professional Edition installation.

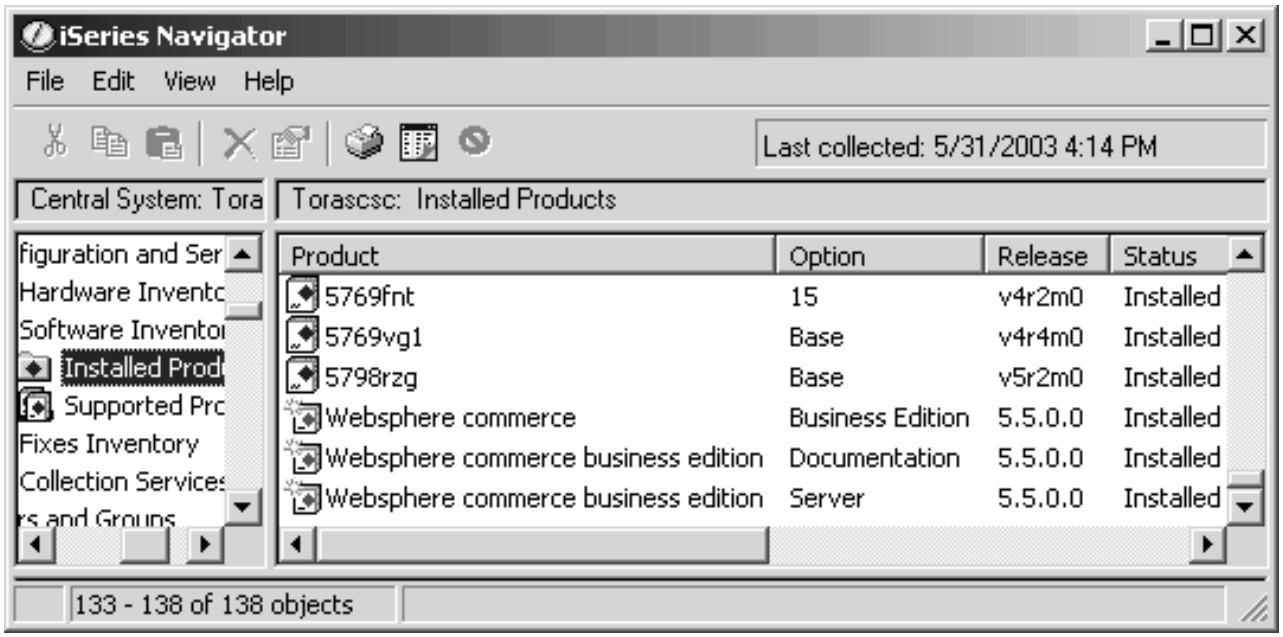


Figure 4. Products for a WebSphere Commerce Server installation

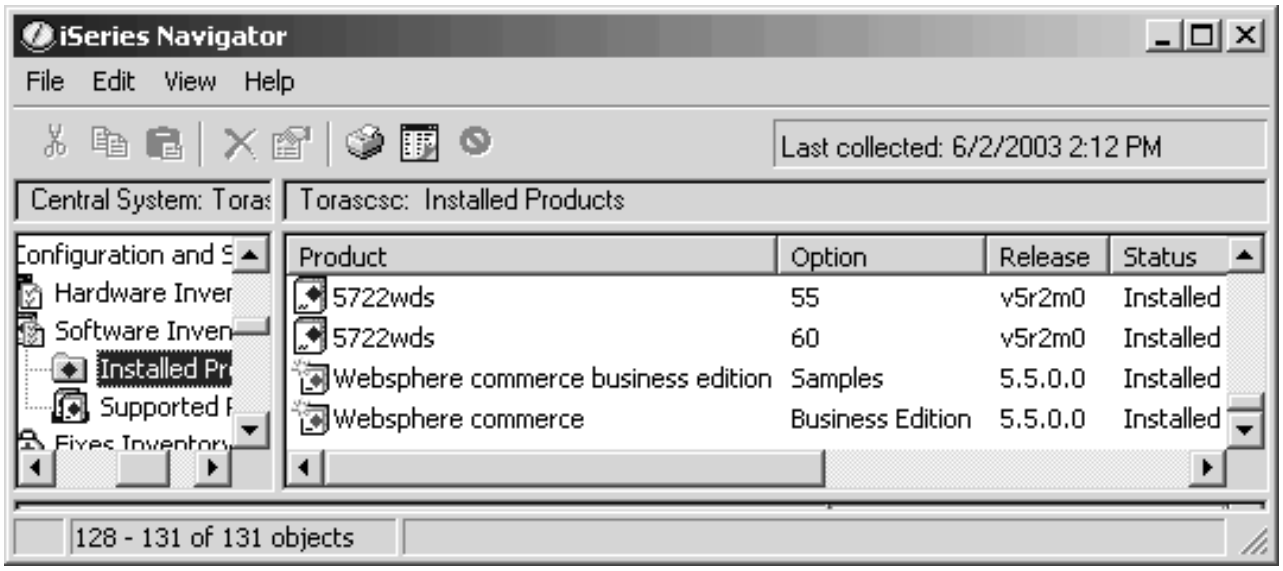


Figure 5. Products for a WebSphere Commerce example files installation

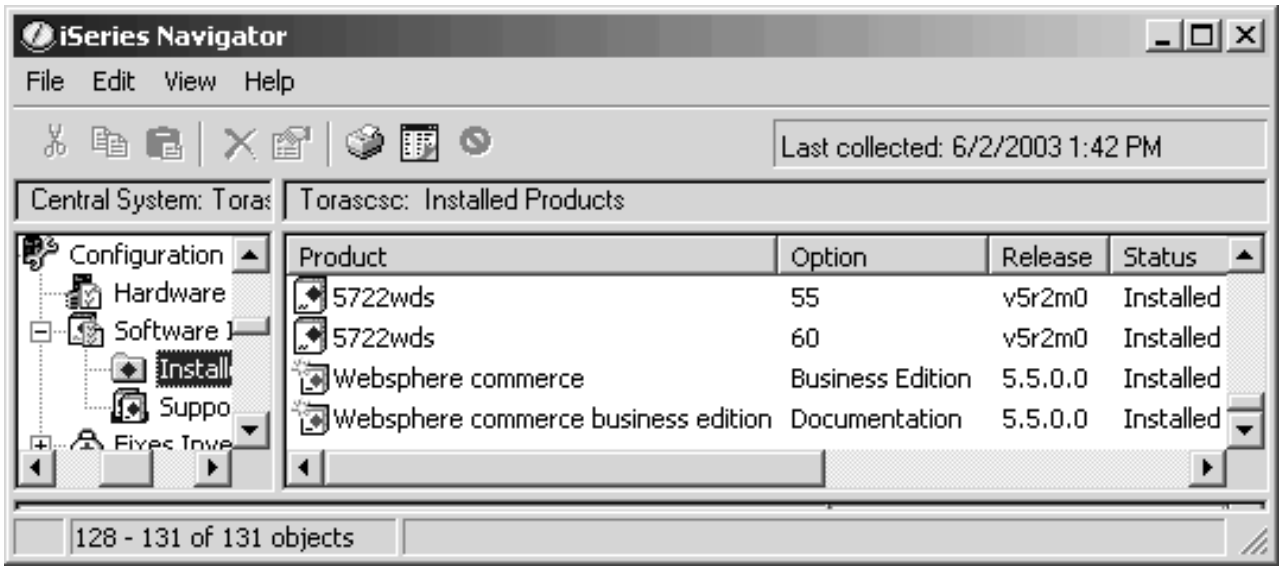


Figure 6. Products for a WebSphere Commerce online help installation

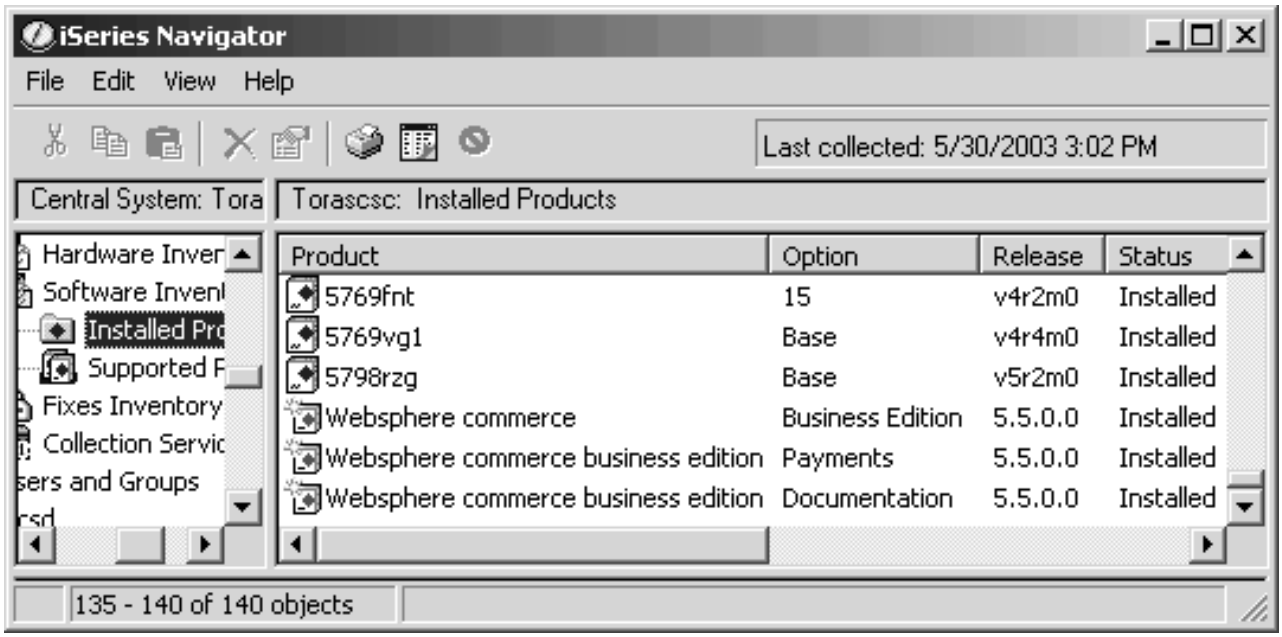


Figure 7. Products for a WebSphere Commerce Payments installation

Proceed to Chapter 6, "Verifying your installation," on page 31.

Chapter 6. Verifying your installation

Note: If during a custom installation, only the WebSphere Commerce example files or WebSphere Commerce online help or WebSphere Commerce Payments is installed, an entry will *not* be created in the License table. The WebSphere Commerce Server component must be installed in order for an entry to be created in the License table.

To change the information for the WebSphere Commerce - Express product, do the following:

1. From the iSeries command line, enter the following command
   `WRKLICINF`
2. Scroll down to **Product 5724A18** and type a 2 in the **OPT** field.
3. In the **USGLMT** field, change the value to the number of processors for which you are licensed.
4. Press ENTER. Additional parameters will be shown.
5. Alter these additional parameters if necessary.
6. Press ENTER to accept the changes.

During the installation of WebSphere Commerce and its components, log files are generated. Examine the following log files to ensure that your installation was successful:

- "WebSphere Application Server installation log"
- "WebSphere Commerce installation log" on page 32

To confirm the installation of any non-IBM software, refer to the documentation provided with the non-IBM software package.

WebSphere Application Server installation log

The location of the WebSphere Application Server installation log file (`WS5ISTDOUT.LOG`) can be found in either of these directories:

- For a graphical install, the log file will be located on the Windows PC from where the install was completed. The log file will be located in the temporary folder of the PC user that was signed on when the installation was started. For example, on a Windows 2000 PC, the log file may be located in the following directory:
  drive`:/Documents and Settings/`*PC_user*`/Local Settings/Temp/WebSphere`
- For a console install, the log file will be located on the iSeries system, in the following directory:
  `/tmp/WebSphere`

The WebSphere Application Server installation is complete if the following message appears in the log file:

```
Installation completed successfully
```

WebSphere Commerce installation log

This log file contains messages generated by the WebSphere Commerce installation wizard. The default location for this log file is:

`/InstallLogs/install_date_time.log`

This log file will always reside on the iSeries system, even when installing remotely from a Windows system.

If the installation of WebSphere Commerce was successful, the following messages will appear at the end of the log file:

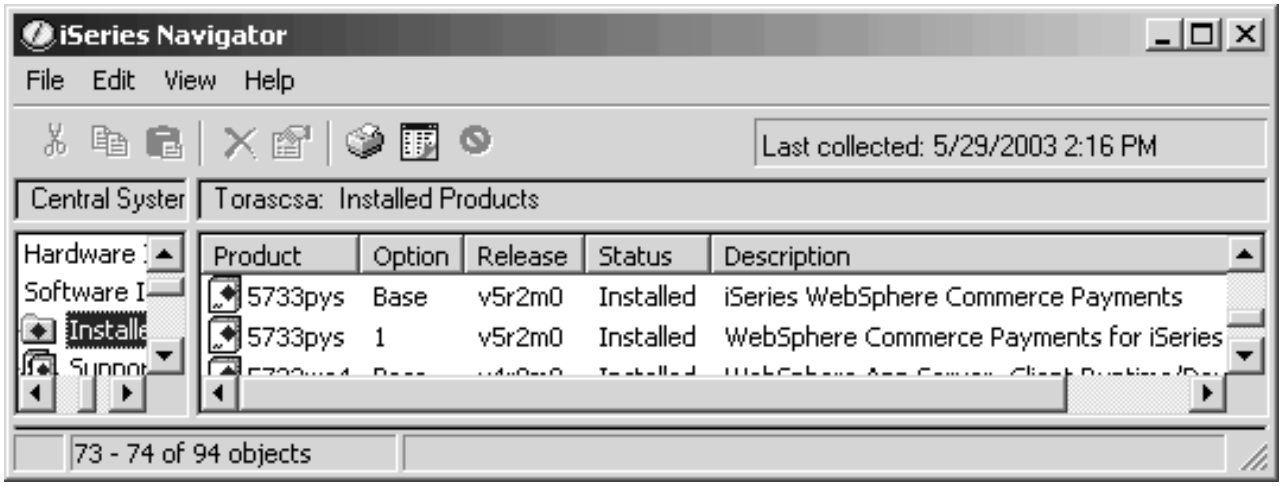
```
CMN7704S: IBM WebSphere Commerce Installer has successfully copied file from
 \tmp\InstallShield\uninstall.qsh to
 \qibm\ProdData\CommerceServer55\_uninst\uninstall.qsh

CMN7720S: IBM WebSphere Commerce Installer internal Generic Catch Warning caught:
 COMMAND ENDED NORMALLY WITH EXIT STATUS 0.
/QIBM/ProdData/CommerceServer55/bin/iSeriesFileAuth.sh
```

This message is formatted to fit the page size of this book. The message may appear differently in your log file.

WebSphere Commerce Payments installation

For a Typical Installation and some components of a Custom Installation, the WebSphere Commerce Payments product will be installed on your iSeries system. You can use iSeries Navigator to see if this product has been installed. Refer to "Verifying a typical installation" on page 19 for information on accessing iSeries Navigator. The iSeries Navigator will show a screen similar to the one shown here:



The next step

After verifying your installation, continue by creating a WebSphere Commerce and WebSphere Commerce Payments instance by following the instructions in Part 3, "Creating a WebSphere Commerce and a WebSphere Commerce Payments instance," on page 33.

Part 3. Creating a WebSphere Commerce and a WebSphere Commerce Payments instance

Once you have installed all the required software, you can create a WebSphere Commerce instance and a WebSphere Commerce Payments instance. These instances can be created through the Configuration Manager.

This section contains the following chapters:

Chapter 7. Before you create or modify an instance with Configuration Manager

Before you start the Configuration Manager server or before you create or modify an instance with Configuration Manager, do the following:

1. Ensure that you have installed any fixes mentioned in the README file. For more information about the README file, refer to "Reviewing the README file" on page 8.
2. Ensure that you meet the prerequisites for starting Configuration Manager. The prerequisites are listed in "Configuration Manager prerequisites" on page 36.
3. Start the Configuration Manager by following the instructions in "Starting the Configuration Manager" on page 38.

Important

You should only modify the following Web server properties, as well as any Commerce-related properties, through the Configuration Manager GUI (and not through the Web server GUI nor the WebSphere Application Server Administrative Console):

- SSL (enabling or disabling)
- Web server instance name or port number
- SSL port number
- System IP address (Payments server host)

This will ensure that all configuration files, not just the Web server configuration files, are updated properly with the correct information.

Installing the Configuration Manager client

Before you create or modify a WebSphere Commerce instance with Configuration Manager, you will need to install the Configuration Manager Client on a Windows PC.

Note: Ensure that the Windows 2000 machine you will be using to install the Configuration Manager client code has Service Pack 3 installed.

Install the Configuration Manager client as follows:

1. Insert the WebSphere Commerce CD 1 into the CD-ROM drive on your remote Windows system.
2. Navigate to the CD-ROM drive and double click on `iSeriesClient.bat` to start the InstallShield Wizard.
3. Select the installation language, and click **OK**.
4. The Welcome screen is displayed; click **Next**.
5. Read the license agreement. If you accept the terms of the agreement, select that you accept the terms and click **Next**.
6. You can choose to select the default destination path (`C:\Program Files\WebSphere\CommerceServer55`) or select **Browse** for another destination path. Once you have selected your destination path, click **Next** to continue.

7. Confirm your installation choices, then select **Next**. (To modify your choices, select **Back**.)
8. The installation begins. A window indicating the percentage that has completed is shown in the bottom corner of the screen.
9. On the InstallShield Wizard panel, select **Next** to continue.
10. On the Installation Complete panel, you can access more information about WebSphere Commerce or click **Next**.
11. To complete the installation, your Windows system must be restarted. Click the appropriate button to either restart now or restart later and click **Finish**.

Note: The directory on the Windows PC where the Configuration Manager Client code is installed will be denoted by: *cfgmgr_installdir* in the remaining sections of this Guide.

Configuration Manager prerequisites

Before starting the WebSphere Commerce Configuration Manager, complete the following:

- Ensure the DDM server is running on your iSeries system. To start this server issue the following OS/400 command:

  ```
  STRTCPSVR SERVER(*DDM)
  ```

Instance creation requirements using a remote database

If you are using a relational database other than *LOCAL, you will need to set up the database for remote access.

To configure your iSeries system to use a remote database, do the following:

1. Start the DDM TCP/IP server on the remote iSeries system using either of the following:
   - The **Network** option under your remote iSeries system in iSeries Navigator
   - The following OS/400 command:

     ```
     STRTCPSVR SERVER(*DDM)
     ```

   Note: To check if the DDM server job is running on your iSeries, check for job QRWTLSTN in subsystem QSYSWRK.
2. On the iSeries system where WebSphere Commerce 5.5 is installed, use the WRKRDBDIRE command to ensure that there is an entry for the remote database where your instance's schema will be created.
3. On the iSeries system where WebSphere Commerce is installed, run the following command on one line:

   ```
   RUNJVA CLASS(com.ibm.db2.jdbc.app.DB2PackageCreator)
     PARM('database_name' 'user' 'password')
   ```

   where *database_name* is the name of the database where the instance's schema will be created, *user* is a profile with authority to create new objects on the remote iSeries system, and *password* is the password associated with the user.

   Note: The command opens up a Java Shell Display. The following message should be displayed after the command has completed: Java program completed
4. Create a user profile on the remote iSeries system. The user profile must have the same name as the instance name (*instance_name*) that you are creating.

Configure the user profile so that it's language settings match the language you intend to choose as the default language for your WebSphere Commerce instance.

The password for this user profile must be the same as on the *LOCAL system. This is the password that will be entered while configuring the Instance Logon Password field in the Configuration Manager.

For information in creating an iSeries user profile, refer to "Creating an iSeries user profile" on page 110.

5. Ensure that the instance user profile, you just created on the remote iSeries system, has authority to the *SQLPKG objects in library QGPL by running the following command on one line:

```
GRTOBJAUT OBJ(QGPL/*ALL) OBJTYPE(*SQLPKG) USER(instance_name)
  AUT(*CHANGE)
```

During instance creation, it is recommended that **Use iSeries Toolbox driver** is selected in the WebSphere panel.

Modifying your iSeries user profile

Use the **DSPUSRPRF** command to determine the Home Directory (HOMEDIR) of your SECOFR user profile. Ensure that the HOMEDIR exists. If the HOMEDIR does not exist, create it using the OS/400 command: MKDIR.

The HOMEDIR must contain a file named SystemDefault.properties, tagged as 819 and containing ASCII data. This file must specify the file.encoding property that matches your user profile. The file.encoding property must be specified on one line, must contain no spaces, and is case sensitive. If this file already exists, use the **EDTF** command to set the file.encoding property to one of the following values:

- Japanese:

  ```
  file.encoding=SJIS
  ```

- Korean:

  ```
  file.encoding=KSC5601
  ```

- Simplified Chinese:

  ```
  file.encoding=Cp1381
  ```

- Traditional Chinese:

  ```
  file.encoding=Cp950
  ```

- All other languages:

  ```
  file.encoding=ISO8859_1
  ```

If this file does not exist, you must copy it to your HOMEDIR using one of the commands below:

- Simplified Chinese:

  ```
  COPY OBJ('/QIBM/ProdData/CommerceServer55/config/SystemDefault_CN.properties')
       TOOBJ('home_directory/SystemDefault.properties')
       TOCCSID(819)
  ```

- Korean:

  ```
  COPY OBJ('/QIBM/ProdData/CommerceServer55/config/SystemDefault_KR.properties')
       TOOBJ('home_directory/SystemDefault.properties')
       TOCCSID(819)
  ```

- Traditional Chinese:

  ```
  COPY OBJ('/QIBM/ProdData/CommerceServer55/config/SystemDefault_TW.properties')
       TOOBJ('home_directory/SystemDefault.properties')
       TOCCSID(819)
  ```

- Japanese:

```
COPY OBJ('/QIBM/ProdData/CommerceServer55/config/SystemDefault_JP.properties')
     TOOBJ('home_directory/SystemDefault.properties')
     TOCCSID(819)
```

- All other languages:

```
COPY OBJ('/QIBM/ProdData/CommerceServer55/config/SystemDefault.properties')
     TOOBJ('home_directory/SystemDefault.properties')
     TOCCSID(819)
```

Once the new file is created, ensure that it contains the proper ASCII data.

Starting the Configuration Manager

To start the WebSphere Commerce Configuration Manager on iSeries, do the following:

1. Start the Configuration Manager server by doing the following:
   a. Log on to the iSeries ensuring that the profile has a *SECOFR user class, and is set up with the language specific settings of either English, or the language that you will choose as the default language for your instance.
   b. Start a QShell session by entering the following command:

      ```
      STRQSH
      ```

      and do the following in the QShell session:

      1) Switch to the WebSphere Commerce server bin directory by issuing the following command:

         ```
         cd WC_installdir/bin
         ```

         Default values for *WC_installdir* are listed in "Path variables" on page v.

      2) Start the configuration manager server program by issuing the following command:

         ```
         config_server.sh [-port server_port_number]
         ```

         The `port` *server_port_number* parameter is optional. If you do not specify this parameter, the default port of 1099 is used. The Configuration Manager server will listen using this port number. If you specify the *server_port_number*, the value must be between 1024 and 65535 and not currently in use on the iSeries system.

      Note: If you are using a system where your primary language is not the same as the language in which you are creating your instance, then you must add the QSYS*language_feature_number* library into your user profile's library list. Otherwise the profile will try to locate it under `QSYS`. To add the language feature library, use the `EDTLIBL` command.

   c. If this is the first time that Configuration Manager is run on the system, you will see the following messages:

      ```
      Attaching Java program to /QIBM/ProdData/CommerceServer55/lib/ConfigManager.JAR.
      Attaching Java program to /QIBM/ProdData/CommercePayments/V55/wc.mpf.ear/lib/ibmjsse.JAR.
      Attaching Java program to /QIBM/ProdData/CommerceServer55/lib/Utilities.JAR.
      Attaching Java program to /QIBM/ProdData/CommerceServer55/lib/Enablement-BaseComponentsLogic.JAR.
      Attaching Java program to /QIBM/ProdData/CommerceServer55/lib/jtopen.JAR.
      Attaching Java program to /QIBM/ProdData/CommerceServer55/lib/xerces.JAR.
      Attaching Java program to /QIBM/ProdData/CommerceServer55/lib/sslite.ZIP.
      ```

   d. When the following messages are posted:

      ```
      Registry created.
      CMServer bound in registry.
      ```

proceed to the next step.

2. Start the Configuration Manager client on the Windows machine where the Configuration Manager client code was installed.

   Note: Ensure that the Windows machine has been restarted after the installation of the Configuration Manager client code.

   a. Using a command prompt on the Configuration Manager client machine, change to the *cfgmgr_installdir*/bin directory.
   b. Start the Configuration Manager client by running the following command:

      ```
      configClient.bat -hostname iSeries_Host_name [-port server_port_number]
      ```

      where

      iSeries_Host_name
      Is the fully qualified host name of the server (ensure the entire name is specified in capital letters).

      server_port_number
      Is the port number on the iSeries server on which the Configuration Manager is listening. You only need to specify this value if the server is listening on a non-default port. The port parameter is optional, but if it was specified in the config_server.sh command, it needs to be specified here

   c. Log in to Configuration Manager. The initial ID is **webadmin** and the initial password is **webibm**. If this is the first time you are logging in to Configuration Manager, you will be asked to change the password for security purposes.
   d. Once your password has been accepted, the Configuration Manager window opens.
   e. Proceed to "The next step."

Stopping the Configuration Manager

To end Configuration Manager, do the following:

1. In the Configuration Manager GUI, click on **Console** and **Exit**.
2. Click **OK** when the message 'For Security reasons, the Config Manager Server will now be stopped.' is posted.
3. Exit from the DOS window where the Configuration Manager client was started.
4. Exit from the QSHELL session, on your iSeries system, where the Configuration Manager server was started.

The next step

Continue with the following sections:

- Chapter 8, "Creating a WebSphere Commerce instance," on page 41.
- Chapter 9, "Creating a WebSphere Commerce Payments instance," on page 45.

Chapter 8. Creating a WebSphere Commerce instance

This chapter describes how to create a WebSphere Commerce instance. For information on modifying a WebSphere Commerce instance, refer to "Modifying a WebSphere Commerce or WebSphere Commerce Payments instance" on page 85.

Considerations when creating a WebSphere Commerce instance

IBM recommends that you create WebSphere Commerce instances within the default WebSphere Application Server instance. When you create a WebSphere Commerce instance, always specify the fully-qualified host name in the appropriate Configuration Manager panels.

You can choose to create WebSphere Commerce instances in non-default WebSphere Application Server instances. Creating such instances may introduce port conflicts that will prevent your WebSphere Commerce instance from starting. An example of a message for a problem with starting a WebSphere Commerce instance is as follows:

```
EJB6121: Application server did not start.
```

If you experience any problems when you attempt to start your WebSphere Commerce instance, regardless of whether your instance is using a default or non-default WebSphere Application Server instance, refer to the items found in Appendix A, "Known problems and limitations," on page 115

You can create more than one WebSphere Commerce instance when the Configuration Manager GUI is open, as long as they are created under the same WebSphere Application Server instance. Before creating a WebSphere Commerce instance under a different WebSphere Application Server instance, you need to stop and then restart the Configuration Manager.

Note: Although the Configuration Manager client code can be installed on more than one Windows PC, creating a WebSphere Commerce instance or WebSphere Commerce Payments instance must be limited to one PC at any given time. Attempting to create instances from two or more PCs at the same time is not supported.

Creating a new WebSphere Commerce instance

To create a new WebSphere Commerce instance, do the following:

1. Start the WebSphere Commerce Configuration Manager. For details, refer to "Starting the Configuration Manager" on page 38.
2. Under **WebSphere Commerce**, expand your *hostname*.
3. Expand **Commerce**.
4. Right-click on **Instance List**.
5. From the resulting pop-up menu, select **Create Instance**. The Instance Creation wizard starts.

6. Complete the Instance Creation wizard.

For help on completing the panels and fields in the instance creation wizard, click **Help** on the Instance creation wizard. A **Help** button is available on each panel of the wizard. The help panels apply to all supported WebSphere Commerce platforms. Ensure you follow the iSeries specific help denoted with the following icon:

7. When you have completed the necessary information in the panels, the **Finish** button is enabled. Click **Finish** to create the WebSphere Commerce instance.

The time required to create an instance depends on the speed of your system. The progress bar that displays when you start creating the instance will indicate when the process has finished.

8. When instance creation is complete, a dialog box appears containing a summary. Click **OK** to close the dialog box.
9. Other dialog boxes may display containing additional instructions, ensure that you review the contents of the dialog boxes before dismissing them.
10. Exit Configuration Manager by clicking on **Console** and **Exit**.
11. The following message is displayed: `For security reasons, the Config Manager Server will now be stopped.` Click **OK** to close Configuration Manager.
12. Exit from the DOS window where the Configuration Manager client was started.
13. Exit from the QShell session, on your iSeries system, where the Configuration Manager server was started.

You can now verify the creation of the WebSphere Commerce instance by following the instructions in "Verifying the instance creation."

Verifying the instance creation

The configuration information for the new WebSphere Commerce instance is stored in the following file:

WC_userdir/instances/*instance_name*/xml/*instance_name*.xml

where default values for *WC_userdir* are listed in "Path variables" on page v and *instance_name* is the name of WebSphere Commerce instance.

Confirm that this file exists before checking the log files produced during instance creation.

Creating a WebSphere Commerce instance produces the following log files:

- Auction.log
- createdb.log
- createdb.production.log
- GenPluginCfg.log
- messages.txt
- populatedb.err.log
- populatedb.log
- populatedb2.err.log

- populatedb2.log
- populatedbnl.err.log
- populatedbnl.log
- RESWCSID.txt
- Schema.log
- trace.txt
- WASConfig.log
- WASConfig.err.log

The files are located in the following directory:

WC_userdir/instances/*instance_name*/logs

where default values for *WC_installdir* are listed in "Path variables" on page v and *instance_name* is the name of WebSphere Commerce instance.

The database population part of instance creation is successful if the following logs are empty:

- populatedb.err.log
- populatedb2.err.log
- populatedbnl.err.log
- WASConfig.err.log

Also, review the contents of the following logs to confirm they do not contain any errors:

- createdb.log
- messages.txt

Completing the configuration of a remote database

If your instance has been configured to use a remote database, you must complete additional configuration. Change the instance user profile on the remote machine so that the instance library is set to the current library. To complete these changes, run the following command:

```
CHGUSRPRF USRPRF(instance_name) CURLIB(instance_name)
```

where *instance_name* is the name of the WebSphere Commerce instance.

Setting the time zone

After you have created your WebSphere Commerce instance, you need to set the time zone for your WebSphere Commerce instance.

To ensure that the appropriate time zone is written in your trace files, set the `user.timezone` property. The property has the following syntax:

```
user.timezone=time_zone
```

where *time_zone* is the code for your time zone (for example, CST for Central Standard Time; for other *time_zone* values, refer to the Web Site shown below, at the end of this section).

Edit the SystemDefault.properties file that is located in the *instance_root*/home directory. By default, *instance_root* refers to *WC_userdir*/instances/*instance_name*, where *WC_userdir* is defined in "Path variables" on page v and *instance_name* is the

name you provide for your instance during configuration. Specifying the time zone property in this way only affects WebSphere Application Server. For additional information, refer to the topic ″Setting the time zone″ in the WebSphere Application Server for iSeries Information Center at the following Web site:

```
http://publib.boulder.ibm.com/iseries/v1r1m0/websphere/ic2924/index.htm?info/
     rzaiz/50/trb/trctimez.htm
```

Note that the above line has been split across two lines for display purposes.

The next step

After you have configured your WebSphere Commerce instance, you should continue by creating a WebSphere Commerce Payments instance. Instructions for creating a WebSphere Commerce Payments are provided in Chapter 9, “Creating a WebSphere Commerce Payments instance,” on page 45.

Chapter 9. Creating a WebSphere Commerce Payments instance

This chapter describes how to create a WebSphere Commerce Payments instance. For information on modifying a WebSphere Commerce Payments instance, refer to "Modifying a WebSphere Commerce or WebSphere Commerce Payments instance" on page 85.

Refer to the WebSphere Commerce Payments cassette supplements for more information about using a particular WebSphere Commerce Payments cassette. To use a WebSphere Commerce Payments cassette with a WebSphere Commerce sample store, refer to *WebSphere Commerce Store Development Guide*.

Note: You should only change WebSphere Commerce Payments ports through the WebSphere Commerce Configuration Manager, as stated in Chapter 7, "Before you create or modify an instance with Configuration Manager," on page 35 and not through the WebSphere Application Server Administrative Console. This ensures that all properties and files are updated with the same information.

Considerations when creating a WebSphere Commerce Payments instance

IBM recommends that you create WebSphere Commerce Payments instances within the default WebSphere Application Server instance. When you create a WebSphere Commerce Payments instance, always specify the fully-qualified host name in the appropriate Configuration Manager panels.

You can choose to create WebSphere Commerce Payments instances in non-default WebSphere Application Server instances. Creating such instances may introduce port conflicts that will prevent your WebSphere Commerce Payments instance from starting. An example of a message for a problem with starting a WebSphere Commerce Payments instance is as follows:

```
EJB6121: Application server did not start.
```

If you experience any problems when you attempt to start your WebSphere Commerce Payments instance, regardless of whether your instance is using a default or non-default WebSphere Application Server instance, refer to the items found in Appendix A, "Known problems and limitations," on page 115.

To change WebSphere Commerce Payments ports, do the following:

1. Start WebSphere Commerce Configuration Manager. For instructions, refer to "Starting the Configuration Manager" on page 38.
2. Under **WebSphere Commerce**, expand your *hostname*.
3. Expand **Payments → Instance List →** *payments_instance_name* **→ Instance Properties**.
4. Click on the **Webserver** tab.
5. Update the desired ports.
6. Click **Apply** to apply your changes.

Note: All Payments ports should be changed through the Configuration Manager, as stated in Chapter 7, "Before you create or modify an instance with Configuration Manager," on page 35 and not through the WebSphere Application Server Administration Console. This ensures that all properties and files are updated with the same information.

You can create more than one WebSphere Commerce Payments instance when the WebSphere Commerce Configuration Manager is open, as long as they are created under the same WebSphere Application Server instance. Before creating a WebSphere Commerce Payments instance under a different WebSphere Application Server instance, you need to stop and then restart the Configuration Manager. Each WebSphere Commerce Payments instance must have a unique instance name and database name.

Note: Although the WebSphere Commerce Configuration Manager client can be installed on more than one Windows system, creating a WebSphere Commerce instance or WebSphere Commerce Payments instance must be limited to one PC at any given time. Attempting to create instances from two or more systems at the same time is not supported.

Creating a new WebSphere Commerce Payments instance

To create a new WebSphere Commerce Payments instance, do the following:

1. Start the WebSphere Commerce Configuration Manager. For details, see "Starting the Configuration Manager" on page 38.

   In cases where WebSphere Commerce Payments is on a separate node from WebSphere Commerce, ensure that the Configuration Manager server on the WebSphere Commerce Payments node is started.
2. Under **WebSphere Commerce** expand your *hostname*
3. Expand **Payments**.
4. Right-click on **Instance List**.
5. From the resulting pop-up menu, select **Create Payments Instance**. The Payments Instance Creation wizard starts.
6. Complete the Payments instance creation wizard information.

For help on completing the panels and fields in the Payments instance creation wizard, click **Help** on the instance creation wizard. A **Help** button is available on each panel of the wizard. The Help panels apply to all supported WebSphere Commerce platforms. Ensure you follow the iSeries specific help denoted with the following icon:

400

Each WebSphere Commerce Payments instance must have a unique instance name and database name.

Important: When completing the WebSphere Commerce Payments instance creation wizard, ensure that the value you enter in the **Site Admin ID** field is the WebSphere Commerce Site Administrator ID. The WebSphere Commerce Site Administrator ID was created when you created the WebSphere Commerce instance and it was the value entered in the **Site Admin ID** field of the WebSphere Commerce instance creation wizard.

7. When you have completed all the necessary information in all the panels, the **Finish** button is enabled. Click **Finish** to create the WebSphere Commerce Payments instance.

The time required to create an instance depends on the speed of your system. The progress bar that displays when you start creating the instance will indicate when the process has finished.

8. When instance creation is complete, a dialog appears containing a summary. Click **OK** to close the dialog window.
9. Exit Configuration Manager by clicking on **Console** and **Exit**.
10. Click **OK** when the message `'For Security reasons, the Config Manager Server will now be stopped.'` is posted.
11. Exit from the DOS window where the Configuration Manager client was started.
12. Exit from the QShell session on your iSeries system where the Configuration Manager server was started.

You can now verify the creation of the WebSphere Commerce Payments instance by following the instructions in "Verifying the instance creation."

Verifying the instance creation

The configuration information for the new WebSphere Commerce Payments instance is stored in the following file:

WC_userdir`/instances/`*payments_instance_name*`/xml/`
payments_instance_name`.xml`

where default values for *WC_userdir* are listed in "Path variables" on page v and *payments_instance_name* is the name of WebSphere Commerce Payments instance.

Confirm that this file exists before checking the log files produced during instance creation.

Creating a WebSphere Commerce Payments instance produces the `Configurator.1.log` file in the *WC_userdir*`/instances` directory where default value for *WC_userdir* is listed in "Path variables" on page v.

Check the `Configurator.1.log` file for any errors.

The next step

After you have configured your WebSphere Commerce Payments instance, you can continue by following the instructions in Part 4, "Last steps," on page 49.

If you are using a remote Web server, you must follow the instructions in Chapter 10, "Mandatory post-instance creation tasks," on page 51.

Part 4. Last steps

This section outlines the mandatory tasks you must perform after creating a WebSphere Commerce and WebSphere Commerce Payments instance. This section also provides information about additional recommended tasks to perform.

Chapter 10. Mandatory post-instance creation tasks

Depending on your WebSphere Commerce topography, perform the tasks in one of the following sections after creating WebSphere Commerce and WebSphere Commerce Payments instances:

- "Web server post-creation tasks"
- "Local Web server post-instance creation tasks"
- "Remote Web server post-instance creation tasks"

Web server post-creation tasks

Review the *WebSphere Commerce Security Guide* for information on enabling Secure Sockets Layer (SSL) for your WebSphere Commerce instance HTTP server. Without enabling SSL, your WebSphere Commerce instance will not start properly.

You must assign a certificate to your HTTP server in Digital Certificate Manager (DCM) on the iSeries. Without assigning a certificate, your WebSphere Commerce instance will not operate properly. For information refer to the iSeries Information Center (`http://publib.boulder.ibm.com/html/as400/infocenter.html`). Once you are at the site, select your operating system version and your language. Search for the topic `"Manage public Internet certificates for SSL communication sessions"`

Local Web server post-instance creation tasks

If the Web server is installed on the same node as WebSphere Commerce and WebSphere Commerce Payments you must stop and restart the Web server after creating WebSphere Commerce and WebSphere Commerce Payments instances.

Remote Web server post-instance creation tasks

If the Web server is installed on a different node from WebSphere Commerce and WebSphere Commerce Payments, do the following after creating a WebSphere Commerce or a WebSphere Commerce Payments instance:

1. Copy the `plugin-cfg.xml` from the WebSphere Commerce node to the Web server node. For instructions, refer to "Copying the plugin-cfg.xml file to Web server" on page 97.
2. If WebSphere Commerce and WebSphere Commerce Payments are installed on different nodes, merge the contents of the `plugin-cfg.xml` file on the WebSphere Commerce Payments node with the `plugin-cfg.xml` on the Web server node. For instructions, refer to "Merging the WebSphere Commerce Payments plugin-cfg.xml file" on page 97.
3. If it does not exist, create a directory on the Web server node that matches the *WAS_installdir* directory on the WebSphere Commerce node.
4. Copy the following directories from the WebSphere Commerce node to the Web server node:

   WAS_userdir/installedApps/*cell_name*/WC_*instance_name*.ear

   WC_userdir/web/doc/*locale*

   where the variables are defined as follows:

WAS_userdir
Default values for this variables are listed in "Path variables" on page v

WC_userdir
Default values for this variables are listed in "Path variables" on page v

cell_name
This is the short host name of the machine on which WebSphere Commerce and WebSphere Commerce Payments are installed.

instance_name
This is the name of the WebSphere Commerce instance.

locale This is locale code for the National Language of the files contained in the directory. For example, Japanese files will be contained in the ja_JP directory.

Ensure that the full paths on the Web server node and the WebSphere Commerce node are the same. You may need to create the directories that make up this path on the Web server node.

Important
It is recommended that you remove any JSP and JAR files from the WC_*instance_name*.ear directory on the Web server. Only static-content files should be in the WC_*instance_name*.ear directory on the Web server.

5. Ensure that the path for the WebSphere Application Server plug-in is shown correctly in the `httpd.conf` file on the Web server node.

   To check the path, open the `httpd.conf` file in a text editor and search for the following:

   ```
   WebSpherePluginConfig
   ```

   This entry should contain the full path to the `plugin-cfg.xml` file on the Web server node. If the path is incorrect, change the path, save the `httpd.conf` file, and restart the Web server.
6. Stop and restart the Web server.

Chapter 11. Recommended post-instance creation tasks

After completing any mandatory post-instance creation tasks, you can continue your installation and configuration of WebSphere Commerce by performing the following tasks:

Review the security of the WebSphere Commerce installation
Security is a crucial component of a production WebSphere Commerce site. Refer to the *WebSphere Commerce Security Guide* for instructions on enabling Secure Sockets Layer (SSL), WebSphere Application Server security, configuring single sign-on and other security options for your installation. This book is available from the WebSphere Commerce technical library. Refer to "WebSphere Commerce technical library" on page 123 for more information.

Publish a WebSphere Commerce sample store
WebSphere Commerce provides a number of samples stores demonstrating various functions in WebSphere Commerce. A WebSphere Commerce sample store can be used to familiarize yourself with WebSphere Commerce and as a base for a developing a customized store.

For information on publishing a WebSphere Commerce sample store, refer to the "Publishing a store archive" topic in the WebSphere Commerce online help.

For information on developing a store in WebSphere Commerce, refer to the *WebSphere Commerce Store Development Guide*. This book is available from the WebSphere Commerce technical library. Refer to "WebSphere Commerce technical library" on page 123 for more information.

Note: In WebSphere Commerce 5.5, publishing some the sample stores is done through the WebSphere Commerce Administration Console.

Install additional software provided with WebSphere Commerce
WebSphere Commerce provides a number of additional software packages that enhance WebSphere Commerce and provide additional function. For more information on the additional software provided with WebSphere Commerce, refer to *WebSphere Commerce Additional Software Guide*. This book is available from the WebSphere Commerce technical library. Refer to "WebSphere Commerce technical library" on page 123 for more information.

Perform advanced configuration tasks
Advanced configurations for WebSphere Commerce include federation, clustering, and multiple instances. Advanced configuration are covered in Part 5, "Advanced configuration options," on page 55.

Part 5. Advanced configuration options

This section contains instructions for the following optional, advanced configurations for WebSphere Commerce:

Chapter 12. Creating multiple WebSphere Commerce and WebSphere Commerce Payments instances

WebSphere Commerce supports the creation of multiple WebSphere Commerce instances. That is, with WebSphere Commerce, you can run two or more instances of WebSphere Commerce concurrently by using a different host name for each WebSphere Commerce instance. In this case, a customer can access *host1.domain* and *host2.domain*. This method involves the use of *virtual host names*.

If you are using WebSphere Commerce Payments to process payments in WebSphere Commerce, each instance of WebSphere Commerce requires its own instance of WebSphere Commerce Payments. For every new WebSphere Commerce instance you create, you must also create a new WebSphere Commerce Payments instance.

Multiple instances, as described in this chapter, are used mainly to have different occurrences of WebSphere Commerce that do not share information. Each instance will be unique. To have multiple cloned occurrences of the same WebSphere Commerce instance, refer to Chapter 14, "Clustering WebSphere Commerce," on page 69.

While it is possible to create multiple instance in any configuration of WebSphere Commerce components, the information in this chapter will assume that a WebSphere Commerce instance and its associated WebSphere Commerce Payments instance exist on the same node. Multiple WebSphere Commerce instances using remote WebSphere Commerce Payments instances will not be covered. The instructions in this chapter also assume that the Web server exists on the same node as WebSphere Commerce and WebSphere Commerce Payments.

The information in this chapter will also assume that you have an existing WebSphere Commerce instance and an existing WebSphere Commerce Payments instance. The instructions in this chapter will focus on creating an additional WebSphere Commerce instance and an additional WebSphere Commerce Payments instance.

In this chapter, the following variables will be used when discussing the creation of multiple WebSphere Commerce and WebSphere Commerce Payments instances using virtual host names:

	Original instance	**New instance**
WebSphere Commerce instance name	*WC_instance_1*	*WC_instance_2*
WebSphere Commerce Payments instance name	*Payments_instance_1*	*Payments_instance_2*
IP address	xxx.xxx.xxx.xxx	yyy.yyy.yyy.yyy
Host name	*host1*	*host2*
Domain name	*domain*	*domain*
Fully qualified host name	*host1.domain*	*host2.domain*
WebSphere Commerce schema name	*WC_schema1*	*WC_schema2*

	Original instance	New instance
WebSphere Commerce Payments schema name	*Payments_schema1*	*Payments_schema2*

These variables represent the parameter values for your first and second instance are intended to show where values are unique or common between instances.

Normally, you will have operational pre-existing WebSphere Commerce and WebSphere Commerce Payments instances and you want 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 may want to modify some parameters of your original instance in order to better organize your multi-instance environment.

Prerequisites

On each node where you want to create multiple instances of WebSphere Commerce or WebSphere Commerce Payments using virtual host names, ensure that the node meets the following requirements:

- Each WebSphere Commerce instance must have its own host name. This host name will also be used by the associated WebSphere Commerce Payments instance.
- Each host name for each instance requires its own IP address. The IP address must be valid on the network, with associated host names in the DNS server. The IP address must also be on the same VLAN as the IP address of the original instance.

- You may also use the IP address and host name of the node for one of the instances. In this case, you need just two IP addresses for two instances.
- Each set of WebSphere Commerce and WebSphere Commerce Payments instances requires its own host name.

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

For instructions on adding another IP address to a machine, refer to "Adding another IP address to an iSeries system" on page 59.

- The host name for each instance must resolve fully to separate IP addresses. For example, to verify that you can run WebSphere Commerce Configuration Manager and create multiple instances, run the `nslookup` command from an iSeries session 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'
nslookup 'xxx.xxx.xxx.xxx'

nslookup 'host2.domain'
nslookup 'yyy.yyy.yyy.yyy'
```

- For each additional WebSphere Commerce instance and its associated WebSphere Commerce Payments instance on a system, increase the system's memory by 1GB to 1.5GB.

Adding another IP address to an iSeries system

To add another IP address to your iSeries machine and then start the address, enter the following commands in an iSeries session:

```
ADDTCPIFC INTNETADR('intnetadr') LIND(lind) SUBNETMASK('subnetmask')
STRTCPIFC INTNETADR('intnetadr')
```

where

- *intnetadr* is the new IP address.
- *lind* is the name of the line description associated with the new interface. The line description must be defined before you can add the IP interface.
- *subnetmask* is the subnet mask for this IP address.

For example, if you wanted to add the address `129.42.16.99`, and then start the address, you would enter the following commands:

```
ADDTCPIFC INTNETADR('129.42.16.99') LIND(LANETH) SUBNETMASK('255.255.255.0')
STRTCPIFC INTNETADR('129.42.16.99')
```

For more information on the TCP/IP commands such as `ADDTCPIFC` and `STRTCPIFC`, refer to your iSeries product documentation.

Creating multiple WebSphere Commerce instances

Assuming you have already created your first WebSphere Commerce instance, you can create each additional instance that you require by following the instructions in Chapter 8, "Creating a WebSphere Commerce instance," on page 41. In the following table, the existing instance is represented by **Original instance** and the new instance is represented by **New instance**. You do not have to modify the values for an existing instance.

You can create multiple WebSphere Commerce instances in the same WebSphere Commerce Configuration Manager session, as long as the instances are created in the same WebSphere Application Server instance. To create a WebSphere Commerce instance in a different WebSphere Application Server instance, you must stop and restart WebSphere Commerce Configuration Manager.

The following table lists the modified default values for the new instance. Replace these values with the actual values that you want to use for your instance.

Field in Configuration Manager	Original instance	New instance
Instance - Instance name	*WC_instance_1*	*WC_instance_2*
Instance - Instance's root path	*WC_userdir*/instances/*WC_instance_1*	*WC_userdir*/instances/*WC_instance_2*
Schema - Name	*WC_schema1*	*WC_schema2*
Web Server - Hostname	*host1.domain*	*host2.domain*
Web Server - Primary Document Root	*WC_userdir*/instances/*instance_name*/web	*WC_userdir*/instances/*instance_name*/web
WebSphere Commerce Payments - Hostname	*host1.domain.com*	*host2.domain.com*

Default values for *WC_userdir* are listed in "Path variables" on page v.

Ensure that you verify the instance creation by following the instructions in "Verifying the instance creation" on page 42.

If you are using WebSphere Commerce Payments to process payments in WebSphere Commerce, you must create a WebSphere Commerce Payments instance for each additional WebSphere Commerce instance.

Creating multiple WebSphere Commerce Payments instances

Assuming you have already created your first WebSphere Commerce Payments instance, you can create each additional instance that you require by following the instructions in Chapter 9, "Creating a WebSphere Commerce Payments instance," on page 45. In the following table, the existing instance is represented by **Original instance** and the new instance is represented by **New instance**. You do not have to modify the values for an existing instance.

You can create multiple WebSphere Commerce Payments instances in the same WebSphere Commerce Configuration Manager session, as long as the instances are created in the same WebSphere Application Server instance. To create a WebSphere Commerce Payments instance in a different WebSphere Application Server instance, you must stop and restart WebSphere Commerce Configuration Manager.

The following table lists the modified default values for the new instance. Replace these values with the actual values that you want to use for your instance.

Field in Configuration Manager	Original instance	New instance
Instance - Instance name	*WC_instance_1*	*WC_instance_2*
Schema - Name	*Payments_schema1*	*Payments_schema2*
Web Server - Hostname	*host1.domain*	*host2.domain*
WebSphere Commerce - Hostname	*host1.domain*	*host2.domain*

Ensure that you verify the instance creation by following the instructions in "Verifying the instance creation" on page 47.

After verifying the additional WebSphere Commerce Payments instances, test the instances.

Testing multiple instances

To test the original and new instances, do the following:

1. Start all WebSphere Commerce instances. For instructions, refer to "Starting or stopping a WebSphere Commerce instance" on page 83.
2. Start all WebSphere Commerce Payments instances. For instructions, refer to "Starting or stopping a WebSphere Commerce Payments instance" on page 84.

3. Test the following URLs:

Original instance	New instance
• http://*host1.domain* • http://*host1.domain*:5432/webapp/PaymentManager • https://*host1.domain* • https://*host1.domain*:5433/webapp/PaymentManager • https://*host1.domain*:8000/accelerator • https://*host1.domain*:8002/adminconsole • https://*host1.domain*:8004/orgadminconsole	• http://*host2.domain* • http://*host2.domain*:5432/webapp/PaymentManager • https://*host2.domain* • https://*host2.domain*:5433/webapp/PaymentManager • https://*host2.domain*:8000/accelerator • https://*host2.domain*:8002/adminconsole • https://*host2.domain*:8004/orgadminconsole

Chapter 13. Federating WebSphere Commerce and WebSphere Commerce Payments

WebSphere Commerce and WebSphere Commerce Payments are installed with the WebSphere Application Server base product. Both WebSphere Commerce and WebSphere Commerce Payments can be considered base WebSphere Application Server nodes.

WebSphere Application Server Network Deployment provides a mechanism which allows you to start the application servers from the WebSphere Application Server Administrative Console. This mechanism is called *federating the application server nodes*. Application server nodes are federated into a *cell* and all of the application servers in a cell are administered by a *deployment manager*. The deployment manager is also an application server. Cells can also be referred to as *deployment manager cells*.

By federating the WebSphere Commerce node and the WebSphere Commerce Payments node into a single deployment manager cell, you can start, stop, and administer both application servers from a WebSphere Application Server Administrative Console. The WebSphere Application Server Administrative Console is a browser-based application, so it can be accessed from any machine on the same network as the cell that has a Web browser. For Web browser requirements for the WebSphere Application Server Administrative Console, refer to the WebSphere Application Server documentation.

Important

Before federating WebSphere Commerce, it strongly recommended that you backup the WebSphere Application Server administrative configuration. Backing up the administrative configuration will allow you to restore the original configuration if federation fails during the federation process. For more information, refer to the "Backing up and restoring administrative configurations" topic in the WebSphere Application Server InfoCenter available through the following URL:

`http://www.ibm.com/software/webservers/appserv/infocenter.html`

Federating WebSphere Commerce

To federate WebSphere Commerce into a deployment manager cell, do the following:

1. Install the WebSphere Application Server Network Deployment product on a separate machine from the machines on which you installed WebSphere Commerce, WebSphere Commerce Payments, the database, and the Web server. This machine now hosts the deployment manager.

   Only one system hosts the deployment manager. As it federates application servers, it expands the cell that it manages. Although you can install other application servers on the same machine as the deployment manager, it is not generally done unless you have a machine with the capacity to host both products. The deployment manager is the central administrative manager.

   Instructions for installing WebSphere Application Server Network Deployment are available in *IBM WebSphere Application Server Network Deployment Getting*

started. This book is available as a PDF file in the `docs` directory of the WebSphere Application Server Network Deployment CD.

Important: Ensure that you apply any WebSphere Application Server fixes documented in the WebSphere Commerce README file to the WebSphere Application Server Network Deployment installation. For more information about the README file, refer to "Reviewing the README file" on page 8.

Failure to apply these fixes will result in WebSphere Commerce functioning incorrectly after federation.

2. On the WebSphere Application Server Network Deployment machine, start the deployment manager. Refer to "Starting and stopping the WebSphere Application Server Network Deployment deployment manager" on page 90 for instructions.
3. Federate the WebSphere Commerce application server into the deployment manager cell by issuing the following command:

```
WAS_installdir/bin/addNode
     deployment_manager_machine_name deployment_manager_port [-includeapps]
  -instance WAS_instance_name
```

The command is shown on multiple lines for display purposes only, enter the command on one line.

The variables and parameters in the command are defined as follows:

WAS_installdir
Default values for *WAS_installdir* are listed in "Path variables" on page v.

deployment_manager_machine_name
This is the fully-qualified domain name of the deployment manager machine.

deployment_manager_port
This is the port on which the deployment manager listens. The default deployment manager port is 8879.

`–includeapps`
This parameter is optional.

Specify this parameter if one or more of the following conditions apply:

- You have non-WebSphere Commerce applications on the WebSphere Commerce node that you want to include in the deployment manager cell.
- A WebSphere Commerce instance exists on the WebSphere Commerce node. If you have not created a WebSphere Commerce instance, this parameter is not required.

WAS_instance_name
This is the name of the WebSphere Application Server instance in which you want to start the application server. The default WebSphere Application Server instance is `default`.

4. If you have federated a WebSphere Commerce node that contains WebSphere Commerce instances and these WebSphere Commerce instances are being federated into the deployment manager cell, create the virtual hosts required by

the WebSphere Commerce application server by issuing the following command on the WebSphere Commerce machine for each WebSphere Commerce instance on the node:

```
WC_installdir/bin/createVirtualHosts.sh instance_name
```

where *instance_name* is the name of the WebSphere Commerce instance.

Default values for *WC_installdir* are listed in "Path variables" on page v.

Note: This step should only be performed if WebSphere Commerce instances exist on the node being federated — only one node being federated into the cell should have an instance.

This step is not required when adding additional WebSphere Commerce application servers to a deployment manager cell nor is it required if you have not created a WebSphere Commerce instance on the node.

Once you have federated the WebSphere Commerce application server nodes into a deployment manager cell, you can start and stop WebSphere Commerce by following the instructions in "Starting or stopping an application server under WebSphere Application Server Network Deployment" on page 92

Federating WebSphere Commerce Payments

To federate WebSphere Commerce Payments into a deployment manager cell, do the following:

1. If you have not already installed the WebSphere Application Server Network Deployment product on a separate machine from the machines on which you installed WebSphere Commerce, WebSphere Commerce Payments, the database, and the Web server, do so now.

   Only one system hosts the deployment manager. As it federates application servers, it expands the cell that it manages. Although you can install other application servers on the same machine as the deployment manager, it is not generally done unless you have a machine with the capacity to host both products. The deployment manager is the central administrative manager.

   Instructions for installing WebSphere Application Server Network Deployment are available in *IBM WebSphere Application Server Network Deployment Getting started*. This book is available as a PDF file in the `docs` directory of the WebSphere Application Server Network Deployment CD.

   Important: Ensure that you apply any WebSphere Application Server fixes documented in the WebSphere Commerce README file to the WebSphere Application Server Network Deployment installation. For more information about the README file, refer to "Reviewing the README file" on page 8.

   Failure to apply these fixes will result in WebSphere Commerce Payments functioning incorrectly after federation.
2. On the WebSphere Application Server Network Deployment node, start the deployment manager application server. Refer to "Starting and stopping the WebSphere Application Server Network Deployment deployment manager" on page 90 for instructions.
3. Federate the WebSphere Commerce Payments application server into the deployment manager cell by issuing the following command:

```
WAS_installdir/bin/addNode
     deployment_manager_machine_name deployment_manager_port [-includeapps]
  -instance WAS_instance_name
```

The command is shown on multiple lines for display purposes only, enter the command on one line.

The variables and parameters in the command are defined as follows:

WAS_installdir
: Default values for *WAS_installdir* are listed in "Path variables" on page v.

deployment_manager_machine_name
: This is the fully-qualified domain name of the deployment manager machine.

deployment_manager_port
: This is the port on which the deployment manager listens. The default deployment manager port is 8879.

–includeapps
: This parameter is optional.

  Specify this parameter if one or more of the following conditions apply:

  - You have non-WebSphere Commerce applications on the WebSphere Commerce Payments node that you want to include in the deployment manager cell.
  - A WebSphere Commerce Payments instance exists on the WebSphere Commerce Payments node. If you have not created a WebSphere Commerce Payments instance, this parameter is not required.

WAS_instance_name
: This is the name of the WebSphere Application Server instance in which you want to start the application server. The default WebSphere Application Server instance is `default`.

4. If you have federated a WebSphere Commerce Payments node that contains a WebSphere Commerce Payments instance, create the virtual hosts required by the WebSphere Commerce Payments application server by issuing the following command on the WebSphere Commerce Payments machine:

   ```
   Payments_installdir/bin/createPaymentsVirtualHost.sh payments_instance_name
   ```

   where *payments_instance_name* is the name of the WebSphere Commerce Payments instance. The default name for the WebSphere Commerce Payments instance is `wpm`.

   Default values for *Payments_installdir* are listed in "Path variables" on page v.

   This step is not required if you have not created a WebSphere Commerce Payments instance on the node.

Once you have federated the WebSphere Commerce Payments application server node into a deployment manager cell, you can start and stop WebSphere Commerce Payments by following the instructions in "Starting or stopping an application server under WebSphere Application Server Network Deployment" on page 92

Removing an application server node from a cell

If the application server node is a member of a cluster, you must remove the application server node from the cluster before removing the application server node from the deployment manager cell.

If you want to remove an application server node from the deployment manager cell, do the following:

1. On each node in the cell, start the node the agent. Refer to "Starting and stopping the WebSphere Application Server node agent" on page 91 for instructions.
2. On the WebSphere Application Server Network Deployment machine, start the deployment manager. Refer to "Starting and stopping the WebSphere Application Server Network Deployment deployment manager" on page 90 for instructions.
3. On the application server node machine, issue the following command:

   WAS_installdir/bin/removeNode

   Default values for *WAS_installdir* are listed in "Path variables" on page v.

The `removeNode` command only removes the node specific configuration from the cell. It does not uninstall any applications that were installed as the result of executing an `addNode` command, because such applications may subsequently be deployed on additional servers in the network deployment cell.

For more information on the `removeNode` command, refer to the WebSphere Application Server documentation.

Chapter 14. Clustering WebSphere Commerce

This chapter shows you how to use the WebSphere Application Server Network Deployment clustering mechanism.

WebSphere Commerce installs the base WebSphere Application Server product on each node where you choose to install WebSphere Commerce Server. The WebSphere Application Server Network Deployment product must be installed on a separate machine after installing WebSphere Commerce.

This chapter covers the following types of clustering for WebSphere Commerce:

- "Clustering with horizontal cluster members" on page 71
- "Clustering with vertical cluster members" on page 71

When clustering WebSphere Commerce, each WebSphere Commerce node in the cluster must use the same WebSphere Commerce Payments instance as WebSphere Commerce Payments does not support clustering. However, to manage WebSphere Commerce Payments with the WebSphere Commerce cluster, you can federate the WebSphere Commerce Payments application server into the same deployment manager cell as the WebSphere Commerce cluster by following the instructions in "Federating WebSphere Commerce Payments" on page 65.

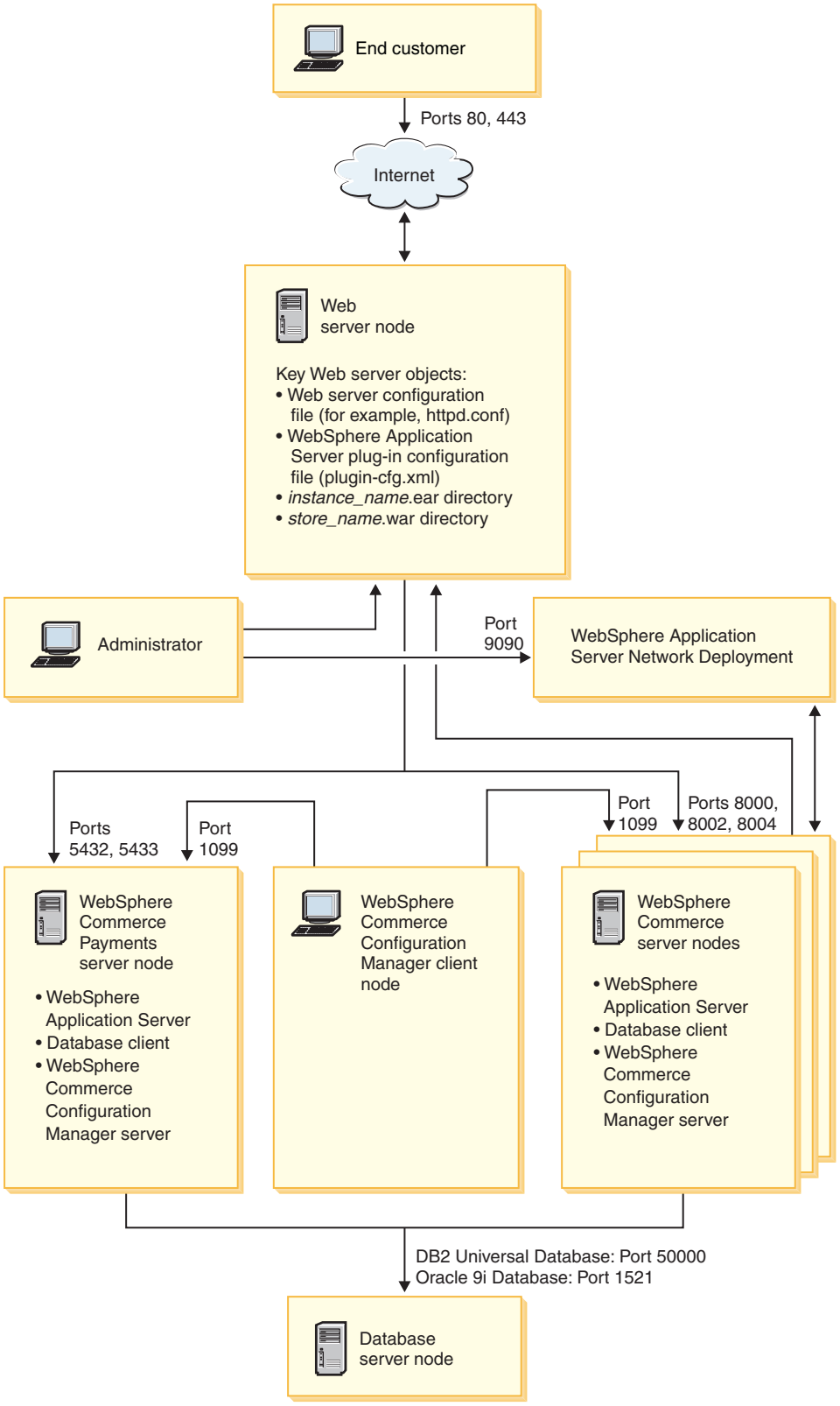
For more information on clustering, refer to the WebSphere Application Server Network Deployment documentation.

Important

Before clustering WebSphere Commerce, it strongly recommended that you backup the WebSphere Application Server administrative configuration. Backing up the administrative configuration will allow you to restore the original configuration if clustering fails during the clustering process. For more information, refer to the ″Backing up and restoring administrative configurations″ topic in the WebSphere Application Server InfoCenter:

`http://www.ibm.com/software/webservers/appserv/infocenter.html`

The diagram on the following page shows clustering in a custom 5–node installation of WebSphere Commerce:



Note: The port numbers indicated for the database on the database node do not apply to @server iSeries users. Also, Oracle9i Database is not supported on @server iSeries.

Figure 8. Custom 5–node installation with clustering

Clustering with horizontal cluster members

Clustering with horizontal cluster members refers to the traditional practice of defining cluster members of an application server on multiple physical machines, thereby allowing a single application to span several machines while presenting a single system image. Clustering with horizontal cluster members can provide increased throughput and high availability.

For clustering with horizontal cluster members, it is recommended that you use both a remote Web server and a remote database.

To create a cluster with horizontal cluster members, do the following:

1. Complete the installation of a WebSphere Commerce node. For instructions, refer to Part 2, "Installing WebSphere Commerce," on page 13.
2. Create a WebSphere Commerce instance. For instructions, refer to Part 3, "Creating a WebSphere Commerce and a WebSphere Commerce Payments instance," on page 33.
3. Federate the WebSphere Commerce node into a deployment manager cell. For instructions refer to "Federating WebSphere Commerce" on page 63.
4. Prepare additional nodes for each node you want to add to the cluster. For instructions, refer to "Preparing additional nodes" on page 72.
5. Create the WebSphere Commerce cluster. For instructions, refer to "Creating the WebSphere Commerce cluster" on page 72.
6. Verify the JDBC provider path for each cluster member. For instructions, refer to "Verifying the JDBC provider path" on page 73.
7. Regenerate the Web server plug-in. For instructions, refer to "Regenerating the Web server plug-in under WebSphere Application Server Network Deployment" on page 74.
8. Copy WebSphere Commerce instance information from the original WebSphere Commerce node to each horizontal cluster member. For instructions, refer to "Copying instance information" on page 75.
9. Copy WebSphere Commerce application and store information from the original WebSphere Commerce node to each horizontal cluster member. For instructions, refer to "Copying WebSphere Commerce application and store information" on page 76.

Important

Before publishing a store in a cluster with horizontal cluster members, review "Publishing a store in a WebSphere Commerce cluster" on page 79.

Clustering with vertical cluster members

Clustering with vertical cluster members refers to the practice of defining cluster members of an application server on the same physical machine. Experience has shown that a single application server, which is implemented by a single Java Virtual Machine (JVM) process, cannot always fully utilize the CPU power of a large multiprocessor machine. Clustering with vertical cluster members provides a straightforward mechanism to create multiple JVM processes, that together can fully use all the processing power available.

To create a cluster with vertical cluster members, do the following:

1. Complete the installation of a WebSphere Commerce node. For instructions, refer to Part 2, "Installing WebSphere Commerce," on page 13.
2. Create a WebSphere Commerce instance. For instructions, refer to Part 3, "Creating a WebSphere Commerce and a WebSphere Commerce Payments instance," on page 33.
3. Federate the WebSphere Commerce node into a deployment manager cell. For instructions refer to "Federating WebSphere Commerce" on page 63.
4. Create the WebSphere Commerce cluster. For instructions, refer to "Creating the WebSphere Commerce cluster."
5. Regenerate the Web server plug-in. For instructions, refer to "Regenerating the Web server plug-in under WebSphere Application Server Network Deployment" on page 74.

Preparing additional nodes

This section applies only to clustering with horizontal cluster members.

As part of clustering with horizontal cluster members, you must install the WebSphere Commerce Server component of WebSphere Commerce on each machine that will be part of the cluster containing the horizontal cluster members.

To prepare a new node as a horizontal cluster member, do the following:

1. Install the WebSphere Commerce Server component of WebSphere Commerce on the machine hosting the horizontal cluster member. Use the custom installation option of the WebSphere Commerce installation wizard to do this. Instructions on completing a custom installation are provided in Chapter 5, "Completing a custom installation," on page 23.
2. Ensure that you can access the WebSphere Commerce database from the new WebSphere Commerce node.
3. Federate the WebSphere Commerce node into a deployment manager cell. For instructions refer to "Federating WebSphere Commerce" on page 63.

Important: Do *not* create a WebSphere Commerce instance on the new WebSphere Commerce node.

Creating the WebSphere Commerce cluster

The instructions in this section create a new cluster that contains the original WebSphere Commerce application server. After creating this cluster, you may create additional cluster members, either on the same node or any other node in the deployment manager cell.

To create the new WebSphere Commerce cluster, do the following:

1. If it is not started, start the deployment manager. Refer to "Starting and stopping the WebSphere Application Server Network Deployment deployment manager" on page 90 for instructions.
2. If they are not started, start the node agent on each node you want to add to a cluster. For instructions, refer to "Starting and stopping the WebSphere Application Server node agent" on page 91.
3. Open the WebSphere Application Server Administrative Console. For instructions, refer to "Starting the WebSphere Application Server Administrative Console" on page 92.

4. In the Navigation area, expand **Servers** and click **Clusters**. The Server Cluster page displays.
5. On the Server Cluster page, click **New**. The Create New Cluster page displays.
6. In the **Cluster Name** field, enter a name for the cluster.
7. In the **Existing server** field, select **Select an existing application server to add to this cluster** and from the list of existing servers, select the WebSphere Commerce application server from the pull-down list. The WebSphere Commerce application server name in the list will appear in the following form:

   cell_name/*machine_name*/WC_*instance_name*

   where

   cell_name
   : is the name of the cell to which the WebSphere Commerce application server belongs.

   machine_name
   : is the short host name of the WebSphere Commerce machine.

   instance_name
   : is the name of the WebSphere Commerce instance.
8. Click **Next**. The Create New Clustered Servers page displays.
9. In the **Name** field, enter the name of the new cluster member to create.
10. From the **Select Node** field, select the name of the machine on which you want to create the new cluster member.

    For horizontal clustering, the machine name would be a different name from the name of the machine on which you originally installed WebSphere Commerce.

    For vertical clustering, the machine name would be the same name as the name of the machine on which you originally installed WebSphere Commerce.
11. In the **Http Ports** field, ensure that **Generate Unique Http Ports** is selected.

    For information about other parameters you can set when creating a new cluster member, refer to the WebSphere Application Server Network Deployment documentation.
12. Click **Apply**.
13. If you want to add more cluster members, repeat steps 9 through 12 for each cluster member you want to add.
14. When you have finished adding cluster members, click **Next**.
15. Click **Finish**.
16. Click **Save** in the Administrative Console task bar.
17. On the Save page, select **Synchronize changes with node**.
18. On the Save page, click **Save**.
19. Exit the WebSphere Application Server Administrative Console.

Verifying the JDBC provider path

For each cluster member, you should verify that the JDBC provider path is set correctly. Failure to do so may result in the cluster not functioning correctly.

To verify the JDBC provider path for a cluster member, do the following:

1. If they are not started, start the node agent on each system managed by WebSphere Application Server Network Deployment. For instructions, refer to "Starting and stopping the WebSphere Application Server node agent" on page 91.
2. If it is not started, start the deployment manager. Refer to "Starting and stopping the WebSphere Application Server Network Deployment deployment manager" on page 90 for instructions.
3. Open the WebSphere Application Server Administrative Console. For instructions, refer to "Starting the WebSphere Application Server Administrative Console" on page 92.
4. In the Navigation area, expand **Resources** and click **JDBC Providers**. The JDBC Providers page displays.
5. In the **Node** field, enter the name of the machine on which the cluster member exists. This is usually the same name as the machine name on which the application server runs.

   For a list of available nodes, click **Browse**.
6. In the **Server** field, enter the name of the application server for which you want to check the JDBC provider path. This is the member name of the cluster member.

   For a list of available application servers, click **Browse**.
7. Click **Apply**. The list of JDBC providers refreshes.
8. Click on the following JDBC provider:

   instance_name - WebSphere Commerce JDBC Provider

   where *instance_name* is the name of the WebSphere Commerce instance.
9. Confirm that the path shown in the **Classpath** field is the full path to the JDBC driver on the machine on which the cluster member exists.

   If the path shown is correct, click **Cancel**.

   If the path shown is incorrect, do the following:
   a. Enter the correct path to the JDBC driver in the **Classpath** field.
   b. Click **OK**.
   c. Click **Save** in the Administrative Console task bar.
   d. On the Save page, select **Synchronize changes with node**.
   e. On the Save page, click **Save**.
10. Exit the WebSphere Application Server Administrative Console.

Regenerating the Web server plug-in under WebSphere Application Server Network Deployment

To regenerate the Web server plug-in, do the following:

1. If it is not started, start the deployment manager. Refer to "Starting and stopping the WebSphere Application Server Network Deployment deployment manager" on page 90 for instructions.
2. If they are not started, start the node agent on each system managed by WebSphere Application Server Network Deployment. For instructions, refer to "Starting and stopping the WebSphere Application Server node agent" on page 91.
3. Regenerate the plug-in in one of the following ways:
   - **[Recommended]** Using the WebSphere Application Server GenPluginCfg utility.

For more information on the GenPluginCfg utility, refer to the *Regenerating Web server plug-in configurations"* page in the WebSphere Application Server Network Deployment information center:

```
http://publib.boulder.ibm.com/infocenter/wasinfo/index.jsp?topic=
 /com.ibm.websphere.nd.doc/info/ae/ae/trun_app_regen.html
```

If the deployment manager is installed on a remote machine, pay special attention to the **Note** section of the *Regenerating Web server plug-in configurations* page.

- Using the WebSphere Application Server Administrative Console:
  a. Open the WebSphere Application Server Administrative Console. For instructions, refer to "Starting the WebSphere Application Server Administrative Console" on page 92.
  b. In the Navigation area, expand **Environment** and click **Update Web Server Plugin**.
  c. Click **OK** to generate a new `plugin-cfg.xml` file.
  d. The message box will post the following entry when the plug-in has been updated:

     ```
     The web server plugin configuration was updated successfully.
     ```

  e. Exit the WebSphere Application Server Administrative Console.
  f. Open the `plugin-cfg.xml` file in a text editor. The `plugin-cfg.xml` file is in the following directory:

     WAS_userdir`/config/cells`

     Review any full-path information in the `plugin-cfg.xml` file. All full path information should match the full path for WebSphere Application Server information on the WebSphere Commerce node.

     Save any changes and exit the text editor.

4. Copy the regenerated `plugin-cfg.xml` file from the WebSphere Application Server Network Deployment machine to the Web server. For instructions, refer to "Copying the plugin-cfg.xml file to Web server" on page 97.
5. If WebSphere Commerce Payments is not federated into the same deployment manager cell as the WebSphere Commerce cluster, merge the contents of the WebSphere Commerce Payments `plugin-cfg.xml` file with the new `plugin-cfg.xml` file on the Web server. For instructions, refer to "Merging the WebSphere Commerce Payments plugin-cfg.xml file" on page 97.

   Note: Skip this step if WebSphere Commerce Payments and the original WebSphere Commerce node are on separate machines.
6. Restart the Web server according to the documentation provided with the Web server.

Copying instance information

For each WebSphere Commerce node in a horizontal cluster, you must copy the WebSphere Commerce instance store information from the original WebSphere Commerce node to the other nodes.

The steps in this section must be also be performed after you create a new WebSphere Commerce instance in the cluster.

To copy the instance information to a horizontal cluster member, do the following:

1. If the cluster is running, stop the cluster. For instructions, refer to "Starting or stopping a WebSphere Commerce cluster" on page 78.
2. Stop the Web server according the documentation provided with the Web server.
3. Copy the contents of the following directory on the original WebSphere Commerce node to the same directory on the other machines:

   WC_userdir/instances/*instance_name*

   where *instance_name* is the name of the WebSphere Commerce instance.

   Default values for *WC_userdir* are listed in "Path variables" on page v.
4. Start the Web server according to the documentation provided with the Web server.
5. Start the cluster. For instructions, refer to "Starting or stopping a WebSphere Commerce cluster" on page 78.

Copying WebSphere Commerce application and store information

For each WebSphere Commerce node in a horizontal cluster, you must copy the WebSphere Commerce application and store information from the original WebSphere Commerce node to the node.

The steps in this section must also be performed each time after you publish a store in the cluster.

To copy the application and store information to a horizontal cluster member, do the following:

1. If the cluster is running, stop the cluster. For instructions, refer to "Starting or stopping a WebSphere Commerce cluster" on page 78.
2. Stop the Web server according the documentation provided with the Web server.
3. Copy the contents of the following directory on the original WebSphere Commerce node to the same directory on the node:

   WAS_userdir/installedApps/*cell_name*/WC_*instance_name*.ear

   This directory should have been created automatically when the cluster member was added.

   The variables are defined as follows:

   WAS_userdir
   : Default values for *WAS_installdir* are listed in "Path variables" on page v.

   cell_name
   : This is the name of the original WebSphere Commerce node.

   instance_name
   : This is the name of the WebSphere Commerce instance.
4. Start the Web server according to the documentation provided with the Web server.
5. Start the cluster. For instructions, refer to "Starting or stopping a WebSphere Commerce cluster" on page 78.

Adding additional cluster members

The instructions in this section describe how to add more members to the cluster you created in "Creating the WebSphere Commerce cluster" on page 72.

To add additional cluster members, do the following:

1. If they are not started, start the node agent on each node you want to add to the cluster. For instructions, refer to "Starting and stopping the WebSphere Application Server node agent" on page 91.
2. If you want to add a horizontal cluster member to the cluster, complete the tasks in "Preparing additional nodes" on page 72.
3. If it is not started, start the deployment manager. Refer to "Starting and stopping the WebSphere Application Server Network Deployment deployment manager" on page 90 for instructions.
4. Open the WebSphere Application Server Administrative Console. For instructions, refer to "Starting the WebSphere Application Server Administrative Console" on page 92.
5. In the Navigation area, expand **Servers** and click **Clusters**. The Server Cluster page displays.
6. Ensure that the cluster is stopped. If the cluster is not stopped, select the cluster name and click **Stop**.
7. Click the cluster name.
8. In the Additional Properties table, click **Cluster Members**.
9. On the Cluster Members page, click **New**.
10. In the **Name** field, enter the name of the new cluster member to create.
11. From the **Select Node** field, select the name of the machine on which you want to create the new cluster member.

    For horizontal clustering, the machine name is different name from the name of the machine on which you originally installed WebSphere Commerce.

    For vertical clustering, the machine name is the same name as the name of the machine on which you originally installed WebSphere Commerce.
12. In the **Http Ports** field, ensure that **Generate Unique Http Ports** is selected.

    For information about other parameters you can set when creating a new cluster member, refer to the WebSphere Application Server Network Deployment documentation.
13. Click **Apply**.
14. To create additional cluster members in the cluster, enter a new name for the node in the **Member name** field and click **Apply**.

    Repeat this step until you have created all the cluster members you want to have in this cluster.
15. Click **Next**.
16. Click **Finish**.
17. Click **Save** in the menu along the top of the Administrative Console. The Save page displays.
18. On the Save page, select **Synchronize changes with node**.
19. On the Save page, click **Save**.
20. Exit the WebSphere Application Server Administrative Console.
21. Regenerate the web server plug-in configuration file. For instructions, refer to "Regenerating the Web server plug-in under WebSphere Application Server Network Deployment" on page 74.

22. Copy the regenerated `plugin-cfg.xml` file from the WebSphere Application Server Network Deployment machine to the Web server. For instructions, refer to "Copying the plugin-cfg.xml file to Web server" on page 97.
23. If you are adding additional new horizontal cluster members to the cluster, do the following:
    a. Copy WebSphere Commerce instance information from the original WebSphere Commerce node to each new horizontal cluster member. For instructions, refer to "Copying instance information" on page 75.
    b. Copy WebSphere Commerce application and store information from the original WebSphere Commerce node to each new horizontal cluster member. For instructions, refer to "Copying WebSphere Commerce application and store information" on page 76.

Starting or stopping a WebSphere Commerce cluster

To start or stop a WebSphere Commerce cluster, do the following:

1. If they are not started, start the node agent on each node in the cluster. For instructions, refer to "Starting and stopping the WebSphere Application Server node agent" on page 91.
2. If it is not started, start the deployment manager. Refer to "Starting and stopping the WebSphere Application Server Network Deployment deployment manager" on page 90 for instructions.
3. Start the WebSphere Application Server Administrative Console and log on to the console. For instructions on starting the WebSphere Application Server Administrative Console, refer to "Starting the WebSphere Application Server Administrative Console" on page 92.
4. In the Navigation area, expand **Servers** and click **Clusters**. The Server Cluster page displays.
5. Select the check box next to the cluster you want to start or stop and click **Start** or **Stop**.

Removing a cluster member

To remove a cluster member from a cluster, do the following:

1. If they are not started, start the node agent on each node in the cluster. For instructions, refer to "Starting and stopping the WebSphere Application Server node agent" on page 91.
2. If it is not started, start the deployment manager. Refer to "Starting and stopping the WebSphere Application Server Network Deployment deployment manager" on page 90 for instructions.
3. Open the WebSphere Application Server Administrative Console. For instructions, refer to "Starting the WebSphere Application Server Administrative Console" on page 92.
4. In the Navigation area, expand **Servers** and click **Clusters**. The Server Cluster page displays.
5. From the list of clusters, click the cluster for which you want to change the membership. The cluster properties page displays.
6. In the Additional Properties table, click **Cluster members**. The Cluster members page displays.
7. Select the cluster members you want to remove from the cluster and click **Delete**.
8. Click **Save** in the Administrative Console task bar.

9. On the Save page, select **Synchronize changes with node**.
10. On the Save page, click **Save**.
11. Exit the WebSphere Application Server Administrative Console.
12. Regenerate the web server plug-in and copy the plug-in to the Web server. For instructions, refer to "Regenerating the Web server plug-in under WebSphere Application Server Network Deployment" on page 74.

Publishing a store in a WebSphere Commerce cluster

Publishing a store in a cluster with horizontal cluster members

To publish a store in a cluster with horizontal cluster members, do the following: In these steps *original WebSphere Commerce node* refers to the node containing all the information for the store you want to publish, including SAR files.

1. Copy WebSphere Commerce instance information from the original WebSphere Commerce node to each horizontal cluster member. For instructions, refer to "Copying instance information" on page 75.
2. Copy WebSphere Commerce application and store information from the original WebSphere Commerce node to each horizontal cluster member. For instructions, refer to "Copying WebSphere Commerce application and store information" on page 76.
3. Publish your store.

   For information on publishing a WebSphere Commerce sample store, refer to the ″Publishing a store archive″ topic in the WebSphere Commerce online help.

   For information on developing a store in WebSphere Commerce, refer to *WebSphere Commerce Store Development Guide*. This book is available from the WebSphere Commerce technical library. Refer to "WebSphere Commerce technical library" on page 123 for more information.

Publishing a store in a cluster with vertical cluster members

When publishing a store in a cluster with vertical cluster members, no additional steps are required.

For information on publishing a WebSphere Commerce sample store, refer to the ″Publishing a store archive″ topic in the WebSphere Commerce online help.

For information on developing a store in WebSphere Commerce, refer to *WebSphere Commerce Store Development Guide*. This book is available from the WebSphere Commerce technical library. Refer to "WebSphere Commerce technical library" on page 123 for more information.

Part 6. Installation and administration tasks

This sections contains instructions for various tasks you must perform during the installation and administration of WebSphere Commerce.

Chapter 15. WebSphere Commerce tasks

This section provides instructions for WebSphere Commerce tasks you may need to complete while installing and administering WebSphere Commerce.

Starting or stopping a WebSphere Commerce instance

To start or stop a WebSphere Commerce instance, do the following:

1. Ensure that the Web server is started.
2. Start, stop, or restart the application server for the WebSphere Commerce instance you want to start. Instructions for starting and stopping an application server are provided in "Starting or stopping an application server" on page 89.

Note: The first time you start an instance, it will take a long time to start. This delay results from the caching of information about Java programs. While the delay can be lengthy, it improves the start-up time in subsequent attempts.

The following sections describe how you start and stop a WebSphere Commerce instance from a command line on iSeries.

Starting the WebSphere Commerce instance

Your user profile must have `*JOBCTL` authority to start a WebSphere Commerce instance.

To start a WebSphere Commerce instance on OS/400, do the following:

1. Ensure the WebSphere Application Server subsystem is started by doing the following:
   a. Start an OS/400 command session.
   b. Issue the following command:
      ```
      WRKSBS
      ```
   c. Ensure that the following subsystem appears in the list of running subsystems:
      ```
      QEJBAS5
      ```

      If the `QEJBAS5` subsystem does not appear in the list of running subsystems, you must start the subsystem before starting a WebSphere Commerce instance. For instructions on starting the `QEJBAS5` subsystem, refer to "Starting the QEJBAS5 subsystem" on page 94.
2. Start a QShell session by entering the following command:
   ```
   STRQSH
   ```

   and enter the following in the QShell session if you want to start the WebSphere Commerce instance in the default WebSphere Application Server application server:
   ```
   WAS_installdir/bin/startServer WC_instance_name
     [-instance WAS_instance_name]
   ```

   The `-instance` *`WAS_instance_name`* parameter is optional for the command.

For example, to start the demo1 WebSphere Commerce instance in the default WebSphere Application Server application server:

```
WAS_installdir/bin/startServer WC_demo1
```

For example, to start the server1 instance in the default WebSphere Application Server application server:

```
WAS_installdir/bin/startServer server1
```

(Note that server1 is automatically started when the QEJBAS5 subsystem is started.)

For example, to start the demo2 WebSphere Commerce instance in the demo2was WebSphere Application Server application server:

```
WAS_installdir/bin/startServer WC_demo2 -instance demo2was
```

Stopping the WebSphere Commerce instance

Your user profile must have *JOBCTL authority to stop a WebSphere Commerce instance.

To stop a WebSphere Commerce instance on OS/400, do the following:

1. Start a QShell session by entering the following command:

   ```
   STRQSH
   ```

2. The following examples show you how to stop the WebSphere Commerce instance using the WebSphere Application Server stopServer command in the Qshell session:
   - If you want to stop the WebSphere Commerce instance in the default WebSphere Application Server instance, enter the following:

     ```
     WAS_installdir/bin/stopServer WC_instance_name [-instance WAS_instance_name]
     ```

     The -instance *WAS_instance_name* parameter is optional for the command.
   - This example stops the demo1 WebSphere Commerce instance in the default WebSphere Application Server.

     ```
     WAS_installdir/bin/stopServer WC_demo1
     ```
   - This example stops the server1 instance in the default WebSphere Application Server.

     ```
     WAS_installdir/bin/stopServer server1
     ```
   - This example stops the demo2 WebSphere Commerce instance in the demo2was WebSphere Application Server application server:

     ```
     WAS_installdir/bin/stopServer WC_demo2 -instance demo2was
     ```

Starting or stopping a WebSphere Commerce Payments instance

To start or stop a WebSphere Commerce Payments instance, do the following:

1. Ensure that the Payments Web server is started.
2. Start Configuration Manager. For instructions on starting Configuration Manager, refer to "Starting the Configuration Manager" on page 38.
3. In Configuration Manager, under **WebSphere Commerce**, expand *hostname* → **Payments** → **Instance List**.
4. Right-click the name of the WebSphere Commerce Payments instance you want to start or stop and do one of the following:

- To start the WebSphere Commerce Payments instance, select **Start Payments Instance** from the pop-up menu. After receiving the Instance started successfully dialog, click **OK** to dismiss the dialog.
- To stop the WebSphere Commerce Payments instance, select **Stop Payments Instance** from the pop-up menu.

Note: The first time you start an instance, it will take a long time to start. This delay results from the caching of information about Java programs. While the delay can be lengthy, it improves the start-up time in subsequent attempts.

Starting or stopping a WebSphere Commerce Payments instance from QShell session

The following are two alternate methods to start or stop a WebSphere Commerce Payments instance. In either method, ensure that the WebSphere Commerce Payments Web server is started before you start a WebSphere Commerce Payments instance.

If the password will not be provided

In this case, *Unattended Restart* has been set on and a password is not required. To start the instance:

1. From a QShell session, traverse to the *WAS_installdir*/bin directory.
2. Run the following command:

```
startServer payments_instance_name_Commerce_Payments_Server
  -instance WAS_instance_name
```

To stop the instance:

1. From a QShell session, traverse to the *WAS_installdir*/bin directory.
2. Run the following command:

```
stopServer payments_instance_name_Commerce_Payments_Server
  -instance WAS_instance_name
```

If the password will be provided

In this case, *Unattended Restart* has been set off and a password is required. To start the instance:

1. From a QShell session, traverse to the *Payments_installdir*/bin directory.
2. Run the following command:

```
IBMPayServer payments_instance_name password
```

where *payments_instance* is the Payments instance name and *password* is the corresponding Payments instance password.

To stop the instance:

1. From QSH, traverse to the *Payments_installdir*/bin directory.
2. Run the following command:

```
StopIBMPayServer payments_instance_name password
```

Modifying a WebSphere Commerce or WebSphere Commerce Payments instance

If you want to change any of the configuration settings for your WebSphere Commerce instance, you can do so from the Configuration Manager.

To update a WebSphere Commerce instance using the Configuration Manager, do the following:

1. Start Configuration Manager. For instructions on starting Configuration Manager, refer to "Starting the Configuration Manager" on page 38.
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. Refer to the online help for the Configuration Manager for information about the various fields and panels of Configuration Manager.
3. After you update your instance, click **Apply** to apply your changes.
4. When the changes have been successfully applied, exit the Configuration Manager client. This also terminates the Configuration Manager server.
5. Restart the instance you have modified.

Deleting a WebSphere Commerce instance

To delete a WebSphere Commerce instance, do the following:

1. Ensure that WebSphere Commerce is stopped. For instructions on stopping WebSphere Commerce, refer to "Starting or stopping a WebSphere Commerce instance" on page 83.
2. If you are deleting a WebSphere Commerce instance from a deployment manager cell, remove the WebSphere Commerce instance from the deployment manager cell. For instructions, refer to "Removing an application server node from a cell" on page 67.
3. Delete the WebSphere Commerce application server by issuing the following command from a QShell session:

   ```
   WC_installdir/bin/rmCommerceServer.sh instance_name
   ```

   where *instance_name* is the name of the WebSphere Commerce instance you want to delete.

   Default values for *WC_installdir* are listed in "Path variables" on page v.

   Important

   Ensure that you enter the name of the WebSphere Commerce instance and *not* the name of the WebSphere Commerce application server.

   When the name of the WebSphere Commerce instance is *instance_name*, the name of the WebSphere Commerce application server is **WC**_*instance_name*.

   If you use WC_*instance_name*, you will receive an error message.

4. Delete the WebSphere Commerce instance from Configuration Manager by doing the following:
   a. Start Configuration Manager. For instructions on starting Configuration Manager, refer to "Starting the Configuration Manager" on page 38.
   b. In Configuration Manager, under **WebSphere Commerce**, expand *hostname* → **Commerce** → **Instance List**.
   c. Right-click the instance you want to delete and select **Delete instance**.
   d. Exit Configuration Manager when the process completes.

5. Drop the WebSphere Commerce schema associated with the WebSphere Commerce instance you want to delete.

   If schema data will be required for other purposes, go to the next step.

   To drop the WebSphere Commerce schema, issue the following command from a QShell session:

   ```
   db2 "drop schema instance_name"
   ```

   where *instance_name* is the name of the WebSphere Commerce instance.

   Note: From another OS/400 session, monitor for any messages that may be posted for the QShell session. The OS/400 command `WRKSBSJOB QINTER` can be used.

6. Delete the following directories:

   ```
   WC_userdir/instances/instance_name
   WAS_userdir/logs/WC_instance_name
   WAS_userdir/config/temp/cells/cell_name/applications/WC_instance_name.ear
   WAS_userdir/config/temp/cells/cell_name/nodes/node_name/servers/
        WC_instance_name
   WAS_userdir/temp/cell_name/WC_instance_name
   WAS_userdir/tranlog/WC_instance_name
   ```

   where *instance_name* is the name of the WebSphere Commerce instance you want to delete.

7. Delete the HTTP entry in the `QATMHINSTC` file in `QUSRSYS` library. The entry will be of the form *instance_name*, where *instance_name* is the name of the WebSphere Commerce instance you want to delete.

8. Delete the user profile associated with the instance using the following OS/400 command:

   ```
   DLTUSRPRF USRPRF(instance_name) OWNOBJOPT(*DLT)
   ```

   Where *instance_name* is the name of the WebSphere Commerce instance you want to delete.

9. If you plan to use other WebSphere Application Server application servers after deleting the WebSphere Commerce instance, you must regenerate the WebSphere Application Server plug-in configuration file. For information on regenerating the WebSphere Application Server plug-in configuration file, refer to "Regenerating the WebSphere Application Server Web server plug-in configuration file" on page 95.

Deleting a WebSphere Commerce Payments instance

To delete a WebSphere Commerce Payments instance, do the following:

1. Ensure that WebSphere Commerce Payments is stopped. For instructions, refer to "Starting or stopping a WebSphere Commerce Payments instance" on page 84.
2. Delete the WebSphere Commerce Payments instance from Configuration Manager by doing the following:
   a. Start Configuration Manager. For instructions on starting Configuration Manager, refer to "Starting the Configuration Manager" on page 38.
   b. In Configuration Manager, under **WebSphere Commerce** expand *hostname* → **Payments → Instance List**.
   c. Right-click the instance you want to delete and select **Delete Payments Instance**.

d. Exit Configuration Manager when the process completes.

This step also deletes the WebSphere Commerce Payments application server.

3. Drop the WebSphere Commerce Payments schema associated with the WebSphere Commerce Payments instance you want to delete. To drop the WebSphere Commerce Payments schema, issue the following command from a QShell session:

   ```
   db2 "drop schema payments_instance_name"
   ```

   where *payments_instance_name* is the name of the WebSphere Commerce Payments instance.

   Note: From another OS/400 session, monitor for any messages that may be posted for the QShell session. The OS/400 command `WRKSBSJOB QINTER` can be used.

4. Delete the following directories if they exist:

   ```
   WC_userdir/instances/payments_instance_name
   WAS_userdir/logs/payments_instance_name_Commerce_Payments_Server
   Payments_userdir/instances/payments_instance_name
   ```

   where *payments_instance_name* is the name of the WebSphere Commerce Payments instance you want to delete.

5. If you plan to use other WebSphere Application Server application servers after deleting the WebSphere Commerce Payments instance, you must regenerate the WebSphere Application Server plug-in configuration file. For information on regenerating the WebSphere Application Server plug-in configuration file, refer to "Regenerating the WebSphere Application Server Web server plug-in configuration file" on page 95.

Chapter 16. WebSphere Application Server tasks

This section provides instructions for WebSphere Application Server tasks you may need to complete while installing and administering WebSphere Commerce.

Starting or stopping an application server

To start or stop an application server on iSeries, do the following:

1. Ensure the WebSphere Application Server subsystem is started by doing the following:
   a. Start an OS/400 command session.
   b. Issue the following command:
      ```
      WRKSBS
      ```
   c. Ensure that the following subsystem appears in the list of running subsystems displayed:
      ```
      QEJBAS5
      ```
      If the QEJBAS5 subsystem does not appear in the list of running subsystems, you must start the subsystem before starting an application server. For instructions on starting the subsystem, refer to "Starting the WebSphere Application Server subsystem" on page 93.
2. Start a QShell session by entering the following from an OS/400 command line:
   ```
   QSH
   ```
3. Do one of the following:
   - To start an application server, issue the following command:
     ```
     WAS_installdir/bin/startServer application_server_name
       -instance WAS_instance_name
     ```
   - To stop an application server, issue the following command:
     ```
     WAS_installdir/bin/stopServer application_server_name
       -instance WAS_instance_name
     ```

   application_server_name
   is the name of the application server you want to start.

Application server name	Description
WC_*instance_name*	WebSphere Commerce application server
*payments_instance_name*_Commerce_Payments_Server	WebSphere Commerce Payments application server

where *instance_name* is the name of the WebSphere Commerce instance.

Note: If the WebSphere Commerce node is federated into a WebSphere Application Server Network Deployment cell, you cannot start WebSphere Commerce using this command. For instructions on starting WebSphere Commerce when it is federated into a WebSphere Application Server Network Deployment cell, refer to "Starting or stopping an application server under WebSphere Application Server Network Deployment" on page 92.

WAS_instance_name
is the name of the WebSphere Application Server instance in which you want to start the application server. The default WebSphere Application Server instance is *default*.

If you want to start the application server in the default WebSphere Application Server instance, the `-instance server_name` parameter is optional for the command. For example, enter the following command:

```
WAS_installdir/startServer application_server_name
```

application_server_name
is the name of the application server you want to start. Some common application servers

Application server name	Description
WC_*instance_name*	WebSphere Commerce application server
*payments_instance_name*_Commerce_Payments_Server	WebSphere Commerce Payments application server

where *instance_name* is the name of the WebSphere Commerce instance and *payments_instance_name* is the name of the WebSphere Commerce Payments instance.

Note: If the WebSphere Commerce node or WebSphere Commerce Payments node is federated into a WebSphere Application Server Network Deployment cell, you cannot start WebSphere Commerce or WebSphere Commerce Payments using this command. For instructions on starting WebSphere Commerce or WebSphere Commerce Payments when they are federated into a WebSphere Application Server Network Deployment cell, refer to

Starting and stopping the WebSphere Application Server Network Deployment deployment manager

To start the WebSphere Application Server Network Deployment deployment manager, do the following:

1. Ensure the WebSphere Application Server subsystem is started by doing the following:
   a. Start an OS/400 command session.
   b. Issue the following command:
      ```
      WRKSBS
      ```
   c. Ensure that the following subsystem appears in the list of running subsystems displayed:
      ```
      QEJBASND5
      ```

      If the `QEJBASND5` subsystem does not appear in the list of running subsystems, you must start the subsystem before starting an application server. For instructions on starting the subsystem, refer to "Starting the WebSphere Application Server Network Deployment subsystem" on page 94.
2. Start a QShell session by entering the following from an OS/400 command line:
   ```
   QSH
   ```

3. Do one of the following:
   - To start the deployment manager, issue the following command:

     ```
     /QIBM/ProdData/WebAS5/ND/bin/startManager
       -instance WAS_instance_name
     ```

   - To stop the deployment manager, issue the following command:

     ```
     /QIBM/ProdData/WebAS5/ND/bin/stopManager
       -instance WAS_instance_name
     ```

   WAS_instance_name
   is the name of the WebSphere Application Server instance in which you want to start the application server. The default WebSphere Application Server instance is *default*

   If you want to start the deployment manager in the default WebSphere Application Server instance, the `-instance server_name` parameter is optional for the command. For example, enter the following command:

   ```
   /QIBM/ProdData/WebAS5/ND/bin/startManager
   ```

Starting and stopping the WebSphere Application Server node agent

To start or stop the WebSphere Application Server node agent, do the following:

1. Ensure the WebSphere Application Server subsystem is started by doing the following:
   a. Start an OS/400 command session.
   b. Issue the following command:

      ```
      WRKSBS
      ```

   c. Ensure that the following subsystem appears in the list of running subsystems displayed:

      ```
      QEJBAS5
      ```

      If the `QEJBAS5` subsystem does not appear in the list of running subsystems, you must start the subsystem before starting an application server. For instructions on starting the subsystem, refer to "Starting the WebSphere Application Server subsystem" on page 93.
2. Start a QShell session by entering the following from an OS/400 command line:

   ```
   QSH
   ```

3. Do one of the following:
   - To start the node agent, issue the following command:

     ```
     /QIBM/ProdData/WebAS5/Base/bin/startNode
       -instance WAS_instance_name
     ```

   - To stop the node agent, issue the following command:

     ```
     /QIBM/ProdData/WebAS5/Base/bin/stopNode
       -instance WAS_instance_name
     ```

   WAS_instance_name
   is the name of the WebSphere Application Server instance in which you want to start the node agent. The default WebSphere Application Server instance is *default*

   If you want to start the deployment manager in the default WebSphere Application Server instance, the `-instance server_name` parameter is optional for the command. For example, enter the following command:

   ```
   /QIBM/ProdData/WebAS5/Base/bin/startNode
   ```

Starting the WebSphere Application Server Administrative Console

You can start the WebSphere Application Server Administrative Console under the following conditions:

Federated application servers
Before starting the WebSphere Application Server Administrative Console, you must start the following:

- The WebSphere Application Server node agent on each federated node. For instructions, refer to "Starting and stopping the WebSphere Application Server node agent" on page 91.
- The WebSphere Application Server Network Deployment deployment manager. For instructions, refer to "Starting and stopping the WebSphere Application Server Network Deployment deployment manager" on page 90.

A standalone (unfederated) application server
Before starting the WebSphere Application Server Administrative Console, you must start the default WebSphere Application Server application server (`server1`). For instructions, refer to "Starting or stopping an application server" on page 89.

Open the WebSphere Application Server Administrative Console by opening a web browser and entering the following URL:

`http://hostname:port/admin`

or

`https://hostname:port/admin`

where *hostname* is the fully qualified TCP/IP name of the machine running WebSphere Application Server and *port* is the TCP/IP port for the WebSphere Application Server Administrative Console.

The default port for the WebSphere Application Server Administrative Console depends on the protocol specified in the URL. For the http protocol, the default port is `9090`. For the https protocol, the default port is `9043`.

Starting or stopping an application server under WebSphere Application Server Network Deployment

The instructions in this section only apply to application servers that have been federated into a cell. For more information on federating application server nodes into cells, refer to the WebSphere Application Server Network Deployment documentation.

The instructions in this section do not apply when starting or stopping a cluster of application servers. For instructions on starting or stopping a cluster of application servers, refer to "Starting or stopping a WebSphere Commerce cluster" on page 78.

For information on federating the WebSphere Commerce application server and the WebSphere Commerce Payments application server into a deployment manager cell, refer to Chapter 13, "Federating WebSphere Commerce and WebSphere Commerce Payments," on page 63.

To start an application server under WebSphere Application Server Network Deployment, do the following on the WebSphere Application Server Network Deployment machine:

1. Ensure the WebSphere Application Server subsystem is started by doing the following:
   a. Start an OS/400 command session.
   b. Issue the following command:
      ```
      WRKSBS
      ```
   c. Ensure that the following subsystem appears in the list of running subsystems displayed:
      ```
      QEJBAS5
      ```
      If the QEJBAS5 subsystem does not appear in the list of running subsystems, you must start the subsystem before starting an application server. For instructions on starting the subsystem, refer to "Starting the WebSphere Application Server subsystem."
2. If they are not started, start the node agent on each system managed by WebSphere Application Server Network Deployment.
3. If it is not started, start the deployment manager. Refer to "Starting and stopping the WebSphere Application Server Network Deployment deployment manager" on page 90 for instructions.
4. Start the WebSphere Application Server Administrative Console and log on to the console. For instructions on starting the WebSphere Application Server Administrative Console, refer to "Starting the WebSphere Application Server Administrative Console" on page 92.
5. In the Navigation area, expand **Servers** and click **Application Servers**. The Application Servers page displays.
6. Select the check box next to the application server you want to start or stop and click **Start** or **Stop**. The following table lists the WebSphere Commerce application servers that may be available:

Application server name	Description
WC_*commerce_instance_name*	WebSphere Commerce application server
*payments_instance_name*_Commerce_Payments_Server	WebSphere Commerce Payments application server

Starting the WebSphere Application Server subsystem

Your user profile must have *JOBCTL authority to start the WebSphere Application Server subsystem.

To start the WebSphere Application Server subsystem on iSeries, do the following:

1. Start Transmission Control Protocol/Internet Protocol (TCP/IP). On the OS/400 command line, issue the following command:
   ```
   STRTCP
   ```
2. Start the QEJBAS5 subsystem by running the following command on the OS/400 command line:
   ```
   STRSBS SBSD(QEJBAS5/QEJBAS5)
   ```

The default WebSphere Application Server instance will start automatically. The job for the default application server instance is *server1*.

For more information, see "Starting the QEJBAS5 subsystem" and "Ending the QEJBAS5 subsystem."

Starting the QEJBAS5 subsystem

To start any WebSphere Commerce instances, the WebSphere Application Server subsystem must be running on your iSeries machine. To check to see if the QEJBAS5 subsystem is running, perform the following steps:

1. Log on to the iSeries server.
2. From the OS/400 command line, type:
   ```
   WRKSBS
   ```
3. Ensure that the QEJBAS5 subsystem is running. If it is not running, issue the following command from the OS/400 command line:
   ```
   STRSBS QEJBAS5/QEJBAS5
   ```
4. To ensure that the subsystem has started, enter the following at the OS/400 command line:
   ```
   WRKACTJOB SBS(QEJBAS5)
   ```

   The subsystem will be displayed with the job SERVER1 running.

You can now proceed to start your WebSphere Commerce instance as described in "Starting the WebSphere Commerce instance" on page 83

Ending the QEJBAS5 subsystem

In order to end the QEJBAS5 subsystem, all the WebSphere Commerce instances, WebSphere Commerce Payments instances and non-default WebSphere Application Server applications must be stopped. Refer to the appropriate sections below to stop the instances that are running on the system. To ensure that all jobs have stopped, enter the following at the OS/400 command line:

```
WRKACTJOB SBS(QEJBAS5)
```

The subsystem will be displayed and no other jobs should be active within the subsystem.

You can now proceed to end the QEJBAS5 subsystem by entering the following at the OS/400 command line:

```
ENDSBS QEJBAS5
```

Starting the WebSphere Application Server Network Deployment subsystem

Your user profile must have *JOBCTL authority to start the WebSphere Application Server Network Deployment subsystem.

To start the WebSphere Application Server subsystem on iSeries, do the following:

1. Start Transmission Control Protocol/Internet Protocol (TCP/IP). On the OS/400 command line, issue the following command:
   ```
   STRTCP
   ```
2. Start the QEJBASND5 subsystem by running the following command on the OS/400 command line:
   ```
   STRSBS SBSD(QEJBAS5/QEJBASND5)
   ```

The default WebSphere Application Server instance will start automatically. The job for the default application server instance is *dmgr*.

Regenerating the WebSphere Application Server Web server plug-in configuration file

The instructions in this section do not apply when operating WebSphere Commerce or WebSphere Commerce Payments in a federated or clustered environment under WebSphere Application Server Network Deployment. For information on generating the Web server plug-in in those environments, refer to "Regenerating the Web server plug-in under WebSphere Application Server Network Deployment" on page 74.

To regenerate the Web server plug-in, do the following on the WebSphere Commerce node:

1. If it is not started, start the default application server — `server1`. Refer to "Starting or stopping an application server" on page 89 for instructions.
2. Open the WebSphere Application Server Administrative Console. For instructions, refer to "Starting the WebSphere Application Server Administrative Console" on page 92.
3. In the Navigation area, expand **Environment** and click **Update Web Server Plugin**.
4. Click **OK** to generate a new `plugin-cfg.xml` file.
5. The Message box will post the following entry when the plug-in has been updated:

   ```
   The web server plugin configuration was updated successfully
   ```

6. Exit the WebSphere Application Server Administrative Console.
7. If WebSphere Commerce Payments is on a separate node, repeat all of these steps on the WebSphere Commerce Payments node.

If the Web server node is remote from the WebSphere Commerce node or the WebSphere Commerce Payments node, you will need to do the following:

1. Copy the plug-in from the WebSphere Commerce node to the Web server node. For details, refer to "Copying the plugin-cfg.xml file to Web server" on page 97.
2. If WebSphere Commerce and WebSphere Commerce Payments are on separate nodes, merge the WebSphere Commerce Payments plug-in with the WebSphere Commerce plug-in. For details, refer to "Merging the WebSphere Commerce Payments plugin-cfg.xml file" on page 97.
3. Restart the Web server according to the documentation provided with the Web server.

Chapter 17. Remote Web server tasks

This sections describes tasks that must be performed if you use a Web server running on a different node than WebSphere Commerce.

Note: The WebSphere Application Server 5.0 product must also be installed on the same node as where the Web Server is running.

Copying the plugin-cfg.xml file to Web server

To copy the `plugin-cfg.xml` file to the remote Web server, do the following:

1. Stop the Web server according the documentation provided with the Web server.
2. Copy the following file on the WebSphere Commerce node to the same location on the Web Server node, depending on your configuration:

WebSphere Commerce in a clustered environment	*WAS_ND_userdir*/config/cells/plugin-cfg.xml
WebSphere Commerce in a non- clustered environment	*WAS_userdir*/config/cells/plugin-cfg.xml

   Default values for *WAS_userdir* and *WAS_ND_userdir* are listed in "Path variables" on page v.

   Important: The `plugin-cfg.xml` file contains directory-specific information. If you do not copy the file to the exact same directory structure on the Web server node, the Web server will not function correctly and WebSphere Commerce will be inaccessible.
3. Ensure that the path for the WebSphere Application Server plug-in is shown correctly in the `httpd.conf` file on the Web server node.

   To check the path, open the `httpd.conf` file in a text editor and search for the following:

   ```
   WebSpherePluginConfig
   ```

   This entry should contain the full path to the `plugin-cfg.xml` file on the Web server node. If the path is incorrect, change the path, save the `httpd.conf` file.
4. Start the Web server according to the documentation provided with the Web server.

If you are working on a custom installation with WebSphere Commerce and WebSphere Commerce Payments on separate nodes, continue with "Merging the WebSphere Commerce Payments plugin-cfg.xml file."

Merging the WebSphere Commerce Payments plugin-cfg.xml file

To merge the WebSphere Commerce Payments `plugin-cfg.xml` file with the Web server `plugin-cfg.xml` file , do the following:

1. Stop the Web server according the documentation provided with the Web server.
2. On the Web server node, open the `plugin-cfg.xml` file in a text editor. The full path of the `plugin-cfg.xml` file is the following:

WAS_userdir/config/cells/plugin-cfg.xml

Default values for *WAS_userdir* are listed in "Path variables" on page v.

3. Open the plugin-cfg.xml file from the WebSphere Commerce Payments node in a text editor. The full path of the plugin-cfg.xml file is the following:

   WAS_userdir/config/cells/plugin-cfg.xml

4. Locate the following text in the WebSphere Commerce Payments plugin-cfg.xml file:

```
<VirtualHostGroup Name="VH_PYM_instance_name">
    <VirtualHost Name="short_host_name:5432"/>
    <VirtualHost Name="host_name:5432"/>
</VirtualHostGroup>
```

   where the variables defined as follows:

   instance_name
   This is the name of the WebSphere Commerce Payments instance.

   short_host_name
   This is the short host name of the WebSphere Commerce Payments node.

   host_name
   This is the fully qualified host name of the WebSphere Commerce Payments node.

5. Copy this section to the Web server plugin-cfg.xml file. Ensure that you insert this section below existing entries of the same type.
6. Locate the following text in the WebSphere Commerce Payments plugin-cfg.xml file:

```
<ServerCluster Name="instance_name_Commerce_Payments_Server_short_host_name_Cluster">
    <Server Name="instance_name_Commerce_Payments_Server">
        <Transport Hostname="IP_address" Port="9081" Protocol="http">
        <Transport Hostname="IP_address" Port="9091"Protocol="http">
    </Server>
    <PrimaryServers>
        <Server Name="instance_name_Commerce_Payments_Server">
    </PrimaryServers>
</ServerCluster>
```

   where the variables are defined as follows:

   instance_name
   This is the name of the WebSphere Commerce Payments instance.

   short_host_name
   This is the short host name of the WebSphere Commerce Payments node.

   IP_address
   This is the TCP/IP address of the WebSphere Commerce Payments node.

7. Copy this section to the Web server plugin-cfg.xml file. Ensure that you insert this section below existing entries of the same type.
8. Locate the following text in the WebSphere Commerce Payments plugin-cfg.xml file:

```
<UriGroup Name="VH_PYM_instance_name_instance_name_Commerce_Payments_Server_short_host_name_Cluster_URIs">
    <Uri AffinityCookie="JSESSIONID" Name="/webapp/SampleCheckout/*">
    <Uri AffinityCookie="JSESSIONID" Name="/webapp/PaymentManager/*">
</UriGroup>
```

where the variables are defined as follows:

instance_name
This is the name of the WebSphere Commerce Payments instance.

short_host_name
This is the short host name (not fully-qualified) of the WebSphere Commerce Payments machine.

9. Copy this section to the Web server `plugin-cfg.xml` file. Ensure that you insert this section below existing entries of the same type.
10. Locate the following text in the WebSphere Commerce Payments `plugin-cfg.xml` file:

```
<Route ServerCluster="instance_name_Commerce_Payments_Server_short_host_name_Cluster"
    UriGroup="VH_PYM_instance_name_instance_name_Commerce_Payments_Server_short_host_name_Cluster_URIs"
    VirtualHostGroup="VH_PYM_instance_name"/>
```

where the variables are defined as follows:

instance_name
This is the name of the WebSphere Commerce Payments instance.

short_host_name
This is the short host name (not fully-qualified) of the WebSphere Commerce Payments machine.

11. Copy this section to the Web server `plugin-cfg.xml` file. Ensure that you insert this section below existing entries of the same type.
12. Save your changes and exit the text editor.
13. Start the Web server according to the documentation provided with the Web server.

Post-Store publishing tasks

If you are using a remote Web server, you must do the following every time you publish a store in WebSphere Commerce:

1. Replace the contents of the `Stores.war` directory on the Web server node with the contents of the `Stores.war` directory on the WebSphere Commerce.

   The full path to the `Stores.war` directory on both nodes is the following:

   WAS_userdir/installedApps/*cell_name*/WC_*instance_name*.ear/Stores.war

   where the variables are defined in "Path variables" on page v and "Variables used in this book" on page v. The WC_*instance_name*.ear directory should have been copied to the Web server node after the creation of the WebSphere Commerce instance.

Chapter 18. Setting and changing passwords

Most components in WebSphere Commerce use user IDs and passwords that are validated by the operating system. For information on changing those passwords, refer to you operating system documentation. This chapter covers how to set and change passwords for WebSphere Commerce components that do not validate user IDs and passwords through the operating system.

Changing 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 password, issue the following commands in a QShell session:

1. Run the wcs_encrypt utility as follows:

   ```
   cd  WC_installdir/bin

   wcs_encrypt.sh new_password
   ```

   where *new_password* is new password for the Configuration Manager. An encrypted version of the new password will be generated by running the command as above.
2. Open the `PwdMgr.xml` file found in the *WC_userdir*`/instances` directory.
3. Modify the LoginPassword field, with the encrypted password generated in step 1 above.
4. Save your changes.

Changing the WebSphere Commerce Site Administrator 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. Log on with the Site Administrator ID and password created when the WebSphere Commerce instance was created.
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 **New 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.

Resetting the Site Administrator password

If you forget the Site Administrator password and want to reset the password, do the following:

1. Start a QShell session.
2. From the QShell session, issue the following command:

```
WC_installdir/bin/chgwcspwd.sh -database WC_database_name
 -schema WC_schema_name -instance WC_instance_profile_name
 -instancePwd WC_instance_profile_pwd -merKey WC_merchant_key
 -wcsUser site_admin_ID -wcsUserPwd new_site_admin_pwd
 [-oneWayHash true_or_false]
```

where the variables and parameters are defined as follows:

WC_installdir
: Default values for this variable are listed in "Path variables" on page v.

–database *WC_database_name*
: This parameter specifies the name of the WebSphere Commerce relational database.

–schema *WC_schema_name*
: This parameter specified the name of the schema where the WebSphere Commerce instance resides. The may be the same as the name of the WebSphere Commerce instance.

–instance *WC_instance_profile_name*
: This parameter specifies the name of iSeries user profile associated with the WebSphere Commerce instance. This profile name is usually the same name as the WebSphere Commerce instance.

–instancePwd *WC_instance_profile_pwd*
: This is the password associated with the WebSphere Commerce instance user profile.

–merKey *WC_merchant_key*
: This parameter specifies the WebSphere Commerce merchant key entered when the WebSphere Commerce instance was created.

–wcsUser *site_admin_ID*
: This parameter specifies the ID for the WebSphere Commerce Site Administrator.

–wcsUserPwd *new_site_admin_pwd*
: This parameter specifies the new password you want to assign to the WebSphere Commerce Site Administrator.

–oneWayHash *true_or_false*
: This parameter is optional. If this parameter is not specified, a value of `true` is assumed for the `-oneWayHash` parameter.

  WebSphere Commerce 5.5 uses one way hash for password encryption. It is recommended that you use the default value for this parameter.

Recovering the Site Administrator ID

If you forget the Site Administrator ID defined when the WebSphere Commerce instance was created and you have no other IDs authorized as Site Administrators, you can recover the Site Administrator ID by doing the following:

1. Start iSeries Navigator from the Windows system where it is installed.

2. Expand **Databases**.
3. Right-click the name of the Relational Database where the schema of the WebSphere Commerce instance resides and select **Run SQL Scripts**. The **Run SQL Scripts** window opens.
4. Enter the following SQL statement in the window:

   ```
   SELECT LOGONID FROM schema_name.USERREG WHERE USERS_ID=-1000
   ```

   where *schema_name* is the name of the schema for your WebSphere Commerce instance resides.

   This statement returns the Site Administrator ID.

Chapter 19. Web Server tasks

This chapter describes how to start and stop the Web server on iSeries. To see how to start and stop other components such as the WebSphere Commerce Configuration Manager, see "Starting the Configuration Manager" on page 38. To see how to start and stop other WebSphere Commerce components such as a WebSphere Commerce instance or WebSphere Commerce Payments, see Chapter 15, "WebSphere Commerce tasks," on page 83.

Starting and stopping IBM HTTP Server

Starting your IBM HTTP Server instance

There is one IBM HTTP Server instance associated with your WebSphere Commerce instance. The IBM HTTP Server name will have the same name as your WebSphere Commerce instance. For example, if your WebSphere Commerce instance is `demo1`, then your IBM HTTP Server name will also be `demo1`.

If you have WebSphere Commerce Payments installed, there will be another IBM HTTP Server instance associated with the WebSphere Commerce Payments instance. The IBM HTTP Server instance will have the same name as the WebSphere Commerce Payments instance. For example, if your WebSphere Commerce Payments is `wpm`, then your IBM HTTP Server instance will also be `wpm`.

You can start the IBM HTTP Server instance from either the OS/400 command line or a Web browser.

To start your IBM HTTP Server instance from the OS/400 command line, do the following:

1. Log on to the iSeries machine as a user with `QSECOFR` class authority.
2. From the command line, type:

   ```
   STRTCPSVR SERVER(*HTTP) HTTPSVR(instance_name)
   ```

   or

   ```
   STRTCPSVR SERVER(*HTTP) HTTPSVR(payments_instance_name)
   ```

To start your IBM HTTP Server instance from a Web browser, do the following:

1. Ensure that the HTTP administrator server instance is running by typing the following at an OS/400 command line:

   ```
   WRKACTJOB SBS(QHTTPSVR)
   ```

   Make sure that there are `ADMIN` jobs in the subsystem. If the HTTP administrator server instance is not running, start it by typing the following at an OS/400 command line:

   ```
   STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)
   ```
2. Once the HTTP administrator server instance is active, go to the following URL:

   ```
   https://iSeries_host_name:2010
   ```

where 2010 is the Web configuration server port and *iSeries_host_name* is the fully qualified host name of your iSeries machine. If you are using the non-secure HTTP administrator server at port 2001, replace this URL with:

```
http://iSeries_host_name:2001
```

If you use the non-secure port, your passwords and other information will not be encrypted.

3. Click **IBM HTTP Server for iSeries**.
4. Click the **Manage** tab.
5. Select the specific server with which you want to work.
6. Click on **Start** (near the bottom of the screen).
7. Check the message area for any problems with starting the instance.
8. To verify, type the following from the OS/400 command line:

   ```
   WRKACTJOB SBS(QHTTPSVR)
   ```

   and look for entries for your Web server instance under the **Subsystem/Job** heading and QTMHHTTP under the **User** heading.

Stopping your IBM HTTP Web Server instance

You can stop the IBM HTTP Server instance from either the OS/400 command line or a Web browser.

To stop your IBM HTTP Server instance from the OS/400 command line, do the following:

1. Log on to the iSeries machine as a user with QSECOFR class authority.
2. From the command line, type:

   ```
   ENDTCPSVR SERVER(*HTTP) HTTPSVR(instance_name)
   ```

   or

   ```
   ENDTCPSVR SERVER(*HTTP) HTTPSVR(payments_instance_name)
   ```

To stop either instance from a Web browser, do the following:

1. Type the following URL:

   ```
   https://iSeries_host_name:2010
   ```

   Note: If you are using the non-secure HTTP administrator server at port 2001, replace this URL with:

   ```
   http://iSeries_host_name:2001
   ```

   If you use the non-secure port, your passwords and other information will not be encrypted.
2. Click **IBM HTTP Server for iSeries**.
3. Click the **Manage** tab.
4. Select the specific server with which you want to work.
5. Click **Stop** (near the bottom of the screen).
6. Check the message area for any problems with stopping the instance.
7. To verify, type the following from the OS/400 command line:

   ```
   WRKACTJOB SBS(QHTTPSVR)
   ```

   and look to make sure that there are no entries for the Web server instance under the **Subsystem/Job** heading and QTMHHTTP is not under the **User** heading.

Starting and stopping the IBM HTTP administrator

To start the HTTP administrator server instance, do the following:

1. Log on to the iSeries machine as a user with QSECOFR class authority.
2. From the command line, type the following:
   ```
   STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)
   ```
3. To verify, type the following from the OS/400 command line:
   ```
   WRKACTJOB SBS(QHTTPSVR)
   ```

   To see if the server has been started successfully, look for the ADMIN entries under the **Subsystem/Job** heading and the QTMHHTTP entry under the **User** heading.

The HTTP administrator server port number is 2010.

Note: Port 2001 is also available for a non-secure connection for the HTTP administrator server instance. If you use the non-secure port, your passwords and other information will not be encrypted.

To stop the HTTP administrator server instance, do the following:

1. Log on to the iSeries machine as a user with QSECOFR class authority.
2. From the command line, type the following:
   ```
   ENDTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)
   ```
3. To verify, type the following from the OS/400 command line:
   ```
   WRKACTJOB SBS(QHTTPSVR)
   ```

   and ensure that there are no entries for ADMIN under the **Subsystem/Job** heading and QTMHHTTP is not under the **User** heading.

The HTTP administrator server port number is 2010.

Note: Port 2001 is also available for a non-secure connection for the HTTP administrator server instance. If you use the non-secure port, your passwords and other information will not be encrypted.

Chapter 20. User IDs required when administering WebSphere Commerce

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.

iSeries user profiles

Two iSeries user profiles are used and referred to frequently when you install and configure WebSphere Commerce:

- A user profile which you create and use to install WebSphere Commerce and start the Configuration Manager. To install and configure WebSphere Commerce, you must use an iSeries user profile of `USRCLS(*SECOFR)` or use the `QSECOFR` user profile. If you need to create a user profile, refer to "Creating an iSeries user profile" on page 110.
- A user profile which is created by the Configuration Manager when you create a WebSphere Commerce instance. This user profile is also referred to as the "instance user profile." A user profile of `USRCLS(*USER)` is created by the Configuration Manager each time you create a WebSphere Commerce instance.

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 any machine that is on the same network as WebSphere Commerce, and has the Configuration Manager client installed.

WebSphere Commerce Site Administrator

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

WebSphere Commerce Accelerator

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

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

WebSphere Commerce Administration Console

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

`https://`*`host_name`*`:8002/adminconsole`

WebSphere Commerce Organization Administration Console

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

`https://`*`host_name`*`:8004/orgadminconsole`

The initial Site Administrator user ID and password are specified during the creation of a WebSphere Commerce instance. WebSphere Commerce requires that the Site Administrator 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 the same character.
- The password does not repeat the same character more than 3 times.

Creating an iSeries user profile

Before you install WebSphere Commerce, ensure that you have access to the `QSECOFR` user profile, or an iSeries user profile of `USRCLS(*SECOFR)`. This user profile must have a CCSID other than 65535, and should either have English language settings, or language settings that match the default language you will choose for your instance.

If you need to create an iSeries user profile, you can either use the OS/400 command line or use iSeries Access. If you are using the command line, do the following to create a user profile:

1. Enter `CRTUSRPRF`.
2. Press PF4 for a prompt.
3. Complete the necessary parameters, and then press Enter to create the user profile.

If you are using iSeries Access, do the following to create a user profile:

1. On the navigation tree, double-click the iSeries server where you want to create the new user.
2. Double-click **Users and Groups**.
3. Click **All Users**. A list of all of the users on the iSeries displays in the right panel.
4. Right-click **All Users**, then select **New User**. A New User window opens.
5. Enter the required information, and then press Add to create the user profile.

The iSeries user profile should be created with the following localized settings:

Table 2. Localized settings for iSeries user profiles

Language	CCSID	LangID	CountryID
English	37	ENU	US
French	297	FRA	FR
German	273	DEU	DE
Italian	280	ITA	IT
Spanish	284	ESP	ES
Brazilian Portuguese	37	PTB	BR
Japanese	5035	JPN	JP
Korean	933	KOR	KR
Traditional Chinese	937	CHT	TW
Simplified Chinese	935	CHS	CN

Using an iSeries user profile other than those defined above may work, but has not

been tested.

Part 7. Appendixes

Appendix A. Known problems and limitations

This section covers known problems and limitations with WebSphere Commerce. Refer to the README file for any late-breaking problems or limitations.

Additional troubleshooting information can be gathered by turning on the trace feature for WebSphere Commerce in WebSphere Application Server. For more information on the trace feature, refer to *WebSphere Commerce Administration Guide*.

Web server problems and limitations

Secure (HTTPS) URLs do not work

If any of the secure URLs for WebSphere Commerce do not work, the SSL certificate for the Web server may be missing or expired.

Refer to the Web server documentation for information on installing or updating the SSL certificate.

WebSphere Commerce instance problems and limitations

WebSphere Commerce instance does not start properly

Attempting to start a WebSphere Commerce instance may fail for a number of reasons. As this instance is started on your iSeries system within a QShell session, the following error may be posted when an instance does not start successfully:

```
EJB6121: Application server did not start.
```

Some of the key problems with starting a WebSphere Commerce instance are listed here:

- The instance name may not be entered correctly.

  On iSeries systems that support both upper and lower case characters, it is necessary to enter the correct case for your *instance_name* OR *payments_instance_name* when invoking the `startServer` command. As an example, if your *instance_name* is defined as `demostore` and the following command is entered:

  ```
  startServer WC_DEMOSTORE
  ```

  the instance will not start.

  In the log file *WAS_userdir*`/logs/WC_demostore/native_stdout.log`, the following error messages are posted:

  ```
  WSVR0004E: The server name, WC_DEMOSTORE, is not a valid name.
  WSVR0009E: Error occurred during startup.
  ```

  Return to the QShell session and ensure that the correct case for the *instance_name* is specified for the `startServer` command.
- Port conflicts may exist. Check the `SystemOut.log` file found in the *WAS_userdir*`/logs/WC_`*instance_name* directory.

  Following are some messages that may be logged to indicate that a port conflict exists:

```
SRVE0146E: Failed to Start Transport on host, port 9093.
The most likely cause is that the port is already in use.

NMSV0011E: Unable to start bootstrap server using port 9810.
Verify that no servers or other processes are already using the bootstrap
server port.

ADMC0015W: SOAP connector failed to start with exception: Address already
in use.
```

To correct a port conflict issue, you will need to select another port number that will not conflict with one that is already running on the iSeries system. Issue the following command at an OS/400 command line:

```
NETSTAT *CNN
```

The command returns a list of ports that are currently active on your system. Ensure that the port number you selected is currently not being used by another application on the iSeries system.

Note: Refer to "Port numbers used by WebSphere Commerce" on page 4 to ensure you do not select a port that may already be reserved by WebSphere Commerce.

Once you have determined the new port number, do the following:

1. From a Web browser, navigate to the WebSphere Application Server Administrative Console. For details, refer to "Starting the WebSphere Application Server Administrative Console" on page 92.
2. Enter a User ID and click **OK**
3. On the left side, expand **Servers** and click **Application Servers**
4. Click on the link for the Application Server that has a port conflict
5. The next page shows General Properties and Additional Properties. Scroll down to the listing of the **Additional Properties**
6. Depending on the message that was posted in the `SystemOut.log` file, you may need to change a Transport Port or an End Point Port.

   If the message indicates a problem with a Transport port, click **Web Container → HTTP transports**

   If the message indicates a problem with a Bootstrap, SOAP connector or another port, click **End Points**.
7. For HTTP transports, click on the appropriate link under the **Host** column.

   For End Points, click on the appropriate link under the **End Point Name** column.
8. Change the port number to the new port number. Click **Apply**
9. The Message(s) box should have the following posted:

   ```
   Changes have been made to your local configuration. Click Save to
   apply changes to the master configuration.
   ```
10. Click on the **Save** in the Message(s) box.
11. A **Save to Master Configuration** message box is displayed. Click the **Save** button within this message box.
12. When the save has completed, the Administrative Console home page is shown.
13. On the left side, expand **Environment** and click **Update Web Server Plugin**
14. Click **OK** to update the plug-in configuration file.

15. The message box will post the following entry when the plug-in has been updated:

    ```
    The web server plugin configuration was updated successfully.
    ```

16. Logout from the Administrative Console, and restart your WebSphere Commerce instance.

Usage notes for the console install

Note the following if you plan to use the console install method for your WebSphere Commerce installation:

- An [*n*] displays at the end of most selection lines. The *n* is a number representing the default choice for the selection. For example, the following line indicates that the default selection is the next panel:

  ```
  Press 1 for Next panel, 3 to Cancel or 4 to Redisplay [1]
  ```

  You can press Enter to accept this choice to proceed to the next panel. If you wish to cancel or re-display the panel, type the valid selection number and press **Enter**.
- When you enter a number for a selection, do not reposition your cursor. Inserting extra spaces before the number will produce an error message.
- As you progress through the installation, you will note that some information scrolls off the 5250 screen. In these instances, you can page back in order to view this information. Some of the sections that may have scrolled information include:
  - Welcome page
  - Software License Agreement
  - Selection of Install Types
  - Confirmation page of installation options
- The greater-than symbol (>) at the left side of the screen indicates that you have made a selection.
- Some panels allow more than one selection. Entering the appropriate selection numbers will show the selection as chosen. Choosing the same selection again will remove it from the selected list. When all selections have been made, select the choice to continue to the next panel.
- If the WebSphere Application Server product is being installed with WebSphere Commerce or WebSphere Commerce Payments, you will be asked to insert CDs for the WebSphere Application Server product. The message will be similar to the following:

  ```
  Insert the IBM WebSphere Application Server CD into the CD-ROM drive
  and specify the location of the CD-ROM drive in the field below.
  ```

  Specifying the location of the CD-ROM drive is not required. Insert the CD in the same CD-ROM drive from where the WebSphere Commerce installation was started.
- If the WebSphere Application Server product is being installed, a status bar is displayed showing the percentage completed. When the second WebSphere Application Server CD is inserted, the original status bar will not be completed. Instead, additional vertical bars will be displayed on another line starting at the left side.
- For some National Language installations, the status bar for both the WebSphere Commerce and WebSphere Application Server installation will display as a vertical bar.

- When the installation of the WebSphere Application Server product completes, the following message is displayed:

  ```
  Insert the IBM WebSphere Commerce - Express CD 1 and specify the location
  of the CD-ROM drive below.
  ```

  Specifying the location of the CD-ROM drive is not required. Insert the CD in the same CD-ROM drive that was used for the installation of WebSphere Application Server.
- After the installation of WebSphere Commerce completes, exit the PASE session with the F3 key.

WebSphere Commerce Payments instance problems and limitations

Remote WebSphere Commerce Payments instance does not work

If a remote WebSphere Commerce Payments instance does not work, the WebSphere Commerce Payments instance may be configured incorrectly.

To check the configuration of WebSphere Commerce Payments, do the following:

1. On the WebSphere Commerce node, open the following file in a text editor:

   WC_userdir/instances/*WC_instance_name*/xml/
   WC_instance_name.xml

   where *WC_instance_name* is the name of the WebSphere Commerce instance.

   Default values for *WC_userdir* are listed in "Path variables" on page v.
2. Search for the following text:

   ```
   <PaymentManager
   ```
3. Ensure that the `Hostname` entry under the found text points to the Web server node used by WebSphere Commerce Payments.

   The entry should contain the fully qualified host name of the Web server node.
4. Save any changes and exit the text editor.
5. On the WebSphere Commerce Payments node, open the following file in a text editor:

   Payments_userdir/instances/*payments_instance_name*/xml/
   Payments_instance_name.xml

   where *payments_instance_name* is the name of the WebSphere Commerce Payments instance.

   Default values for *Payments_userdir* are listed in "Path variables" on page v.
6. Search for the following text:

   ```
   <PMWCSRealm
   ```
7. Ensure that the `Hostname` entry under the found text points to the Web server node used by WebSphere Commerce.

   The entry should contain the fully qualified host name of the Web server node.
8. Save any changes and exit the text editor.
9. Restart WebSphere Commerce and WebSphere Commerce Payments. For instructions, refer to Chapter 15, "WebSphere Commerce tasks," on page 83.

WebSphere Commerce Payments instance does not start

The WebSphere Commerce Payments instance will not start if WebSphere Application Server is configured to use a port other than port 9090.

To confirm that this the cause of the problem, do the following:

1. Open the following in a text editor:

   WAS_userdir/logs/*payments_instance_name*_Commerce_Payments_Server/SystemOut.log

   where *payments_instance_name* is the name of the WebSphere Commerce Payments instance.

   Default values for *WAS_userdir* are listed in "Path variables" on page v.
2. Search the file for the following message:

   ```
   SRVE0146E: Failed to Start Transport on host *, port 9090.
   ```

If you have this error message, change the WebSphere Commerce Payments port. For instructions, refer to "Considerations when creating a WebSphere Commerce Payments instance" on page 45.

If you do not have this error message, contact your IBM support representative.

Appendix B. Uninstalling WebSphere Commerce Components

This chapter describes how to uninstall various WebSphere Commerce components

Uninstalling WebSphere Commerce

Note: Uninstalling WebSphere Commerce from your iSeries system will also uninstall WebSphere Commerce Payments if the Payments product is installed on the same iSeries system.

To uninstall WebSphere Commerce, do the following:

1. Start a QShell session by entering the following command:
   ```
   STRQSH
   ```
2. Change your current directory to the WebSphere Commerce `uninstall` directory
   ```
   cd WC_installdir/_uninst
   ```
3. Run the uninstall command:
   ```
   uninstall.qsh
   ```
4. When the Welcome message displays, press **1** for the Next panel.
5. The WebSphere Commerce directory displays along with the features that will be uninstalled. Press **Enter** to begin the uninstallation.

   Note: The listing will show many features that may not be OS/400 specific, or may duplicate an OS/400 entry. These extra entries can be ignored and will not cause any problems during the uninstall.
6. The uninstallation of WebSphere Commerce begins with the message `'Uninstalling product...'`.
7. When the uninstallation is complete, the following message will be displayed: `'The InstallShield Wizard has successfully uninstalled IBM WebSphere Commerce. Choose Finish to exit the wizard.'`

   Press **Enter** to exit the Wizard.
8. Press the **F3** function key to exit the QShell session.

Default values for *WC_installdir* are listed in "Path variables" on page v.

Uninstalling WebSphere Commerce Configuration Manager client

To uninstall the Configuration Manager client on the Windows PC where the Configuration Manager client is installed, do the following:

1. Navigate to the *cfgmgr_installdir* directory, where *cfgmgr_installdir* is the directory where the Configuration Manager client is installed.
2. In the *cfgmgr_installdir* directory, navigate to the `_uninst` directory.
3. Double-click the file `uninstall.exe`.
4. A WebSphere Commerce window displays. Select the preferred Language and click **OK**.

   Note: The language selection is only available in the National Language version of WebSphere Commerce and not available for the English version.

5. On the Welcome Page, click **Next**.
6. The next screen shows the *cfgmgr_installdir* directory.
7. Click **Next** to begin uninstalling the Configuration Manager client code.
8. On the InstallShield Wizard screen, click **Finish** to close the wizard.

Alternately, you can also use the **Add/Remove Programs** option from the Control Panel on the Windows PC. Clicking on **Change/Remove** will begin the uninstall program. Follow steps 4 through 8 as above.

Note: The *cfgmgr_installdir* directory may remain after the uninstallation completes. At this time, you can delete this directory on your Windows PC.

Uninstalling WebSphere Application Server

For information on uninstalling WebSphere Application Server, refer to the installation and initial configuration book available through the @server iSeries WebSphere Application Server library:

```
http://www.ibm.com/servers/eserver/iseries/software/
     websphere/wsappserver/docs/docws50.html
```

Uninstalling WebSphere Application Server Network Deployment

For information on uninstalling WebSphere Application Server Network Deployment, refer to the installation and initial configuration book available through the @server iSeries WebSphere Application Server Network Deployment library:

```
http://www.ibm.com/servers/eserver/iseries/software/
     websphere/wsappserver/docs/docnd50.html
```

Reinstalling WebSphere Commerce and its Components

If you are reinstalling the entire WebSphere Commerce package follow the instructions in Part 2, “Installing WebSphere Commerce,” on page 13.

If you are reinstalling portions of WebSphere Commerce, refer to Chapter 5, “Completing a custom installation,” on page 23. You will need to delete and recreate your instance following the instructions in Part 3, “Creating a WebSphere Commerce and a WebSphere Commerce Payments instance,” on page 33.

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 technical library

WebSphere Commerce online help

The WebSphere Commerce online information is your primary source of information for customizing, administering, and reconfiguring WebSphere Commerce. After you have installed WebSphere Commerce, you can access topics in the online information by visiting the following URL:

`https://host_name:8000/wchelp/`

where *host_name* is the fully qualified host name of your WebSphere Commerce instance as defined in "Variables used in this book" on page v.

WebSphere Commerce technical library

The WebSphere Commerce technical library is available at the following URL:

`http://www.ibm.com/software/commerce/library/`

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 WebSphere Commerce technical library Web site.

WebSphere Commerce Payments information

Help for WebSphere Commerce Payments is available by clicking the following help icon:

This help icon displays on the WebSphere Commerce Payments user interface within the WebSphere Commerce Administration Console and WebSphere Commerce Accelerator and in the standalone WebSphere Commerce Payments user interface at the following URL:

`http://host_name:http_port/webapp/PaymentManager`

or

`https://host_name:ssl_port/webapp/PaymentManager`

Where the variables are defined as follows:

host_name
The fully qualified TCP/IP host name of the Web server associated with WebSphere Commerce Payments.

http_port
The HTTP port used by WebSphere Commerce Payments. The default HTTP port is 5432.

ssl_port
The SSL port used by WebSphere Commerce Payments. The default SSL port is 5433.

If WebSphere Commerce Payments is SSL-enabled, you can use either URL. If IWebSphere Commerce Payments is not SSL-enabled, you can only use the non-secure URL (http).

Help is also available at the following URL:

`http://host_name:http_port/webapp/PaymentManager/language/docenter.html`

or

`https://host_name:ssl_port/webapp/PaymentManager/language/docenter.html`

Where the variables are defined as follows:

host_name
The fully qualified TCP/IP host name of the Web server associated with WebSphere Commerce Payments.

http_port
The HTTP port used by WebSphere Commerce Payments. The default HTTP port is 5432.

ssl_port
The SSL port used by WebSphere Commerce Payments. The default SSL port is 5433.

language
A language code for the language in which the help page will be displayed. It is two letters for most languages. The language codes are as follows:

Language	**Code**
German	de
English	en
Spanish	es
French	fr
Italian	it
Japanese	ja
Korean	ko
Brazilian Portuguese	pt
Simplified Chinese	zh
Traditional Chinese	zh_TW

More information about WebSphere Commerce Payments and the Payments Cassettes is available at the WebSphere Commerce Technical Library:

http://www.ibm.com/software/commerce/library/

IBM HTTP Server information

IBM HTTP Server information is available at the IBM HTTP Server Web site:

http://www.ibm.com/software/webservers/httpservers/

The documents are in HTML format, PDF files, or both.

WebSphere Application Server information

WebSphere Application Server information is available at the WebSphere Application Server InfoCenter:

http://www.ibm.com/software/webservers/appserv/infocenter.html

DB2 Universal Database information

DB2 documentation is available at the DB2 Technical Library:

http://www.ibm.com/software/data/db2/library/

For information about SQL statements, refer to the DB2 Universal Database for iSeries SQL Reference at the following URL:

http://publib.boulder.ibm.com/html/as400/infocenter.html

Other IBM publications

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

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