IBM WebSphere Commerce
for IBM @server iSeries 400

IBM

# Quick Beginnings

*Version 54*

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for IBM @₀server iSeries 400

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*Version 54*

> **Note:**
>
> Before using this information and the product it supports, be sure to read the general information under "Notices" on page 53.

**First Edition, First Revision (May 2002)**

This edition applies to version 5.4 of IBM® WebSphere Commerce for IBM @server iSeries 400® and to all subsequent releases and modifications until otherwise indicated in new editions. Make sure you are using the correct edition for the level of the product.

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# Contents

# Part 1. Getting ready to install WebSphere Commerce

# Chapter 1. Welcome to WebSphere Commerce

This book describes how to install and configure the main components of
WebSphere Commerce 5.4 on a single machine, and how to create one of the
sample stores. It is intended for system administrators or for anyone else
responsible for performing installation and configuration tasks. For more advanced
configuration scenarios please refer to the WebSphere Commerce 5.4 Installation
Guides.

For instructions on the installation and configuration of WebSphere® Commerce
Studio, please refer to the *IBM WebSphere Commerce Studio for Windows NT® and
Windows® 2000 Installation Guide*.

To learn about last-minute changes to the product, see the README file. This file, as
well as an updated copy of this book are available as PDF files from the Library →
Technical Library section of the WebSphere Commerce Web site:

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

## Conventions used in this book

This book uses the following 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. |
| *host_name* | The fully qualified host name of your WebSphere Commerce server (for example, `server1.torolab.ibm.com` is fully qualified). |
| *instance_name* | The name of the WebSphere Commerce instance with which you are working. |

## Installation paths

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

| WebSphere Commerce 5.4 | `/QIBM/ProdData/WebCommerce` |
| --- | --- |
| WebSphere Application Server 4.0 | `/QIBM/ProdData/WebAsAdv4` |

## Supported Web browsers

You can only access the WebSphere Commerce tools and online help using
Microsoft® Internet Explorer 5.5 from a machine running a Windows operating
system on the same network as your WebSphere Commerce machine. You must
use Internet Explorer full version 5.50.4522.1800 (also known as Internet Explorer

5.5 Service Pack 1 and Internet Tools) with the latest critical security updates from Microsoft— prior versions do not support full functionality of WebSphere Commerce tools.

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

- Netscape Navigator® 4.7
- Microsoft Internet Explorer 5.5

## Port numbers used by WebSphere Commerce

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

| Port Number | Used By |
|---|---|
| 80 | IBM HTTP Server |
| 443 | IBM HTTP Server. This secure port requires SSL. |
| 900 | WebSphere Application Server bootstrap |
| 1099 | WebSphere Commerce Configuration Manager |
| 2222 | WebSphere Application Server accessed as user `wasuser` |
| 8000 | WebSphere Commerce Tools. This secure port requires SSL. |
| 8080 | WebSphere Test Environment for VisualAge® for Java™ |
| 9000 | WebSphere Application Server Location Server |
| 16900 | A dummy, non-SSL port number, reserved for WebSphere Commerce. |
| 16999 | WebSphere Commerce Cache Daemon (default) |

## Locales used by WebSphere Commerce

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

| Language | Locale Code |
|---|---|
| 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 |
| --- | --- |

# Quick reference to user IDs, passwords and Web addresses

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

| User ID | Default values | Notes |
| --- | --- | --- |
| iSeries user profiles | | Two iSeries user profiles are used and referred to frequently when you install and configure WebSphere Commerce:<br><br>• A user profile which you create and use to install WebSphere Commerce and access 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 9.<br><br>• 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. If you need to create a user profile, refer to "Creating an iSeries user profile" on page 9. |
| Configuration Manager user ID | The default Configuration Manager user ID and password are `webadmin` and `webibm` | The Configuration Manager tool's graphical interface allows you to modify the way WebSphere Commerce is configured. You can access Configuration Manager from any machine, which supports Microsoft Internet Explorer 5.5, and which is on the same network as your WebSphere Commerce machine. |

| WebSphere Commerce Instance Administrator | The default Instance Administrator user ID is `wcsadmin` and the default password is `wcsadmin`. **Note:** The `wcsadmin` user ID should never be removed, and should always have instance administrator authority. | The Instance Administrator user ID and password apply to the following WebSphere Commerce tools: <br><br> • WebSphere Commerce Accelerator. To access the WebSphere Commerce Accelerator from a remote machine running a Windows operating system, open your Internet Explorer Web browser, and type the following Web address: <br><br> `https://host_name:8000/accelerator` <br><br> • WebSphere Commerce Administration Console. To access the WebSphere Commerce Administration Console from a remote machine running a Windows operating system, open your Internet Explorer Web browser, and type the following Web address: <br><br> `https://host_name:8000/adminconsole` <br><br> • Store Services. You can access your Store Services page by opening your Web browser and typing the following Web address: <br><br> `https://host_name:8000/storeservices` <br><br> WebSphere Commerce requires that the user ID and password adhere to the following rules: <br><br> • The password must be at least 8 characters in length. <br> • The password must include at least 1 numeric digit. <br> • The password does not contain more than 4 occurrences of a character. <br> • The password does not repeat the same character more than 3 times. |
|---|---|---|
| Payment Manager Administrator | When you install Payment Manager, the WebSphere Commerce Administrator ID, `wcsadmin`, is automatically assigned the Payment Manager Administrator role. Do not delete or rename the logon user ID `wcsadmin`, and do not change the preassigned Payment Manager role of `wcsadmin` as WebSphere Commerce functions related to Payment Manager integration will not work. | The Payment Manager Administrator role enables a user ID to control and administer Payment Manager. |

# 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.

## Knowledge requirements

To install and configure WebSphere Commerce, you require knowledge of the following:
- Your operating system
- The Internet
- Web server operation and maintenance
- IBM DB2® for iSeries
- WebSphere Application Server Administrative Console
- Basic operating system commands

To create and customize your store, you require knowledge of the following:
- WebSphere Application Server
- IBM DB2 for iSeries
- HTML and XML
- Structured Query Language (SQL)
- Java programming

Please refer to the *WebSphere Commerce Programmer's Guide*, and the *WebSphere Commerce Store Developer's Guide* for more information on customizing your store or mall. These books are included with both WebSphere Commerce and WebSphere Commerce Studio.

## Prerequisite hardware

You must ensure that you meet the following minimum hardware requirements before installing WebSphere Commerce:
- 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
  - iSeries Server Model 270 with processor feature 2252
  - iSeries Server Model 820 with processor feature 2396
- 1 gigabyte 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 1, or later (in an unrestricted state)
- IBM Developer Kit for Java (TM) (5722-JV1), Version 1.3 (option 5)
- AS/400 Toolbox for Java (5722-JC1).
- OS/400 Qshell Interpreter (5722-SS1 option 30) is needed for using WebSphere Application Server scripts as well as for local installation of WebSphere Application Server (installing to your iSeries™ server from the CD-ROM of your iSeries server).
- OS/400 Host Servers (5722-SS1 option 12) is needed for remote installation of WebSphere Application Server (installing to your iSeries server from the CD-ROM of a workstation). 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 iSeries.
- OS/400 Directory Services (5722-SS1 option 32) is not required to install, configure, or run WebSphere Application Server. Install it if you plan to secure WebSphere resources using Lightweight Directory Access Protocol (LDAP) or Lightweight Third-Party Authentication (LTPA). OS/400 Directory Service allows you to store and manage user registry information for LDAP and LTPA.
- IBM TCP/IP Connectivity Utilities for iSeries (5722-TC1) is required to configure and run WebSphere Application Server. It is also needed if you are using remote installation (installing WebSphere Application Server on your iSeries server from the CD-ROM of a workstation). To start TCP/IP on iSeries, enter the Start TCP/IP (STRTCP) command on the OS/400 command line.
- An HTTP server product is not needed for installation. However, it is required to support requests for servlets and JavaServer Pages resources managed by WebSphere Application Server. It is also needed if you plan to use Secure Sockets Layer (SSL) protocol. If you plan to deploy only enterprise beans, it is not needed. WebSphere Commerce supports IBM HTTP Server for iSeries (5722-DG1) - for servers at V5R1 or above.
- OS/400 Digital Certificate Manager (5722-SS1 option 34) is not required for installation. However, it is needed if you plan to use SSL protocol.
- A Cryptographic Access Provider product is not needed for installation, but it is required if you plan to use SSL protocol. You must install 5722-AC3 (128-bit).
- DB2 Universal Database™ (UDB) for iSeries or DB2 UDB for AS/400 must be configured to work with WebSphere Application Server for iSeries if you plan to connect to the local database.
- DB2 (R) Query Manager and SQL Development Kit for iSeries (5722-ST1) is an optional product that can be helpful in developing client applications.

# 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).

If you need to create an iSeries user profile, you can either use the OS/400 command line or use Client 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 Client 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 Enter to create the user profile.

# Part 2. Installing WebSphere Commerce

# Chapter 3. Understanding iSeries unique concepts

This chapter describes concepts that are unique to the IBM @server iSeries 400 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 `QWEBCOMM` library in the QSYS.LIB file system. It contains the following types of objects:

```
*PGM
*SRVPGM
*MSGF
*FILE - QYWCTXTSRC (Contains the README)
*CMD
*PNLGRP
*PRDDFN
*PRDLOD
```

# The root file system

The root, or *l*, 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: `/QIBM/UserData/WebCommerce/instances/`*instance_name*.

2. When the instance's Enterprise application is deployed, all of the JSP files and other assets are stored in:

   `/QIBM/UserData/WebASAdv4/`*was_instance_name*`/installedApps/`
     `WC_Enterprise_App_`*instance_name*`.ear`

   Files in this directory can be modified as well.

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 `UserData` path. You should not change the original files, contained in the following path:

`/QIBM/ProdData/WebCommerce`

**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 `/QIBM/UserData/WebCommerce/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. |
| /QIBM/UserData/WebASAdv4/*WAS_instance_name*/ installedApps/WC_Enterprise_App_*Inst_name*.ear | The directory containing instance properties files. For exact location of customized assets, refer to the *WebSphere Commerce Programmer's Guide* |
| */instance_root*/logs | The directory containing WebSphere Commerce log files. |

| Path | Significance |
|---|---|
| /instance_root/xml | The directory containing WebSphere Commerce instance configuration XML files. |
| /instance_root/cache | The directory containing cached files for the instance. |
| /instance_root/sar | The directory containing theWebSphere Commerce store archive file. |

## 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 Operations Navigator for iSeries. To use Client Access™ to perform database queries, do the following:

1. Start Operations Navigator for iSeries from the PC where it is installed.
2. Right-click the **Database** icon 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, see the *AS/400*® *DB2 UDB for AS/400 SQL Reference Information*, SC41-5612-04.

# Chapter 4. Installing IBM WebSphere Commerce

This chapter describes how to install the WebSphere Commerce system on the iSeries. Before beginning, ensure that you have completed the steps that are described in "Creating an iSeries user profile" on page 9.

> **Important**
>
> It is important that you meet the requirements outlined in Chapter 2, "Preinstallation requirements" on page 7; otherwise you may encounter difficulties during the installation process. You must also review the License Agreement (in the WebSphere Commerce media kit) for the product.

The following describes how to install WebSphere Commerce using a single-tier configuration. If you require instructions for a more complex configuration, refer to the *WebSphere Commerce Installation Guide*.

## IBM WebSphere Payment Manager 3.1.2

IBM WebSphere Payment Manager 3.1.2 is a protocol-independent payment transaction server for an online merchant. It provides cash register functionality to a site, supporting multiple payment methods using protocol-specific cassettes. These cassettes are software components that can be attached to the Payment Manager framework to interpret generic payment and administrative commands into payment protocol-specific requests, which are then forwarded to the appropriate recipient, such as the payment gateway of an Acquirer institution. The end result is similar to when a cashier swipes a payment card at the checkout counter in a traditional store.

### Before installing Payment Manager

Read the latest README file, `readme.framework.html`, available on the Payment Manager Web site at the following Web address:

`www.ibm.com/software/webservers/commerce/paymentmanager/support/readme31.html`

### Installing Payment Manager

To use a local Payment Manager instance, install Payment Manager on your WebSphere Commerce machine. To install Payment Manager, do the following:

1. Insert the Payment Manager CD into your CD-ROM drive.
2. Use the Restore Licensed Program (**RSTLICPGM**) command to install the Payment Manager for iSeries product.
3. Specify the Payment Manager product number and the device from which the product is to be installed. For example: `RSTLICPGM LICPGM(5733PY3) DEV(OPT01)`.

### Enabling the WCSRealm

If you create your Payment Manager instance using the **CRTPYMMGR** command, then PSOS400Realm is provided as the supporting default realm. However, to use the WCSRealm where the Payment Manager instance is created, you must

manually configure Payment Manager through the Administration Console. To manually configure your system to use WCSRealm, do the following:

1. Open the WebSphere Application Server Administration Console on the Payment Manager machine.

2. Stop the WebSphere Payment Manager Application Server:

   a. Expand **WebSphere Administrative Domain**.

   b. Expand **Nodes**.

   c. Expand *node name*.

   d. Expand **Application Servers**.

   e. Select **WPM** *instnace_name* **WebSphere Payment Manager** and click **Stop**.

3. Select the **JVM Settings** tab and scroll down to the System Properties box. Select the **wpm.RealmClass** system property and change the value from:

   ```
   com.ibm.etill.framework.payserverapi.PSOS400Realm
   ```

   to

   ```
   com.ibm.commerce.payment.realm.WCSRealm
   ```

   Click **Apply**.

4. In the Payment Manager instance directory, /QIBM/UserData/PymSvr/*instance_name*/, create an ASCII file called WCSRealm.properties and add the following entries:

   ```
   WCSHostName=domain-qualified host_nameUseNonSSLWCSClient=[0|1]
   WCSWebServerPort=port_number
   WCSWebPath=/webapp/wcs/stores/servlet
   ```

   **Notes:**

   a. Set UseNonSSLWCSClient to 1 if NonSSL is used, or 0 if SSL is used.

   b. Set WCSWebServerPort to the NonSSL WebSphere Commerce port number (for example, 80) if UseNonSSLWCSClient=1, or to the SSL WebSphere Commerce port number (for example, 443) if UseNonSSLWCSClient=0.

   Save the file.

5. Copy WCSRealm.jar to the Payment Manager instance ear directory by running the following command from an iSeries session:

   ```
   CPY OBJ('/QIBM/ProdData/PymSvr/Java/WCSRealm.jar')
   TOOBJ('/QIBM/UserData/WebASAdv4/server/installedApps/
       payment_instance_name_IBM_PaymentManager.ear/WCSRealm.jar')
   ```

   where *server* is the name of the WebSphere Application Server on which you Payment Manager instance is running, and *payment_instance_name* is the name of your Payment Manager instance.

6. Restart the Payment Manager instance from an iSeries session. Use the following command to end the Payment Manager instance:

   ```
   ENDPYMMGR PYMMGR(payment_instance_name) PWD(payment_instance_password)
   ```

   Use the following command to start the Payment Manager instance:

   ```
   STRPYMMGR PYMMGR(payment_instance_name) PWD(payment_instance_password)
   ```

   where *payment_instance_password* is the password provided for the CRTPYMMGR command when creating the Payment Manager instance.

For more information on the WCSRealm, refer to the WebSphere Commerce online help.

## Installing Payment Manager cassettes

If you install Payment Manager you may also want to install the accompanying cassettes. To install a cassette, perform the following steps:

1. Insert the Payment Manager CD into your CD-ROM drive.

2. Use the Restore Licensed Program (**RSTLICPGM**) command to install the Payment Manager SET, CyberCash, VisaNet, or BankServACH cassette for iSeries product.

3. Specify the Payment Manager product number, the device from which the product is to be installed, and the appropriate option number for the cassette you want to install.

   - To install the SET cassette, type:

     ```
     RSTLICPGM LICPGM(5733PY3) DEV(OPT01) OPTION(1)
     ```

   - To install the CyberCash cassette, type:

     ```
     RSTLICPGM LICPGM(5733PY3) DEV(OPT01) OPTION(2)
     ```

   - To install the VisaNet cassette, type:

     ```
     RSTLICPGM LICPGM(5733PY3) DEV(OPT01) OPTION(3)
     ```

   - To install the BankServACH cassette, type:

     ```
     RSTLICPGM LICPGM(5733PY3) DEV(OPT01) OPTION(4)
     ```

# Installing WebSphere Application Server 4.0

The installation process consists of two steps:

1. Installing the WebSphere Application Server run-time environment on your iSeries server.

2. Installing the WebSphere Administrative Console component on your workstation.

You can install the Administrative Console before you install the product on your iSeries server, but you cannot start the Administrative Console until you have successfully installed and started the WebSphere Application Server environment.

To install WebSphere Application Server on your iSeries server and to install the WebSphere Administrative Console on your workstation complete the following steps:

1. Install the WebSphere Application Server environment on your iSeries server:

   a. Ensure that the iSeries server has the prerequisite software. Refer to "Prerequisite software" on page 8

   b. Install the WebSphere Application Server product.

      1) Place the WebSphere Application Server 4.0 Advanced Edition for iSeries CD-ROM in the CD-ROM drive of your iSeries server.

         **Notes:**

         a) Do not use the WebSphere Application Server Advanced Edition for Windows NT, AIX, Solaris, or Linux CD-ROM (which also came in your WebSphere Application Server Advanced Edition for iSeries package) for this set of steps.

         b) Your user profile must have *ALLOBJ authority.

      2) Enter the following command exactly as shown on one continuous line. Be sure to use the same capitalization as shown:

```
RUNJVA CLASS(SETUP) CLASSPATH('/QIBM/ProdData/Java400/jt400ntv.jar:
/QOPT/WebSphere/OS400:/QOPT/WebSphere/OS400/INSTALL.JAR:
/QOPT/WebSphere') PROP((os400.runtime.exec QSHELL)
(java.compiler jitc) (java.version 1.3))
```

> **Note:** This command has been wrapped for display purposes. Enter it as one command.

c. Verify that the correct OS/400 cumulative PTF package is installed.

1) Sign on to your server.

2) Enter the Display PTF Status (**DSPPTF**) command on the OS/400 command line. The first PTF listed with a status of **Temporarily applied** correlates to the cumulative PTF that is installed on the server.

   You must order and install the prerequisite OS/400 cumulative PTF package before proceeding to the next step in this process.

d. Install additional PTFs required for WebSphere Application Server.

Fixes for the WebSphere Application Server product are shipped as group PTFs for iSeries. The latest WebSphere Application Server 4.0 for iSeries group PTF must be loaded and applied prior to starting WebSphere for the first time. This group PTF includes the latest WebSphere for iSeries PTFs that bring the product up to the latest WebSphere for iSeries level, which at time of printing is 4.0.2. This group PTF also contains miscellaneous PTFs for IBM Developer Kit for Java, DB2 Universal Database for iSeries, and IBM HTTP Server that are not included in other group PTFs or cumulative PTF packages. These miscellaneous PTFs must be installed or the administrative server may fail when it is started.

See the PTFs page on the WebSphere Application Server Web site to determine which group PTF you must order and install for your WebSphere Application Server V4.0 edition (Advanced or Advanced Single Server) and OS/400 release level. This page is available using the **PTFs** link at the following URL:

www.ibm.com/servers/eserver/iseries/software/websphere/wsappserver/

All product prerequisites must be installed before you install the group PTF package. For example, the Java PTFs contained in the package will not be installed if IBM Developer Kit for Java 1.3 (5722-JV1 option 5) is not installed on the server. If all prerequisites are not installed, WebSphere Application Server may fail when it is started.

The following instructions describe how to install the WebSphere Application Server for iSeries group PTF:

1) Verify that all of the prerequisite software is installed.

2) Place the WebSphere for iSeries group PTF CD-ROM into the CD-ROM drive on your iSeries server.

3) Sign on to the system console. Your user profile must have *ALLOBJ authority.

4) Enter the following command to bring your system into a restricted state:

   ```
   ENDSBS SBS(*ALL)
   ```

5) Enter the following command from the OS/400 command line once the system is in a restricted state:

   ```
   GO PTF
   ```

6) Select option 8 (Install program temporary fix package) from the menu.

7) Specify the following parameter values and press Enter:

a) Specify the device for your CD ROM drive (for example, OPT01)

b) Automatic IPL: Y

c) PTF type: 1 (All PTFs)

This will restart the server after all of the PTFs have been installed.

8) For information on the release as well as a description of known problems and workarounds, see the product Release Notes for the version of WebSphere that you are installing after installing the group PTF. The Release Notes are available on the WebSphere Applicaiton Server 4.0 Advanced Edition documentation page.

2. Install the WebSphere Administrative Console on your workstation:

a. Install the Administrative Console component.

1) Insert the WebSphere Application Server 4.0 Advanced Edition CD-ROM for your workstation's operating system. For example, if you are using Windows NT, insert the WebSphere Application Server 4.0 Advanced Edition for Windows NT CD-ROM.

   **Note:** Do not use the WebSphere Application Server 4.0 Advanced Edition for iSeries CD-ROM (which also came in your WebSphere Application Server Advanced Edition for iSeries package) for this set of steps.

2) If you are using a Windows workstation and Autorun is enabled, the Windows InstallShield program starts automatically. If Autorun is not enabled, run the Windows InstallShield program by using Windows Explorer to navigate to your CD-ROM drive. Double-click the setup.exe file.

   If you are using an AIX, Solaris, HP-UX, or Linux workstation, go to the subdirectory that is named for your operating system, (AIX, Solaris, HP, or Linux) and type ./install.sh to run the install script file.

3) Select the language for the installation and click **OK**.

4) Click **Next**.

5) If you have a previous version or versions of WebSphere Application Server installed on the workstation machine, the Previous Installation Detected panel is displayed. Click Next to install a new version of the WebSphere Administrative Console on the workstation.

   If this panel is not displayed, continue to the next step.

6) On the Installation Options panel, select Custom Installation. Click **Next**.

7) On the Choose Application Server Components panel, select Administrator's Console and Application and Development Tools, and IBM JDK 1.3.0. Click **Next**.

8) Type the host name. To determine the host name, follow these steps after you verify that the WebSphere Application Server environment has been started:

   a) Enter the Configure TCP/IP (CFGTCP) command on the OS/400 command line.

   b) Select option 12 (Change TCP/IP domain information).

   c) Note the host name value. This value should be used as the host name parameter.

**Note:** You must have a host name entered on iSeries. The WebSphere Administrative Console will not connect if the entry is not present. If you do not have a host name entry, add it.

Additionally, the host name parameter is case-sensitive. For example, if the host name on iSeries is in lowercase, you must also use the lowercase name when connecting the WebSphere Administrative Console to the iSeries server. This method works in most simple cases. More complicated scenarios, with systems that have multiple IP addresses, multiple alias names, or multiple Domain Name System (DNS) entries, may require additional TCP/IP configuration.

The WebSphere Administrative Console uses port 900 by default. If you changed the default port with the `admin.bootstrapPort` parameter when starting the administrative server, you need to specify that port for the WebSphere Administrative Console.

9) Type the name of the destination directory. This is the directory on the workstation that will contain the Administrative Console installation. Click **Next**.

10) On the Select Program Folder panel, click **Next** to accept the default program folder name.

11) Verify the options that you selected. To make changes, click **Back**. To continue with the installation, click **Next**.

The Installing IBM WebSphere Application Server panel is displayed, indicating the progress of the installation process.

12) The installation program copies all files to the workstation and performs any necessary configuration. The Setup Complete panel is displayed when the installation is complete. Click **Finish**.

b. Install the appropriate FixPak for the Administrative Console.

Fixes for the Administrative Console are shipped as a FixPak that is installed on each Administrative Console machine. Each FixPak includes the fixes from the previous FixPak. For example, FixPak 2 contains new fixes, plus the fixes from FixPak 1.

The correct FixPak must be installed on the Administrative Console workstation so that the Administrative Console version matches the version of WebSphere Application Server installed on your iSeries server. For example, if you install version 4.0.4 of WebSphere Application Server, you must also install FixPak 4 to upgrade the Administrative Console to version 4.0.4.

To determine which level of WebSphere Application Server you have, compare the Edition, Version, and Build values in the product.xml files. On the workstation, the file is located in the `was_install_dir`\properties\com\ibm\websphere, where `was_install_dir` is the WebSphere installation directory. On your iSeries server, the file is located in `/QIBM/ProdData/WebASAdv4/properties/com/ibm/websphere`. If the workstation and server are at the same level, these files should contain the same values for Edition, Version, and Build.

For information about obtaining and installing FixPaks for the Administrative Console, see the WebSphere Application Server 4.0 for iSeries Release Notes.

> **Note:** The instructions on how to install FixPaks are located in the Installation Instructions section of the Release Notes.

If you have problems with any part of the installation, see the troubleshooting information section of the WebSphere Application Server documentation center.

# Installing WebSphere Commerce

The following steps describe how to install IBM WebSphere Commerce. You must install WebSphere Application Server before you continue with the steps in this section.

> **Note:** Refer to the product's README for information detailing what is contained on each of your software CD's. The README can be viewed at one of the following URLs:
> www.software.ibm.com/software/webservers/commerce/wc_pe/lit-tech-general.html
> ▶ Business www.software.ibm.com/software/webservers/commerce/wc_be/lit-tech-general.html

If you are installing WebSphere Commerce on multiple machines, repeat the following steps for each machine on which you want to install WebSphere Commerce.

To install all components of the WebSphere Commerce system, do the following:

1. If the products in the "Software Requirements" section are not already installed, install them using the documentation that is provided with them.
2. Log on as the user profile that you created in "Creating an iSeries user profile" on page 9.
3. Type the following command on a command line:
   CHGMSGQ QSYSOPR *BREAK SEV(70)
4. Insert the WebSphere Commerce CD into your iSeries CD-ROM drive.
5. Type RSTLICPGM on the command line.
6. Press PF4 for a prompt.
7. Type the LICPGM (5733WC5) and DEV name in the appropriate entry fields.
8. Type the feature code for the language feature that you want to install in the LNG field, and press Enter.
9. If you are installing WebSphere Commerce on a system where the Primary language is not English, you will be asked to answer a message Load another volume into device OPTxx. Insert the CD containing the language MRI into the CD drive, and answer the message. On an English-only system, simply proceed to the next step.
10. An acknowledgment message displays, indicating that *BASE has been restored.
11. If you were required to insert a CD containing a language MRI other than English above, remove this CD now and insert the WebSphere Commerce CD.
12. Type RSTLICPGM on the command line.
13. Press PF4 for a prompt.
14. Type the LICPGM (5733WC5) and DEV name in the appropriate entry fields.
15. Type OPTION (1) and RSTOBJ (*PGM) to install additional WebSphere Commerce components, and press Enter. An acknowledgment message displays, indicating that Option 1 has been restored.

16. Type `RSTLICPGM` on the command line.

17. Press PF4 for a prompt.

18. Type the LICPGM (5733WC5) and DEV name in the appropriate entry fields.

19. Type `OPTION (2)`, and `RSTOBJ (*PGM)` to install additional WebSphere Commerce components, and press Enter. An acknowledgment message displays, indicating that Option 2 has been restored. You have now completed installing WebSphere Commerce Professional Edition.

20. ▶ Business   If you are installing WebSphere Commerce Business Edition, you must complete these remaining steps. Type `RSTLICPGM` on the command line.

21. Press PF4 for a prompt.

22. Type the LICPGM (5733WC5) and DEV name in the appropriate entry fields.

23. Type `OPTION (3)` and `RSTOBJ (*PGM)` to install additional WebSphere Commerce Business Edition components, and press Enter. An acknowledgment message displays, indicating that Option 3 has been restored. You have now completed installing WebSphere Commerce Business Edition.

# Part 3. Configuring WebSphere Commerce

# Chapter 5. Creating an instance with the Quick Configuration command

The Quick Configuration command allows users to quickly create an instance without lauching the Configuration Manager graphic user interface. A native command, **CRTWCSINST**, is used instead. The Quick Configuration command allows you to quickly and easily get up and running with a working instance. To increase the ease of use, instances created using the Quick Configuration command do not use some of the advanced configuration options that are avalaible through the Configuration Manager user interface.

For more advanced configurations, refer to *the WebSphere Commerce Installation Guide*.

## Assumptions and Restrictions

Creating an instance using the Quick Configuration command either assumes the following, or imposes the following restrictions:

* The command creates the instance in the default WebSphere Application Server instance listening on port 900.
* The instance directory is /QIBM/UserData/WebCommerce/instances/*instance_name*.
* The instance loads the boot strap data for each of the ten supported languages.
* The instance uses a local database.
* Auctions are not configured. If required, you must lauch the Configuration Manager after instance creation to configure auctions.
* If you choose to use Payment Manager, the Quick Configuration command configures a local Payment Manager instance that has the same instance name as the WebSphere Commerce instance.
* You must ensure that your Java Virtual Machine is started with the correct `file.encoding` property which match the localized settings for the instance user profile as defined in "Creating an iSeries user profile" on page 9. To do this, complete the following steps:
    1. Use the DSPUSRPRF command to determine the Home Directory (HOMEDIR) of your SECOFR user profile. Ensure that the HOMEDIR exists. If it does not, create it.
    2. 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:
        - China
          ```
          file.encoding=Cp1381
          ```
        - Korea
          ```
          file.encoding=KSC5601
          ```
        - Taiwan
          ```
          file.encoding=Cp950
          ```
        - Japan

```
file.encoding=SJIS
```
– For 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:

– China
```
COPY OBJ('/QIBM/ProdData/WebCommerce/config/SystemDefault_CN.properties')
  TOOBJ('home_directory/SystemDefault.properties')
```
– Korea
```
COPY OBJ('/QIBM/ProdData/WebCommerce/config/SystemDefault_KR.properties')
  TOOBJ('home_directory/SystemDefault.properties')
```
– Taiwan
```
COPY OBJ('/QIBM/ProdData/WebCommerce/config/SystemDefault_TW.properties')
  TOOBJ('home_directory/SystemDefault.properties')
```
– Japan
```
COPY OBJ('/QIBM/ProdData/WebCommerce/config/SystemDefault_JP.properties')
  TOOBJ('home_directory/SystemDefault.properties')
```
– For all other languages
```
COPY OBJ('/QIBM/ProdData/WebCommerce/config/SystemDefault.properties')
  TOOBJ('home_directory/SystemDefault.properties')
```

3. Once the file is created, verify that it is tagged with 819, and contains the proper ASCII data. Sign off and back on before running the **CRTWCSINST** command.

## Launching the Quick Configuration command

To create an instance using the Quick Configuration command, enter the following at an OS/400 command prompt:

```
CRTWCSINST INSTNAME(instance_name)
INSTPWD(instance_password)
INSTHOST(instance_hostname)
MERKEY(instance_merchant_key)
DFTLANG(instance_default)
USEPAYMENT(usePayment)
CNNCTTIME(connect_time)
PORT(port_number)
SERVERSTRT(serverStart)
SERVERSHUT(serverShutdown)
```

where

**instance_name**
the name of the WebSphere Commerce instance that you want to create, currently is restricted to 9 characters.

**instance_password**
the instance user profile password, currently is restricted to 10 characters.

**instance_hostname**
the hostname used by the instance, a non-zero string.

**instance_merchant_key**
the merchantkey used by the instance, a 16-digit hexadecimal, case-sensitive string.

**instance_default**
is the default language for the instance. The valid values are: *EN, *FR, , *DE, *IT, *ES, *PT, *ZH_CN, *ZH_TW, *KO, *JA.

**usePayment**

\*YES option will create a local Payment Manager instance. ″Local″ in the sense that the payment instance is on the same system as the WebSphere Commerce instance and shares the same instance name, hostname (hence, HTTP server) and instance library as the WebSphere Commerce instance. `*NO` option will not create a payment instance. The Payment Manager instance password is the same as the WebSphere Commerce instance user profile password.

**connect_time**

the amount of connect time in minutes

**serverStart**

\*YES option starts the Configuration Manager server in the background before calling CRTWCSINST, \*NO option will not start the Configuration Manager server. If you choose the \*NO option, the Configuration Manager server should be started by the user manually, by running the STRWCSCFG command before running the CRTWCSINST command. The default is \*YES.

**serverShutdown**

\*YES option will stop the Configuration Manager server after an instance is created. This is good for security reasons. \*NO option will not stop the Configuration Manager server after an instance is created. You may want to do this when creating multiple instances so that you don't have to start the Configuration Manager server again. The default is \*YES

**port_number**

the port number the Configuration Manager server listens on. Default is 1099.

The **CRTWCSINST** command starts the Configuration Manager server as a job running in the background, and then starts the Quick Configuration program. The Quick Configuration program first attempts to connect to the server. The program exits if it cannot connect to the server in a period of CNNCTTIME time (specified by the user, default to 5 mintues). After it connects to the server, the program parses the input parameters. It also checks if each input is valid. The Quick Configuration program then constructs the instance configuration XML file, and proceeds to create the WebSphere Commerce instance. If the instance is created successfully, a ″Successfully added instance to the instance list″ message will be displayed on the Java shell screen. If the instance is not created successfully, a ″Failed to add instance. Please check the configuration log for more information″ message will be displayed on the Java shell screen.

## Verifying your instance creation

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

- /QIBM/UserData/WebCommerce/instances/*instance_name*/ xml/*instance_name.xml*. This file contains all of the configuration information about your WebSphere Commerce instance.
- /QIBM/UserData/WebCommerce/instances/*instance_name*/ logs/schema.log. This file contains information about the WebSphere Commerce database creation. There should be no schema.err log file.
- /QIBM/UserData/WebCommerce/instances/*instance_name*/ logs/messages.txt /QIBM/UserData/WebCommerce/instances/*instance_name*/ logs/RESWCSID.txt. These files contain information about the WebSphere Commerce database population process.
- /QIBM/UserData/WebCommerce/instances/*instance_name*/ logs/WASConfig.log. This file contains information about the installation and configuration of your new WebSphere Commerce instance, within WebSphere Application Server.

- `/QIBM/UserData/WebCommerce/instances/`*instance_name*`/ logs/wcs.log`. This file describes the operation of the WebSphere Commerce application server. Use this log to ensure that the server has started correctly.
- `/QIBM/UserData/WebCommerce/instances/`*instance_name*`/ logs/CreatePayment.log`, if Payment Manager is used. This file contains information about the WebSphere Payment Manager instance creation.

## Compiling the JavaServer™ Pages files

Compiling the JavaServer Pages™ will significantly reduce the amount of time needed to load the WebSphere Commerce tools. To batch compile JavaServer Pages (JSP) files, do the following:

1. Log on to the iSeries server using a user profile which has *SECOFR authority.
2. To mass compile the JSP files run the following commands using the QSHELL (on one line each):

```
STRQSH

/QIBM/ProdData/WebCommerce/bin/WCSJspBatchCompiler
    -nameServerHost host_name
    -enterpriseApp "instance_name - WebSphere Commerce
        Enterprise Application"
    -webModule 'WC Stores' -keepgenerated true

/QIBM/ProdData/WebCommerce/bin/WCSJspBatchCompiler
    -nameServerHost host_name
    -enterpriseApp "instance_name - WebSphere Commerce
        Enterprise Application"
    -webModule "WC Tools" -keepgenerated true
```

where

**host_name**
    is the name of the node; usually this is the short host name of the machine. This parameter is mandatory. It should match the host name in option 12 of CFGTCP.

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

Several errors will be logged when you perform these compiles. Ignore them.

## The next step

After you have configured and started your WebSphere Commerce instance, you can create a store using the instructions in Chapter 6, "Creating a store from a sample store archive" on page 33. If you need to start your WebSphere Commerce instance, refer to Appendix A, "Starting and stopping components" on page 39.

# Part 4. Creating a store with WebSphere Commerce

# Chapter 6. Creating a store from a sample store archive

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

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

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

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

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

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

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

To create a store using one of the sample stores, do the following:
1. Create a store archive.
2. Publish a store archive.

## Creating a store archive

To create a store archive using one of the sample stores, do the following:
1. Ensure the following servers are running:
   - IBM HTTP Server Stores instance
   - IBM HTTP Server Tools instance
   - IBM WebSphere AdminServer
   - Websphere Commerce Server *instance_name*

   **Note:** To ensure that the WebSphere Commerce Server *instance_name* is running check the WebSphere Commerce Administration Console

2. Ensure the Payment Manager Application Server is started in the WebSphere Application Server Administration Console.
3. Start the IBM Payment Manager instance used by your WebSphere Commerce instance, by doing the following:
   a. Open an iSeries command session:
   b. Enter the following command:

      STRPYMMGR

   You are prompted to enter your Payment Manager instance name and password. The Payment Manager instance name is the same as the WebSphere Commerce instance name. The Payment Manager instance password is the same as the WebSphere Commerce instance password.
4. Start Store Services by opening Microsoft Internet Explorer 5.5 and typing the following URL:

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

   The **Store Services Logon** page displays. Enter the default Instance Administrator user ID (wcsadmin), and the default password (wcsadmin) and click **Log on**. You will be asked to change your password the first time you log in.
5. The **Create Store Archive** page displays. In the **Store archive** field, type the name of your store archive. The extension .sar is added to the name you type, for example, *Mystore*.sar. This name becomes the filename for the store archive. When you finish creating your store archive, it is saved in the following location:

   /QBIM/UserData/WebASAdv4/was_instance_name/installedApps/
      WC_Enterprise_App_wcinstancename.ear/wcstores.war/Mystore.sar
6. In the **Store directory** field, type the directory name for your store. The directory name defines the directory to which the web assets will be published on the server. When the store archive is published, it will be published to the store directory defined here by default. For example, if you enter the directory name "Mystore" in the **Store directory** field, the following directory is created:

   /QBIM/UserData/WebASAdv4/was_instance_name/installedApps/
      WC_Enterprise_App_wcinstancename.ear/wcstores.war/Mystore
7. ▶ Business ◀ From the **Store owner** drop-down list, select the organization that owns the store, for example Seller Organization.

   **Note:** The Default Organization is available for customers who do not have a buying organization. Do not select the default organization as your store owner.
8. From the **View** drop-down list, select which sample store you would like to view.
9. From the **Sample** list box, select the store archive on which you will base your store. A description of the sample displays in the Sample description box. To view the sample store first, click **Preview**.
10. Click **OK**.
11. A dialog box opens informing you that your store archive was created successfully. Click **OK**.
12. The Store Archive list displays. Note that the store archive you created displays in the list and that the name in the Store name field is the same as the name of the sample store. You can change this name using the Store Profile notebook.

You have now created a new store archive, based on a sample store. As a result, the new store archive contains all of the same information as the sample store. When you are creating your own store, you will want to change this information. For more details on changing this information, see the WebSphere Commerce online help and the *IBM WebSphere Commerce Store Developer's Guide*. For the purpose of this guide, do not change this information now.

## Publish a store archive

Publishing a store archive to a WebSphere Commerce Server allows you to create a running store. You have two options for publishing a store archive:

- Publish a store archive from Store Services
- Publish a store archive from the command line

This section will only cover publishing from Store Services. Additional information on publishing is available in the WebSphere Commerce online help and *IBM WebSphere Commerce Store Developer's Guide*.

## Publish a store archive from Store Services

Publishing a store archive to a WebSphere Commerce Server allows you to create a running store. To publish a store archive, complete the following steps:

1. Ensure the following servers are running:
   - IBM HTTP Server Stores instance
   - IBM HTTP Server Tools instance
   - IBM WebSphere AdminServer
   - Websphere Commerce Server *instance_name*

   **Note:** To ensure that the WebSphere Commerce Server *instance_name* is running check the WebSphere Application Server Administration Console

2. Ensure the Payment Manager Application Server is started in the WebSphere Application Server Administration Console.
3. Start the IBM Payment Manager instance used by your WebSphere Commerce instance, by doing the following:
   a. Open an iSeries command session:
   b. Enter the following command:
      STRPYMMGR

   You are prompted to enter your Payment Manager instance name and password. The Payment Manager instance name is the same as the WebSphere Commerce instance name. The Payment Manager instance password is the same as the WebSphere Commerce instance password.
4. Ensure that you have Site Administrator or Store Administrator access. If you have Store Administrator access, ensure that the access is for all stores.
5. From the **Store Archive** list in Store Services, select the check box beside the store archive you want to publish.
6. Click **Publish...**. The Publish Store Archive page displays.
7. Select your desired publishing options. For more information on publishing options, click **Help**.

   **Note:** To create a fully functional store, select all publishing options, including the product data option, the first time you publish a store archive.

8. Click **OK**. While the store publishes you are returned to the Store Archive list page. The publishing state is reflected in the Publish status column. Depending on the speed of your system, it may take several minutes to complete the publishing process. Click **Refresh** to update the status.

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

10. When publishing is complete, click **Launch Store** to view and test your store. When you have finished, bookmark the site and close the browser.

### Compiling the JavaServer Pages files

Compiling the JavaServer Pages files will significantly reduce the amount of time needed to load your store. To batch compile JavaServer Pages (JSP) files, refer to "Compiling the JavaServer™ Pages files" on page 30.

**Important:**

- Only one store archive can be published at a time. Concurrent publishing is not supported and may cause the publish of both stores to fail.

- During publish, the consistency checker confirms that the files referenced by the store archive exist. If the consistency check finds an error, the error will be written to the log. Publishing continues as normal.

- Before republishing a store, delete the files from following directory: `/QIBM/UserData/WebCommerce/instances/`*instance_name*`/cache`.

  While in the store development phase, you should disable caching. To do this, open the Caching panel of the Configuration Manager, and ensure that Enable Cache is deselected.

- When you launch the store from Store Services, you are logged into the store with the same user name and password that you used to log into Store Services. If you change your password in the store, you are also changing it for that user. Instead, to test the features in the store, including changing your password, bookmark the site, close the browser, then log on to the store again. You can also launch your store by entering the following URL in a browser:

  `https://`*host_name*`/webapp/wcs/stores/`*store_directory*`/index.jsp`

## Placing a test order at your store

To place a test order at your store, do the following:

1. Open your store by doing the following:

   a. In the Store Services window, select your store and click **Publish Summary**.

   b. On the Publish Summary screen, select **Launch Store**.

   c. A window opens asking for the Web application Web path for the store. Enter the appropriate path (the default is `/webapp/wcs/stores`).

   d. Bookmark your store's location in your Web browser.

   e. Close all of your existing Web browsers, and open a new Web browser.

   f. Navigate to your Store's home page.

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

3. Complete the order process. For testing purposes you can use the credit card number 0000000000000000 (16 zeros) for VISA. An order confirmation page displays, confirming that your order is complete.

# Part 5. Appendixes

# Appendix A. Starting and stopping components

At various times during the installation process you are required to start and stop components of WebSphere Commerce. The following instructions describe how to start and stop the components successfully.

**Note:** The very 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 the WebSphere Commerce instance

There are two ways to start your WebSphere Commerce instance. You can either run an OS/400 system command, or use the WebSphere Admin Console. The instructions for both methods are listed below:

- To start the WebSphere Commerce instance using an OS/400 system command, run the following command (on one line):

  ```
  STRWCSSVR INSTNAME(instance_name)
  ```

  where

  **instance_name**
  is the name of your WebSphere Commerce instance as specified in the Configuration Manager.

  **Notes:**
  1. If security is enabled for your administrative server, ensure you have completed the steps in "Using STRWCSSVR and ENDWCSSVR in a secure environment" on page 41.
  2. If security is enabled, and you get the following errors when you start WebSphere Commerce instance:

     ```
     Unexpected Java Exception: org.omg.CORBA.NO_PERMISSION: Failed mutual
          authentication handshake. Session does not exist in the session table
     ```

     You must adjust the `com.ibm.CORBA.sessionGCinterval` setting in the `sas.server.props` file. By default, it is set to 5 minutes. If the `com.ibm.CORBA.sessionGCinterval` property is not listed in the file, add it at the end of the file. For more information, refer to the following Web site:

     ```
     publib.boulder.ibm.com/was400/40/AE/english/docs/secsapp.html
     ```

- To start the WebSphere Commerce instance using the WebSphere Admin Console, perform the following steps:
  1. Log on to the iSeries server using the instance user profile.
  2. From the OS/400 command line, type:

     ```
     WRKACTJOB  SBS(QEJBADV4)
     ```

  3. If there are no jobs in this subsystem, type the following from an OS/400 command line and wait until QEJBADMIN and QEJBMNTR start:

     ```
     STRSBS SBSD(QEJBADV4/QEJBADV4)
     ```

     This will also start all WebSphere Application Server instances that were running when the subsystem was ended.

> **Note:** This command will only start the default WebSphere Admin server. For more information, refer to the following Web address:
>
> publib.boulder.ibm.com/was400/40/AE/english/docs/admmwas.html

4. If QEJBADV4 is already there, but your WebSphere Application Server instance is not listed under QEJBADV4, you must start your WebSphere Application Server instance by performing the following steps:

**Staring the WebSphere Application Server instance from the iSeries command line**

Enter the following command on one line:

```
SBMJOB CMD(QSYS/CALL PGM(QEJBADV4/QEJBMNTR) PARM('-p'
   '/QIBM/UserData/WebASAdv4/WAS_instance/
   properties/admin.properties'))  JOB(MONITOR_JOB_NAME)
   JOBD(QEJBADV4/QEJBJOBD)  JOBQ(QEJBADV4/QEJBJOBQ)  USER(QEJB)
```

where *WAS_instance* is the WebSphere Application Server instance name, and *MONITOR_JOB_NAME* is the monitor job name which must be 10 characters or less.

**Staring the WebSphere Application Server instance from the QSHELL**

Enter the following commands:

a. STRQSH

b. /QIBM/ProdData/WebASADV4/bin/strwasinst -instance
   *WAS_instance*

where *WAS_instance* is the WebSphere Application Server instance name.

5. Start the WebSphere Commerce instance from the WebSphere Admin Console by doing the following:

a. On a Windows workstation, open an MS-DOS command window, and run the following command:

AdminClient *host_name port_number*

where *host_name* is the fully qualified, case-sensitive host name of your iSeries WebSphere Commerce machine, and *port_number* is the port number that you assigned to the WebSphere Application Server.

b. Expand **WebSphere Administrative Domain**.

c. Expand **Nodes**.

d. Expand the HOST_NAME.

e. Expand **Application Servers**

f. Right-click *instance_name* – **WebSphere Commerce Server** and select **Start**.

If your WebSphere Commerce machine is slow, increase the Ping timeout and Ping initial timeout values so that your WebSphere Commerce instance can start. To do this, perform the following steps:

1. On a Windows workstation, open an MS-DOS command window, and run the following command:

AdminClient *host_name port_number*

2. Expand *HOST_NAME*.

3. Select *instance_name* - **WebSphere Commerce Server** and then select the **Advanced** tab.

4. Increase the values of `Ping timeout` and `Ping initial timeout`, depending on the speed of your machine. The default values are 100000 seconds for `Ping timeout`, and 150000 seconds for `Ping initial timeout`.

5. Click **Apply**.

## Using STRWCSSVR and ENDWCSSVR in a secure environment

To use STRWCSSVR and ENDWCSSVR when security is enabled for your administrative server, you must perform the following steps:

1. Open the `sas.client.props` property file for editing. This file is located in the `properties` subdirectory the instance root of your administrative server. For the default administrative server, this file is located in the `/QIBM/UserData/WebASAdv4/default/properties` directory.

2. Edit or add the following property-value pairs:

   ```
   com.ibm.CORBA.loginSource=properties
   com.ibm.CORBA.loginUserid=user_id
   com.ibm.CORBA.principalName=domain/user_id
   com.ibm.CORBA.loginPassword=password
   ```

   where

   **user_id**
       is your user ID

   **domain**
       is the domain name

   **password**
       is the password for the specified user ID. Set the password to the appropriate unencrypted value.

3. Encode the password using the PropFilePasswordEncoder utility.

   a. Start the QShell environment by entering `STRQSH` on an OS/400 command line.

   b. Enter the following on a single line:

   ```
   /QIBM/ProdData/WebASAdv4/bin/PropFilePasswordEncoder
       /QIBM/UserData/WebASAdv4/wasinstanceName/properties/sas.client.props -SAS
   ```

   You can find the encoding algorithm in `admin.properties` file, XOR is the default setting. If you use the OS/400 password encoding algorithm, please refer to the following Web site for details:

   `publib.boulder.ibm.com/was400/40/AE/english/docs/secpmgt.html`

## Stopping the WebSphere Commerce instance

There are two ways to stop your WebSphere Commerce instance. You can either run an OS/400 system command, or use the WebSphere Admin Console. The instructions for both methods are listed below:

- To start the WebSphere Commerce instance using an OS/400 system command, run the following command:

  ```
  ENDWCSSVR INSTNAME(instance_name)
  ```

  where

  **instance_name**
      is the name of your WebSphere Commerce instance as specified in the Configuration Manager.

If security is enabled for your administrative server, ensure you have completed the steps in "Using STRWCSSVR and ENDWCSSVR in a secure environment" on page 41.

- To stop the WebSphere Commerce instance using the WebSphere Admin Console, perform the following steps:

  1. On a Windows workstation, open an MS-DOS command window, and run the following command:

     ```
     AdminClient host_name port_number
     ```

     where *host_name* is the fully qualified, case-sensitive host name of your iSeries WebSphere Commerce machine, and *port_number* is the port number that you assigned to the WebSphere Application Server.

  2. Expand the HOST_NAME.

  3. Right-click *instance_name* – **WebSphere Commerce Server** and select **Stop**.

  4. A message displays, stating that the server stopped successfully. Your WebSphere Commerce instance will no longer be listed under the QEJBADV4 subsystem on the iSeries system.

## Starting and stopping IBM HTTP Server

### Starting your IBM HTTP Server instance

There are two IBM HTTP Server instances associated with your WebSphere Commerce instance. One is called the Stores HTTP server, and the other is called the Tools HTTP server. The distinction is made so that you can disable access to the Tools HTTP server to eliminate potential security problems.

You can start each of the IBM HTTP Server instances from either the command line or a Web browser.

In the following instructions, *web_server_instance_name* is the same as the name of your WebSphere Commerce instance.

To start your IBM HTTP Server Stores instance from the command line, do the following:

1. Log on to the iSeries using the instance user profile.
2. From the command line, type:

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

To start your IBM HTTP Server Tools instance from the command line, do the following:

1. Log on to the iSeries using the instance user profile.
2. From the command line, type:

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

   **Note:** You must append the letter T to the end of the *web_server_instance_name* in order to indicate that you want to start the Tools HTTP server instance.

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

1. Ensure that the HTTP administrator server instance is running by typeing 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 go to the following URL:

```
https://host_name:2010
```

where 2010 is the Web configuration server port. If you are using the non-secure HTTP administrator server at port 2001, replace this URL with:

```
http://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 **Configuration and Administration** link.
5. Select **Server Instances**.
6. Select **Work with server instances**.
7. From the drop-down list, select the Web server instance that you want to start, and click **Start**.

   **Note:** The Tools HTTP server instance will have T appended to the *web_server_instance_name*.

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 either IBM HTTP Web Server instance from either the command line or the Web browser.

In the following instructions, web_server_instance_name is the same as the name of your WebSphere Commerce instance.

To stop your Stores HTTP server instance from the command line, do the following:

1. Log on to the iSeries server using the instance user profile.
2. From the command line, type:

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

To stop your Tools HTTP server instance from the command line, do the following:

1. Log on to the iSeries server using the instance user profile.
2. From the command line, type:

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

   **Note:** You must append the letter T to the end of the *web_server_instance_name* in order to indicate that you want to start the Tools HTTP server instance.

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

1. Type the following URL:

   ```
   https://host_name:2010
   ```

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

   ```
   http://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 **Configuration and Administration** link.
4. Select **Server instances**.
5. Select **Work with server instances**.
6. From the drop-down list, select the Web server instance that you want to stop, and click **Stop**.

   **Note:** The Tools HTTP server instance will have T appended to the *web_server_instance_name*.

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 using the instance user profile.
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)
   ```

   If the server has been started successfully, you will see ADMIN under the **Subsystem/Job** heading and QTMHHTTP 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 server using the instance user profile.
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.

## Starting and stopping Payment Manager

To start Payment Manager, start the Payment engine as described in "Starting the Payment Manager engine".

### Starting the Payment Manager engine

There are two ways to start the Payment Manager Engine. The two methods are as follows:

**Using the OS/400 Tasks page**
1. Access the OS/400 Tasks page from a web browser by typing `hostname:2001/` in the URL field. The IBM HTTP administrator server instance must be started to access the Tasks page.
2. Select **IBM WebSphere Payment Manager for AS/400**.
3. Select a Payment Manager instance from the drop-down menu
4. Select **Start/End**
5. Enter the Payment Manager instance password, if requested, and then click **Start**

**Using an OS/400 Command line**
Use the **STRPYMMGR** command to start the Payment Manager.

When the Payment Manager engine is started, the corresponding IBM HTTP Server and WebSphere Payment Manager Application Server are also started. To verify that these processes are active, issue the work with active job (**WRKACTJOB**) command:

- The Payment Manager engine runs as a job that has the Payment Manager instance name under the QSYSWRK subsystem. This job will end automatically after the Payment Manager instance has been successfully started.
- The IBM HTTP Server runs as multiple jobs with the Payment Manager instance name under the QHTTPSVR subsystem.
- The WebSphere Payment Manager Application Server runs as a job with the name `PYM_` under the QEJBADV4 subsystem.

### Accessing the Payment Manager user interface

After starting the Payment Manager engine and WebSphere Payment Manager Application Server , do the following to access the Payment Manager user interface:

1. Go to the following Web address:

   `http://host_name/PaymentManager/`

   where *host_name* is the Payment Manager instance host name.
2. On the Payment Manager Logon window, enter the Payment Manager administrator's user ID and password, and click **OK**. The default user ID and password are both `wcsadmin`.

   For information on creating Payment Manager user IDs refer to one of the following:

- If you are using the WCSRealm, refer to the WebSphere Commerce online help. You are using WCSRealm if the default Payment Manager administrator's user ID is wcsadmin.
- If you are using the PSOS400Realm, refer to the Payment Manager Administrator's Guide. You are using PSOS400Realm if the default Payment Manager administrator's user ID is QPYMADM.

**Tip:** You can also access a subset of the Payment Manager user interface function from the WebSphere Commerce Administration Console.

# Stopping the Payment Manager

There are two ways to stop the Payment Manager. The two methods are as follows:

**Using the OS/400 Tasks page**
1. Access the iSeries Tasks page
2. Select **Payment Manager for iSeries Tasks** Web page
3. Select a Payment Manager instance from the drop-down menu
4. Select **Start/End**
5. Enter a password, if requested, and then click **End**

**Using an OS/400 Command line**
   Use the **ENDPYMMGR** command to stop the Payment Manager.

The preceding two methods stop the WebSphere Payment Manager Application Server. The IBM HTTP Server is not stopped as other applications may be using the same HTTP server.

## Stopping Payment Manager servlets using WebSphere Application Server

When using WebSphere Application Server 4.0, you can stop all servlets by stopping the WebSphere Payment Manager application server. To stop the WebSphere Payment Manager application server:

1. Go to the WebSphere Application Server Administration Client.
2. Select **WPM** *instance_name* **WebSphere Payment Manager**.
3. Right-click the application server and select **Stop**.
4. Exit the Administration Client.

# Appendix B. Where to find more information

More information about the WebSphere Commerce system and its components is available from a variety of sources in different formats. The following sections indicate what information is available and how to access it.

## WebSphere Commerce information

The following are the sources of WebSphere Commerce information:

- WebSphere Commerce online help
- WebSphere Commerce portable document format (PDF) files
- WebSphere Commerce Web site

### Using the online help

The WebSphere Commerce online information is your primary source of information for customizing, administering, and reconfiguring WebSphere Commerce. After you have installed WebSphere Commerce, you can access topics in the online information by visiting the following URL:

`http://`*`host_name`*`/wchelp/`

where *host_name* is the fully qualified TCP/IP name of the machine where you have installed WebSphere Commerce.

### Locating the printable documentation

Some of the online information is also available on your system in PDF files, which you can view and print using Adobe® Acrobat® Reader. You can download Acrobat Reader for free from the Adobe Web site at the following Web address:

`http://www.adobe.com`

### Viewing the WebSphere Commerce Web site

WebSphere Commerce product information is available at the WebSphere Commerce Web site:

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

A copy of this book, and any updated versions of this book, are available as PDF files from the Library section of the WebSphere Commerce Web site. In addition, new and updated documentation may also be available from the Web site.

## IBM HTTP Server information

IBM HTTP Server information is available at the following Web address:

`http://www.ibm.com/software/webservers/httpservers/`

The documents are in HTML format, PDF files, or both.

# Payment Manager information

Payment Manager documents are available after installation of the Payment Manager and can be accessed from the Payment Manager Tasks Web page, accessible from the AS/400 Tasks Page at `http://host_name:2001` where `host_name` is the TCP/IP host name of the AS/400 system. The link name in the navigation frame is **Documentation**.

Additional Payment Manager information is available through the library link on the Payment Manager Web site:

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

The following Payment Manager documentation is available:

- The *IBM WebSphere Payment Manager for Multiplatforms Installation Guide* PDF file format (`paymgrinstall.pdf`)
- The *IBM WebSphere Payment Manager Administrator's Guide* PDF file format (`paymgradmin.pdf`)
- The *IBM WebSphere Payment Manager for Multiplatforms Pogrammer's Guide and reference* PDF file format (`paymgrprog.pdf`)
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- The Payment Manager README file, in HTML format (`readme.framework.html`)
- The IBM Cassette for SET README file, in HTML format (`readme.set.html`)
- The IBM Cassette for VisaNet README file, in HTML format (`readme.visanet.html`)
- The IBM Cassette for CyberCash README file, in HTML format (`readme.cybercash.html`)
- The IBM Cassette for BankServACH README file, in HTML format (`readme.bankservach.html`)

The *Secure Electronic Transactions* section of the WebSphere Commerce online help also contains Payment Manager information.

# WebSphere Application Server

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

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

# DB2 Universal Database information

DB2 documentation is available at the following Web address:

`http://www.ibm.com/software/data/db2`

# Downloadable tools

## WebSphere Commerce Installation and Configuration Checker

WebSphere Commerce Installation and Configuration Checker, or IC Checker is a standalone, downloadable problem determination tool, which enables users to verify the installation and configuration of WebSphere Commerce. IC Checker gathers configuration data and logs, and performs simple error-checking. The following are some details pertaining to WebSphere Commerce IC Checker:

*   Products currently supported include WebSphere Commerce Suite 5.1 Start and Pro Editions, WebSphere Commerce 5.1 Business Edition, and WebSphere Commerce 5.4 Professional and Business Editions.
*   The tool can be accessed and downloaded online from the following URL locations:

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

# Other IBM publications

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

# Appendix C. Program specifications and specified operating environment

This version of WebSphere Commerce supports the following operating environment:

- OS/400 for iSeries V5R1

WebSphere Commerce 5.4 includes the following components:

**WebSphere Commerce Server**
> The WebSphere Commerce Server handles the store, and commerce-related functions, within your e-commerce solution. Functionality is provided by the following components:
>
> - Tools (Store Services, Loader package, Commerce Accelerator, Administration Console)
> - Subsystems (catalog, member, negotiation, order)
> - Product Advisor
> - Common server run time
> - System management
> - Messaging services
> - WebSphere Application Server

**Store Services**
> The Store Services provides a central location for creating, customizing, and maintaining certain operational features of a store.

**Loader package**
> The Loader package allows the initial load of product information through ASCII and XML files, as well as incremental updates of complete or partial information. Online catalogs are updated using this tool.

**WebSphere Commerce Accelerator**
> Once your store and product data have been created, use the WebSphere Commerce Accelerator to manage your store and to facilitate your business strategies. WebSphere Commerce Accelerator provides an integration point for all functionality that WebSphere Commerce delivers for operating an online store, such as store and product management, marketing, customer orders, and customer service.

**WebSphere Commerce Administration Console**
> The Administration Console allows a Site Administrator or Store Administrator to perform tasks related to site and store configuration, including the following:
>
> - User and group management (access control)
> - Performance monitoring
> - Messaging configuration
> - IBM WebSphere Payment Manager functions
> - Brokat Blaze Rules administration

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

**IBM Payment Manager 3.1.2**
> Payment Manager provides real-time Internet payment processing for merchants using a variety of methods including SET (Secure Electronic Transaction), and Merchant Originated Payment.

**WebSphere Application Server 4.0**
> WebSphere Application Server is a Java-based application environment for building, deploying and managing Internet and Intranet Web applications.

**IBM WebSphere Commerce Analyzer 5.4**
> IBM WebSphere Commerce Analyzer is a new, optionally installed feature of WebSphere Commerce. A WebSphere Commerce-specific entry edition of IBM WebSphere Commerce Analyzer provides reports for customer profiling and monitoring campaign performance. The reports cannot be customized. Note that you cannot install IBM WebSphere Commerce Analyzer without Brio Broadcast Server.

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

**Segue SilkPreview 1.0**
> Segue SilkPreview provides a repository of information to analyze and report results throughout application development.

**WebSphere Commerce 5.4 Recommendation Engine powered by LikeMinds**
> Macromedia LikeMinds provides product recommendations and targeted promotions for each individual Web visitor. It is a personalization server based on collaborative filtering and market basket analysis.

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