

IBM WebSphere Commerce Payments for  
Multiplatforms



# Installation Guide

*Version 3.1*



IBM WebSphere Commerce Payments for  
Multiplatforms



# Installation Guide

*Version 3.1*

**Note**

Before using this information and the product it supports, be sure to read the general information under Appendix B, "Notices", on page 101.

**Tenth Edition (February 2003)**

This edition applies to Version 3.1.3 of IBM WebSphere Commerce Payments for Multiplatforms and to all subsequent releases and modifications until otherwise indicated in new editions.

© Copyright IBM Corporation 2000, 2003. All rights reserved.

US Government Users Restricted Rights — Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

---

# Contents

<b>Preface</b> . . . . .	vii
What's new in this release . . . . .	viii
Frequently used terms. . . . .	x
Conventions in this document . . . . .	x
For more information . . . . .	x
<b>Chapter 1. WebSphere Commerce Payments installation program</b> . . . . .	1
Installation checklist . . . . .	1
<b>Chapter 2. Installation planning</b> . . . . .	3
Planning for workstation platforms (Windows, AIX, Solaris, Linux on Intel). . . . .	3
Planning for Linux for zSeries and S/390. . . . .	4
Choosing your database product. . . . .	4
Installing DB2 UDB, HTTP Server, and WebSphere Application Server. . . . .	5
Planning for iSeries. . . . .	5
Standard configurations for workstation platforms. . . . .	5
Planning decisions for workstation platforms . . . . .	6
Choosing your database product. . . . .	6
JDBC drivers . . . . .	7
Selecting your installation approach. . . . .	7
Checking software versions . . . . .	10
Installing a database (UDB) on workstation platforms . . . . .	11
Manually installing WebSphere Application Server . . . . .	13
Web browsers . . . . .	14
Netscape limitation . . . . .	14
Web servers . . . . .	14
Payment cassettes . . . . .	15
WebSphere Commerce Payments installation . . . . .	15
<b>Chapter 3. Migrating from previous versions of the product</b> . . . . .	17
Migrating from Payment Manager Version 2.2.0 or higher . . . . .	17
Payment cassettes . . . . .	17
Databases . . . . .	18
Pre-Migration considerations . . . . .	18
Upgrading UDB. . . . .	19
Migrating MS SQL databases to UDB . . . . .	21
Migration procedure for iSeries . . . . .	22
Post-migration considerations . . . . .	23
Cassettes . . . . .	23
Removed files . . . . .	23
Backed up files . . . . .	23
<b>Chapter 4. Installing WebSphere Commerce Payments on Windows.</b> . . . . .	25
Windows NT and Windows 2000 platform requirements . . . . .	25
Before installing WebSphere Commerce Payments . . . . .	26
Installation procedure on Windows. . . . .	27
Windows shortcuts . . . . .	29
<b>Chapter 5. Installing WebSphere Commerce Payments on Solaris</b> . . . . .	31
Solaris platform requirements . . . . .	31
Before installing WebSphere Commerce Payments on Solaris . . . . .	32
Solaris kernel configuration parameters . . . . .	33
Installation procedure on Solaris . . . . .	34

<b>Chapter 6. Installing WebSphere Commerce Payments on AIX</b>	37
AIX platform requirements	37
Before installing WebSphere Commerce Payments	38
Installation procedure on AIX	39
<b>Chapter 7. Installing WebSphere Commerce Payments on Linux (Intel)</b>	41
Linux platform requirements	41
Before installing WebSphere Commerce Payments	42
Installation procedure on Linux	43
<b>Chapter 8. Installing WebSphere Commerce Payments on Linux for zSeries and S/390</b>	45
Linux platform requirements	45
Before installing WebSphere Commerce Payments	46
Installation procedure on Linux for zSeries and S/390	47
Installing Cassettes	49
Using DB2 UDB for OS/390 as a remote database on Linux for zSeries and S/390	51
Connecting to DB2 UDB for OS/390 manually	51
Altering the size of the DB2 UDB for OS/390 tablespace	52
<b>Chapter 9. Installing WebSphere Commerce Payments on iSeries</b>	53
iSeries platform requirements	53
Before installing WebSphere Commerce Payments	54
Configuring TCP/IP	55
Setting up the DB2/400 database	56
Installation procedure on iSeries	56
<b>Chapter 10. Post-installation activities</b>	57
Configuring Lotus Domino Server (workstation platforms)	57
Configuring realms	58
Migrating customized configurations in WebSphere Application Server	59
Configuration for remote WebSphere Commerce Payments	59
Installing payment cassettes for WebSphere Commerce Payments	60
Post-installation tasks for the iSeries platform	61
Setting up the WebSphere Commerce Payments administrator	61
Accessing the Payments for iSeries tasks page	62
Creating a WebSphere Commerce Payments instance	62
Add a payment cassette to the WebSphere Commerce Payments instance	63
<b>Chapter 11. Starting WebSphere Commerce Payments</b>	65
Starting WebSphere Commerce Payments on Windows, AIX, Solaris, and Linux platforms	65
IBMPayServer command syntax	65
Starting WebSphere Commerce Payments by entering the password	66
Starting WebSphere Commerce Payments in unattended operation mode	67
Starting WebSphere Commerce Payments on iSeries	67
Starting the Web server	68
Starting IBM HTTP Server on Windows	68
Starting IBM HTTP Server on Solaris	68
Starting IBM HTTP Server on AIX	68
Starting IBM HTTP Server on Linux	68
Starting other Web servers	68
Starting WebSphere Application Server	69
Starting WebSphere Application Server on Windows	69
Starting WebSphere Application Server on Solaris	69

Starting WebSphere Application Server on AIX . . . . .	70
Starting WebSphere Application Server on Linux . . . . .	70
Starting the WebSphere Commerce Payments user interface . . . . .	71
<b>Chapter 12. Troubleshooting . . . . .</b>	<b>73</b>
Summary and trace files on Windows, AIX, Solaris, and Linux platforms . . . . .	73
WebSphere Commerce Payments framework summary file . . . . .	73
Cassette summary file . . . . .	73
Installation trace files. . . . .	74
Error and trace logs . . . . .	74
Service menu (iSeries) . . . . .	75
Troubleshooting your WebSphere Commerce Payments installation . . . . .	75
Installing IBM HTTP Server (workstation platforms) . . . . .	76
Verifying Web server started . . . . .	76
Verifying WebSphere Application Server started . . . . .	77
Fixing WebSphere Application Server problems . . . . .	77
WebSphere Commerce Payments startup errors . . . . .	79
WebSphere Commerce Payments hangs after entering IBMPayserver command (Windows, AIX, Solaris, Linux platforms) . . . . .	79
Internal server error when starting the user interface (Windows, AIX, Solaris, Linux platforms). . . . .	80
IBM HTTP Server start up errors on Windows . . . . .	80
Error initializing the user interface on Windows . . . . .	80
Error logging on to the user interface on Windows . . . . .	80
Error starting WebSphere Application Server (Windows, AIX, Solaris, Linux platforms) . . . . .	81
Failure to connect to the database (Windows, AIX, Solaris, Linux platforms) . . . . .	81
DB2 issues SQL1224N and WebSphere Application Server administration server fails with StaleConnectionException (AIX) . . . . .	82
WebSphere Commerce Payments did not start successfully (Windows, AIX, Solaris, Linux on Intel platforms) . . . . .	82
Error reading configuration table -- could not get logPath (AIX) . . . . .	83
File not found error with WebSphere Application Server . . . . .	83
Error setting the WebSphere Commerce Payments hostname . . . . .	84
Time zone errors . . . . .	84
<b>Chapter 13. Uninstalling WebSphere Commerce Payments . . . . .</b>	<b>85</b>
Stopping WebSphere Commerce Payments . . . . .	86
Stopping WebSphere Commerce Payments . . . . .	86
Stopping WebSphere Commerce Payments servlets using WebSphere Application Server . . . . .	87
Uninstalling WebSphere Commerce Payments on Windows . . . . .	87
Uninstalling WebSphere Commerce Payments on Solaris . . . . .	88
Uninstalling WebSphere Commerce Payments on AIX . . . . .	88
Uninstalling WebSphere Commerce Payments on Linux . . . . .	89
Uninstalling WebSphere Commerce Payments on iSeries . . . . .	89
Emergency uninstall procedure . . . . .	89
Removing WebSphere Commerce Payments from WebSphere Application Server configuration . . . . .	89
Registry, packaging, and directory cleanup. . . . .	90
Uninstalling WebSphere Application Server . . . . .	92
Uninstalling and reinstalling UDB . . . . .	92
Before uninstalling UDB on Windows. . . . .	92
Before uninstalling UDB on Solaris . . . . .	92
Before uninstalling UDB on AIX . . . . .	93
Before uninstalling UDB on Linux . . . . .	93

<b>Appendix A. Customizing the WebSphere Commerce Payments relational database</b> . . . . .	95
Installing the database software. . . . .	95
Setting up the administrator's environment. . . . .	96
Creating the WebSphere Commerce Payments database . . . . .	96
Installing and configuring Oracle . . . . .	97
Using a remote database with WebSphere Commerce Payments . . . . .	97
Server configuration . . . . .	97
Client configuration on Solaris . . . . .	98
<b>Appendix B. Notices</b> . . . . .	101
Trademarks. . . . .	102
<b>Index</b> . . . . .	105



---

# Preface

This guide provides installation information for IBM® WebSphere® Commerce Payments for Windows NT®, Windows® 2000, Sun Solaris, Linux® (for both Linux on Intel workstations and Linux for zSeries™ and S/390®), AIX®, and iSeries™. Read the planning and installation information provided here before you install WebSphere Commerce Payments.

**Note:** IBM WebSphere Commerce Payments for Multiplatforms (hereafter called WebSphere Commerce Payments) was previously known as IBM WebSphere Payment Manager for Multiplatforms. Starting with version 3.1.3, the payments application was renamed to WebSphere Commerce Payments and references to the product were changed throughout this document. References to the former product may still appear in this document (such as in migration discussions) and apply to earlier releases of the product.

This guide includes:

- Chapter 1, “WebSphere Commerce Payments installation program”, on page 1 provides an overview to the installation process and includes a checklist you can use to ensure you complete all installation tasks.
- Chapter 2, “Installation planning”, on page 3 provides detailed planning information for WebSphere Commerce Payments.
- Chapter 3, “Migrating from previous versions of the product”, on page 17 describes how to migrate from former versions of the product known as IBM WebSphere Payment Manager to WebSphere Commerce Payments Version 3.1.
- Chapter 4, “Installing WebSphere Commerce Payments on Windows”, on page 25 includes hardware and software prerequisites and installation instructions for Windows NT or Windows 2000.
- Chapter 5, “Installing WebSphere Commerce Payments on Solaris”, on page 31 includes hardware and software prerequisites and installation instructions for Solaris.
- Chapter 6, “Installing WebSphere Commerce Payments on AIX”, on page 37 includes hardware and software prerequisites and installation instructions for AIX.
- Chapter 7, “Installing WebSphere Commerce Payments on Linux (Intel)”, on page 41 includes hardware and software prerequisites and installation instructions for Linux on Intel workstations.
- Chapter 8, “Installing WebSphere Commerce Payments on Linux for zSeries and S/390”, on page 45 includes hardware and software prerequisites and installation instructions for Linux for zSeries and S/390 .
- Chapter 9, “Installing WebSphere Commerce Payments on iSeries”, on page 53 includes hardware and software prerequisites and installation instructions for iSeries.
- Chapter 10, “Post-installation activities”, on page 57 describes activities to do after installing the WebSphere Commerce Payments engine.
- Chapter 11, “Starting WebSphere Commerce Payments”, on page 65 shows how to start WebSphere Commerce Payments on supported operating systems.
- Chapter 12, “Troubleshooting”, on page 73 describes problems you may encounter and their solutions.
- Chapter 13, “Uninstalling WebSphere Commerce Payments”, on page 85 shows how to uninstall WebSphere Commerce Payments.

- Appendix A, “Customizing the WebSphere Commerce Payments relational database”, on page 95 provides installation and configuration assistance for Oracle.
- Appendix B, “Notices”, on page 101 includes legal notices, copyrights, and trademarks.

---

## What’s new in this release

The *IBM WebSphere Commerce Payments Installation Guide* reflects changes for WebSphere Commerce Payments Version 3.1. Major changes include:

- The product is renamed to WebSphere Commerce Payments as shown in the product documentation, user interface, messages, and some directory or file names. For example, the `PaymentManager.war` and `IBM_PaymentManager.ear` subdirectories are renamed to `Payments.war` and `IBM_Payments.ear`.
- Support for Linux is provided.

**Note:** Linux will not support the Cassette for SET™.

- The Payment Engine and Payment Servlet are merged into one entity. As a result of the change, WebSphere Commerce Payments now contains numerous performance enhancements designed to increase throughput on all platforms. TCP/IP communication between the Payment Servlet and the Payment Engine has been eliminated. All payment threads now run under the WebSphere Application Server Java™ virtual machine. There is also a reduction in the number of calls to the data base manager, and more efficient java routines and structures, introduced by JDK 1.2, are now exploited. CPU resource requirements have been reduced. These enhancements can improve performance in most environments.
- The starting and stopping of the WebSphere Commerce Payments has changed. Previously, you started and stopped the Payment Engine. Now, you can start and stop WebSphere Commerce Payments on workstation platforms with enhanced `IBMPayServer` and `StopIBMPayServer` commands, or with enhanced `STRPYMMGR` and `ENDPYMMGR` commands on iSeries.
- Support for WebSphere Application Server Version 4.0 is provided. WebSphere Application Server Version 3.5.x, 2.03, and 3.02 are no longer supported. Also, your Web server (e.g., IBM HTTP Server) and database must be supported by WebSphere Application Server 4.0. Refer to the installation planning chapter and specific installation instructions for your platform for more information about software prerequisites.

As a result of providing support for WebSphere Application Server 4.0, note the following changes:

- Because WebSphere Application Server Version 4.0 is compliant with Java 2 Platform, Enterprise Edition (J2EE) specifications, some changes were necessary to the WebSphere Commerce Payments directory structure and configuration of WebSphere Application Server relative to that of Payment Manager Version 3.1.0 and earlier releases.

To configure WebSphere Application Server, WebSphere Commerce Payments now makes use of Web archive (WAR) and enterprise archive (EAR) files. This change is generally transparent to you unless you are writing payment cassettes for use with WebSphere Commerce Payments. If you are writing cassettes, refer to the *IBM WebSphere Commerce Payments for Multiplatforms Cassette Kit Programmer’s Guide* for more information about how to ensure that your cassette properly configures WebSphere Application Server. (The document is packaged with the WebSphere Commerce

Payments cassette toolkit available from  
<http://www.ibm.com/software/webservers/commerce/payments/download.html>.)

- Check the installation instructions for your intended platform to note the minimum amount of temporary and free disk space you should have available to install WebSphere Commerce Payments. The revised directory structure uses more compressed files, and as a result, it takes longer to open and copy files during installation and migration, and more space is required.
- The uninstallation of WebSphere Commerce Payments no longer requires you to manually remove WebSphere Commerce Payments objects from the WebSphere Application Server configuration.
- Migration support is provided for Payment Manager Version 2.2.0 and higher. Migration support is *not* provided for Payment Manager versions 2.1.3, 2.1.4, or 2.1.5. If you are currently using Payment Manager version 2.1.x and you wish to migrate, you must migrate to Payment Manager Version 2.2.0 first, and then migrate to WebSphere Commerce Payments Version 3.1.3.
- Existing cassettes and third-party cassettes (prior to Payment Manager Version 3.1.1) must be migrated to version 3.1.2 to work with the new WebSphere Commerce Payments framework. If you are using third-party payment cassettes with WebSphere Commerce Payments, check with your cassette provider to ensure that your cassette can be migrated to work with the version 3.1.2 framework. You should not attempt a WebSphere Commerce Payments installation unless you are sure your existing third-party cassette will work under the new version.
- Support for database products has changed:
  - On the workstation platforms (Windows, AIX, Solaris, Linux) IBM DB2 Universal Database (UDB) and Oracle databases continue to be supported. Supported versions are UDB Version 7.2 (FixPak 5 or higher) and Oracle 8i (8.1.7) or 9i. Older versions of these database products are no longer supported: UDB Version 6.1.x., Oracle 8.0x. Users of UDB Version 6.1.x or 7.1 must upgrade to the UDB Version 7.2 FixPak 5 level to use this version of WebSphere Commerce Payments.  
  
On the Linux for zSeries and S/390 platform, IBM DB2 UDB Version 7.2 (FixPak 7) is supported. Oracle is not supported on this platform.
  - Support for Microsoft® SQL Server is no longer provided. Users of Microsoft SQL Server can migrate database tables to UDB using the migrateDB utility as described in “Migrating MS SQL databases to UDB” on page 21.
- The compatibility interface for Payment Server Version 1.2 is no longer available. Payment Server Version 1.2 user exits are not supported with this version of WebSphere Commerce Payments.
- The WebSphere Commerce Suite realm was renamed from PMRealm to WCSRealm. If you are installing WebSphere Commerce Payments on a system that already has WebSphere Commerce Suite, WebSphere Commerce Business Edition, or WebSphere Commerce Studio, Business Developer Edition installed, the WCSRealm class is automatically configured for your system. More information about the WCSRealm is provided in the *IBM WebSphere Commerce Payments for Multiplatforms Administrator's Guide*.
- This version of WebSphere Commerce Payments does not provide Tivoli Ready™ support. Instructions for installing Tivoli Ready support are removed from this document.

---

## Frequently used terms

This term is used throughout this book:

**UDB** DB2 Universal Database product

References to UNIX<sup>®</sup> apply to AIX, Sun Solaris, and Linux platforms.

References to "workstation" platforms apply to Windows, AIX, Solaris, and Linux on Intel platforms (not iSeries).

References to Linux apply to both Linux on Intel workstations and also to Linux for zSeries and S/390, unless otherwise specified. Where necessary, differences between the Linux environments are explained. For example, separate installation chapters are provided for Linux (Intel) and Linux for zSeries and S/390.

Sections not flagged with platform references apply to all platforms.

---

## Conventions in this document

Table 1. Conventions in this document

<b>Boldface</b>	Indicates the name of the item you need to select, the name of a field, or a string you must enter.
<i>Italics</i>	Indicates book titles or variable information that must be replaced by an actual value.
Monospace	Indicates an example, a portion of a file, or a previously entered value.

---

## For more information

More information is available from these documents and Web sites:

- The *IBM WebSphere Commerce Payments for Multiplatforms Administrator's Guide Version 3.1* (WebSphere Commerce Payments Administrator's Guide) contains conceptual information and shows how to configure WebSphere Commerce Payments using the user interface.
- The *IBM WebSphere Commerce Payments for Multiplatforms Programmer's Guide, Version 3.1* (WebSphere Commerce Payments Programmer's Guide) provides details about the WebSphere Commerce Payments API.
- The *IBM WebSphere Commerce Payments for Multiplatforms, Cassette for SET Supplement Version 3.1* (WebSphere Commerce Payments Cassette for SET Supplement ) provides information about using the SET protocol with the WebSphere Commerce Payments, including installation and configuration information.
- The *IBM WebSphere Commerce Payments for Multiplatforms, Cassette for VisaNet Supplement, Version 3.1* (WebSphere Commerce Payments Cassette for VisaNet Supplement) provides information about using WebSphere Commerce Payments to access the VisaNet system, including installation and configuration information.
- The *IBM WebSphere Commerce Payments for Multiplatforms Cassette for CyberCash Supplement, Version 3.1* (WebSphere Commerce Payments Cassette for CyberCash Supplement) provides information about using the WebSphere Commerce Payments to access the CyberCash Cash Register service, including installation and configuration information.

- The *IBM WebSphere Commerce Payments for Multiplatforms, Cassette for BankServACH Version 3.1* (WebSphere Commerce Payments Cassette for BankServACH Supplement) provides information about using WebSphere Commerce Payments to access the Automated Clearing House (ACH) network through the BankServ gateway. Installation and configuration information is included.

The above documents are available after installation of WebSphere Commerce Payments (or the cassette software) through the WebSphere Commerce Payments user interface. On iSeries, the documentation is also accessible off the iSeries tasks page at <http://hostname:2001> where hostname is the TCP/IP host name of the iSeries system. The link name in the navigation frame is Documentation.

All documents are available on the WebSphere Commerce Payments CD-ROMs in Portable Document Format (PDF). For the latest Acrobat reader, see: <http://www.adobe.com>. On iSeries systems, the documentation is compressed into a save file and is only available after WebSphere Commerce Payments has been installed.

- <http://www.ibm.com/software/webservers/commerce/payments/support.html> provides current WebSphere Commerce Payments technical information and links to the latest WebSphere Commerce Payments documentation and frequently asked questions (FAQs).
- <http://www.ibm.com/software/websphere/appserv/library.html> provides documentation links for IBM WebSphere Application Server.
- <http://www.ibm.com/software/webservers/appserv/efix.html> provides the latest FixPaks and E-fixes for IBM WebSphere Application Server.
- <http://www.ibm.com/software/webservers/httpservers/library.html> provides links to IBM HTTP Server documentation
- <http://www.ibm.com/software/data/db2/udb/> provides documentation links for IBM DB2 Universal Database.
- <http://www.ibm.com/software/commerce/connect> provides information on:
  - Payment Processing Services that support WebSphere Commerce Payments. This Web site will point you to the Financial Institutions and payment processors that can be accessed through WebSphere Commerce Payments.
  - Payment Cassettes that are available for use with WebSphere Commerce Payments. Most particularly, this site will contain connectivity and functionality information, as well as links to ordering information for the available cassettes.
- <http://www.ibm.com/software/webservers/commerce/payments/download.html> provides information on WebSphere Commerce Payments cassette development.



---

## Chapter 1. WebSphere Commerce Payments installation program

Before installing WebSphere Commerce Payments, review the information in this chapter to get an overview of how the installation program works for your platform, and to understand what tasks need to be performed as part of your installation.

### On Windows, AIX, Solaris, and Linux platforms

The WebSphere Commerce Payments installation program checks to see if prerequisite and corequisite programs are installed. If prerequisite programs are not installed, error messages are generated and the installation of WebSphere Commerce Payments stops.

Starting with WebSphere Commerce Payments Version 3.1, the WebSphere Commerce Payments installation program does not silently install WebSphere Application Server or a Web server product (for example, IBM HTTP Server). It is assumed that these prerequisite programs are already installed and available.

If prerequisite programs are found, installation continues with the installation of the WebSphere Commerce Payments framework, the CustomOffline cassette, and the OfflineCard cassette. At this point, WebSphere Commerce Payments and one or both cassettes can be configured as a fully-functional payment processor.

### On iSeries (AS/400®)

No checking is done during installation to see if prerequisite software is installed because prerequisite and corequisite programs can be installed in any order.

### On Windows, AIX, Solaris, Linux, and iSeries platforms

After the installation program completes, you can optionally install additional cassettes. Other payment cassettes you can install include:

- Cassette for BankServACH
- Cassette for CyberCash
- Cassette for SET (not available on Linux)
- Cassette for VisaNet
- Third-party cassettes (not provided by IBM)

Payment cassettes can be downloaded from IBM Web site [www.ibm.com/software/webservers/commerce/payments/download.html](http://www.ibm.com/software/webservers/commerce/payments/download.html).

---

## Installation checklist

To install and configure WebSphere Commerce Payments, perform these sequential tasks:

1. Review the planning information shown in Chapter 2, "Installation planning", on page 3.
2. If you are installing WebSphere Commerce Payments Version 3.1 over a prior version of the product, read Chapter 3, "Migrating from previous versions of the product", on page 17.



3. Review the WebSphere Commerce Payments hardware and software requirements for your platform and ensure that it meets the minimum requirements:
  - For Windows NT or Windows 2000, see “Windows NT and Windows 2000 platform requirements” on page 25.
  - For Solaris, see “Solaris platform requirements” on page 31.
  - For AIX, see “AIX platform requirements” on page 37.
  - For Linux on Intel, see “Linux platform requirements” on page 41.
  - For Linux for zSeries and S/390, see “Linux platform requirements” on page 45.
  - For iSeries, see “iSeries platform requirements” on page 53.
4. If necessary, install your database product (for example, UDB 7.2). For more information, see “Choosing your database product” on page 6 and “Installing a database (UDB) on workstation platforms” on page 11.
5. It is assumed that your Web server and the WebSphere Application Server is already installed. If not, install them.
6. Make sure your internet connection (TCP/IP) is up and running when you begin installation, otherwise WebSphere Commerce Payments will use a hostname ending with a “.”.
7. Install the WebSphere Commerce Payments Framework. Use the instructions for your operating system:
  - Chapter 4, “Installing WebSphere Commerce Payments on Windows”, on page 25
  - Chapter 5, “Installing WebSphere Commerce Payments on Solaris”, on page 31
  - Chapter 6, “Installing WebSphere Commerce Payments on AIX”, on page 37
  - Chapter 7, “Installing WebSphere Commerce Payments on Linux (Intel)”, on page 41
  - Chapter 8, “Installing WebSphere Commerce Payments on Linux for zSeries and S/390”, on page 45
  - Chapter 9, “Installing WebSphere Commerce Payments on iSeries”, on page 53
8. Perform any necessary post-install activities, as shown in Chapter 10, “Post-installation activities”, on page 57.
9. Validate the WebSphere Commerce Payments installation by starting WebSphere Commerce Payments as described in Chapter 11, “Starting WebSphere Commerce Payments”, on page 65.
10. Install any additional payment protocol cassettes (for example, Cassette for SET, Cassette for CyberCash, or a third-party cassette), as needed. For more information, see “Installing payment cassettes for WebSphere Commerce Payments” on page 60.



---

## Chapter 2. Installation planning

This chapter describes the installation planning decisions you need to make when installing WebSphere Commerce Payments on various platforms.

---

### Planning for workstation platforms (Windows, AIX, Solaris, Linux on Intel)

As with any software, planning is necessary to ensure a successful installation. Before installing WebSphere Commerce Payments, you must decide which corequisite products you will be using. In some cases, one or more of the corequisite products required by WebSphere Commerce Payments may have already been installed. In others, you will need to install all the corequisite products.

WebSphere Commerce Payments relies on several software products, including:

- A database product
- IBM WebSphere Application Server
- A Web server product

The WebSphere Commerce Payments installation program determines whether or not a suitable set of prerequisite products has been installed. If the WebSphere Application Server and a suitable Web server have not been installed, you must install them. (A Web server should already have been installed for WebSphere Application Server.)

If you received WebSphere Commerce Payments as part of an IBM WebSphere Commerce software product (for example, the IBM WebSphere Commerce Business Edition or IBM WebSphere Commerce Studio, Business Developer Edition), these prerequisite or corequisite products may already be provided for you. Software products that may be available in your package to meet WebSphere Commerce Payments software requirements are shown in Table 2:

*Table 2. Software used with WebSphere Commerce Payments*

Software	Function
WebSphere Application Server Advanced Edition, Version 4.0.2 (you must ensure that the WebSphere Application Server PTF for version 4.0.2 has been applied).	Web application server
IBM HTTP Server Version 1.3.19.1	Web server
IBM Developer Kit, Java 2 Technology Edition, Version 1.3 (included with WebSphere Application Server). If you are installing on a Windows platform, you must ensure that you have build (service release) 10 of the developer kit.	Java runtime environmental development tools
IBM DB2 Universal Database (UDB) Version 7.2 with FixPak 5 (you must ensure that UDB FixPak 5 or higher has been applied).	Relational database

---

## Planning for Linux for zSeries and S/390

Before installing WebSphere Commerce Payments, you must decide which corequisite products you will be using. In some cases, one or more of the corequisite products required by WebSphere Commerce Payments may have already been installed. In others, you will need to install all corequisite products.

If you received WebSphere Commerce Payments as part of an IBM WebSphere commerce software product (for example, the IBM WebSphere Commerce Business Edition), these prerequisite or corequisite products may already be provided for you. Software products that may be available in your package to meet WebSphere Commerce Payments software requirements are shown in Table 3:

*Table 3. Software used with WebSphere Commerce Payments*

Software	Function
WebSphere Application Server Advanced Edition, Version 4.04	Web application server
IBM HTTP Server Version 1.3.19.3	Web server
IBM Developer Kit, Java 2 Technology Edition, for Linux, Version 1.3.1. (This developer kit is required by and provided with WebSphere Application Server Version 4.0.4. If for some reason you need to install the developer kit yourself, you can obtain the developer kit from <a href="http://www.ibm.com/java/jdk/download/index.html">http://www.ibm.com/java/jdk/download/index.html</a> .)	Java runtime environmental development tools
DB2 Version 7.2 FixPak 7 (IBM DB2 Universal Database 7.1.0.67)	Relational database
SuSE Linux Enterprise Server (SLES) 7 for S/390 and zSeries	Operating system

In addition, a Web browser is required because a browser is not included with WebSphere Commerce Payments. Refer to “Web browsers” on page 14 for more information about browsers.

For a list of the minimum hardware and software requirements, see “Linux platform requirements” on page 45.

### Choosing your database product

In the Linux for zSeries and S/390 environment, WebSphere Commerce Payments supports DB2 UDB and DB2 UDB for OS/390. If you are using DB2 UDB for OS/390, you must first install and then configure your database connection before installing the WebSphere Commerce Payments framework. If you are using DB2 UDB you must also install it prior to installing the framework. For more information on customizing your WebSphere Commerce Payments database, see the following:

- For DB2 UDB, see Appendix A, “Customizing the WebSphere Commerce Payments relational database”, on page 95.
- For DB2 UDB for OS/390, see “Using DB2 UDB for OS/390 as a remote database on Linux for zSeries and S/390” on page 51.

# Installing DB2 UDB, HTTP Server, and WebSphere Application Server

For more information about installing these components and recommended instructions, refer to the *IBM WebSphere Commerce for Linux for zSeries and S/390 Installation Guide*.

---

## Planning for iSeries

If you are installing on iSeries, the only planning considerations you need to be aware of are:

- WebSphere Commerce Payments requires OS/400 Version 5 Release 1.
- You can either perform a new installation of WebSphere Commerce Payments as described in Chapter 9, “Installing WebSphere Commerce Payments on iSeries”, on page 53, or migrate from earlier versions of the product as described in Chapter 3, “Migrating from previous versions of the product”, on page 17.
- You can choose which Web server to use: the IBM HTTP Server, or the IBM HTTP Server powered by Apache; however, you are not required to make this decision at WebSphere Commerce Payments installation time.

The database considerations described in this chapter do not apply to a WebSphere Commerce Payments installation on iSeries. *You can skip the rest of this chapter.* If you are migrating from a prior release of WebSphere Commerce Payments for iSeries (WebSphere Payment Manager), continue with Chapter 3, “Migrating from previous versions of the product”, on page 17. If you are *not* migrating from a prior release, continue with Chapter 9, “Installing WebSphere Commerce Payments on iSeries”, on page 53.

---

## Standard configurations for workstation platforms

### Windows, AIX, Solaris, Linux on Intel

The WebSphere Commerce Payments Version 3.1 installation program supports these installation scenarios:

- New installation (clean installation) of WebSphere Commerce Payments using a database product such as UDB. A new installation assumes that you have the following installed: WebSphere Application Server, IBM HTTP Server (or some other supported Web server), developer kit for Java, and a database product. A clean installation assumes that you have *not* already installed WebSphere Commerce Payments (this or prior versions of its predecessor product, Payment Manager) on the system.
- Migration from the following versions of WebSphere Commerce Payments or its predecessor product is supported on workstation platforms:
  - WebSphere Payment Manager Version 2.2 and higher
  - WebSphere Payment Manager Version 3.1.0

If you have been using UDB Version 6.1.x, or UDB Version 7.1, you must upgrade to the UDB 7.2 FixPak 5 level before installing WebSphere Commerce Payments. See “Upgrading UDB” on page 19 for tips on how to do this.

**Note:** WebSphere Commerce Payments no longer supports Microsoft SQL databases. If you are migrating from a Microsoft SQL database, you must migrate your data to UDB, Version 7.2 (with FixPak 5 or later). A utility is provided with WebSphere Commerce Payments to assist you with migrating data from Microsoft SQL to UDB.

Migration from the following is not supported:

- CommercePOINT eTill Version 1.0
- Payment Server Version 1.2
- WebSphere Payment Manager Version 2.1.5, 2.1.4, 2.1.3 and below

For more information on installing and configuring payment cassettes, see the *WebSphere Commerce Payments Administrator's Guide* or the cassette-specific supplement for your payment cassette. Information about cassette migration that you should consider when planning your installation is provided in "Payment cassettes" on page 17.

---

## Planning decisions for workstation platforms

### Windows, AIX, Solaris, Linux on Intel

The planning decisions you must make include:

- Choose your database product
- Choose which Web server to use (see "Web servers" on page 14 for more information)

Although using the recommended IBM software will simplify your installation, you can use a different database or a different Web server. If you choose a database other than UDB or a Web server other than IBM HTTP Server, you will be required to answer more questions or perform more tasks outside of the installation program itself.

## Choosing your database product

The following table summarizes your database product choices supported by WebSphere Commerce Payments and WebSphere Application Server. If you are not already using a database, using UDB will simplify your installation.

*Table 4. Database products supported by WebSphere Commerce Payments*

Database product	Supported by WebSphere Application Server V4.0 Advanced Edition	Supported by WebSphere Commerce Payments
UDB V7.2 (FixPak 5 or higher)	Yes	Yes
Oracle 8i (8.1.7) or later up to and including Oracle 9i	Yes	Yes
<b>Note:</b> For information on customizing your WebSphere Commerce Payments database installation, see Appendix A, "Customizing the WebSphere Commerce Payments relational database", on page 95.		

When considering which database product to use, remember:

- It is recommended that you use the same database product for both WebSphere Application Server and WebSphere Commerce Payments.
- If you are using UDB, you must create a database for WebSphere Commerce Payments before installing WebSphere Commerce Payments. Instructions are provided in "Installing a database (UDB) on workstation platforms" on page 11.
- If you use another database product, you will have to manually upgrade any corequisite products not already installed. Also, note the following:

- If you use a Sybase database for WebSphere Application Server, then you must install a second database product for WebSphere Commerce Payments (it does not support Sybase). Having two database products on the same system is not recommended.
- If you use an MS SQL database for WebSphere Commerce Payments, you must migrate your data to UDB to continue using WebSphere Commerce Payments. MS SQL is not supported. See “Migrating MS SQL databases to UDB” on page 21 for more information about the migration utility provided.
- If you use an Oracle database for WebSphere Commerce Payments, install and configure Oracle using Oracle documentation. Then continue with “Selecting your installation approach”.

## JDBC drivers

### Windows, AIX, Solaris, Linux

You should use only JDBC drivers that are compatible with the version of the database product you select. JDBC drivers you can use with WebSphere Commerce Payments are:

- For UDB: JDBC DB2 Driver (com.ibm.db2.jdbc.app.DB2Driver)  
The JDBC driver is provided with UDB.
- For Oracle: Oracle Thin JDBC driver

If you are using Oracle as your database product, make sure you are using the Oracle Thin JDBC driver, Version 8.1.6, or above, before migrating to WebSphere Commerce Payments Version 3.1. The JDBC driver is provided with Oracle.

**Note:** Oracle is not supported on Linux for zSeries and S/390.

## Selecting your installation approach

### For WebSphere Commerce Payments Version 3.1.3.0

After deciding which database product you will use, you must now determine how you should install WebSphere Commerce Payments. Review the items in the following table.

*Table 5. Typical WebSphere Commerce Payments installation scenarios*

If your installation scenario is...	This is what the WebSphere Commerce Payments GUI installation program does...	Notes
New installation WebSphere Commerce Payments on a clean machine	Installs WebSphere Commerce Payments framework for you.	<p>It is recommended that you use UDB as your database product.</p> <p>Before installing WebSphere Commerce Payments, if you are using UDB, you must have UDB installed and create a database for WebSphere Commerce Payments (for example, “payments”). Instructions on how to install UDB and perform these tasks are provided in “Installing a database (UDB) on workstation platforms” on page 11.</p> <p>After installing UDB, continue with “WebSphere Commerce Payments installation” on page 15.</p>

Table 5. Typical WebSphere Commerce Payments installation scenarios (continued)

If your installation scenario is...	This is what the WebSphere Commerce Payments GUI installation program does...	Notes
Product upgrade of WebSphere Commerce Payments (migration) and you currently use WebSphere Application Server Version <b>2.0.3.x</b>	The installation program will generate an error because your WebSphere Application Server is not current enough. Migration of your WebSphere Payment Manager Version 2.2 and higher is supported after you upgrade WebSphere Application Server.	<p>WebSphere Commerce Payments no longer supports WebSphere Application Server Version 2.0.3.x. You must:</p> <ol style="list-style-type: none"> <li>1. Uninstall WebSphere Application Server 2.0.3.x .</li> <li>2. Install WebSphere Application Server Version 4.0. WebSphere Application Server installation provides IBM HTTP Server and the developer kit for Java. (You can install WebSphere Application Server using the WebSphere Application Server CD. For more information, see “Manually installing WebSphere Application Server” on page 13.) When installing WebSphere Application Server: <ul style="list-style-type: none"> <li>• Choose the database product you want to use.</li> <li>• Choose the Web server you want to use.</li> </ul> </li> <li>3. Apply the WebSphere Application Server PTF for WebSphere Application Server 4.0.2. You will need to apply the PTF manually.</li> <li>4. Follow WebSphere Commerce Payments migration instructions to install WebSphere Commerce Payments Version 3.1. See Chapter 3, “Migrating from previous versions of the product”, on page 17.</li> </ol>
Product upgrade of WebSphere Commerce Payments (migration) and you currently use WebSphere Application Server Version <b>3.0.2.x</b>	The installation program will generate an error because your WebSphere Application Server is not current enough. Migration of your WebSphere Payment Manager Version 2.2 and higher is supported after you upgrade WebSphere Application Server.	<p>WebSphere Commerce Payments no longer supports WebSphere Application Server Version 3.0.2.x. You must:</p> <ol style="list-style-type: none"> <li>1. Follow WebSphere Application Server instructions to install WebSphere Application Server Version 4.0 (You can install WebSphere Application Server using the WebSphere Application Server CD. For more information, see “Manually installing WebSphere Application Server” on page 13.) When installing the WebSphere Application Server upgrade: <ul style="list-style-type: none"> <li>• Choose the same database product you previously used with WebSphere Payment Manager (recommended).</li> <li>• Choose the same Web server you previously used (recommended).</li> </ul> </li> <li>2. Apply the WebSphere Application Server PTF for WebSphere Application Server 4.0.2. You will need to apply the PTF manually.</li> <li>3. Follow WebSphere Commerce Payments migration instructions to install WebSphere Commerce Payments Version 3.1. See Chapter 3, “Migrating from previous versions of the product”, on page 17.</li> </ol>



Table 5. Typical WebSphere Commerce Payments installation scenarios (continued)

If your installation scenario is...	This is what the WebSphere Commerce Payments GUI installation program does...	Notes
Product upgrade of WebSphere Commerce Payments (migration from WebSphere Payment Manager Version 2.2.x) and you currently use WebSphere Application Server Version <b>3.5</b>	The installation program will generate an error because your WebSphere Application Server is not current enough. Migration of your WebSphere Payment Manager Version 2.2 and higher is supported after you upgrade WebSphere Application Server.	<p>WebSphere Commerce Payments requires WebSphere Application Server Version 4.0.2.</p> <ol style="list-style-type: none"> <li>1. Follow WebSphere Application Server instructions to install WebSphere Application Server Version 4.0. (You can install WebSphere Application Server using the WebSphere Application Server CD. For more information, see “Manually installing WebSphere Application Server” on page 13.) When installing the WebSphere Application Server upgrade: <ul style="list-style-type: none"> <li>• Choose the same database product you previously used with WebSphere Payment Manager (recommended).</li> <li>• Choose the same Web server you previously used (recommended).</li> </ul> </li> <li>2. Apply the WebSphere Application Server PTF for WebSphere Application Server 4.0.2. You will need to apply the PTF manually.</li> <li>3. Follow WebSphere Commerce Payments migration instructions to install WebSphere Commerce Payments Version 3.1. See Chapter 3, “Migrating from previous versions of the product”, on page 17.</li> </ol>
Product upgrade of WebSphere Commerce Payments (migration from WebSphere Payment Manager Version 3.1.0) and you currently use WebSphere Application Server Version <b>3.5</b>	The installation program will generate an error because your WebSphere Application Server is not current enough. Migration of your WebSphere Payment Manager Version 3.1.0 is supported after you upgrade WebSphere Application Server.	<ol style="list-style-type: none"> <li>1. Follow WebSphere Application Server instructions to install WebSphere Application Server Version 4.0. (You can install WebSphere Application Server using the WebSphere Application Server CD. For more information, see “Manually installing WebSphere Application Server” on page 13.) When installing the WebSphere Application Server upgrade: <ul style="list-style-type: none"> <li>• Choose the same database product you previously used with WebSphere Payment Manager (recommended).</li> <li>• Choose the same Web server you previously used (recommended).</li> </ul> </li> <li>2. Apply the WebSphere Application Server PTF for WebSphere Application Server 4.0.2. You will need to apply the PTF manually.</li> <li>3. Follow WebSphere Commerce Payments migration instructions to install WebSphere Commerce Payments Version 3.1. See Chapter 3, “Migrating from previous versions of the product”, on page 17.</li> <li>4. Apply the WebSphere Commerce Payments PTF for version 3.1.3, and the version 3.1.3 PTF for any WebSphere Payment Manager cassettes used.</li> </ol>
Product upgrade of WebSphere Commerce Payments from Payment Manager Version 3.1.1 and you currently use WebSphere Application Server Version <b>4.0</b>	Migration is not necessary if you already have WebSphere Payment Manager Version 3.1.1 installed.	<ol style="list-style-type: none"> <li>1. Apply the WebSphere Application Server PTF for WebSphere Application Server 4.0.2. You will need to apply the PTF manually.</li> <li>2. Apply the WebSphere Commerce Payments PTF for version 3.1.3, and the version 3.1.3 PTF for any WebSphere Payment Manager cassettes used. Cassette migration is not necessary if you are already using Payment Manager Version 3.1.1 cassettes.</li> </ol>

Table 5. Typical WebSphere Commerce Payments installation scenarios (continued)

If your installation scenario is...	This is what the WebSphere Commerce Payments GUI installation program does...	Notes
Product upgrade of WebSphere Commerce Payments from Payment Manager Version 3.1.2 and you currently use WebSphere Application Server Version <b>4.0</b>	Migration is not necessary if you already have WebSphere Payment Manager Version 3.1.2 installed.	<ol style="list-style-type: none"> <li>1. Ensure the WebSphere Application Server PTF for WebSphere Application Server 4.0.2 was applied.</li> <li>2. Apply the WebSphere Commerce Payments PTF for version 3.1.3, and the version 3.1.3 PTF for any WebSphere Payment Manager cassettes used. Cassette migration is not necessary if you are already using Payment Manager Version 3.1.2 cassettes.</li> </ol>

## Checking software versions

If you have versions of UDB, WebSphere Application Server, or IBM HTTP Server already installed for use with WebSphere Commerce Payments, check the version number to ensure that it is consistent with the version packaged with WebSphere Commerce Payments or with versions supported by WebSphere Commerce Payments 3.1. Versions supported are listed in Table 2 on page 3.

- To check the version of UDB:

**On Windows:** you can enter the **db2level** command from a DB2 command window, or check the values in the Windows Registry. To check the registry, click **Start->Run** and enter **regedit**. Expand **HKEY\_LOCAL\_MACHINE->SOFTWARE->IBM**. Expand your database product (DB2 Universal Database Enterprise Edition or Application Development Client). Click **CurrentVersion** to view the values for Version, Release, and Modification. Exit the Windows Registry.

**On Solaris:**

```
pkginfo | grep -i db2
pkginfo -l <pkgname>
```

**On AIX:** enter: `lspp -al | grep -i db2`

**On Linux:** enter: `rpm -qa | grep -i db2`

If your versions are not consistent with WebSphere Commerce Payments software requirements, you can upgrade to the required versions using the instructions in the sections that follow.

- To check the version of IBM HTTP Server:

**On Windows:** enter: `apache -v`

**On Solaris, AIX, and Linux:** enter: `httpd -ver`

For the command to run properly, you must do one of the following:

- Ensure the HTTP server installation directory is in the path.
- Enter the command directly from the `<HTTP_server_install_directory>` on Windows or the `<HTTP_server_install_directory>/bin` (on UNIX platforms).

- To check the version of WebSphere Application Server:

**On Windows:** enter:

```
cd <WebSphere_Install_directory>\properties\com\ibm\WebSphere
type product.xml
```

**On Solaris, AIX, and Linux:** enter:



```
cd <WebSphere_Install_directory>/properties/com/ibm/WebSphere
cat product.xml
```

For additional software upgrade information, see these Web sites:

- <http://www.ibm.com/software/data/db2/udb/>
- <http://www.ibm.com/software/websphere/appserv/library.html>
- <http://www.software.ibm.com/webserver/httpserver/library.html>

---

## Installing a database (UDB) on workstation platforms

### Windows, AIX, Solaris, Linux on Intel

You must install a database product before installing WebSphere Commerce Payments. For your convenience, UDB Version 7.2 is provided on a separate CD-ROM. If your version of UDB is not Version 7.2 with FixPak 5, you must upgrade to that version and FixPak. You can use the supplied Version 7.2 CD to upgrade. UDB Fixpaks can be obtained from Web site:

<http://www.ibm.com/software/data/db2> (refer to technical support and FixPaks).

To install UDB on a "clean machine":

1. Mount the UDB CD-ROM that was packaged with WebSphere Commerce Payments. The UDB CD-ROM is enabled for Autorun, which will automatically start the installation program (on Windows). If your system does not support Autorun, start the UDB installation by running the SETUP application in the root directory of the CD-ROM.

**Note:** Do not install UDB into a directory which has a blank in the directory name (if you do, WebSphere Application Server will not properly set files to use it and the WebSphere Application Server admin server will not start).

2. When installing DB2, you are prompted to select your choice of UDB components. These components can be installed:
  - **On Windows:**
    - DB2 Enterprise Edition (or a DB2 client such as the DB2 Administration Client if you are connecting to a remote installation of DB2)
    - DB2 Application Development Client
  - **On Solaris, AIX, and Linux:**
    - DB2 Enterprise Edition (or a DB2 client such as the DB2 Client Enabler if you are connecting to a remote installation of DB2)
    - DB2 Software Developer's Kit or DB2 Application Development Client

You do not have to install DB2 Enterprise Edition if you have the DB2 Administration Client installed on Windows, or the DB2 Client Enabler installed on a UNIX platform.

3. Select **Typical Install**. By default:
  - **On Windows:** UDB Version 7.2 is installed into: `c:\program files\sql11ib`.

**Note:** Do not install UDB in a directory with a blank space in its name. As shown above, the default directory name for UDB 7.2 has a blank space. If you choose typical install, when asked to accept the default directory, click **Browse** and enter a directory name that has no blank spaces.

- **On Solaris:** UDB 7.2 is installed into: `/opt/IBMdb2`.

- **On AIX:** UDB Version 7.2 is installed into: /usr/lpp/db2\_07\_02.
  - **On Linux:** UDB Version 7.2 is installed into: /usr/IBMDB2/V7.1
4. On the "Choose Destination Location" screen, click **Next**.
  5. **On Windows:** An instance with the name DB2 is created. When you install the WebSphere Commerce Payments framework, you will be asked for this instance name.
 

**On UNIX platforms:** An instance with the name db2inst1 is created by default, but you can change it to some other name. The name you select will be used later when installing WebSphere Commerce Payments.
  6. On the "Enter Username and Password for the Control Center Server screen, enter the username and password for the Admin Server:
    - The default user ID and password is **db2admin**. On Windows, UDB will create the user ID as a member of the NT Administrators Group. You must use a user ID that is 8 characters or less in length.
  7. Click **Next**.
  8. When told that the user ID (for example, db2admin) does not exist, click **Yes** to create the user ID.
  9. On the "Start copying files" screen, click **Next**. Files are copied and the database is configured.
  10. On the "Install OLAP Starter Kit" screen, you are prompted to install the OLAP Starter Kit. Make your selection and click **Continue**.
  11. On the "Setup Complete" screen, click Finish. The "IBM Product Registration" screen is displayed. To register, complete the screen and click **Next**. Click **Submit** to submit the registration.
  12. When the installation completes, the "Welcome to IBM DB2" screen is displayed. Click **Exit** and reboot your computer.
  13. Create a database for the WebSphere Commerce Payments:
    - **On Windows:**
      - a. From the Start menu, click Start->Programs->DB2 for Windows NT ->Command Line Processor
      - b. At the db2=> prompt, enter: create database <dbname> In this example, the database "payments" is created:  
create database payments
      - c. Increase the application heap size of the WebSphere Commerce Payments database to at least 256 before you install WebSphere Commerce Payments. To increase the heap size, at the db2=> prompt, enter:  
UPDATE DB CFG FOR payments USING APPLHEAPSZ 256
    - **On Solaris, AIX, and Linux:**
      - a. As the db2 instance user, run:  
db2 create db payments
      - b. Increase the application heap size of the WebSphere Commerce Payments database to at least 256 before you install WebSphere Commerce Payments. To increase the heap size, at the db2=> prompt, enter:  
UPDATE DB CFG FOR payments USING APPLHEAPSZ 256
      - c. If you install UDB and WebSphere Commerce Payments on the same machine, you must enter these commands from a DB2 prompt to circumvent a known DB2 problem:

- catalog tcpip node <node\_name> remote <hostname> server <servicename> (where the value for *servicename* is the TCP/IP service name which can be determined by entering the following command from a DB2 command line: db2 get dbm cfg ).
- catalog database <db\_name> as <db\_alias> at node <nodename> (*db\_name* is the database name for WebSphere Commerce Payments)

If the hostname has more than 8 characters or has a special character such as "-", you should apply the following commands instead:

- catalog tcpip node loop00 remote 127.0.0.1 server *servicename*
- catalog database *db\_name* as *db\_alias* at node loop00

**Notes:**

1. Ensure that UDB Version 7.2 with FixPak 5 or later is installed. To obtain the FixPak, see Web site: <http://www.ibm.com/software/data/db2> (refer to technical support and FixPaks).
2. When you install the WebSphere Commerce Payments, you will be asked for the name of the WebSphere Commerce Payments database you just created.
3. The database product must be running during WebSphere Commerce Payments installation (DB2 services are started).

## Manually installing WebSphere Application Server

If you need to manually install or upgrade WebSphere Application Server, you can install WebSphere Application Server using the WebSphere Application Server CD-ROM. Evaluation copies of WebSphere Application Server are available for download from: <http://www.ibm.com/software/webservers/appserv/>.

For installation or migration instructions, see the WebSphere Application Server Info Center, which you can download or view directly from:

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

**Notes:**

1. When installing WebSphere Application Server, you will be asked which database you want to use. You must use a relational database. DB2 UDB is recommended. If you are presented with the option, **do not** select the Quick option. If you select the Quick option, InstantDB is used. InstantDB is not supported by WebSphere Commerce Payments and should *not* be used.
2. If you receive messages that you do not understand when installing WebSphere Application Server, refer to the WebSphere Application Server documentation for problem determination. For example, if you intend to use DB2 UDB and are installing on a Windows platform, you may receive a message informing you that the level of JDBC drivers detected was not correct for your level of WebSphere Application Server. (In this case, you can locate and run the usejdbc2 executable in your SQLLIB Java12 subdirectory to correct the JDBC driver level before completing your WebSphere Application Server installation.) Refer to the WebSphere Application Server documentation for current information about installing WebSphere Application Server. You should also ensure that WebSphere Application Server is properly installed and functional before installing WebSphere Commerce Payments.

---

## Web browsers

The WebSphere Commerce Payments packaging does not include a Web browser, so you must supply your own. While the Web browser does not need to be on the same machine where the WebSphere Commerce Payments resides, you must use a browser to access the WebSphere Commerce Payments user interface.

The WebSphere Commerce Payments user interface has been tested with a range of browsers and has been optimized to work with these recommended Web browsers:

- Netscape Communicator 4.08, or later
- Microsoft Internet Explorer 4.01 with Service Pack 2, or later

For viewing DBCS data, it is recommended that you use either Microsoft Internet Explorer or Netscape Communicator 4.7i or higher.

**Note:** Internet Explorer cannot be installed on UNIX or iSeries platforms, but the browser can be used to access WebSphere Application Server Manager from a remote Windows machine.

## Netscape limitation

If you resize the Netscape browser window while logged in to the WebSphere Commerce Payments user interface, it will force you to log into the user interface again. This is a limitation of the Netscape Web browser.

Also, some versions of Netscape do not display hyperlinks correctly. These browsers may not display the WebSphere Commerce Payments Sample Checkout tutorial pages in their entirety. The Sample Checkout tutorial is described in the *WebSphere Commerce Payments Administrator's Guide*.

---

## Web servers

While we recommend you use IBM HTTP Server, you may use any of the Web servers that are supported by WebSphere Application Server. For WebSphere Application Server, these include IBM HTTP Server, Apache Server, Microsoft Internet Information Server, and others.

For more information on Web servers supported by WebSphere Application Server, see the Info Center provided with your version of WebSphere Application Server or visit the following Web site for WebSphere Application Server installation and configuration information:

**<http://www.ibm.com/software/websphere/appserv/library.html>**.

If you are using Microsoft Internet Information Server (IIS) on Windows, be aware that you may need to perform additional configuration steps to enable basic authentication before you can successfully log in to the WebSphere Commerce Payments user interface. Refer to "Error logging on to the user interface on Windows" on page 80 for more information.

Due to IIS limitations on Windows NT Version 4.0 Workstation, the WebSphere Commerce Payments user interface functionality is limited. If you use Windows NT Workstation with IIS, you will receive sporadic fatal errors in the WebSphere Commerce Payments user interface (The user interface could not communicate with the WebSphere Commerce Payments engine). To avoid these errors, you can use Windows NT Workstation with IBM HTTP Server.

---

## Payment cassettes

As part of your hardware planning, you should consider the number and type of payment cassettes you intend to use with WebSphere Commerce Payments because additional disk space will be required beyond that which is necessary to install the WebSphere Commerce Payments Framework. The recommended amount of minimum disk space for IBM-provided WebSphere Commerce Payments cassettes is shown in the following table. For disk space recommendations for the Framework, see the installation chapter for your platform in this document.

Table 6. Minimum disk space recommended for WebSphere Commerce Payments cassettes

Cassette	If WebSphere Commerce Payments and WebSphere Application Server are installed on same file system	If installed on different file systems	
		WebSphere Commerce Payments	WebSphere Application Server
Cassette for SET	100 MB	75 MB	25 MB
Cassette for CyberCash	35 MB	25 MB	10 MB
Cassette for VisaNet	25 MB	10 MB	15 MB
Cassette for BankServ	25 MB	10 MB	15 MB

For temporary space, you should add at least 250 MB additional space for each cassette.

---

## WebSphere Commerce Payments installation

If you are *not* migrating from a prior release of WebSphere Commerce Payments (or its predecessor product, WebSphere Payment Manager), continue with the instructions for your operating system:

- Chapter 4, “Installing WebSphere Commerce Payments on Windows”, on page 25
- Chapter 5, “Installing WebSphere Commerce Payments on Solaris”, on page 31
- Chapter 6, “Installing WebSphere Commerce Payments on AIX”, on page 37
- Chapter 7, “Installing WebSphere Commerce Payments on Linux (Intel)”, on page 41
- Chapter 8, “Installing WebSphere Commerce Payments on Linux for zSeries and S/390”, on page 45
- Chapter 9, “Installing WebSphere Commerce Payments on iSeries”, on page 53

If you are migrating from a prior release, continue with Chapter 3, “Migrating from previous versions of the product”, on page 17.



---

## Chapter 3. Migrating from previous versions of the product

This chapter provides detailed instructions on migrating WebSphere Commerce Payments from previous versions of its predecessor product, WebSphere Payment Manager. Instructions on how to upgrade to UDB are also provided. *If you are not migrating from a previous WebSphere Payment Manager release, you can skip this chapter.*

Before migrating, **back up your database**, then:

- Read the latest README file, `readme.framework.html`, accessed through the documentation library link on the WebSphere Commerce Payments Web site <http://www.ibm.com/software/webservers/commerce/payment>. For iSeries, the README is also available on the Documentation link on the WebSphere Commerce Payments tasks page, accessible off the iSeries tasks page at <http://system-name:2001> where the system-name is the TCP/IP host name of the iSeries system.
- Remove any of the cassettes that you do not want to migrate before you install this new version.
- If you are migrating from WebSphere Payment Manager Version 2.2.x to WebSphere Commerce Payments, Version 3.1, see “Migrating from Payment Manager Version 2.2.0 or higher”.

---

### Migrating from Payment Manager Version 2.2.0 or higher

The installation/migration program will migrate data from WebSphere Payment Manager, Version 2.2.0 or higher. The existing database will continue to be used, and any required data migration will occur during the installation.

Migration is possible only from a working version of WebSphere Payment Manager Version 2.2.0 or higher. That is, migration from WebSphere Payment Manager Version 2.1.5, 2.1.4, 2.1.3, or earlier modification levels is not supported. If you are using WebSphere Payment Manager Version 2.1.5 or earlier, you must upgrade to Version 2.2.0 before you can migrate to WebSphere Commerce Payments Version 3.1.

### Payment cassettes

All cassettes (IBM provided or third party) previously installed on WebSphere Payment Manager, Version 2.2 or higher are not guaranteed to function properly after installing WebSphere Commerce Payments, Version 3.1.3. Before you install WebSphere Commerce Payments, note the following:

- If you are currently using third-party payment cassettes, you should first check with your cassette provider to ensure your existing cassette can be migrated to WebSphere Commerce Payments Version 3.1.3 before attempting to install WebSphere Commerce Payments on your system.
- Both third-party and IBM-provided payment cassettes must be migrated to WebSphere Commerce Payments Version 3.1.3 for the cassettes to function properly. If you are using IBM-provided cassettes (such as the Cassette for VisaNet or Cassette for SET), you must install the version 3.1.3 cassette software to perform migration. For installation instructions, refer to the cassette-specific supplement for your payment cassette.

**Note:** Cassette migration is not necessary if you are upgrading from WebSphere Payment Manager Version 3.1.1 or 3.1.2 to Version 3.1.3. In this case,



you need only install the WebSphere Commerce Payments Version 3.1.3 PTF for the WebSphere Commerce Payments Framework and the version 3.1.3 PTF for the IBM-supplied WebSphere Commerce Payments cassette (after upgrading to WebSphere Application Server 4.0.2).

- If you are currently using WebSphere Payment Manager Version 2.1.4 with the Cassette for SET Version 2.1.4, you must first install the Version 2.1.5 PTFs (for both the Payment Manager Framework and the Cassette for SET). Then, start the Payment Engine at least once, and stop the engine, before migrating. Otherwise, the installation of Version 3.1.3 will fail during the data migration.

## Databases

If you are migrating from a prior installation, ensure your database product, operating system, and companion products are at a level supported by WebSphere Commerce Payments. For platform-specific information, see:

- Chapter 4, “Installing WebSphere Commerce Payments on Windows”, on page 25
- Chapter 5, “Installing WebSphere Commerce Payments on Solaris”, on page 31
- Chapter 6, “Installing WebSphere Commerce Payments on AIX”, on page 37
- Chapter 7, “Installing WebSphere Commerce Payments on Linux (Intel)”, on page 41
- Chapter 8, “Installing WebSphere Commerce Payments on Linux for zSeries and S/390”, on page 45
- Chapter 9, “Installing WebSphere Commerce Payments on iSeries”, on page 53

**On workstation platforms:** If you are using a version of UDB earlier than UDB Version 7.2 with FixPak 5, you must upgrade to that version of UDB. For information on upgrading your UDB software from CD-ROM, see “Installing a database (UDB) on workstation platforms” on page 11. Optionally, if your installation used a database other than UDB and you now want to change to UDB, you may manually install UDB and migrate your WebSphere Payment Manager data to UDB.

## Pre-Migration considerations

Note the following additional considerations before migrating.

### Test Cassette

The Test Cassette provided in WebSphere Payment Manager Version 2.1.x is no longer provided, starting with Version 2.2. The installation program will delete the Test Cassette if found. If you are currently using the Test Cassette, it is recommended that you convert to using the OfflineCard Cassette.

**On iSeries:** It is recommended that you remove the Test Cassette from each WebSphere Payment Manager instance before installing WebSphere Commerce Payments Version 3.1.

For more information about the OfflineCard Cassette, see the *WebSphere Commerce Payments Administrator's Guide*.

### EventListener SocksHost length limitation

The length of the SocksHost field is now limited to 254 characters. If an EventListener has been created by an application with a SocksHost field with a length greater than 254 characters, it will be truncated to 254 characters by the migration program. For more information on event notification, see the *WebSphere Commerce Payments Programmer's Guide*.



## WebSphere Commerce Payments NT Service

**On Windows:** The WebSphere Commerce Payments installation program removes the InstallPaymentManagerNTService script if found during installation. Previously, this script installed the product as a manual NT Service named WebSphere Payment Manager. WebSphere Commerce Payments no longer installs as an NT Service.

## PSWAS2Realm migration

**On Windows and UNIX platforms:** If your WebSphere Payment Manager environment used the PSWAS2Realm (as identified in the PaymentServlet.properties file), the realm is not migrated when you install WebSphere Commerce Payments Version 3.1.x. WebSphere Commerce Payments will use PSDefaultRealm instead. No action on your part is necessary as a result of this change.

Continue with the instructions for your operating system:

- Chapter 4, “Installing WebSphere Commerce Payments on Windows”, on page 25
- Chapter 5, “Installing WebSphere Commerce Payments on Solaris”, on page 31
- Chapter 6, “Installing WebSphere Commerce Payments on AIX”, on page 37
- Chapter 7, “Installing WebSphere Commerce Payments on Linux (Intel)”, on page 41
- Chapter 8, “Installing WebSphere Commerce Payments on Linux for zSeries and S/390”, on page 45
- Chapter 9, “Installing WebSphere Commerce Payments on iSeries”, on page 53

---

## Upgrading UDB

### For Windows, AIX, Solaris, Linux on Intel platforms

*If you are installing WebSphere Commerce Payments on iSeries, you can skip this section.*

If you are using UDB as your database manager product, you must ensure that you are using the level of UDB required for this version of WebSphere Commerce Payments (UDB Version 7.2 FixPak 5 or higher). If you need to upgrade to this level of UDB, you can follow these procedures to upgrade UDB.

#### **Please note**

For the latest instructions on migrating UDB databases, you should refer to the UDB documentation (consult the DB2 *Quick Beginnings* document). Upgrade instructions are summarized here for your convenience, but you should recognize that the UDB documentation represents your most current and accurate set of migration instructions for DB2. Use the appropriate commands for your platform.

Also, references to the “Payments” database in the following instructions apply to your current payments database (e.g., WebSphere Payment Manager database).

If you are installing UDB for the first time and no migration is necessary, see “Installing a database (UDB) on workstation platforms” on page 11 for installation procedures.

1. Make a directory to hold a backup of your database. (Creating a backup of your payments database is suggested as a safety measure.) For example:

**On Windows:** md c:\db2backup

**On UNIX platforms:** mkdir /db2backup

2. Gracefully stop all applications with connections to the database. In the event you cannot stop the applications gracefully, you can force all DB2 users off the system by entering db2 force application all. **Important:** Forcing users off can lead to unwanted data loss. Therefore, be sure to take the proper measures to stop your applications properly.

3. Back up the Payments database. For example:

**On Windows** (from a DB2 command line):

```
backup db <dbname>
```

**On UNIX platforms:**

```
db2 backup db <dbname>
```

where *dbname* is the Payments database name.

4. After backing up the database, run the **db2ckmig** command to verify the database is ready for migration.

**On Windows:**

```
db2ckmig <dbname> -L <c:\temp> -u <db2adminid> -p <db2adminpw>
```

**On UNIX platforms** (from a DB2 command line):

```
db2ckmig <dbname> -L </tmp> -u <db2adminid> -p <db2adminpw>
```

Specify a location and file name to keep a list of errors generated for the database (for example, in a temporary directory).

Specify the user account used to connect to the database for *db2adminid*.

Specify the password of the user account used to connect to the database for *db2adminpw*.

5. Stop any running services that may have been using the database: IBM HTTP Server, WebSphere Application Server, and DB2.
6. Install UDB Version 7.2.
  - Select the DB2 components you want installed and click **Next**. (See step 2 on page 11 for more information.)
  - Select **Typical** installation and click **Next**. If your previous DB2 folder was found, files are copied into that folder.
  - Enter your DB2 database information (username and password).
  - After the installation completes successfully, restart your workstation. Exit from the DB2 Product Registration and Quick Tour. Verify that DB2 starts up.
  - Migrate your database by following the instructions provided in the *DB2 Quick Beginnings* documentation for migrating databases. The migration involves the following tasks:
    - a. Log onto the machine with SYSADM authority.
    - b. Verify that the database to migrate is cataloged.

**On Windows** (from a DB2 command line):

```
list database directory
```

**On UNIX platforms:**

db2 list database directory

- c. Run the **db2 migrate** command to migrate your database.

**On Windows:** db2 migrate database <dbname>

**On UNIX platforms:** db2 migrate database <dbname>

You should receive a successful migration message.

**Note:** This step simply upgrades the database to the current UDB level installed.

- Install UDB Version 7.2 FixPak 5 or higher. To obtain and install the FixPak for UDB, see Web site: <http://www.ibm.com/software/data/db2> (refer to technical support and FixPaks).
- Verify that you can access the database table from the DB2 console. Verify that you can bring up WebSphere Application Server and WebSphere Payment Manager and the WebSphere Payment Manager logon panel is displayed.

---

## Migrating MS SQL databases to UDB

*Unless you are installing WebSphere Commerce Payments on Windows, you can skip this section.*

To migrate MS SQL databases to UDB, you can use the migratedb utility. The utility is supported for use only on Windows NT or Windows 2000 platforms, and only to migrate MS SQL databases to UDB (DB2) format. You should run the migratedb utility after installing UDB and creating a Payments database in UDB, but before migrating to the new WebSphere Commerce Payments Framework or WebSphere Commerce Payments cassette software.

To run the migratedb utility, follow these steps on the Windows NT or Windows 2000 system where your current Payments database is installed:

1. From a command prompt, change to the migratedb subdirectory under the Windows NT platform directory on the WebSphere Commerce Payments product CD. For example:

```
cd x:\nt\migratedb
```

where *x* represents your CD-ROM drive.

2. Copy all the files located in the migratedb subdirectory to a temporary directory of your choice on your system. Then, in your temporary directory, look for the migratedb.properties.sample file. Copy the file as migratedb.properties and modify the copied file to provide information about your current MS SQL database environment and your UDB environment. Specifically, provide values for the following properties:

- Enter the JDBC URL for the old and new Payments databases:

```
OldJdbcUrl=jdbc:weblogic:mssqlserver4:oldDatabaseName@servername.example.com:1433
UDBJdbcUrl=jdbc:db2:newDatabaseName
```

The old JDBC URL can be found in the Windows Registry, under HKEY\_LOCAL\_MACHINE\SOFTWARE\IBM\Payment Server\2.1\2.1db\_jdbcurl.

For *newDatabaseName*, specify the name of the WebSphere Commerce Payments database you created when you installed UDB.

- Enter the JDBC driver, driver classpath, and driver shared library path for the old and new databases. For example:

```
OldJdbcDriver=weblogic.jdbc.mssqlserver4.Driver
OldJdbcClasspath=C:\weblogic\mssqlserver4\classes
OldJdbcSharedLib=
UDBJdbcDriver=COM.ibm.db2.jdbc.app.DB2Driver
UDBJdbcClasspath=<db2installdirectory>/java12/db2java.zip
UDBJdbcSharedLib=<db2installdirectory>/java12;<db2installdirectory>/bin
```

A shared library path is required only if your existing JDBC driver uses a shared library.

*db2installdirectory* is the directory where DB2 UDB is installed.

- Enter values for the database administrator and owner user IDs for the old and new databases, and the instance name of the new database. For example:

```
OldAdminUserid=MSSQLAdmin
OldOwnerUserid=MSSQLOwner
UDBAAdminUserid=db2admin
UDBOwnerUserid=db2admin
UDBInstance=DB2
```

In this example, the default values of *db2admin* are used for the DB2 administrator and owner user IDs, and *DB2* for the instance name.

3. After saving the migratedb.properties file, run the migratedb command from your temporary directory.

```
migratedb -oldpass oldadminpassword -newpass newadminpassword [-pmdir Payments_installdir]
```

*oldadminpassword* is the administrator's password for the database you are migrating "from." The value entered for this password should be the *same* as the value entered for *newadminpassword*.

*newadminpassword* is the administrator's password for the new UDB database you are migrating "to." The value entered for this password should be the *same* as the value entered for *oldadminpassword*.

*Payments\_installdir* is the directory where your existing version of WebSphere Payment Manager is installed. If *-pmdir* is not specified, the *sql.converted* file is written to the current directory. You must then manually move the *sql.converted* file to the directory where WebSphere Payment Manager is installed.

The migratedb utility creates tables in your UDB environment and copies data from your MS SQL database to UDB. A message is displayed to inform you if the utility ran successfully.

**Note:** The migratedb utility does not migrate your UDB database to WebSphere Commerce Payments Version 3.1 format. You must migrate (install) WebSphere Commerce Payments Version 3.1 to migrate your new WebSphere Commerce Payments database to a Version 3.1 database.

---

## Migration procedure for iSeries

Version 3.1.3 of the WebSphere Commerce Payments for iSeries Licensed Program must be installed along with the cassette options you require before you can migrate from WebSphere Payment Manager Version 2.2.0 or higher. After version 3.1.3 is installed, you can use the Convert Payments Instance (CVTPYMMGR) command to migrate your data from release 2.2.0 or higher.

To migrate to WebSphere Commerce Payments, Version 3.1.3:

- For each cassette that exists in your previous configuration, you must ensure that the corresponding Version 3.1.3 cassette option is installed.
- From an iSeries Command Entry screen, enter the following command:  
**CVTPYMMGR PYMMGR(instance) PWD(password)** where the two parameters are the name of the instance to be migrated, and the password associated with that instance (or \*VLDL if the password should be obtained from the WebSphere Commerce Payments validation list).

Beginning with Version 3.1.1, the Convert Commerce Payments Instance (**CVTPYMMGR**) command supports an optional WASINST parameter that allows you to specify a pre-existing non-default WebSphere instance.

---

## Post-migration considerations

### Cassettes

After a successful installation and migration of the WebSphere Commerce Payments Framework, you must upgrade your IBM cassettes and version 2.2.x non-IBM cassettes to version 3.1.3 for the cassettes to function properly.

### Removed files

All of the PSPL files that contain a language qualifier (represented by \*\*) in the name are deleted for WebSphere Commerce Payments and IBM WebSphere Commerce Payments cassettes including:

```
pspl/admin.**.PSPL  
pspl/payment.**.PSPL  
pspl/reports.**.PSPL
```

Language-qualified PSPL files for third-party cassettes are not removed.

Because Tivoli Ready support for WebSphere Commerce Payments is no longer provided, the `<Payments_installdir>/tivsupport` directory is removed.

In addition, **on workstation platforms:**

- After a successful install, the entire `jre` subdirectory is removed (WebSphere Commerce Payments uses the developer kit for Java that WebSphere Application Server uses).
- Web pages that were formerly listed under the Web publish directory `<webPubDir>` are removed and made available in the `Payments.war` subdirectory contained in the `IBM_Payments.ear` subdirectory located in the `<WAS_HOME/installedApps><Payments_installdir>`. The WebSphere Commerce Payments user interface uses files that are in the `web` subdirectory for your Web server.
- The `FormatServletTrace.cmd` file, which was previously used to format trace log information, is removed. You can format trace information with the `FormatTrace.cmd` file instead. For more information about this command file, refer to the *WebSphere Commerce Payments Administrator's Guide*.

### Backed up files

During migration, these key files and subdirectories are saved to a new backup directory:

- On Windows, AIX, Solaris, and Linux platforms:**  
 <Payments\_installdir>/!pm22Backup! or <Payments\_installdir>/!pm21Backup!  
 (depending on what version you had previously):
  - .payment
  - IBMPayServer[.cmd]
  - IBMPaymentServerUI.properties
  - PaymentServlet.properties
  - PSDefaultRealm
  - StopIBMPayServer[.cmd]
  - log/\* (all files within this directory)
  - samples/\* (all files within this directory)
- On iSeries:** /QIBM/UserData/PymSvr/instanceName/pm31Backup
  - IBMPaymentServerUI.properties
  - PaymentServlet.properties
  - log/\* (all files within this directory)

---

## Chapter 4. Installing WebSphere Commerce Payments on Windows

Use this information to install WebSphere Commerce Payments on Windows NT or Windows 2000.

---

### Windows NT and Windows 2000 platform requirements

The minimum hardware and software requirements for WebSphere Commerce Payments are as follows:

#### Hardware requirements:

- Intel Pentium II® personal computer with a 500MHz processor or better that can support Windows 2000 or Windows NT Version 4.0
- A network communications adapter that supports the TCP/IP protocol (Ethernet or Token Ring card)
- Network connectivity to the internet
- A CD-ROM drive
- 512 MB RAM minimum
- 150 MB free disk space minimum if you are installing WebSphere Commerce Payments and WebSphere Application Server on the same file system (or 75 MB on the WebSphere Commerce Payments system and 75 MB on the WebSphere Application Server system if installing separately)
- 150 MB of disk space minimum on whichever disk the TEMP environment variable points to.

Note: On Windows 2000, each user has their own TEMP environment variable which is set by default to:

```
c:\Documents and Settings\\Local Settings\Temp
```

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

- Additional disk space for your database
- Additional disk space for any payment cassettes you intend to use. See “Payment cassettes” on page 15 for more information.

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

#### Software requirements

- One of the following:
  - Microsoft Windows 2000 Advanced Server with Service Pack 2, or Windows 2000 Server with Service Pack 2
  - Microsoft Windows NT Version 4.0 Workstation or Server with Service Pack 6A

You can download the latest service packs from <http://www.microsoft.com>. For information on upgrading your operating system, see your Windows documentation.

- WebSphere Application Server Advanced Edition, Version 4.0.2.



- IBM Developer Kit, Java 2 Technology Edition for Windows NT, Version 1.3.0. This developer kit is required by and provided with WebSphere Application Server Version 4.0.2. If for some reason you need to install the developer kit yourself, you can obtain the developer kit from <http://www.ibm.com/java/jdk/download/index.html>.

**Note:** For Windows, build 10 of this developer kit is required. To see if you have build 10, enter the following command from a command prompt where WebSphere Application Server is installed:

```
java -fullversion
```

If cn130-20010925 is displayed in the output, you have the correct build. If it is not displayed, contact your IBM support personnel for assistance.

- A Web server. See your WebSphere Application Server documentation for supported Web servers.

**Note:** Due to the IIS limitations on Window NT Version 4.0 Workstation, the WebSphere Commerce Payments user interface functionality is limited. For more information, see “Web servers” on page 14.

- A database product. For supported databases, see “Choosing your database product” on page 6.

**Note:** On a Windows NT platform, WebSphere Commerce Payments supports the use of UDB and Oracle database products. If you currently use a Microsoft database product (MS SQL), you must migrate your database to UDB.

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

**Note:** While a Web browser is *not* required to be installed on the same machine where the WebSphere Commerce Payments resides, a Web browser *is* necessary to access the WebSphere Commerce Payments user interface as well as WebSphere Application Server.

---

## Before installing WebSphere Commerce Payments

1. Read the latest readme file, `readme.framework.html`, accessed through documentation links on the WebSphere Commerce Payments Web site: <http://www.ibm.com/software/webservers/commerce/payments/support.html> and on the WebSphere Commerce Payments CD-ROM.
2. WebSphere Commerce Payments requires IBM Developer Kit, Java 2 Technology Edition, Version 1.3.0. If you are using earlier versions of WebSphere Application Server (for example, Version 2.0.3.x or 3.0.2.x) which use earlier versions of the developer kit, you must upgrade WebSphere Application Server and have the IBM Developer Kit, Java Technology Edition Version 1.3 installed prior to installing WebSphere Commerce Payments. WebSphere Application Server Version 4.0.2 uses version 1.3 of the developer kit.
3. You must have a database product already installed for use with WebSphere Commerce Payments:
  - If you are using UDB, you must use UDB Version 7.2 with FixPak 5 or higher applied.



- Create an instance and a database for WebSphere Commerce Payments.
- The database product must be running during WebSphere Commerce Payments installation.

If you are using UDB for the WebSphere Commerce Payments database, you must increase the application heap size of the WebSphere Commerce Payments database to at least 256 before you install WebSphere Commerce Payments. To increase the heap size, at a DB2 command prompt enter:

```
UPDATE DB CFG FOR payments USING APPLHEAPSZ 256
```

where *payments* is the WebSphere Commerce Payments database name.

4. Before installation begins, ensure that:
  - WebSphere Application Server is installed. The WebSphere Application Server administration server **should** be running at installation.
 

Also, make sure WebSphere Application Server does not have an application server named **WebSphere Commerce Payments** configured for another purpose (such as for use with other products). If so, rename or delete it. To delete it, do the following:

    - a. From the WebSphere Application Server administrative console, under **Nodes**, select the WebSphere Commerce Payments Application Server. Right-click the selection.
    - b. Select **Remove**.
    - c. Repeat the removal procedure under **Enterprise Applications**. Select the **IBM\_Payments** application. Right-click the selection. Select **Remove**.
  - If you are migrating from an earlier version of this product, ensure the product is **not** running.
5. Ensure that WebSphere security is disabled before installing WebSphere Commerce Payments or any payment cassettes. To disable security,
  - a. Start the WebSphere Application Server administrative console.
  - b. Click **Console**→**Security Center** on the console menu bar.
  - c. On the **General** tabbed page of the Security Center, deselect the **Enable Security** check box.
  - d. On the **Authentication** tabbed page, select **Local Operating System**.
  - e. Specify the **Security Server ID** and **password**; namely, the user ID and password of the local administrator of the machine.
  - f. Click **OK** when done.
  - g. Restart WebSphere Application Server.

After following subsequent procedures to install WebSphere Commerce Payments and any payment cassettes, you can re-enable security.

---

## Installation procedure on Windows

After reviewing the preinstallation planning and completing the preinstall activities, install WebSphere Commerce Payments on Windows NT or Windows 2000:

1. Logon to Windows as a user with Administrator's group privileges.

**Note:** For more information on user IDs and passwords, see step 6 on page 12 in "Installing a database (UDB) on workstation platforms" on page 11.

2. Ensure the resolution on your display is set to 800 by 600 pixels or higher to best view the WebSphere Commerce Payments installation program.
3. Insert the WebSphere Commerce Payments for Windows NT and Windows 2000 CD-ROM.
4. Change to the root directory of the CD-ROM.
5. From a command prompt, enter `Install`.
6. On the WebSphere Commerce Payments Install screen, click **Next**.
7. Accept the default destination directory or enter another directory.
8. If you are migrating from WebSphere Payment Manager version 2.2 and the installation program finds the Test Cassette, it will delete it and inform you of the deletion. Click **Next** to proceed.
9. If the installation program cannot determine which IBM Developer Kit, Java Technology Edition that WebSphere Application Server is using, you will be asked to enter the location of the developer kit directory. If the location displayed is correct, click **Next**. If not, enter the correct location and click **Next**.
10. Select which database you will use with WebSphere Commerce Payments: UDB or Oracle.
11. When the installation finds the JDBC driver information, click **Next**. If it does not find the JDBC driver information, ensure that the JDBC driver class name and class location are as follows:

For UDB:

- JDBC Driver Class name: `COM.ibm.db2.jdbc.app.DB2Driver`
- JDBC Class location for IBM Developer Kit 1.3.0:  
`\<db2installdirectory>\java\db2java.zip`
- JDBC Driver shared library path: `\<db2installdirectory>\bin\`

For Oracle, consult the Oracle documentation to obtain similar information.

**Note:** If you enter incorrect database information and database errors occur, using the "back" button may cause more database error pop-ups to appear. If this occurs, you can either click "Cancel" and restart the Installation or you can click "Back" through several screens and then move forward using the "Next" buttons (ensuring the correct values are entered at each intervening screen) until you get back to the database entry screen. Once this screen reappears, you can enter the correct information.

12. On the WebSphere Commerce Payments Database Access Information screen, enter your values for the database owner user ID, administrator's user ID, administrator's password, WebSphere Commerce Payments database name and the DB2 instance name. For example, if you are using UDB, enter:

```
db2admin /* for the database owner user ID
db2admin /* for the database administrator's user ID
db2admin /* for the database administrator's password
payments /* for the IBM WebSphere Commerce Payments database name
DB2 /* the default DB2 instance name
```

If you are using a remote database, do not specify the remote database instance name for the DB2 instance name. Specify the DB2 instance name associated with the machine on which you are installing WebSphere Commerce Payments.

13. When prompted, enter the name of the WebSphere Application Server admin node and click **Next**.

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

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

15. When installation is complete, restart (reboot) your system before starting the Web server and WebSphere Commerce Payments.
16. Continue with Chapter 10, "Post-installation activities", on page 57.

## Windows shortcuts

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

- Log on to WebSphere Commerce Payments.
- View the readme file if you haven't already done so.
- Uninstall WebSphere Commerce Payments.



---

## Chapter 5. Installing WebSphere Commerce Payments on Solaris

Use this information to install WebSphere Commerce Payments on Solaris.

---

### Solaris platform requirements

The minimum hardware and software requirements for WebSphere Commerce Payments are as follows:

#### Hardware requirements:

- A Sun SPARC or compatible workstation
- A network communications adapter that supports the TCP/IP protocol (Ethernet or Token Ring)
- Network connectivity to the internet
- A CD-ROM drive
- 150 MB free disk space minimum if you are installing WebSphere Commerce Payments and WebSphere Application Server on the same file system (or 75 MB on the WebSphere Commerce Payments system and 75 MB on the WebSphere Application Server system if installing separately)
- 150 MB minimum of disk space in /tmp
- 768 MB RAM minimum
- 384 MB swap space minimum, 768 MB recommended
- 384 MB file descriptor space minimum, 768 MB recommended
- Additional disk space for your database
- Additional disk space for any payment cassettes you intend to use. See “Payment cassettes” on page 15 for more information.

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

#### Software requirements:

- Solaris Version 7 or Version 8. For information on upgrading your operating system, see your Solaris documentation.
- WebSphere Application Server Advanced Edition, Version 4.0.2
- Java 2 Software Development Kit (SDK) 1.3 (version supplied with WebSphere Application Server)
- A database product. For supported databases, see “Choosing your database product” on page 6.
- A Web server. See your WebSphere Application Server documentation for supported Web servers.
- A Web browser. WebSphere Commerce Payments has been optimized for:
  - Netscape Communicator 4.08, or later
  - Microsoft Internet Explorer 4.01 with Service Pack 2, or later

**Note:** While a Web browser is *not* required to be installed on the same machine where the WebSphere Commerce Payments resides, a Web browser *is*

necessary to access the WebSphere Commerce Payments user interface as well as WebSphere Application Server.

---

## Before installing WebSphere Commerce Payments on Solaris

Before you install WebSphere Commerce Payments on Solaris, you must:

1. Read the latest readme file, `readme.framework.html`, accessed through documentation links on the WebSphere Commerce Payments Web site <http://www.ibm.com/software/webservers/commerce/payments/support.html> and on the WebSphere Commerce Payments CD-ROM.
2. Make sure you have the correct version of the Java 2 SDK installed, as shown in “Solaris platform requirements” on page 31.
3. You must have a database already installed for use with WebSphere Commerce Payments. For instructions on installing UDB, see “Installing a database (UDB) on workstation platforms” on page 11.
  - If you are using UDB, you must use UDB Version 7.2 with FixPak 5 or higher applied.
  - Create an instance and a database
  - The database product must be running during WebSphere Commerce Payments installation

If you are using UDB for the WebSphere Commerce Payments database, you must increase the application heap size of the WebSphere Commerce Payments database to at least 256 before you install WebSphere Commerce Payments. To increase the heap size, at a DB2 command prompt enter:

```
UPDATE DB CFG FOR payments USING APPLHEAPSZ 256
```

where *payments* is the WebSphere Commerce Payments database name.

4. Before installation begins, ensure that:
  - WebSphere Application Server is installed. WebSphere Application Server and your HTTP server **should** be running at installation.  
Also, make sure WebSphere Application Server does not have an application server named **WebSphere Commerce Payments** configured for another purpose (such as for use with other products). If so, rename or delete it. To delete it, do the following:
    - a. From the WebSphere Application Server administrative console, under **Nodes**, select the WebSphere Commerce Payments Application Server. Right-click the selection.
    - b. Select **Remove**.
    - c. Repeat the removal procedure under **Enterprise Applications**. Select the **IBM\_Payments** application. Right-click the selection. Select **Remove**.
  - If you are migrating from an earlier version of the product, ensure that the product is **not** running
5. Ensure that WebSphere security is disabled before installing WebSphere Commerce Payments or any payment cassettes. To disable security,
  - a. Start the WebSphere Application Server administrative console.
  - b. Click **Console→Security Center** on the console menu bar.
  - c. On the **General** tabbed page of the Security Center, deselect the **Enable Security** check box.
  - d. On the **Authentication** tabbed page, select **Local Operating System**.

- e. Specify the **Security Server ID** and **password**; namely, the user ID and password of the local administrator of the machine.
- f. Click **OK** when done.
- g. Restart WebSphere Application Server.

After following subsequent procedures to install WebSphere Commerce Payments and any payment cassettes, you can re-enable security.

- 6. Ensure you are logged on as **root** directly (as opposed to logging on as a different user and then doing an **su** to root).
- 7. Update the kernel parameters as shown in “Solaris kernel configuration parameters”.
- 8. Ensure that you have installed a patch cluster from July 1999, or later.

## Solaris kernel configuration parameters

You must update the Solaris kernel configuration parameters before installing the WebSphere Commerce Payments Framework. Follow the steps below to ensure that your Solaris kernel configuration is consistent with the recommended values outlined in the kernel configuration table.

- 1. Use the table below (see Table 7) to set the Solaris kernel configuration parameters in the `/etc/system` file.
- 2. Restart the system.
- 3. Run the Framework install using the instructions in “Installation procedure on Solaris” on page 34.

Table 7. Solaris Kernel Configuration Parameters (recommended values)

Kernel Parameter	64MB - 128MB, Physical Memory	128MB - 256MB, Physical Memory	256MB - 512MB, Physical Memory	512MB +, Physical Memory
msgsys:msginfo_msgmax	65535 (1)	65535 (1)	65535 (1)	65535 (1)
msgsys:msinfo_msgmnb	65535 (1)	65535 (1)	65535 (1)	65535 (1)
msgsys:msginfo_msgmap	130	258	258	258
msgsys:msginfo_msgmni	128	256	256	256
msgsys:msginfo_msgssz	16	16	16	16
msgsys:msginfo_msgtql	256	512	1024	1024
msgsys:msginfo_msgseg	8192	16384	32768	32768
shmsys:shminfo_shmmax	67108864	134217728 (2)	268435456 (2)	536870912 (2)
shmsys:shminfo_shmseg	16	16	16	16
shmsys:shminfo_shmmni	300	300	300	300
semsys:seminfo_semmni	128	256	512	1024
semsys:seminfo_semmap	130	258	514	1026
semsys:seminfo_semms	256	512	1024	2048
semsys:seminfo_semmnu	256	512	1024	2048
semsys:seminfo_semume	200	200	200	200
semsys:seminfo_semopm	200	200	200	200

**Notes:**

1. The `msgsys:msinfo_msgmnb` and `msgsys:msginfo_msgmax` parameters must be set to 65535.
2. The `shmsys:shminfo_shmmax` parameter should be set to the highest of the following values:
  - The suggested value in the above table, or
  - 90 percent of the physical memory (in bytes)

For example, if your system has 196 MB of memory, set the `shmsys:shminfo_shmmax` parameter to 184968806 (176\*1024\*1024).

**Setting kernel configuration parameters**

To set a kernel parameter:

1. Add this line at the end of the `/etc/system`:  

```
set <parameter_name> = <value>
```

For example, to set the value of the `msgsys:msginfo_msgmax` parameter, add this line to the end of the `/etc/system` file:

```
set msgsys:msginfo_msgmax = 65535
```

Sample files for updating the kernel configuration parameters are provided in the `/opt/IBMDB2/V7.1/cfg` directory. The names for these files are:

- `kernel.param.64MB` for systems with 64 MB -124 MB of physical memory
  - `kernel.param.128MB` for systems with 128 MB -256 MB of physical memory
  - `kernel.param.256MB` for systems with 256 MB -512 MB of physical memory
  - `kernel.param.512MB` for systems with more than 512 MB of physical memory
2. Append the appropriate kernel configuration parameter file to the `/etc/system` file. If necessary, change the value of the `shmsys:shminfo_shmmax` parameter as described in note 2.
  3. After updating the `/etc/system` file, restart the system.

---

**Installation procedure on Solaris**

1. Logon as root directly (as opposed to logging on as a different user and then doing an `su` to root).
2. Set the `THREADS_FLAG` environment variable to the value of **native** in the shell you will install from.
3. Ensure that your `LIBPATH` and `LD_LIBRARY_PATH` environment variables contain references to the Java 2 SDK's *native* thread libraries, rather than to the green thread libraries.
4. Ensure that you do *not* include references to other Java 2 SDKs or JREs in your `LIBPATH` or `LD_LIBRARY_PATH` environment variables.
5. Ensure the resolution on your display is set to 800 by 600 pixels or higher to best view the WebSphere Commerce Payments installation program.
6. Insert the WebSphere Commerce Payments for Solaris CD-ROM, and mount the CD-ROM file system, if necessary.
7. Run the **Install** command.
8. On the "WebSphere Commerce Payments Install" screen, click **Next**.
9. Accept the default destination directory or enter another directory. Do not include blanks or spaces in the destination directory name.



10. If the installation program cannot determine which Java 2 SDK WebSphere Application Server is using, you will be asked to enter the location of the Java 2 SDK directory.
11. Select which database you will use with WebSphere Commerce Payments: UDB or Oracle.
12. When the install finds the JDBC driver information, click **Next**. If it does not find the JDBC driver information, ensure that the JDBC driver class name and class location are as follows:

For UDB:

- JDBC Driver Class name: COM.ibm.db2.jdbc.app.DB2Driver
- JDBC Class location: /<db2installdirectory>/java12/db2java.zip
- JDBC Driver shared library path: /<db2installdirectory>/lib/

For Oracle, consult the Oracle documentation to obtain similar information.

**Note:** If you enter incorrect database information and database errors occur, using the "back" button may cause more database error pop-ups to appear. If this occurs, you can either click "Cancel" and restart the Installation or you can click "Back" through several screens and then move forward using the "Next" buttons (ensuring the correct values are entered at each intervening screen) until you get back to the database entry screen. Once this screen reappears, you can enter the correct information.

13. If you are migrating from WebSphere Payment Manager Version 2.2 and the installation program finds the Test Cassette, it will delete it and inform you of the deletion. Click **Next** to proceed.
14. On the "WebSphere Commerce Payments Database Access Information" screen, enter your values for the database owner user ID, administrator's user ID, administrator's password, WebSphere Commerce Payments database name and the DB2 instance name. For example, if you are using UDB, enter:

```
db2admin /* for the database owner user ID
db2admin /* for the database administrator's user ID
db2admin /* for the database administrator's password
payments /* for the IBM WebSphere Commerce Payments database name
DB2      /* The default DB2 instance name
```

If you are using a remote database, do not specify the remote database instance name for the DB2 instance name. Specify the DB2 instance name associated with the machine on which you are installing WebSphere Commerce Payments.

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

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

16. When installation is complete, restart the Web server and start WebSphere Commerce Payments before you access the WebSphere Commerce Payments GUI.
17. Continue with Chapter 10, "Post-installation activities", on page 57.



---

## Chapter 6. Installing WebSphere Commerce Payments on AIX

Use this information to install WebSphere Commerce Payments on AIX.

---

### AIX platform requirements

The minimum hardware and software requirements for WebSphere Commerce Payments are as follows:

#### Hardware requirements:

- An RS/6000<sup>®</sup> machine
- A network communications adapter that supports the TCP/IP protocol (Ethernet or Token Ring card)
- Network connectivity to the internet
- A CD-ROM drive
- 768 MB RAM minimum
- 150 MB free disk space minimum if you are installing WebSphere Commerce Payments and WebSphere Application Server on the same file system (or 75 MB on the WebSphere Commerce Payments system and 75 MB on the WebSphere Application Server system if installing separately)
- 150 MB minimum of disk space in /tmp
- Additional disk space for your database
- Additional disk space for any payment cassettes you intend to use. See “Payment cassettes” on page 15 for more information.

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

#### Software requirements:

- AIX Version 4.3.3 4330-07 maintenance level plus APAR IY19277, 4330-08 maintenance level plus APAR IY19277, 4330-09 maintenance level for WebSphere Application Server 4.0 (which includes the APAR), or later.  
To determine the operating system level, issue the `oslevel` command. To determine the maintenance level, issue the following command: `instfix -i | grep AIX_ML`. For information on upgrading your operating system, see your AIX documentation or visit: <http://techsupport.services.ibm.com>
- WebSphere Application Server Advanced Edition, Version 4.0.2.
- IBM Developer Kit, Java 2 Technology Edition, for AIX, Version 1.3. (This developer kit is required by and provided with WebSphere Application Server Version 4.0.2. If for some reason you need to install the developer kit yourself, you can obtain the developer kit from <http://www.ibm.com/java/jdk/download/index.html>.)
- A database product. For supported databases, see “Choosing your database product” on page 6.
- A Web server. See your WebSphere Application Server documentation for supported Web servers.
- A Web browser. WebSphere Commerce Payments has been optimized for:
  - Netscape Communicator 4.08, or later
  - Microsoft Internet Explorer 4.01 with Service Pack 2, or later

**Note:** While a Web browser is *not* required to be installed on the same machine where the WebSphere Commerce Payments resides, a Web browser *is* necessary to access the WebSphere Commerce Payments user interface as well as WebSphere Application Server.

- If you are using the IBM 4758 Models 1, 2, 13, or 23 PCI Cryptographic Coprocessor:
  - APARs IX74080 and IX73944 (for AIX Version 4.3.x)
  - 4758 CCA support program level 1.3.1, or later

Note: WebSphere Commerce Payments supports the 4758 Coprocessor only on AIX.

---

## Before installing WebSphere Commerce Payments

- Read the latest readme file, `readme.framework.html`, accessed through documentation links on the WebSphere Commerce Payments Web site <http://www.ibm.com/software/webservers/commerce/payments/support.html> and on the WebSphere Commerce Payments CD-ROM.
- Make sure you have the correct version of the IBM Developer Kit, Java Technology Edition installed, as shown in “AIX platform requirements” on page 37.
- You must have a database already installed for use with WebSphere Commerce Payments. For instructions on installing UDB, see “Installing a database (UDB) on workstation platforms” on page 11.
  - If you are using UDB, you must use UDB Version 7.2 with FixPak 5 or higher applied.
  - Create an instance name (for example, `db2admin`) and a database.
  - The database product must be running during WebSphere Commerce Payments installation.

If you are using UDB for the WebSphere Commerce Payments database, you must increase the application heap size of the WebSphere Commerce Payments database to at least 256 before you install WebSphere Commerce Payments. To increase the heap size, at a DB2 command prompt enter:

```
UPDATE DB CFG FOR payments USING APPLHEAPSZ 256
```

where *payments* is the WebSphere Commerce Payments database name.

- If you install UDB and WebSphere Application Server on the same machine, you must do the following:
  - As DB2 Database Administrator (e.g., `db2admin`) edit the `.profile` file in the `/home/db2admin/` directory. *db2admin* is the DB2 instance user ID (`db2inst1` by default). In this directory example, `db2admin` is the DB2 instance name, and its home directory is `/home/db2admin`.

Add the following lines to the `.profile` file to configure the database manager to use extended shared memory by setting the EXTSHM environment variable:

    - `EXTSHM=ON`
    - `export EXTSHM`
  - From the `/home/db2admin` directory at an AIX command prompt, enter the following to source the environment:
    - . `.profile`

The leading dot is significant. This dot command allows the changes to environment variables to persist.

- Then, from the same AIX command prompt, enter the following command (do this only once):  
db2set DB2ENVLIST=EXTSHM
- Stop and restart DB2 from the same command prompt.
- Before installation begins, ensure that:
  - WebSphere Application Server is installed. WebSphere Application Server and your HTTP server **should** be running at installation.  
Also, make sure WebSphere Application Server does not have an application server named **WebSphere Commerce Payments** configured for another purpose (such as, for use with other products). If so, rename or delete it. To delete it, do the following:
    1. From the WebSphere Application Server administrative console, under **Nodes**, select the WebSphere Commerce Payments Application Server. Right-click the selection.
    2. Select **Remove**.
    3. Repeat the removal procedure under **Enterprise Applications**. Select the **IBM\_Payments** application. Right-click the selection. Select **Remove**.
  - If you are migrating from an earlier version of the product, ensure the product **is not** running
- Ensure that WebSphere security is disabled before installing WebSphere Commerce Payments or any payment cassettes. To disable security,
  1. Start the WebSphere Application Server administrative console.
  2. Click **Console**→**Security Center** on the console menu bar.
  3. On the **General** tabbed page of the Security Center, deselect the **Enable Security** check box.
  4. On the **Authentication** tabbed page, select **Local Operating System**.
  5. Specify the **Security Server ID** and **password**; namely, the user ID and password of the local administrator of the machine.
  6. Click **OK** when done.
  7. Restart WebSphere Application Server.

After following subsequent procedures to install WebSphere Commerce Payments and any payment cassettes, you can re-enable security.

---

## Installation procedure on AIX

1. Logon as root directly (as opposed to logging on as a different user and then doing an su to root).
2. Ensure the resolution on your display is set to 800 by 600 pixels or higher to best view the WebSphere Commerce Payments installation program.
3. Mount the WebSphere Commerce Payments AIX CD-ROM.
4. Run the **Install** command.
5. On the "WebSphere Commerce Payments Install" screen, click **Next**.
6. Accept the default destination directory or enter another directory. Do not include blanks or spaces in the destination directory name.
7. If the installation program cannot determine which IBM Developer's Kit, Java Technology Edition that WebSphere Application Server is using, you will be asked to enter the location of the developer kit directory.

8. Select which database you will use with WebSphere Commerce Payments: UDB or Oracle.
9. When the install finds the JDBC driver information, click **Next**. If it does not find the JDBC driver information, ensure that the JDBC driver class name and class location are as follows:

For UDB:

- JDBC Driver Class name: COM.ibm.db2.jdbc.app.DB2Driver
- JDBC Class location: /<db2installdirectory>/java12/db2java.zip
- JDBC Driver shared library path: /<db2installdirectory>/lib/

For Oracle, consult the Oracle documentation to obtain similar information.

**Note:** If you enter incorrect database information and database errors occur, using the "back" button may cause more database error pop-ups to appear. If this occurs, you can either click "Cancel" and restart the Installation or you can click "Back" through several screens and then move forward using the "Next" buttons (ensuring the correct values are entered at each intervening screen) until you get back to the database entry screen. Once this screen reappears, you can enter the correct information.

10. If you are migrating from WebSphere Payment Manager Version 2.2 and the installation program finds the Test Cassette, it will delete it and inform you of the deletion. Click **Next** to proceed.
11. On the "WebSphere Commerce Payments Database Access Information" screen, enter your values for the database owner user ID, administrator's user ID, administrator's password, WebSphere Commerce Payments database name and the DB2 instance name. For example, if you are using UDB, enter:

```
db2admin /* for the database owner user ID
db2admin /* for the database administrator's user ID
db2admin /* for the database administrator's password
payments /* for the IBM WebSphere Commerce Payments database name
DB2      /* The default DB2 instance name
```

If you are using a remote database, do not specify the remote database instance name for the DB2 instance name. Specify the DB2 instance name associated with the machine on which you are installing WebSphere Commerce Payments.

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

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

13. When installation is complete, start or restart your Web server (for example, IBM HTTP Server) and WebSphere Commerce Payments.
14. Continue with Chapter 10, "Post-installation activities", on page 57.

---

## Chapter 7. Installing WebSphere Commerce Payments on Linux (Intel)

Use this information to install WebSphere Commerce Payments on Linux on Intel workstations. For instructions on installing WebSphere Commerce Payments on Linux for zSeries and S/390, see Chapter 8, “Installing WebSphere Commerce Payments on Linux for zSeries and S/390”, on page 45.

---

### Linux platform requirements

The minimum hardware and software requirements for WebSphere Commerce Payments are as follows:

#### Hardware requirements:

- Intel Pentium II® personal computer with a 300MHz processor or better that can support Linux
- A network communications adapter that supports the TCP/IP protocol
- A CD-ROM drive
- 512 MB RAM minimum
- 150 MB free disk space minimum if you are installing WebSphere Commerce Payments and WebSphere Application Server on the same file system (or 75 MB on the WebSphere Commerce Payments system and 75 MB on the WebSphere Application Server system if installing separately)
- 150 MB minimum of disk space in /tmp
- Additional disk space for your database
- Additional disk space for any payment cassettes you intend to use. See “Payment cassettes” on page 15 for more information.

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

#### Software requirements

- One of the following distributions of Linux for Intel processors:
  - Red Hat Linux 7.1, 2.4 kernel
  - SuSE Linux 7.1, 2.4 kernel
- WebSphere Application Server Advanced Edition, Version 4.0.2.
- IBM Developer Kit, Java 2 Technology Edition, for Linux, Version 1.3. (This developer kit is required by and provided with WebSphere Application Server Version 4.0.2. If for some reason you need to install the developer kit yourself, you can obtain the developer kit from <http://www.ibm.com/java/jdk/download/index.html>.)
- A Web server. See your WebSphere Application Server documentation for supported Web servers.
- A database product. For supported databases, see “Choosing your database product” on page 6.
- A Web browser. WebSphere Commerce Payments has been optimized for:
  - Netscape Communicator 4.08, or higher.
  - Microsoft Internet Explorer 4.01 with Service Pack 2, or later.



**Note:** While a Web browser is *not* required to be installed on the same machine where the WebSphere Commerce Payments resides, a Web browser *is* necessary to access the WebSphere Commerce Payments user interface as well as WebSphere Application Server.

---

## Before installing WebSphere Commerce Payments

1. Read the latest readme file, `readme.framework.html`, accessed through documentation links on the WebSphere Commerce Payments Web site: <http://www.ibm.com/software/webservers/commerce/payments/support.html> and on the WebSphere Commerce Payments CD-ROM.
2. Make sure you have the correct version of IBM Developer Kit, Java Technology Edition installed, as shown in “Linux platform requirements” on page 41.
3. You must have a database product already installed for use with WebSphere Commerce Payments. For instructions on installing UDB, see “Installing a database (UDB) on workstation platforms” on page 11:
  - If you are using UDB, you must use UDB Version 7.2 with FixPak 5 or higher applied.
  - Create an instance name (e.g., `psadmin`) and a database for WebSphere Commerce Payments.
  - The database product must be running during WebSphere Commerce Payments installation.
  - You must have a database already installed for use with WebSphere Commerce Payments. For instructions on installing UDB, see “Installing a database (UDB) on workstation platforms” on page 11.
    - If you are using UDB, you must use UDB Version 7.2 with FixPak 5 or higher applied.
    - Create an instance name (for example, `db2admin`) and a database.
    - The database product must be running during WebSphere Commerce Payments installation.

If you are using UDB for the WebSphere Commerce Payments database, you must increase the application heap size of the WebSphere Commerce Payments database to at least 256 before you install WebSphere Commerce Payments. To increase the heap size, at a DB2 command prompt enter:

```
UPDATE DB CFG FOR payments USING APPLHEAPSZ 256
```

where *payments* is the WebSphere Commerce Payments database name.

4. If you install UDB and WebSphere Commerce Payments on the same machine, you must enter these commands from a DB2 prompt to circumvent a known DB2 problem:
  - `catalog tcpip node <node_name> remote <hostname> server <servicename>` (where the value for *servicename* is the TCP/IP service name which can be determined by entering the following command from a DB2 command line: `db2 get dbm cfg`).
  - `catalog database <db_name> as <db_alias> at node <nodename>` (*db\_name* is the database name for WebSphere Commerce Payments)

If the hostname has more than 8 characters or has a special character such as “-”, you should apply the following commands instead:

- `catalog tcpip node loop00 remote 127.0.0.1 server <servicename>`
- `catalog database <db_name> as <db_alias> at node loop00`



5. Before installation begins, ensure that WebSphere Application Server is installed and WebSphere Application Server and your HTTP server **are running** at installation.

Also, make sure WebSphere Application Server does not have an application server named **WebSphere Commerce Payments** configured for another purpose (such as for use with other products). If so, rename or delete it. To delete it, do the following:

- a. From the WebSphere Application Server administrative console, under **Nodes**, select the WebSphere Commerce Payments Application Server. Right-click the selection.
  - b. Select **Remove**.
  - c. Repeat the removal procedure under **Enterprise Applications**. Select the **IBM\_Payments** application. Right-click the selection. Select **Remove**.
6. Ensure that WebSphere security is disabled before installing WebSphere Commerce Payments or any payment cassettes. To disable security,
    - a. Start the WebSphere Application Server administrative console.
    - b. Click **Console**→**Security Center** on the console menu bar.
    - c. On the **General** tabbed page of the Security Center, deselect the **Enable Security** check box.
    - d. On the **Authentication** tabbed page, select **Local Operating System**.
    - e. Specify the **Security Server ID** and **password**; namely, the user ID and password of the local administrator of the machine.
    - f. Click **OK** when done.
    - g. Restart WebSphere Application Server.

After following subsequent procedures to install WebSphere Commerce Payments and any payment cassettes, you can re-enable security.

---

## Installation procedure on Linux

After reviewing the preinstallation planning and completing the preinstall activities, install WebSphere Commerce Payments on Linux:

1. Logon as root directly (as opposed to logging on as a different user and then doing a su to root).
2. Ensure the resolution on your display is set to 800 by 600 pixels or higher to best view the WebSphere Commerce Payments installation program.
3. Mount the WebSphere Commerce Payments for Linux CD-ROM.
4. Run the **Install** command.
5. On the WebSphere Commerce Payments Install screen, click **Next**.
6. Accept the default destination directory or enter another directory. Do not include blanks or spaces in the destination directory name.
7. If the installation program cannot determine which IBM Developer Kit, Java Technology Edition that WebSphere Application Server is using, you will be asked to enter the location of the developer kit directory.
8. Select which database you will use with WebSphere Commerce Payments: UDB or Oracle.
9. When the install finds the JDBC driver information, click **Next**. If it does not find the JDBC driver information, ensure that the JDBC driver class name and class location are as follows:

For UDB:

- JDBC Driver Class name: COM.ibm.db2.jdbc.app.DB2Driver
- JDBC Class location: /<db2installdirectory>/java12/db2java.zip
- JDBC Driver shared library path: /<db2installdirectory>/java12/

For Oracle, consult the Oracle documentation to obtain similar information.

**Note:** If you enter incorrect database information and database errors occur, using the "back" button may cause more database error pop-ups to appear. If this occurs, you can either click "Cancel" and restart the Installation or you can click "Back" through several screens and then move forward using the "Next" buttons (ensuring the correct values are entered at each intervening screen) until you get back to the database entry screen. Once this screen reappears, you can enter the correct information.

10. On the "WebSphere Commerce Payments Database Access Information" screen, enter your values for the database owner user ID, administrator's user ID, administrator's password, WebSphere Commerce Payments database name and the DB2 instance name. For example, if you are using UDB, enter:

```
db2admin /* for the database owner user ID
db2admin /* for the database administrator's user ID
db2admin /* for the database administrator's password
payments /* for the IBM WebSphere Commerce Payments database name
DB2      /* the default DB2 instance name
```

If you are using a remote database, do not specify the remote database instance name for the DB2 instance name. Specify the DB2 instance name associated with the machine on which you are installing WebSphere Commerce Payments.

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

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

12. When installation is complete, start or restart your Web server (for example, IBM HTTP Server) and WebSphere Commerce Payments.
13. Continue with Chapter 10, "Post-installation activities", on page 57.

---

## Chapter 8. Installing WebSphere Commerce Payments on Linux for zSeries and S/390

Use this information to install WebSphere Commerce Payments on Linux for zSeries and S/390.

---

### Linux platform requirements

The minimum hardware and software requirements for WebSphere Commerce Payments are as follows:

#### Hardware requirements:

- A zSeries or S/390 server running the Linux operating system
- 1 full volume (3300 cylinders) free disk space for the Linux operating system
- 1 full volume (6600 cylinders) free disk space for WebSphere Application Server, DB2 UDB, and WebSphere Commerce Payments
- 768 MB RAM minimum
- A local area network (LAN) adapter that supports the TCP/IP protocol
- A Windows NT, Windows 2000, or Linux machine with a graphics-capable monitor and a CD-ROM drive
- 150 MB free disk space minimum if you are installing WebSphere Commerce Payments and WebSphere Application Server on the same file system (or 75 MB on the WebSphere Application Server system if installing separately)
- 150 MB minimum of disk space in /tmp
- Additional disk space for your database
- Additional disk space for any payment cassettes you intend to use. See “Payment cassettes” on page 15 for more information.

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

#### Software requirements

- SuSE Linux Enterprise Server (SLES) 7 for S/390 and zSeries
- WebSphere Application Server Advanced Edition, Version 4.0.4
- IBM Developer Kit, Java 2 Technology Edition, for Linux, Version 1.3. (This developer kit is required by and provided with WebSphere Application Server Version 4.0.4. If for some reason you need to install the developer kit yourself, you can obtain the developer kit from <http://www.ibm.com/java/jdk/download/index.html>.)
- IBM HTTP Server 1.3.19.3
- DB2 V7.2 FixPak 7 (IBM DB2 Universal Database 7.1.0.67)
- A Web browser. WebSphere Commerce Payments has been optimized for:
  - Netscape Communicator 4.08, or higher.
  - Microsoft Internet Explorer 4.01 with Service Pack 2, or later.

**Note:** While a Web browser is *not* required to be installed on the same machine where the WebSphere Commerce Payments resides, a Web browser *is* necessary to access the WebSphere Commerce Payments user interface as well as WebSphere Application Server.

---

## Before installing WebSphere Commerce Payments

1. Read the latest readme file, `readme.framework.html`, accessed through documentation links on the WebSphere Commerce Payments Web site: <http://www.ibm.com/software/webservers/commerce/payments/support.html> and on the WebSphere Commerce Payments CD-ROM.
2. Make sure you have the correct version of IBM Developer Kit, Java Technology Edition installed, as shown in "Linux platform requirements" on page 45.
3. You must have a database product already installed for use with WebSphere Commerce Payments.
  - a. If you are using DB2 UDB as your WebSphere Commerce Payments database, you must use DB2 UDB Version 7.2 with FixPak 7.
  - b. Create an instance name (e.g., `db2inst1`) and a database (e.g., `payments`) for WebSphere Commerce Payments.

If you are using DB2 UDB for OS/390 as your WebSphere Commerce Payments database, you need to set up a connection to the database. See "Using DB2 UDB for OS/390 as a remote database on Linux for zSeries and S/390" on page 51 for more information.
  - c. The database product must be running during WebSphere Commerce Payments installation.
  - d. Check that the WebSphere Commerce Payments service names ports are defined as follows and that they appear in the `/etc/services` file:
    - `db2cpsadmin 50000/tcp` (e.g., `db2c + instance name; port = 50000`) and
    - `db2ipsadmin 50001/tcp` (e.g., `db2i + instance name; port = 50001`)
  - e. Increase the application heap size of the WebSphere Commerce Payments database to at least 256 before you install WebSphere Commerce Payments. To increase the heap size, at a DB2 command prompt enter:

```
UPDATE DB CFG FOR payments USING APPLHEAPSZ 256
```

where *payments* is the WebSphere Commerce Payments database name.
4. If you install DB2 UDB and WebSphere Commerce Payments on the same machine, you must enter these commands from a DB2 prompt to circumvent a known DB2 problem:
  - `catalog tcpip node <node_name> remote <hostname> server <servicename>` (where the value for *servicename* is the TCP/IP service name which can be determined by entering the following command from a DB2 command line: `db2 get dbm cfg`).
  - `catalog database <db_name> as <db_alias> at node <nodename>` (*db\_name* is the database name for WebSphere Commerce Payments)

If the hostname has more than 8 characters or has a special character such as "-", you should apply the following commands instead:

  - `catalog tcpip node loop00 remote 127.0.0.1 server <servicename>`
  - `catalog database <db_name> as <db_alias> at node loop00`
5. Before installation begins, ensure that WebSphere Application Server is installed and WebSphere Application Server and your HTTP server **are running** at installation.

Also, make sure WebSphere Application Server does not have an application server named **WebSphere Commerce Payments** configured for another purpose (such as for use with other products). If so, rename or delete it. To delete it, do the following:

- a. From the WebSphere Application Server administrative console, under **Nodes**, select the WebSphere Commerce Payments Application Server. Right-click the selection.
  - b. Select **Remove**.
  - c. Repeat the removal procedure under **Enterprise Applications**. Select the **IBM\_Payments** application. Right-click the selection. Select **Remove**.
6. Ensure that WebSphere security is disabled before installing WebSphere Commerce Payments or any payment cassettes. To disable security,
- a. Start the WebSphere Application Server administrative console.
  - b. Click **Console**→**Security Center** on the console menu bar.
  - c. On the **General** tabbed page of the Security Center, deselect the **Enable Security** check box.
  - d. On the **Authentication** tabbed page, select **Local Operating System**.
  - e. Specify the **Security Server ID** and **password**; namely, the user ID and password of the local administrator of the machine.
  - f. Click **OK** when done.
  - g. Restart WebSphere Application Server.

After following subsequent procedures to install WebSphere Commerce Payments and any payment cassettes, you can re-enable security.

---

## Installation procedure on Linux for zSeries and S/390

After reviewing the preinstallation planning and completing the preinstall activities, install WebSphere Commerce Payments on Linux:

1. Insert the WebSphere Commerce Payments Version 3.1.3 CD into your CD-ROM drive and FTP the following files to a temporary directory (e.g., */tmp*) on your Linux machine:

```
zLinux.FRAME.tar
```

Because this file is binary, ensure that you set the transfer type to "bin" before entering the **put** or **mput** command.

2. Log in to your Linux machine as user ID root.
3. Telnet to your Linux for zSeries machine and logon as root. Export the display to the X Windows workstation. From a command prompt, enter:

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

where *fully\_qualified\_host\_name* is either the hostname or the TCP/IP address of your X Windows server workstation. If your system replies with a can not open DISPLAY= message, run the following command on your X Server workstation machine:

```
xhost +
```

4. Switch to the temporary directory where you put the *zLinux.FRAME.tar* file and make a framework directory. Switch to the framework directory and untar the framework tar file. For example:

```
mkdir FRAME
cd FRAME
tar xvf /tmp/zLinux.FRAME.tar
```

A *linux* and *docs* directory are created in the current directory.

5. Run the **Install** command to launch the WebSphere Commerce Payments installation program and install the framework before installing any cassettes:

```
./Install
```

6. On the WebSphere Commerce Payments Install screen, click **Next**.
7. Accept the default destination directory or enter another directory. Do not include blanks or spaces in the destination directory name.
8. Select which database you will use with WebSphere Commerce Payments: IBM Universal Database or Oracle. Although both choices are presented, you must select IBM Universal Database (DB2) because WebSphere Commerce Payments on Linux for zSeries and S/390 only supports DB2 UDB. After a few screens you'll be asked to enter the database name. The installation program will implicitly determine the database type. The database type is either DB2 UDB or DB2 UDB for OS/390.
9. The WebSphere Commerce Payments installation program automatically searches for the following default JDBC information:
  - JDBC Driver Class name: COM.ibm.db2.jdbc.app.DB2Driver
  - JDBC Class location: */<db2installdirectory>/java12/db2java.zip*
  - JDBC Driver shared library path: */<db2installdirectory>/java12/*
  - DB2 Instance Name: db2inst1

If you accepted the default values when you installed DB2 UDB, click **Next**.

**Tip:** If you execute the db2profile before starting the installation program, appropriate JDBC information will be automatically loaded. To do this, go to the db2 instance home directory and issue the db2profile command:

```
cd sqllib  
. db2profile
```

**Note:** If you enter incorrect database information and database errors occur, using the **Back** button may cause more database error pop-ups to display. If this occurs, you can either click **Cancel** and restart the installation or you can click **Back** through several screens and then move forward using the **Next** buttons (ensuring the correct values are entered at each intervening screen) until you get back to the database entry screen. When this screen displays, you can enter the correct information.

10. On the WebSphere Commerce Payments Database Access Information screen, enter the values for the database. For example:

```
db2inst1 - for the database owner user ID  
db2inst1 - for the database administrator's user ID  
ibmdb2   - for the database administrator's password  
payments - for the IBM WebSphere Commerce Payments database name
```

DB2 390: If you are using DB2 UDB for OS/390, the IBM WebSphere Commerce Payments database name must be the same alias name that was defined in your DB2 UDB connection setup. Check with your Payments database administrator for the actual values.

11. On the WebSphere Commerce Payments configuration information screen, accept the default WebSphere Administrative node name unless the default value of your node name is a qualified machine name or any other value.
12. On the "Installation Summary" screen, review the chosen parameters. Click **Next** to continue the installation.

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

13. At this point, you have the option of further customizing WebSphere Commerce Payments. To install optional cassettes, see “Installing Cassettes”.

---

## Installing Cassettes

You can install the following cassettes that are offered: VisaNet, BankServACH, or CyberCash. Before installation, FTP the following cassette tar files (as appropriate) to a temporary directory (e.g., */tmp*) on your Linux machine:

```
zLinux.VISANET.tar
zLinux.CYBERCASH.tar
zLinux.BANKSERVACH.tar
```

Because the files are binary, ensure that you set the transfer type to “bin” before entering the **put** or **mput** command.

### VisaNet:

1. Make sure your X Windows server is running.
2. Telnet to your Linux for zSeries machine and logon as root. Export the display to the X Windows workstation. From a command prompt, enter:

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

where *fully\_qualified\_host\_name* is either the hostname or the TCP/IP address of your X Windows server workstation.

3. Make sure WebSphere Commerce Payments is not running. For information on stopping WebSphere Commerce Payments, see “Stopping WebSphere Commerce Payments” on page 86.
4. Switch to the temporary directory and make a cassette directory. Switch to the cassette directory and untar the cassette tar file. Then, switch to the `linux` directory:

```
mkdir VISANET
cd VISANET
tar xvf /tmp/zLinux.VISANET.tar
cd linux
```

5. Run the **InstallVisaNetCassette** command to install the cassette:  
`./InstallVisaNetCassette`
6. On the installation summary screen, review the chosen parameters. Click **Next** to continue with the installation.

**Note:** The progress bar will move during installation, although at times, it can appear to have stopped. Do not terminate the installation. The progress bar will resume moving when system resources permit.

7. When installation is complete, start WebSphere Commerce Payments with the **IBMPayServer** command. The **IBMPayServer** command is described in Chapter 11, “Starting WebSphere Commerce Payments”, on page 65.

For more information about this cassette, refer to the *IBM WebSphere Commerce Payments for Multiplatforms Cassette for VisaNet Supplement*.



### BankServACH:

1. Make sure your X Windows server is running.
2. Telnet to your Linux for zSeries machine and logon as root. Export the display to the X Windows workstation. From a command prompt, enter:

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

where *fully\_qualified\_host\_name* is either the hostname or the TCP/IP address of your X Windows server workstation.

3. Make sure WebSphere Commerce Payments is not running. For information on stopping WebSphere Commerce Payments, see “Stopping WebSphere Commerce Payments” on page 86.
4. Switch to the temporary directory and make a cassette directory. Switch to the cassette directory and untar the cassette tar file. Then, switch to the linux directory:

```
mkdir BANKSERVACH
cd BANKSERVACH
tar xvf /tmp/zLinux.BANKSERVACH.tar
cd linux
```

5. Run the **InstallBankServACHCassette** command to install the cassette:  
`./InstallBankServACHCassette`
6. On the installation summary screen, review the chosen parameters. Click **Next** to continue with the installation.

**Note:** The progress bar will move during installation, although at times, it can appear to have stopped. Do not terminate the installation. The progress bar will resume moving when system resources permit.

7. When installation is complete, start WebSphere Commerce Payments with the **IBMPayServer** command. The **IBMPayServer** command is described in Chapter 11, “Starting WebSphere Commerce Payments”, on page 65.

For more information about this cassette, refer to the *IBM WebSphere Commerce Payments for Multiplatforms Cassette for BankServACH Supplement*.

### CyberCash:

1. Make sure your X Windows server is running.
2. Telnet to your Linux for zSeries machine and logon as root. Export the display to the X Windows workstation. From a command prompt, enter:

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

where *fully\_qualified\_host\_name* is either the hostname or the TCP/IP address of your X Windows server workstation.

3. Make sure WebSphere Commerce Payments is not running. For information on stopping WebSphere Commerce Payments, see “Stopping WebSphere Commerce Payments” on page 86.
4. Switch to the temporary directory and make a cassette directory. Switch to the cassette directory and untar the cassette tar file. Then, switch to the linux directory:

```
mkdir CYBERCASH
cd CYBERCASH
tar xvf /tmp/zLinux.CYBERCASH.tar
cd linux
```

5. Run the **InstallCyberCashCassette** command to install the cassette:  
`./InstallCyberCashCassette`



6. On the installation summary screen, review the chosen parameters. Click **Next** to continue with the installation.

**Note:** The progress bar will move during installation, although at times, it can appear to have stopped. Do not terminate the installation. The progress bar will resume moving when system resources permit.

7. When installation is complete, start WebSphere Commerce Payments with the **IBMPayServer** command. The **IBMPayServer** command is described in Chapter 11, “Starting WebSphere Commerce Payments”, on page 65.

For more information about this cassette, refer to the *IBM WebSphere Commerce Payments for Multiplatforms Cassette for CyberCash Supplement*.

---

## Using DB2 UDB for OS/390 as a remote database on Linux for zSeries and S/390

The following section applies only to Linux for zSeries users who are using DB2 UDB for OS/390 as a remote database for WebSphere Commerce Payments.

The DB2 UDB for OS/390 connection must be set up before installing the framework for WebSphere Commerce Payments. The connection from Linux for zSeries to DB2 UDB for OS/390 can be set up using the steps that follow. When you are finished setting up your DB2 UDB for OS/390 connection, return to step 3c on page 46.

### Connecting to DB2 UDB for OS/390 manually

To set up your connection manually, follow these steps:

1. Set up access to your local DB2 database:
  - a. Logon as your local DB2 administrator.
  - b. Execute `sql1lib/db2profile` in the DB2 administrator home directory.
2. Catalog the remote node by issuing the following command:

```
db2 CATALOG TCPIP NODE nodexx REMOTE hostname SERVER 446
```

where:

**nodexx**

is the node name of your choice.

**hostname**

is the hostname of your DB2 UDB for OS/390 instance.

**446** is the DB2 UDB for OS/390 TCP/IP port number (usually 446 – verify with your DB2 UDB for OS/390 database administrator).

3. Catalog the remote database by issuing the following command:

```
db2 CATALOG DB hostxx AS aliasxx AT NODE nodexx AUTHENTICATION DCS
```

where:

**hostxx**

is the database name of your choice.

**aliasxx**

is the database alias name that will be used to connect to your database. This value should be the same as the value for `hostxx` (the database name in DB2 UDB for OS/390).

**nodexx**

is the same variable as the one defined for remote node.

- Catalog an entry for your database in the DCS directory by issuing the following command:

```
db2 CATALOG DCS DB hostxx AS locxx
```

where:

**hostxx**

is the same variable as the one defined above for your remote database.

**locxx** is the location name of the DB2 UDB for OS/390 database.

- Connect to the DB2 UDB for OS/390 database by issuing the following command:

```
db2 CONNECT TO aliasxx USER userid USING passwd
```

where:

**aliasxx**

is the same variable as the one defined for the remote database (same value as *hostxx*).

**userid/passwd**

is a valid DB2 UDB for OS/390 user ID (verify with your DB2 UDB for OS/390 database administrator) and associated password.

- Switch to the `sqllib/bnd` directory and issue the bind command:

```
cd ~/sqllib/bnd
db2 BIND @ddcsmvs.1st BLOCKING ALL SQLERROR CONTINUE GRANT PUBLIC
```

For further information, refer to *The Universal Connectivity Guide to DB2*, SG24-4894.

## Altering the size of the DB2 UDB for OS/390 tablespace

After WebSphere Commerce Payments has been installed, all of the required tablespaces in the WebSphere Commerce Payments database will have been created using default tablespace values. If you would like to change the size of these tablespace values, follow the instructions below:

- Alter the tablespace values:

```
ALTER TABLESPACE <dbname.tsname> PRIQTY <integer> SECQTY <integer>
```

where *dbname* is your database name, *tsname* is your tablespace name, and *integer* is the integer value, in kilobytes.

- Run the DB2 UDB utility REORG to physically reallocate the tablespace with the new values:

```
REORG TABLESPACE <dbname.tsname> SORTDATA UNLDDN <ddname> WORKDDN <ddname1, ddname2>
```

where *dbname* is your database name, *tsname* is your tablespace name, *ddname* is the DD name of the unload data set, *ddname1* is the DD name of the temporary work file for sort input, and *ddname2* is the DD name of the temporary work file for sort output.

For more information, refer to the *DB2 UDB for OS/390 and zOS V7 SQL Reference (SC26-9944)* and *DB2 UDB for OS/390 and zOS V7 Utility Guide and Reference (SC26-9945)*.

---

## Chapter 9. Installing WebSphere Commerce Payments on iSeries

Use this information to install WebSphere Commerce Payments for iSeries (formerly called Payment Manager for AS/400).

---

### iSeries platform requirements

The minimum hardware and software requirements for WebSphere Commerce Payments are as follows:

#### Hardware requirements:

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

- AS/400 RISC system with a CPW rating of 220 or more with:
  - A minimum of 512 MB of RAM
  - A minimum of 256 MB of disk space for WebSphere Commerce Payments as *packaged* (see note below)
  - Additional disk space for any payment cassettes you intend to use. See “Payment cassettes” on page 15 for more information.
  - Network communications adapter that supports the TCP/IP protocol

#### Notes:

1. If more than one language is installed, then additional space is required. The total recommended disk space is greater than the installed program to allow for database and log file post-installation growth. Additional instances of WebSphere Commerce Payments will require additional space for configuration and transaction data. The transaction data, in particular, may require a significant amount of space if the transaction rate is high or if you do not frequently prune the transaction database (delete old records) or prune the logs.
2. Additional hardware will be necessary for any merchant application software that will be running on the same iSeries as WebSphere Commerce Payments and for any prerequisite products, such as WebSphere Application Server.
3. Systems below these recommended minimums may be used in environments that support a limited number of transactions and where longer initialization times can be tolerated.
4. WebSphere Commerce Payments for iSeries does not support hardware cryptography except when used through the Secure Sockets Layer (SSL) interface.

#### Software requirements:

- OS/400® (5722SS1) Version 5 Release 1
- iSeries Developer’s Kit for Java (5722JV1) Version 5 Release 1
- iSeries Toolbox for Java (5722JC1) Version 5 Release 1
- IBM HTTP Server for iSeries (5722DG1) Version 5 Release 1
- IBM WebSphere Application Server for iSeries, Version 4.0 (5733WA4)
- QShell Interpreter, OS/400, option 30, Version 5 Release 1

**Note:** JC1, JV1 and DG1 come with OS/400 but are separately installed.

If you plan to use Secure Sockets Layer (SSL), you will also need:

- Digital Certificate Manager, OS/400, Option 34, Version 5 Release 1
- Cryptographic Access Provider, (5722AC1, 5722AC2 or 5722AC3, Version 5 Release 1)

---

## Before installing WebSphere Commerce Payments

- Read the latest README file, `readme.framework.html`, accessed through documentation links on the WebSphere Commerce Payments Web site.
- Read the “Installation checklist” on page 1 for more information on the installation and configuration steps.

Make sure that the software requirements are installed or be prepared to install them when you install WebSphere Commerce Payments. Then do the following steps:

1. Set the date and time values. WebSphere Commerce Payments for iSeries requires that the system date, time, and coordinated universal time offset values be set precisely. Use the Work with System Values (**WRKSYSVAL**) CL command to set the values for QDATE, QTIME, and QUTCOFFSET prior to configuring WebSphere Commerce Payments. The QUTCOFFSET value specifies the number of hours and minutes local time differs from Greenwich Mean Time (GMT). For example, a system in the Eastern Standard Time zone in the United States would have a QUTCOFFSET value of `-05:00`.
2. Set the system values QCCSID (65535 will *not* work), QCNTYID, and QLANGID based on Table 8.
3. Next, see the following section to configure TCP/IP.
4. Finally, see “Setting up the DB2/400 Database” in the section, below.

*Table 8. Recommended system values for languages*

Language Feature Code	QCCSID	QCNTYID	QLANGID
2987 Traditional Chinese	937	TW	CHT
2989 Simplified Chinese	935	CN	CHS
2924 English	37	US	ENU
2938 English Uppercase DBCS	5026 or 5035 (A WebSphere Commerce Payments instance may not be created with CCSID 5026 (CRTPYMMGR CCSID(5026)), but it may run on a 5026 system.)	US	ENP
2950 English Uppercase	37	GB	ENP

Table 8. Recommended system values for languages (continued)

Language Feature Code	QCCSID	QCNTYID	QLANGID
2984 English Upper/Lower DBCS	5026 or 5035 (A WebSphere Commerce Payments instance may not be created with CCSID 5026 (CRTPYMMGR CCSID(5026)), but it may run on a 5026 system.)	US	ENU
2928 French	297	FR	FRA
2940 French (Swiss)	500	CH	FRS
2966 French (Belgium)	500	BE	FRB
2981 French (Canada)	500	CA	FRC
2929 German	273	DE	DEU
2939 German (Swiss)	500	CH	DES
2932 Italian	280	IT	ITA
2942 Italian (Swiss)	1144	CH	ITS
2962 Japanese	5026 or 5035 (A WebSphere Commerce Payments instance may not be created with CCSID 5026 (CRTPYMMGR CCSID(5026)), but it may run on a 5026 system.)	JP	JPN
2986 Korean	933	KR	KOR
2980 Brazilian Portuguese	37	BR	PTB
2931 Spanish	284	ES	ESP

## Configuring TCP/IP

There are several points to consider when configuring TCP/IP:

- TCP/IP must be configured using the Configure TCP/IP (**CFGTCP**) CL command or Operations Navigator.
- The iSeries must be reachable from the secure network in order for administration functions to work.
- The iSeries must be reachable from the Internet.
- You will need one or more interfaces for communicating with TCP/IP. IP addresses will need to be configured to accomplish this.
- Ensure the LOOPBACK and LOCALHOST names are in the host table for the loopback address 127.0.0.1. The LOOPBACK and LOCALHOST names can be added to the host table using the CFGTCP command and taking the option to Work with TCP/IP host tables entries.
- You need to use the Start TCP/IP (**STRTCP**) CL command to start TCP/IP.

More information is available in *OS/400 TCP/IP Configuration and Reference (SC41–5420)*.

## Setting up the DB2/400 database

Set up the DB2/400 database for use by WebSphere Commerce Payments:

- Use the Work with Relational Database Directory (**WRKRDBDIRE**) CL command to specify a database name for the relational database that will be used to store WebSphere Commerce Payments configuration and transaction data. Different databases can be used for different WebSphere Commerce Payments instances
- If using the local system DB2/400 Database, ensure that an entry for \*LOCAL is specified. Name the local database (the local system name or TCP/IP host name are recommended, although any name is acceptable).

---

## Installation procedure on iSeries

This section describes the procedure for installing WebSphere Commerce Payments.

1. Use the Restore Licensed Program (**RSTLICPGM**) CL command to install WebSphere Commerce Payments. Specify the WebSphere Commerce Payments product number and the device from which the product is to be installed. For example: RSTLICPGM LICPGM(5733PY3)

**Note:** This installs the WebSphere Commerce Payments Framework along with the OfflineCard and CustomOffline cassettes. It will also be necessary to install any payment cassettes that you will be using with WebSphere Commerce Payments. See: “Installing payment cassettes for WebSphere Commerce Payments” on page 60 for more information.

2. If requisite program products need to be installed (see Minimum Software Requirements for iSeries), use the Go License Program (**GO LICPGM**) CL command and select menu item **11** to install licensed programs, or refer to the product documentation for installation instructions.

---

## Chapter 10. Post-installation activities

After you have installed WebSphere Commerce Payments on your operating system, perform these activities, as necessary:

- Verify your installation, using the tutorial in the "Getting Started" chapter of the *WebSphere Commerce Payments Administrator's Guide*.
- If you haven't already done so, install any required payment cassettes. See "Installing payment cassettes for WebSphere Commerce Payments" on page 60.
- If you have problems, see "Troubleshooting your WebSphere Commerce Payments installation" on page 75.

If you are installing WebSphere Commerce Payments for use with other WebSphere Commerce software products, be sure to also check the WebSphere Commerce software product documentation for instructions on performing any additional post-installation tasks required for your environment.

---

### Configuring Lotus Domino Server (workstation platforms)

#### Windows, AIX, Solaris, Linux on Intel

If you are using Lotus® Domino Server Release 5 with WebSphere Commerce Payments and are using WebSphere Commerce Payments as a standalone application, you must add the user `admin` to Lotus Domino Server after installing WebSphere Commerce Payments (but *before* logging into the WebSphere Commerce Payments user interface for the first time). To add the user `admin` to the Domino directory:

1. Go to `http://<hostname>/webadmin.nsf`
2. Select **Directories**
3. Select **People**
4. Select **Add Person**
5. In the **Last name** enter: `admin`
6. In the **User name** enter: `admin`
7. In the **Internet password** enter: `admin`

Each time you add a WebSphere Commerce Payments user, you must first add the user in Lotus Release 5 using the above instructions. Users must also be added to the WebSphere realm. Under WebSphere Application Server, WebSphere Commerce Payments creates its own realm. To add users to the realm, use the `PSDefaultRealm.cmd`. For example, at a command prompt, enter:

```
PSDefaultRealm <realmFileName> add <userID> <password>
```

where `<realmFileName>` is the WebSphere Commerce Payments realm file name (`PSRealm` by default), and `<userID> <password>` are the desired user ID and password.

If you are using Lotus Domino Server with a WebSphere Commerce product (such as WebSphere Commerce Business Edition) and are not using WebSphere Commerce Payments as a standalone application, the "wcsadmin" user is used instead of "admin." In this case you do not need to run the `PSDefaultRealm` command.



---

## Configuring realms

When you install WebSphere Commerce Payments on the same system with a WebSphere Commerce product (for example, WebSphere Commerce Business Edition), the following happens:

- The WebSphere Commerce Administrator ID, `wcsadmin`, is automatically assigned the Payments Administrator role. This Administrator role enables a user ID to control and administer WebSphere Commerce Payments. For example, you can use the Administrator role to define, in the WebSphere Commerce Payments Users window, role-based access for a user defined in a realm. Do not delete or rename the logon user ID `wcsadmin`, and do not change the preassigned WebSphere Commerce Payments role of `wcsadmin` as WebSphere Commerce functions related to integration with the payments application will not work.
- The `WCSRealm` realm is automatically configured for your system. For iSeries, `WCSRealm` is also configured if a WebSphere Commerce Payments instance is created through the WebSphere Commerce product's Configuration Manager.

The `WCSRealm` stores a list of realm users. It allows WebSphere Commerce Payments to use the administrator information that is already registered in the WebSphere Commerce product user tables so that you do not have to define another set of administrator IDs to use the WebSphere Commerce Payments user interface.

Depending on your circumstances, another realm may have been defined on your system as the supporting default realm. (For example, if you install WebSphere Commerce Payments on a remote machine or as a standalone application, the `PSDefaultRealm` will be provided as the supporting default realm.) To use the `WCSRealm` if it is not already established as the realm, you must manually configure it for WebSphere Commerce Payments through the WebSphere Application Server administrative console. Refer to the *WebSphere Commerce Payments Administrator's Guide* for instructions on how to configure the `WCSRealm` manually, or for more information about realms or defining WebSphere Commerce Payments users.

**iSeries note:** When you install WebSphere Commerce Payments for iSeries, the user profile `QPYMADM` will be created and automatically assigned the Administrator role for all new WebSphere Commerce Payments instances. User profile `QPYMADM` is in the `PSOS400Realm`. When a Payments instance is created as a standalone instance (using the `CRTPYMMGR CL` command, or the WebSphere Commerce Payments tasks interface), all WebSphere Commerce Payments IDs for that instance must be defined in the `PSOS400Realm`.

If you create a Payments instance through another WebSphere Commerce product, the WebSphere Commerce Administrator ID, `wcsadmin`, will automatically be assigned the Payments Administrator role for that instance. The `wcsadmin` ID is defined in the `WCSRealm`. When a Payments instance is created through the WebSphere Commerce product, all IDs for that instance must be defined in the `WCSRealm`. Refer to WebSphere Commerce online help for instructions on how to define new IDs in the `WCSRealm`.



---

## Migrating customized configurations in WebSphere Application Server

If you migrated from a previous version of WebSphere Commerce Payments and had customized WebSphere Application Server with additional configuration parameters, you must re-enter the customized parameters in WebSphere Application Server. The WebSphere Commerce Payments installation/migration program does not preserve customizations you make after installing WebSphere Commerce Payments.

---

## Configuration for remote WebSphere Commerce Payments

As described in the *WebSphere Commerce Payments Administrator's Guide*, WebSphere Commerce Payments authenticates users through the use of realms. On Windows and UNIX systems, when you install WebSphere Commerce Payments on a system where WebSphere Commerce Business Edition or WebSphere Commerce Studio is installed, the `WCSRealm` class is automatically configured for your system. If you have installed WebSphere Commerce Payments on a system remote from these WebSphere products, WebSphere Commerce Payments will use the `PSDefaultRealm` instead. If you would like to use WebSphere Commerce Payments with either of these WebSphere products, you will need to manually configure your WebSphere Commerce Payments system to use the `WCSRealm` instead of the `PSDefaultRealm`.

On **iSeries**, if you create the WebSphere Commerce Payments instance through the WebSphere Commerce product's Configuration Manager, the `WCSRealm` class is automatically configured for that instance. If not, WebSphere Commerce Payments will use the `PSOS400Realm` instead.

To specify the realm name, do the following:

1. Open the WebSphere Application Server administrative console.
  - a. Expand the **WebSphere Administrative Domain**.
  - b. Expand **Nodes**.
  - c. Expand `<hostname>`.
  - d. Expand **Application Servers**.
  - e. Click **WebSphere Commerce Payments**. (If you are using an iSeries system, click **WPM <instance> WebSphere Commerce Payments**, where *instance* is the name of the WebSphere Commerce Payments instance.)
  - f. Select the **JVM Settings** tab page. In the **System Properties** box, select and change the value for the `wpm.RealmClass` initialization parameter.
  - g. Change the value of the `wpm.RealmClass` initialization parameter from `com.ibm.etill.framework.payserverapi.PSDefaultRealm` to `com.ibm.commerce.payment.realm.WCSRealm` and click **Apply**.
2. If WebSphere Commerce Payments is enabled for SSL, you must also use the WebSphere Application Server administrative console to add `*:443` entries to the default host window under Virtual Hosts.

Under the **WebSphere Administrative Domain**, click **Virtual Hosts** and on the **General** tab for the default host, do the following:

  - a. Add `<hostname>:443` as a Host Alias.
  - b. Add `<hostname.domain.com>:443` as a Host Alias.
3. Edit the `WCSRealm.properties` file from your WebSphere Commerce Payments installation directory. On the iSeries platform, this file is in the `/QIBM/UserData/PymSvr/<instance>` directory. This file contains definitions for the `WCSHostName` and `WCSWebPath`.

For the `WCSHostName`, note the following:

- If your configuration has the WebSphere Commerce product (such as Business Edition) installed on the same machine as WebSphere Application Server and the Web server, you should enter the fully-qualified hostname of the remote machine where WebSphere Commerce product is installed. (The default is the hostname of the system where WebSphere Commerce Payments is installed.)
- If your configuration has the Web server and WebSphere Application Server installed on different systems, the `WCSHostName` property should specify the fully-qualified hostname of the remote machine that the WebSphere Commerce product (such as Business Edition) is responding to. (This could be a remote Web server machine which forwards traffic to WebSphere Application Server, or even a network dispatcher cluster name.)

You do not have to change the property for the `WCSWebPath`.

4. Use the WebSphere Application Server administrative console to stop and restart the WebSphere Commerce Payments Application Server:
  - a. Under the **WebSphere Administrative Domain**, click **Nodes**. Select the node name for the system where WebSphere Commerce Payments is installed. Navigate to the **WebSphere Commerce Payments** server under **Application Servers**.
  - b. Right-click the **WebSphere Commerce Payments** resource and select **Stop** to stop the application server.
  - c. Start the WebSphere Commerce Payments Application Server in the WebSphere Application Server administrative console for your changes to take effect.

If you added `*:443` entries to the default host window, you also need to stop and restart WebSphere Application Server.

Also, if you are installing WebSphere Commerce Payments on a system remote from WebSphere Commerce products and would like to use the WebSphere Commerce stylesheet in your WebSphere Commerce Payments user interface, you must copy the `PMCustomUI.properties` file located in the following path to the main WebSphere Commerce Payments installation directory. (For iSeries, copy to your `/QIBM/UserData/PymSvr/<pminstance>` directory.)

- On Windows: `<Payments_installdir>\samples\wcs\PMCustomUI.properties`
- On UNIX platforms: `<Payments_installdir>/samples/wcs/PMCustomUI.properties`
- On iSeries: `/QIBM/ProdData/PymSvr/Samples/PMCustomUI.properties`

---

## Installing payment cassettes for WebSphere Commerce Payments

Before installing payment cassettes, start WebSphere Commerce Payments, WebSphere Application Server, and your Web server, as shown in Chapter 11, “Starting WebSphere Commerce Payments”, on page 65. By starting these components before installing a cassette, you can verify that WebSphere Commerce Payments is successfully installed in your environment. Then, *before* installing IBM or third-party cassettes, you should *stop* the WebSphere Commerce Payments Application Server from the WebSphere Application Server administrative console. This ensures that the configuration files for WebSphere Commerce Payments will be freed to enable the payment cassette installation program to update the files. If you are installing more than one type of cassette, you must stop the WebSphere Commerce Payments Application Server before installing each cassette.

The OfflineCard and CustomOffline cassettes are installed with the WebSphere Commerce Payments framework. For information on using the CustomOffline Cassette or the OfflineCard Cassette, see the *WebSphere Commerce Payments Administrator's Guide*. It is highly recommended that you install and configure these cassettes to be able to use the tutorial described in the *WebSphere Commerce Payments Administrator's Guide*. They can also help you to become generally familiar with how to perform administrative tasks involving cassettes. Other cassettes must be installed separately.

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

- *WebSphere Commerce Payments Cassette for BankServACH Supplement*
- *WebSphere Commerce Payments Cassette for CyberCash Supplement*
- *WebSphere Commerce Payments Cassette for SET Supplement*
- *WebSphere Commerce Payments Cassette for VisaNet Supplement*

**Note:** The Cassette for SET is not supported in a Linux environment.

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

---

## Post-installation tasks for the iSeries platform

This section describes additional tasks you should perform if you are installing WebSphere Commerce Payments in an iSeries environment.

### Setting up the WebSphere Commerce Payments administrator

Three OS/400 user profiles are created when the WebSphere Commerce Payments software is installed to assist in the administration of WebSphere Commerce Payments. The first profile is the QPYMSVR user and group profile, which is used to control access to the WebSphere Commerce Payments programs, the Payments for iSeries tasks page and the configuration and transaction data for all WebSphere Commerce Payments instances. The user that will manage the WebSphere Commerce Payments instances (for example, create and delete instances, and add and remove payment cassettes) must have authorization to the commands and database tables. This authorization can be provided by the system security officer by setting the user's group profile or supplemental group profile to QPYMSVR or granting the user \*ALLOBJ special authority. Use of the QPYMSVR group profile should be restricted to only those users that need to manage instances.

The second profile that is created at installation is the QPYMWEB user profile. This profile has authority to perform WebSphere configuration.

**Note:** WebSphere Commerce Payments instances always run under the QPYMWEB user profile.

The third profile that is created at installation is the QPYMADM user profile that is used as the default WebSphere Commerce Payments administrator for all WebSphere Commerce Payments instances. A password must be associated with this user profile before it can be used. To set the password for the QPYMADM profile, use the Change User Profile (**CHGUSRPRF**) CL command. After a password is associated with this user profile, you can use this user profile and password when you initially log onto the WebSphere Commerce Payments User

Interface for a new instance. Once you are logged onto the User Interface, you can configure other users as payment or merchant administrators specifically for the new instance.

## Accessing the Payments for iSeries tasks page

The Payments for iSeries tasks page allows you to manage WebSphere Commerce Payments instances (create, delete, start and end, as well as add and remove cassettes). The Payments for iSeries tasks page is available after WebSphere Commerce Payments and the IBM HTTP Server are installed. To access the Payments tasks page:

1. The HTTP administration server must be started before accessing the tasks page. Use the Start TCP/IP Server (**STRTCPSVR**) CL command to start the \*HTTP server, \*ADMIN instance. For example, **STRTCPSVR SERVER(\*HTTP) HTTPSVR(\*ADMIN)**.
2. Use a supported Web browser to access the iSeries tasks Web page. The URL for the iSeries tasks Web page is: **http://system-name:2001** where the system-name is the TCP/IP host name of the iSeries system.
3. Select the WebSphere Commerce Payments icon to get to the Payments tasks page.
4. The WebSphere Commerce Payments commands require a password. The password will be automatically retrieved from the validation list if the QRETSVRSEC system value is set up to allow server security data to be stored. Otherwise, you will be required to enter the password

**Note:** If the WebSphere Commerce Payments for AS/400 icon does not appear, it is likely that the required IBM HTTP Server PTFs have not been installed. You can access the Payments tasks page using the URL: **http://system-name:2001/QIBM/PymSvr/Admin/qzeicmain.ndm/main** where system-name is the TCP/IP host name of the iSeries system. You should also verify that the required PTFs for all dependent products are installed. Information regarding required PTFs is available off the WebSphere Commerce Payments technical Web site at **http://www.ibm.com/software/webservers/commerce/payments/support.html**.

The Payments tasks page provides only instance management functions. Administration and payment processing for an individual WebSphere Commerce Payments instance is available on the WebSphere Commerce Payments User Interface that is available after the instance is created and started. A link to the WebSphere Commerce Payments User Interface for each instance is provided from the Administer Instance menu on the Payments tasks page. For users that do not have access to the Payments tasks page, the logon screen for the WebSphere Commerce Payments User Interface can also be referenced directly as **http://system\_name:port\_number/Payments**, where system\_name and port\_number are the TCP/IP host name and port number of the Web server that the WebSphere Commerce Payments instance is configured for.

## Creating a WebSphere Commerce Payments instance

To create a WebSphere Commerce Payments instance, select the menu to **Create** from the Payments for iSeries tasks page. You must specify a name and a password for the WebSphere Commerce Payments instance. You may also customize information about the relational database used to store the WebSphere Commerce Payments configuration and transaction data. The default is the local DB2/400 database. If a remote database is specified, a user ID and password for the remote

system are required. The **Create** will create and initialize the WebSphere Commerce Payments database tables in a library that has the same name as the WebSphere Commerce Payments instance name. If a library already exists by that name, it must contain the journals, journal receivers, and catalogs associated with a database collection.

If an existing HTTP server instance is specified, it will be updated for this WebSphere Commerce Payments. If the HTTP server is already configured for WebSphere Application Server, it must be a version of WebSphere Application Server supported by WebSphere Commerce Payments. If the HTTP server does not exist, one will be created with a default configuration. After creation it may be necessary to customize some of the HTTP configuration values such as the HTTP server's port number. Refer to the documentation for the IBM HTTP Server for iSeries for information about how to customize configuration values.

Finally, you may customize the language information for the WebSphere Commerce Payments instance. The coded character set identifier (CCSID) specifies the format in which character data is stored. The CCSID, language ID and country ID fields are used when starting the WebSphere Commerce Payments batch job.

After a successful create, the following will exist for the WebSphere Commerce Payments instance:

1. A set of database tables in the library with the same name as the WebSphere Commerce Payments instance.
2. A validation list for storing the WebSphere Commerce Payments password.
3. A directory `/QIBM/UserData/PymSvr/instance-name` to hold the properties files for the instance where *instance-name* is the name of the WebSphere Commerce Payments instance.
4. A directory `/QIBM/UserData/PymSvr/instance-name/Logs` to hold the trace and dump information for the instance where *instance-name* is the name of the WebSphere Commerce Payments instance.
5. An HTTP Server instance containing the directives required by WebSphere and WebSphere Commerce Payments.

**Note:** A WebSphere Application Server configured to run the WebSphere Commerce Payments servlets will be created when WebSphere Commerce Payments is first started.

Warning: If you lose your password, there is no way to recover encrypted information or certificates. This is different from other iSeries passwords where the security officer can reset the password for you and nothing is lost. It is recommended that you back up your data just prior to changing the password.

**Note:** Alternately, you can use the Create Commerce Payments (**CRTPYMMGR**) CL command to create a Commerce Payments instance.

## Add a payment cassette to the WebSphere Commerce Payments instance

After installing a payment cassette, you need to add the cassette to the WebSphere Commerce Payments instance. This process enables the cassette to be used by that instance through the creation of the appropriate database tables. Select a WebSphere Commerce Payments instance from the drop-down box and then select the **Work Cassettes** menu from the Payments tasks page to add the cassette to a Commerce Payments instance. Alternately, you can use the Add Payment Cassette

**(ADDPYMCSS)** CL command. The list of valid cassettes for the Add command will be based on which cassettes are installed. If only the *framework* is installed, then only the OfflineCard and CustomOffline Cassettes will be available.

**Notes:**

1. The Payment Servlet must not be active when adding or removing a cassette from a WebSphere Commerce Payments instance. If the Payment Servlet is active, it must be reloaded prior to using the new cassette. The Payment Servlet can be reloaded by ending and restarting the WebSphere Application Server which corresponds with the WebSphere Commerce Payments instance to which a cassette is being added. For details, refer to the Websphere documentation at: <http://www.ibm.com/software/websphere/appserv/library.html>, then click on "WebSphere for AS/400".



---

## Chapter 11. Starting WebSphere Commerce Payments

This chapter describes how to start WebSphere Commerce Payments and its user interface on workstation platforms and iSeries. It also describes how to start the Web server (IBM HTTP Server) and WebSphere Application Server.

---

### Starting WebSphere Commerce Payments on Windows, AIX, Solaris, and Linux platforms

After you have installed WebSphere Commerce Payments and restarted your system, start your database, WebSphere Application Server, and your Web server (if they are not already started), and then start WebSphere Commerce Payments.

- **On Windows:** Open the control panel, click **Services**, and ensure the IBM WS AdminServer service is started. Then, start the WebSphere Application Server administrative console (adminclnt) and make sure the WebSphere Commerce Payments Application Server is started. If you cannot start the WebSphere Application Server adminclnt, ensure WebSphere Application Server is started, as shown in “Starting WebSphere Application Server” on page 69.
- **On AIX, Solaris, or Linux:** Enter `ps -ef | grep java` and make sure WebSphere Application Server is started, as shown in “Starting WebSphere Application Server” on page 69.

WebSphere Commerce Payments requires a password so that it can both connect to the database and also decrypt any sensitive data that is stored in the database. Protection of this password is therefore critical to protecting the security of your payment data. When you start WebSphere Commerce Payments, you must specify the database password of the user you use to connect to the WebSphere Commerce Payments database. There are two ways to specify the WebSphere Commerce Payments password:

- Enter the WebSphere Commerce Payments password directly from the command line when using the `IBMPayServer` command to start WebSphere Commerce Payments. This method is recommended for optimal security.
- Use a password file to run WebSphere Commerce Payments in “unattended operation” mode (as described in “Starting WebSphere Commerce Payments in unattended operation mode” on page 67). This method allows WebSphere Commerce Payments to start when there is no user present to enter the password.

### IBMPayServer command syntax

The syntax of the `IBMPayServer` command used to start WebSphere Commerce Payments is as follows. You can run this command from a command window (change directory to the directory where WebSphere Commerce Payments is installed):

```
IBMPayServer [ -file [ passwordFile ] | -prompt ]  
             [ -changepassword ]  
             [ -pmhost hostname ]  
             [ -pmpport portnumber ]  
             [ -wasuid userid ]  
             [ -waspw password ]
```

- **-file** Specifies that the WebSphere Commerce Payments password will be read from a password file called *passwordFile*. If the file name is not specified, the default file name is `.payment`.

- prompt**  
Specifies that the user will be prompted to enter the WebSphere Commerce Payments password. By default, the user is prompted.
- changepassword**  
Specifies that the WebSphere Commerce Payments password should be changed to a new value.
- pmhost**  
For configurations where the Web server and WebSphere Application Server are installed on the same host system, this parameter specifies the hostname where WebSphere Commerce Payments is installed. The default is the hostname of the current machine.  
  
If your configuration has the Web server and WebSphere Application Server installed on different systems, the `-pmhost` parameter should specify the hostname of the Web server host.
- pmpport**  
Specifies the port number that the WebSphere Commerce Payments Application Server is listening on. The default is port '80'.
- wasuid**  
Specifies the WebSphere Application Server user ID to use when connecting to the Payment Servlet. Usually, this parameter is not needed. It is only required if you turn on WebSphere Application Server security for the Payment Servlet.
- waspw** Specifies the password of the WebSphere Application Server user specified in the `-wasuid` parameter.

**Note:** The first time you start WebSphere Commerce Payments on a UNIX system, logs are created in a WebSphere Commerce Payments logs directory. If you use a user ID with root privileges to start WebSphere Commerce Payments the first time, you must use a root user ID to start WebSphere Commerce Payments on any subsequent attempt. Otherwise, WebSphere Commerce Payments cannot write to the logs. The log directory permissions must allow the user to write to the directory. Therefore, if you want your WebSphere Commerce Payments application to be started by a user ID with non-root privileges, you should start WebSphere Commerce Payments with a non-root user ID so that the logs can be written to accordingly. If you have already started WebSphere Commerce Payments with a user ID with root privileges and need to change to a non-root user ID, you should delete the logs in the log directory before starting WebSphere Commerce Payments with the non-root user ID.

## Starting WebSphere Commerce Payments by entering the password

To start WebSphere Commerce Payments, open a command window and change directory to the directory where WebSphere Commerce Payments is installed. Then, enter the following command:

```
IBMPayServer
```

You are prompted to enter your WebSphere Commerce Payments password. This is the password of the user you specified to use when connecting to the database.



## Starting WebSphere Commerce Payments in unattended operation mode

If you need WebSphere Commerce Payments to be startable when there is no user present to enter the password, you need to create a password file. The default password file name is `.payment` and the file should reside in the same directory as the WebSphere Commerce Payments installation directory. The file should contain a single line as follows:

```
DBPassword=yourpassword
```

To start WebSphere Commerce Payments using this password file, open a command window and change directory to the WebSphere Commerce Payments installation directory. Then enter the following command:

```
IBMPayServer -file
```

Instead of prompting you for the password, WebSphere Commerce Payments reads the password directly from the `.payment` file.

### Attention

If you use a password file to start WebSphere Commerce Payments, be aware that you are making it easier for people to penetrate the security of your payment data. If they can read the password file, they can potentially obtain access to the database and decrypt the sensitive payment data it contains. To avoid this security limitation, you can either start WebSphere Commerce Payments by entering a password every time, or you can take measures to put extra security on your password file to make sure that no unauthorized users can read it. However, if you choose to protect the password file, you must ensure that at least the user who will start WebSphere Commerce Payments can both read and write to the file.

---

## Starting WebSphere Commerce Payments on iSeries

After installations are complete for both the WebSphere Commerce Payments Framework and the payment cassette, or cassettes and the WebSphere Commerce Payments instance is created, the next steps are starting the WebSphere Commerce Payments and the IBM HTTP Server.

To start WebSphere Commerce Payments:

1. Access the iSeries tasks page.
2. Select the **Payments for iSeries** tasks Web page.
3. Select a WebSphere Commerce Payments instance from the drop-down menu.
4. Select the **Start/End** menu item.
5. Enter a password, if requested, and then press the **Start** button.

**Note:** Alternatively, you can use the Start Commerce Payments (**STRPYMMGR**) CL command.

WebSphere Commerce Payments messages are written to a log file which can be read by selecting the **View Log** menu item from the Payments tasks page. When WebSphere Commerce Payments is started and ready to process requests, a message stating that WebSphere Commerce Payments has successfully started will be written to the log file.

When WebSphere Commerce Payments is started, the corresponding HTTP Server and WebSphere Application Server are also started.

---

## Starting the Web server

Instructions for starting the IBM HTTP Server on workstation platforms are provided in this section.

**Note:** If you are using iSeries, you can disregard this section. On iSeries, the Web server is started automatically when WebSphere Commerce Payments is started.

If you are using a Web server other than IBM HTTP Server, see your Web server's documentation for instructions on starting the Web server. See "Starting other Web servers" for information on starting Web servers other than the IBM HTTP Server.

## Starting IBM HTTP Server on Windows

Go to the Windows NT or Windows 2000 **Services** window and manually start the IBM HTTP Server service.

## Starting IBM HTTP Server on Solaris

1. Change the directory to `<HTTPDDIR>/bin`, where `<HTTPDDIR>` is the directory where the HTTP Server is installed.
2. Before starting HTTP Server, ensure the file descriptor limit is set to at least 512. If it is less than 512, you should change it by entering: `ulimit -n 512`
3. Start the HTTP Server, enter:  
`./apachectl start`

## Starting IBM HTTP Server on AIX

1. Change to the `<HTTPDDIR>/bin` directory, where `<HTTPDDIR>` is the directory where the HTTP Server is installed.
2. Start the HTTP Server, enter:  
`./apachectl start`

## Starting IBM HTTP Server on Linux

1. Change to the `<HTTPDDIR>/bin` directory, where `<HTTPDDIR>` is the directory where the HTTP Server is installed.
2. Start the HTTP Server, enter:  
`./apachectl start`

## Starting other Web servers

### Using the SetupWebServerEnvironment script on UNIX platforms

To enable a connection between the Payment Servlet and the WebSphere Commerce Payments database, WebSphere Commerce Payments provides a script, `SetupWebServerEnvironment`, that appends to certain environment variable paths. Some Web server products (for example, Netscape FastTrack Server) employ scripts to start their Web servers that set these same environment variables to *specific values*, instead of appending to them. When you run a Web server start-up script, the Web server ignores the environment changes that were made by the WebSphere Commerce Payments `SetupWebServerEnvironment` script. Consequently, the Payment Servlet is unable to connect to the database.

If your Web server uses a start-up script that sets LIBPATH or LD\_LIBRARY\_PATH to specific paths, you should consider modifying your Web server start-up script so that it appends to these paths rather than overwriting them.

If you use a Web server *other* than IBM HTTP Server, you should run the SetupWebServerEnvironment script before starting your Web server to set up the environment correctly for WebSphere Commerce Payments.

**Note:** It is not necessary to run the SetupWebServerEnvironment script if you are using IBM HTTP Server (if you happen to run it anyway, no adverse impact should result).

To run the script on Solaris, AIX, or Linux, do the following:

1. Set up the WebSphere Commerce Payments environment, enter:

```
. <Payments_installdir>/SetupWebServerEnvironment
```

<Payments\_installdir> is the directory where WebSphere Commerce Payments is installed.

**Note:** The leading dot is significant. This dot command allows the changes to environment variables to persist after the script is executed.

2. Follow your Web server instructions to start your Web server.

### Starting Netscape Web servers on Solaris and AIX

The Netscape Enterprise Server and Netscape FastTrack Server should be started from the command line in the window where you ran the SetupWebServerEnvironment script, rather than from the Web page interface that is included with these Web servers. If the Web servers are started from the Web page interface, the environment variable updates made by the SetupWebServerEnvironment script will not take effect.

---

## Starting WebSphere Application Server

Use these platform-specific instructions to check if the application is started or to start the application manually on workstation platforms. For complete instructions on starting WebSphere Application Server, refer to WebSphere Application Server documentation. Documentation links are available at <http://www.ibm.com/software/websphere/appserv/library.html>.

**Note:** If you are using iSeries, you can disregard this section. On iSeries, WebSphere Application Server is started automatically when WebSphere Commerce Payments is started.

## Starting WebSphere Application Server on Windows

Check your Services window to see if WebSphere Application Server is started.

To manually start WebSphere Application Server on Windows NT or Windows 2000:

1. Go to the **Services** window.
2. Start the service named IBM WS AdminServer 4.0.

## Starting WebSphere Application Server on Solaris

Enter: `ps -ef | grep java` to check if WebSphere Application Server is started, and check for WebSphere/AppServer in the output.

To manually start WebSphere Application Server on Solaris:

1. Set up the WebSphere Commerce Payments environment, enter:

```
. <Payments_installdir>/SetupWebServerEnvironment
```

<Payments\_installdir> is the directory where WebSphere Commerce Payments is installed.

**Note:** The leading dot is significant. This dot command allows the changes to environment variables to persist after the script is executed.

2. Change the directory to <WASDIR>/bin, where <WASDIR> is the directory where WebSphere Application Server is installed.
3. To start WebSphere Application Server, enter:

```
./startupServer.sh
```

## Starting WebSphere Application Server on AIX

Enter: `ps -ef | grep java` to check if WebSphere Application Server is started, and check for WebSphere/AppServer in the output.

To manually start WebSphere Application Server on AIX:

1. Set up the WebSphere Commerce Payments environment, enter:

```
. <Payments_installdir>/SetupWebServerEnvironment
```

<Payments\_installdir> is the directory where WebSphere Commerce Payments is installed.

**Note:** The leading dot is significant. This dot command allows the changes to environment variables to persist after the script is executed.

2. Change to the <WASDIR>/bin directory, where <WASDIR> is the directory where WebSphere Application Server is installed.
3. To start WebSphere Application Server, enter:

```
./startupServer.sh
```

## Starting WebSphere Application Server on Linux

Enter: `ps ax | grep java` to check if WebSphere Application Server is started, and check for WebSphere/AppServer in the output.

To manually start WebSphere Application Server on Linux:

1. Set up the WebSphere Commerce Payments environment, enter:

```
. <Payments_installdir>/SetupWebServerEnvironment
```

<Payments\_installdir> is the directory where the WebSphere Commerce Payments is installed.

**Note:** The leading dot is significant. This dot command allows the changes to environment variables to persist after the script is executed.

2. Change to the <WASDIR>/bin directory, where <WASDIR> is the directory where WebSphere Application Server is installed.
3. To start WebSphere Application Server, enter:

```
./startupServer.sh
```

---

## Starting the WebSphere Commerce Payments user interface

After starting WebSphere Application Server and WebSphere Commerce Payments, start the WebSphere Commerce Payments user interface as follows:

1. Point your Web browser to:

`http://<hostname>/webapp/PaymentManager/`

where *<hostname>* is the machine where you installed WebSphere Commerce Payments.

**Note:** Alternatively, on Windows, you can use the shortcut to log on to WebSphere Commerce Payments. On iSeries, you can select the **Administrator Instance** menu item on the WebSphere Commerce Payments tasks page.

2. On the WebSphere Commerce Payments Logon window, enter the WebSphere Commerce Payments administrator's user ID and password, and click **OK**. For workstation platforms, the default user ID and password are both **admin**. For iSeries, the default user ID is **QPYMADM** for the WebSphere Commerce Payments administrator. The password is the value you configured previously in "Setting up the WebSphere Commerce Payments administrator" on page 61 (there is no default password). For information on creating WebSphere Commerce Payments user IDs, see the *WebSphere Commerce Payments Administrator's Guide*.

If you experience problems starting WebSphere Commerce Payments or its user interface, see Chapter 12, "Troubleshooting", on page 73 for more information.



---

## Chapter 12. Troubleshooting

If you encounter a problem while installing or configuring WebSphere Commerce Payments, review the material in this chapter. This chapter provides information about error and trace logs used by WebSphere Commerce Payments, and provides hints and tips that may address your problem. Topics include:

- Summary and trace files and how to use them on workstation platforms
- Other error and log files used in the WebSphere Commerce Payments environment
- The Service menu item on the WebSphere Commerce Payments tasks page for iSeries
- Specific troubleshooting steps for installation, startup, and communication problems

---

### Summary and trace files on Windows, AIX, Solaris, and Linux platforms

Summary files are written to the *<Payments\_installdir>/service* subdirectory when WebSphere Commerce Payments is installed and when IBM-provided WebSphere Commerce Payments payment cassettes are installed. You should have the information in these files available to communicate with IBM Support personnel, should you require support.

### WebSphere Commerce Payments framework summary file

The **wpmFW.properties** summary file is written to the *<Payments\_installdir>/service* subdirectory when WebSphere Commerce Payments is installed. It identifies the level of the WebSphere Commerce Payments and WebSphere Application Server products installed.

A sample summary file is shown:

```
FrameworkVersion=n
FrameworkRelease=n
FrameworkModLevel=n
FrameworkInstallDate=yyyymmdd
FrameworkLastModifiedDate=yyyymmdd
FrameworkInstalldirectory=location
OperatingSystemlevel=name
WASversion=n.n.n
WASdirectory=location
JavaClasses=classlist
JavaExe=location
Migration=true|false
oldPMVersion=n
oldPMRelease=n
oldPModLevel=n
```

No data is listed if information is not available.

### Cassette summary file

The **wpm<CassetteName>.properties** file is written to the *<Payments\_installdir>/service* subdirectory when a WebSphere Commerce Payments cassette is installed. It identifies the level and location of the WebSphere Commerce Payments cassette.

```

CassetteNameVersion=n
CassetteNameRelease=n
CassetteNameModlevel=n
CassetteNameInstallDate=yyyymmdd
CassetteNameLastModifiedDate=yyyymmdd
CassetteNameInstallDirectory=location
Migration=true|false
oldCassetteNameVersion=n
oldCassetteNameRelease=n
oldCassetteNameModLevel=n
CassetteNameExtension=cassettepackagename
CassetteNameClasspath=CassetteNameInstallDirectory/lib/Cassetteclasses.zip

```

## Installation trace files

Installation trace files are stored in the TEMP directory on Windows (or tmp for UNIX platforms). (On Windows 2000, the default TEMP directory is c:\Documents and Settings\*<logon user id>*\Local Settings\Temp.) These installation trace files are automatically copied to the *<Payments\_installdir>/service* subdirectory at the completion of the installation so that all files you need to communicate with IBM Support are in one convenient place. If a failure occurs during installation and the installation process does not complete, check the TEMP directory for installation trace files.

The names of the trace files include the product version/release, date, and number of the trace in the following format:

- For the WebSphere Commerce Payments framework:  
**psxx\_install.trace***yyyy.mm.dd\_n*.
- For WebSphere Commerce Payments cassettes, the format is similar:

```

Cassette for BankServACH: bsxx_install.trace.yyyy.mm.dd_n
Cassette for CyberCash: ccxx_install.trace.yyyy.mm.dd_n
Cassette for SET: setxx_install.trace.yyyy.mm.dd_n
Cassette for VisaNet: vnxx_install.trace.yyyy.mm.dd_n

```

*xx* is the version/release, *yyyy.mm.dd* is the date of the installation, and *n* is the number of times the installation was performed (incrementing from 0). For example: *ps31\_install.trace.2001.10.15\_1* shows that WebSphere Commerce Payments Version 3.1 was installed for the second time on October 15, 2001.

If you experience installation problems and contact IBM Support for assistance, be prepared to provide these files to support personnel.

---

## Error and trace logs

Once you begin using WebSphere Commerce Payments, you may have a need to diagnose problems encountered while actually using the application. Error and trace logs are available for support personnel for analysis.

For iSeries, these trace files exist in the */QIBM/UserData/PymSvr/<instance name>/logs* directory for each instance.

### PMError

Errors associated with WebSphere Commerce Payments are recorded in the *PMError* file located in the WebSphere Commerce Payments log directory. The error file can be viewed as is; no utility is required to format the error log for viewing.



### PMTrace1.log, PMTrace2.log

Tracing to these trace logs can be enabled through the WebSphere Commerce Payments user interface Trace settings. The level and size of the trace logs is configurable through the WebSphere Commerce Payments user interface. When PMTrace1.log fills, PMTrace2.log is started, and vice versa. To format the trace log files for viewing, you can run the FormatTrace command to invoke a utility program which formats the information into a readable text file. Trace logs are written to a user-specified location. For iSeries, to format the trace log files, you can run the DMPPYMTRC command, specifying \*PYMMGR for the trace type.

These files should be made available to support personnel when reporting problems with using WebSphere Commerce Payments. For more information about these files, refer to the troubleshooting section of the *WebSphere Commerce Payments Administrator's Guide*.

---

## Service menu (iSeries)

In WebSphere Commerce Payments for iSeries, the Service menu item on the Payments tasks page allows you to view and format error logs, trace files, and dump files.

1. **View logs and formatted trace files:** Select an error log, or enter the name of the file that you wish to view and press the View button. If any errors are seen in the Command Error Log or the Migration Error Log, you should contact service immediately.
2. **Format trace and dump files:** This section replicates the function of the Dump Payment Trace command (DMPPYMTRC). You may choose to format a WebSphere Commerce Payments trace by choosing a trace type and entering an output file for the information to be dumped into. You may also choose to format a dump file by selecting 'Format dump file', entering the name of the file to be formatted, choosing a trace type, and entering the output file name. The Replace field allows you to replace the output file if it already exist (Yes) or append any new data to the output file (Append). The default value for this field is No, which will not write over an existing output file. Pressing the OK button will cause the command to execute and will display the formatted trace file. The formatted output file exists as an IFS file on iSeries and may be viewed at any time using the **View logs and formatted trace files** section above.
3. **Gather data for service:** This section allows the user to gather error logs, formatted trace files, and job logs in one step. If the Error Logs check box is selected, all error logs for the current WebSphere Commerce Payments instance will be copied to the output directory. If the Trace Files check box is selected all trace and dump files for the instance will be formatted into the output directory. If the Job Logs check box is selected the WebSphere Commerce Payments job logs will be copied into an IFS file in the output directory. The user must specify an existing output directory. When this function completes a list of files that were copied into the output directory will be shown.

---

## Troubleshooting your WebSphere Commerce Payments installation

If you encounter problems with your WebSphere Commerce Payments installation, ensure that you have done the following:

- Reviewed the WebSphere Commerce Payments hardware and software requirements for your platform and confirmed that you meet the minimum requirements for your operating system:

- For Windows NT or Windows 2000, see “Windows NT and Windows 2000 platform requirements” on page 25.
- For Solaris, see “Solaris platform requirements” on page 31.
- For AIX, see “AIX platform requirements” on page 37.
- For Linux on Intel, see “Linux platform requirements” on page 41.
- For Linux for zSeries and S/390, see “Linux platform requirements” on page 45.
- For iSeries, see “iSeries platform requirements” on page 53.
- Reviewed migration information (only if you were migrating from a previous release).
  - For more information on migrating from a previous release, see Chapter 3, “Migrating from previous versions of the product”, on page 17.
- Reviewed and completed all preinstallation tasks for your operating system:
  - For Windows NT or Windows 2000, see “Before installing WebSphere Commerce Payments” on page 26
  - For Solaris, see “Before installing WebSphere Commerce Payments on Solaris” on page 32
  - For AIX, see “Before installing WebSphere Commerce Payments” on page 38
  - For Linux on Intel, see “Before installing WebSphere Commerce Payments” on page 42
  - For Linux on zSeries and S/390, see “Before installing WebSphere Commerce Payments” on page 46
  - For iSeries, see “Before installing WebSphere Commerce Payments” on page 54

## Installing IBM HTTP Server (workstation platforms)

If HTTP Server fails to install correctly, you may have too much free disk space on the drive where you are trying to install it. If this is the case, you can:

1. Create a large file, such that you have 2.5 GB (or less) of free disk space.
2. Remove IBM HTTP Server WebSphere Application Server, and WebSphere Commerce Payments (if installed).
3. Rerun the WebSphere Commerce Payments install program.
4. Delete the file you created.

---

## Verifying Web server started

To verify that your Web server started, open a browser and enter this URL:

`http://<hostname>`

At times you may need to enter the fully qualified hostname (for example, `myhost.company.com` rather than `myhost`).

If you are using the IBM HTTP Server, the “Welcome to the IBM HTTP Server” window should appear. If you are using another server, that server’s “welcome page” should appear.

On iSeries, you may see an error returned from the IBM HTTP Server depending on how your IBM HTTP Server is configured. For example, if your HTTP configuration does not have a directive to allow the

`http://<hostname>`

URL, you may see an "Error 403 - Forbidden - by rule" returned.

---

## Verifying WebSphere Application Server started

You can use the WebSphere Application Server administrative console to verify that WebSphere Application Server is working properly, or use one of these methods to verify WebSphere Application Server is started:

- If you installed the samples when you installed WebSphere Application Server, you can use the snoop utility. Snoop is installed automatically if WebSphere Application Server is installed during the WebSphere Commerce Payments installation. To use snoop, point your browser at:

```
http://<hostname>/servlet/snoop
```

If WebSphere Application Server has started, the snoop utility will display in your browser window.

**Note:** The Default server under the WebSphere Application Server PM node must be running before you can use snoop. Start the default server using the WebSphere Application Server administrative console.

- For WebSphere Application Server, point your browser at:

```
http://<hostname>/servlet/hello
```

If WebSphere Application Server has started, **Hello World** will display in your browser window.

## Fixing WebSphere Application Server problems

With WebSphere Application Server, you need to verify the following configuration information using the WebSphere Application Server administrative client:

- **For Windows, AIX, Solaris, and Linux** platforms, both the fully-qualified TCP/IP name and the short name of your server machine are listed in your WebSphere default\_host aliases list, as shown in "Verify alias configuration".
- **For iSeries**, the WebSphere virtual host alias list contains the proper values as shown in Verify alias configuration.
- The WebSphere Commerce Payments installation program successfully updated your WebSphere Application Server configuration with the appropriate WebSphere Commerce Payments objects, as shown in "Verifying object configuration" on page 78.

### Verify alias configuration

To verify that the fully-qualified TCP/IP name and the server short name are listed in your WebSphere default\_host (or virtual host, for iSeries) aliases list:

1. Ensure your admin server is started:

- **On Windows:** look in the Services window for the "IBM WS Admin Server". If the server has not been started, start it and wait for startup to complete.
- **On Solaris and AIX:** check which processes have started. At a command prompt, enter:

```
ps -ef | grep "java"
```

and look for the .../WebSphere/AppServer... process. If the server has not been started, start it and wait for startup to complete.

- **On Linux:** check which processes have started. At a command prompt, enter:

```
ps ax | grep "java"
```

and look for the "IBMWebAS" process. If the server has not been started, start it and wait for startup to complete.

- **On iSeries:** use the **WRKACTJOB** command to verify that the **QEJBADV4** subsystem is active and the **QEJBADMIN** job is active.
2. Start the WebSphere Application Server administrative console:
    - **On Windows:** click Start-> Programs -> IBM WebSphere -> Application Server V4.0 AE -> Administrator's Console
    - **On AIX, Linux, or Solaris:** change directory to where WebSphere Application Server is installed and enter the following to run the administrative client script: `./adminclient.sh`
  3. Select **WebSphere Administrative Domain**.
  4. Select **Virtual Hosts**.
  5. Select **default\_host**. On iSeries, select the **virtual host** that corresponds with your WebSphere Commerce Payments instance.
  6. Select the **General** tab.
  7. Check the **Aliases** list. Ensure that both the short name and fully-qualified TCP/IP name are both listed. If either of the names is not defined as an alias, add it and click on **Apply**.
  8. Under the WebSphere Administrative Domain tree view, select **Nodes**.
  9. Select the name of the host you are running on and right-click the selection.
  10. Select **Regen Webserver Plugin**.

**Using SSL for servlet communication:** If you plan to use SSL to communicate with the WebSphere Commerce Payments servlets, you also need to have your machine names (both short and fully-qualified TCP/IP names) with the SSL port number specified in the WebSphere default\_host aliases list. The example syntax is: `hostname:sslPortNumber`. Use the above steps to verify whether they are listed as aliases. If they are not, you should add them as aliases.

### Verifying object configuration

To verify that the WebSphere Commerce Payments installation program successfully updated your WebSphere Application Server configuration with the appropriate objects:

1. Start the WebSphere Application Server administrative console:
  - **On Windows:** click Start-> Programs -> IBM WebSphere -> Application Server V4.0 AE -> Administrator's Console
  - **On AIX, Linux, or Solaris:** change directory to where WebSphere Application Server is installed and enter the following to run the administrative client script: `./bin/adminclient.sh`
2. Ensure that these objects exist and are running under the WebSphere Application Server node you selected during the WebSphere Commerce Payments installation (you have to click on each object to see the next object):
  - a. **WebSphere Commerce Payments Application Server**
  - b. **IBM\_Payments Enterprise Application**
  - c. **Installed Web Modules -> Payments**

For iSeries, the object names are slightly different:

- a. **WPM <pminstance> WebSphere Commerce Payments** (Application Server)
- b. **<pminstance> IBM Payments** (Enterprise Application)
- c. **Installed Web Modules -> <pminstance>**

**For Windows, AIX, Solaris, and Linux** platforms: When you have finished verifying the WebSphere Application Server configuration, exit the administrative console and proceed with payment cassette installation.

**Note:** During the installation of cassettes, the **WebSphere Commerce Payments** application server (and its associated objects) must be stopped before installing the cassettes. To minimize the disruption in service to your customers (for example, merchant administrators), you should:

- Notify customers in advance that you will be restarting the server
- Inform customers that they will experience a downtime during this procedure
- Warn customers not to try to perform any other operations during this downtime

**For iSeries** platforms: The WebSphere objects are created or updated at the time your WebSphere Commerce Payments instance is started.

---

## WebSphere Commerce Payments startup errors

If you encounter problems while starting your WebSphere Commerce Payments, ensure that you have:

- Completed the installation and configuration tasks for your operating system:
  - For Windows NT or Windows 2000, see Chapter 4, “Installing WebSphere Commerce Payments on Windows”, on page 25
  - For Solaris, see Chapter 5, “Installing WebSphere Commerce Payments on Solaris”, on page 31
  - For AIX, see Chapter 6, “Installing WebSphere Commerce Payments on AIX”, on page 37
  - For Linux on Intel, see Chapter 7, “Installing WebSphere Commerce Payments on Linux (Intel)”, on page 41
  - For Linux on zSeries and S/390, see Chapter 8, “Installing WebSphere Commerce Payments on Linux for zSeries and S/390”, on page 45
  - For iSeries, see Chapter 9, “Installing WebSphere Commerce Payments on iSeries”, on page 53
- Installed any payment cassettes, see “Installing payment cassettes for WebSphere Commerce Payments” on page 60.

Then, review this information for fixes and work-arounds to common WebSphere Commerce Payments startup problems.

## WebSphere Commerce Payments hangs after entering IBMPayserver command (Windows, AIX, Solaris, Linux platforms)

If you are migrating your WebSphere Commerce Payments application and use the Cassette for SET, the system may hang if phantom WebSphere Commerce Payments applications are running and interfering with the starting of the Cassette for SET. After entering the IBMPayServer command to start WebSphere Commerce Payments, the system hangs and eventually a timeout message is displayed to inform you of communication problems with the default port, or a message is displayed containing primary return code = 53 (PRC\_UNHANDLED\_EXCEPTION), secondary return code = 0.

**On Windows:** if possible, determine which Java applications are phantom WebSphere Commerce Payments applications. If you are unable to make this determination, reboot your system.

**On AIX, Linux, and Solaris:** check with processes have started. At a command prompt, enter the following to see which Java application is the phantom WebSphere Commerce Payments application.

```
ps -ef | grep java
```

Then, use the `kill` command to kill the application.

## Internal server error when starting the user interface (Windows, AIX, Solaris, Linux platforms)

If you get an internal server error message when you start the WebSphere Commerce Payments user interface or SampleCheckout application, and the URL in your browser's address box shows an additional period, your IBM HTTP Server configuration is wrong. To correct this problem, edit the `httpd.conf` and `admin.conf` files in the `\WebSphere\AppServer\httpd\conf` subdirectory. Look for the `ServerName` entry and ensure that the value is the fully qualified hostname of your machine. For example, `ServerName ecom.raleigh.ibm.com`. You will also need to apply the workaround as described for "File not found error with WebSphere Application Server" on page 83.

## IBM HTTP Server start up errors on Windows

When starting the IBM HTTP Server service on Windows NT or Windows 2000, you may get an error indicating that the service could not start. If you get this error, but the service actually does start, then no error occurred and you can ignore this particular error message. If you get this error and the service did *not* start, then this problem must be investigated and resolved before WebSphere Commerce Payments will function properly.

## Error initializing the user interface on Windows

If WebSphere Commerce Payments has started successfully and you cannot bring up the WebSphere Commerce Payments user interface or process payments, ensure that WebSphere Application Server has been started:

1. Open the **Services** window off the Start menu.
2. Select the WebSphere Administrator's Console.
3. Under **WebSphere Administrative Domain**, select **Nodes**.
4. Select **Application Servers**.
5. Stop the **WebSphere Commerce Payments** application by right-clicking and selecting **Stop**.
6. Start WebSphere Commerce Payments by right-clicking and selecting **Start**.

If you are using the Microsoft IIS as your Web server, point your browser at:

```
http://<hostname>/webapp/PaymentManager/PaymentServerUI/Start
```

instead of `http://<hostname>/PaymentManager`

## Error logging on to the user interface on Windows

WebSphere Commerce Payments requires basic authentication to be enabled on the Web server to operate properly. For the IBM HTTP Server and iPlanet, basic authentication is enabled by default. If you are using the Microsoft Internet



Information Server (IIS) as your Web server and receive an authentication error (User does not have the required authentication) while attempting to log on to the WebSphere Commerce Payments user interface, perform the following additional configuration steps.

To enable basic authentication for IIS:

1. Start the IIS Internet Services Manager.
2. Select the **Default Web Site** on the left, then select the **Action ->Properties** menu item to open the properties sheet for the Default Web Site.
3. Select the **Directory Security** tab from the Properties notebook.
4. Click the **Edit** button on the right of the "Anonymous access and Authentication control" section to bring up the Authentication Methods dialog box.
5. Ensure that the check box for **Anonymous access** is On and the other options ("Basic Authentication" and "Integrated Windows Authentication") are off.
6. Click **OK** several times to complete the change.

Other methods may be available to enable basic authentication with IIS. Consult your IIS documentation for current procedures and alternative methods.

## Error starting WebSphere Application Server (Windows, AIX, Solaris, Linux platforms)

You may receive a message stating An error occurred starting WebSphere Application Server when the WebSphere Commerce Payments installation program attempts to start WebSphere Application Server. Check the WebSphere Commerce Payments installation trace file for more details about the error. If the trace file shows the following messages (specifically, a service specific error value of 10), you most likely installed UDB into a directory that had a blank in the directory name.

```
[INFO ] Error from process:  
The IBM WS AdminServer service could not be started.  
  
A service specific error occurred: 10.
```

As described in "Installing a database (UDB) on workstation platforms" on page 11, you should not include a blank in the UDB directory name, because blanks cause the WebSphere Application Server to set files improperly and prevent the WebSphere Application Server admin server from starting. To resolve this error, uninstall UDB, and reinstall it with no blanks in the directory name.

## Failure to connect to the database (Windows, AIX, Solaris, Linux platforms)

WebSphere Commerce Payments is configured to support multiple concurrent connections to the database to support high transaction throughput. However, to optimize memory utilization, the number of connections is limited by default to 10. If this limit is too low for your system, you may see CEPFW0459 error messages in the PMError log. You can increase the number of database connections using the WebSphere Application Server administrative console. From the type view of the WebSphere Administrative Domain, do the following:

- Expand **Resources**.
- Expand **JDBC Providers**.
- Expand **WPM DB Driver**.
- Click **WPM Data source**.

- Select the **Connection Pooling** tab.
- Change the **Maximum connection pool** size setting.

For this new setting to take effect, you must stop and start WebSphere Commerce Payments by selecting the WebSphere Commerce Payments application server object, stopping and starting the object using the toolbar, and then issuing the IBMPayServer command from the WebSphere Commerce Payments installation directory.

## DB2 issues SQL1224N and WebSphere Application Server administration server fails with StaleConnectionException (AIX)

On an AIX system, if you receive a DB2 internal error with an error return code of 18 and SQL code 1224, note the following workaround:

- In DB2 client sessions, execute the following line before connecting to DB2:  

```
export EXTSHM=ON
```
- When starting the DB2 UDB server, execute the following lines to start up DB2:  

```
export EXTSHM=ON
db2set DB2ENVLIST=EXTSHM
db2start
```

It is highly recommended that you add the above workaround to all user .profile files that access DB2 to ensure the user environments are set up automatically.

## WebSphere Commerce Payments did not start successfully (Windows, AIX, Solaris, Linux on Intel platforms)

If you are using Oracle for your WebSphere Commerce Payments database and are using a different type of database for WebSphere Application Server (for example, DB2 UDB), you may receive startup errors when entering the IBMPayServer command to start WebSphere Commerce Payments. The error message is CEPFW0821: IBM WebSphere Commerce Payments did not start successfully. Primary return code: 50. Secondary return code: 513. This problem occurs because you have chosen to use a database which is different from the database WebSphere Application Server is configured to use. In this case, you must edit the admin.config file located in the bin subdirectory of the WebSphere Application Server installation directory and append your Oracle database classpath. Locate the following line in the file:

```
com.ibm.ejs.sm.util.process.Nanny.adminServerJvmArgs
```

Append your Oracle database classpath to this line. For example, on Windows, if you are using Oracle for WebSphere Commerce Payments, but DB2 UDB for WebSphere Application Server, you would append the following Oracle database classpath:

Example:

```
c:/SQLLIB/java/db2java.zip;c:/oracle/ora8i/jdbc/lib/classes12.zip
```

Be sure to specify the correct path for your Oracle environment.

After saving the change to the admin.config file, stop and restart the WebSphere Application Server. WebSphere Application Server will recognize the classpath of the database WebSphere Commerce Payments is configured to use.



## Error reading configuration table -- could not get logPath (AIX)

This error may be displayed in the WebSphere Commerce Payments user interface to inform you of DB2 connection problems. An exception associated with this error is: serious error: initialization failure: Exception while reading ETILLCONFIG. If you are using WebSphere Commerce Payments on AIX and have migrated to using WebSphere Application Server Version 4.0, the number of available connections may have been exceeded (WebSphere Application Server Version 4.0 uses more connections than in earlier versions). You may be able to correct this situation by doing the following:

1. Create an alias in DB2 for the WebSphere Commerce Payments database by configuring a loopback TCP/IP node. For example, if the database name is *db\_name* and the service name is *db2inst1*, then the loopback is configured as:
  - CATALOG TCPIP NODE *loop00* SERVER 127.0.0.1 SERVICE *db2inst1*
  - CATALOG DATABASE *db\_name* AS *1pdb\_name* AT NODE *loop00*
2. Use the WebSphere Application Server administrative console to update the `wpm.DBjdbcURL` initialization parameter. Navigate to the **JVM Settings** tab page for **WebSphere Commerce Payments** under **Nodes**. Change this:  
`DBjdbcURL=jdbc:db2:db_name`

to the following:

```
DBjdbcURL=jdbc:db2:1pdb_name
```

3. Use the WebSphere Application Server administrative console to update the database name to reflect the *1pdb\_name*:
  - a. Expand **Resources** under the WebSphere Administrative Domain in the navigation pane.
  - b. Expand **JDBC Providers**.
  - c. Expand **WPM DB Driver**.
  - d. Click **Data Sources**.
  - e. Change the **Database name** value to the following: *1pdb\_name*.
4. Use the WebSphere Application Server administrative console to stop the current WebSphere Commerce Payments Application Server.
5. Use the WebSphere Application Server administrative console to start the WebSphere Commerce Payments Application Server.
6. Use the `IBMPayServer` command to start WebSphere Commerce Payments.
7. Log in to WebSphere Commerce Payments. The database connection should work.

## File not found error with WebSphere Application Server

"File not found" errors may be displayed when you start the WebSphere Commerce Payments user interface or SampleCheckout application and WebSphere Application Server is not configured correctly. To correct this problem, start the WebSphere Application Server administrative console and look in the advanced tab of the `default_host` virtual host. The aliases list should contain both the short hostname and the fully qualified hostname of your machine. For example, `ecom` `ecom.raleigh.ibm.com`. If you change this list to add one or both of these aliases, click the **Apply** button and then stop and start WebSphere Application Server for this change to take effect.

## Error setting the WebSphere Commerce Payments hostname

The WebSphere Commerce Payments uses a DNS lookup of the local machine to determine its TCP/IP hostname. Although intended to be a fully-qualified TCP/IP hostname, the Java implementation on certain platforms will return a short name rather than the full name.

The problem may be corrected by setting the hostname, either through the WebSphere Commerce Payments user interface (using **Basic Settings**) or directly through API requests (that is, a `ModifyPayServer` request with the `ETILLHOSTNAME` keyword present).

---

## Time zone errors

Some versions of Java do not correctly determine the time zone of the operating system. If the WebSphere Commerce Payments displays a time with an incorrect time zone, you can fix the problem by adding a `user.timezone` option to the `IBMPayServer` startup script:

- **On Windows:**

```
./jre/bin/jre -Duser.timezone=XXX -noclassgc -nojit -classpath ...  
com.ibm.etill.framework.ETill ...
```

- **On AIX or Solaris:**

```
.\jre\bin\jre -Duser.timezone=XXX -noclassgc -nojit -classpath ...  
com.ibm.etill.framework.ETill ...
```

where *XXX* is a valid time zone supported by Java (that is: GMT, UTC, ECT, EET, ART, EAT, MET, NET, PLT, IST, BST, VST, CTT, JST, ACT, AET, SST, NST, MIT, HST, AST, PST, PNT, MST, CST, EST, IET, PRT, CNT, AGT, BET, CAT).

**On iSeries**, you can set the correct time zone by defining the `user.timezone` property in the file `/QIBM/UserData/Java400/SystemDefault.properties`. For example, add the following line:

```
user.timezone=CST
```

This change affects all Java applications on the system.

---

## Chapter 13. Uninstalling WebSphere Commerce Payments

Before uninstalling the WebSphere Commerce Payments:

1. Stop WebSphere Commerce Payments and the WebSphere Commerce Payments servlets using the instructions in “Stopping WebSphere Commerce Payments” on page 86.
2. Uninstalling the WebSphere Commerce Payments Framework does not uninstall payment cassettes or prerequisite software that the WebSphere Commerce Payments installation program installs for use with WebSphere Commerce Payments. If you want to remove the WebSphere Commerce Payments cassettes, you must uninstall the payment cassettes before uninstalling WebSphere Commerce Payments. (Any payment cassettes remaining on the system after the WebSphere Commerce Payments Framework is removed will not work.) For information on uninstalling a payment cassette, see the appropriate cassette supplement:
  - The *WebSphere Commerce Payments Cassette for BankServACH Supplement*
  - The *WebSphere Commerce Payments Cassette for CyberCash Supplement*
  - The *WebSphere Commerce Payments Cassette for SET Supplement*
  - The *WebSphere Commerce Payments Cassette for VisaNet Supplement*
3. On **Windows, AIX, Solaris, and Linux** platforms, the WebSphere Commerce Payments uninstall program will drop the WebSphere Commerce Payments database tables. To preserve your data, you must export it to a different database.

On **iSeries**, the uninstall program leaves the database tables. You must delete the WebSphere Commerce Payments instance to remove the database tables on iSeries.

4. You must uninstall prerequisite software separately:
  - Uninstall WebSphere Commerce Payments **before** uninstalling WebSphere Application Server. WebSphere Commerce Payments uses the developer kit for Java installed by WebSphere Application Server. Therefore, if you uninstall WebSphere Application Server first, the WebSphere Commerce Payments uninstall will not work.
  - Uninstall WebSphere Commerce Payments **before** uninstalling the database used by WebSphere Commerce Payments.
  - You need to stop only the WebSphere Commerce Payments and the WebSphere Commerce Payments Application Server. The WebSphere Commerce Payments Application Server stops all other servlets. For more information, see “Stopping WebSphere Commerce Payments” on page 86.
  - The WebSphere Commerce Payments uninstall program will delete WebSphere Commerce Payments files and remove WebSphere Commerce Payments as a deployable application. The uninstallation also causes WebSphere Application Server to be reconfigured and WebSphere Commerce Payments to be removed from the WebSphere Application Server list of installed applications. All WebSphere Application Server objects created during the WebSphere Commerce Payments installation will be removed after you uninstall WebSphere Commerce Payments.
  - For more information on uninstalling software products shipped with WebSphere Commerce Payments, see the product documentation for the software you want to uninstall.

---

## Stopping WebSphere Commerce Payments

On **Windows, AIX, Solaris, and Linux** platforms, to stop the WebSphere Commerce Payments, you need to:

- Stop WebSphere Commerce Payments, as shown in “Stopping WebSphere Commerce Payments”.
- Stop the WebSphere Commerce Payments Application Server under WebSphere Application Server, as shown in “Stopping WebSphere Commerce Payments servlets using WebSphere Application Server” on page 87.
- Stop all other WebSphere Commerce Payments servlets.

On **iSeries**, to stop WebSphere Commerce Payments, you need to use the ENDPYMMGR command or select **End** from the WebSphere Commerce Payments tasks page. This stops WebSphere Commerce Payments, the WebSphere Application Server, and servlets.

## Stopping WebSphere Commerce Payments

You can stop WebSphere Commerce Payments using the StopIBMPayServer command from a command window, or through use of a password file. For more information on using a password file for password protection, see “Starting WebSphere Commerce Payments in unattended operation mode” on page 67.

### StopIBMPayServer command syntax

The syntax of the StopIBMPayServer command is as follows:

```
StopIBMPayServer [ -file [ passwordFile ] | -prompt ]  
                 [ -pmhost hostname ]  
                 [ -pmpport portnumber ]  
                 [ -wasuid userid ]  
                 [ -waspw password ]
```

**-file** Specifies that the WebSphere Commerce Payments password will be read from a password file called *passwordFile*. If the file name is not specified, the default file name is *.payment*.

**-prompt** Specifies that the user will be prompted to enter the WebSphere Commerce Payments password. By default, the user is prompted.

**-pmhost** Specifies the hostname where WebSphere Commerce Payments is installed. The default is the hostname of the current machine.

**-pmpport** Specifies the port number that the WebSphere Commerce Payments Application Server is listening on. The default is port '80'.

**-wasuid** Specifies the WebSphere Application Server user ID used to connect to the Payment Servlet. Usually, this parameter is not needed. It is only required if you turn on WebSphere Application Server security for the Payment Servlet.

**-waspw** Specifies the password of the WebSphere Application Server user specified in the *-wasuid* parameter.

### Stopping WebSphere Commerce Payments with the StopIBMPayServer command

To stop WebSphere Commerce Payments, open a command window and change directory to the directory where you installed WebSphere Commerce Payments. Then enter the following command:

StopIBMPayServer

You will be prompted to enter your WebSphere Commerce Payments password. This is the password of the user you specified to use when connecting to the database.

### Stopping WebSphere Commerce Payments in unattended operation mode

If you need to stop WebSphere Commerce Payments when there is no user present to enter the password, you need a password file. For a description of the password file, see “Starting WebSphere Commerce Payments in unattended operation mode” on page 67. To stop WebSphere Commerce Payments using this file, open a command window and change directory to the WebSphere Commerce Payments installation directory. Then, enter the following command:

```
StopIBMPayServer -file
```

## Stopping WebSphere Commerce Payments servlets using WebSphere Application Server

Under WebSphere Application Server, you can stop all servlets by stopping only the **WebSphere Commerce Payments** application server. To stop the WebSphere Commerce Payments application server:

1. Start the WebSphere Application Server administrative console:
  - **On Windows:** click Start-> Programs -> IBM WebSphere -> Application Server V4.0 AE -> Administrator's Console
  - **On AIX, Linux, or Solaris:** change directory to where WebSphere Application Server is installed and enter: `./adminclient.sh`
2. Under **WebSphere Administrative Domain**, select **Nodes**. Select the node name for the system where WebSphere Commerce Payments is installed.
3. Navigate to the WebSphere Commerce Payments server under Application Servers.
4. Stop the **WebSphere Commerce Payments** application by right-clicking and selecting **Stop**.
5. Exit the administrative console.

---

## Uninstalling WebSphere Commerce Payments on Windows

After stopping WebSphere Commerce Payments and all servlets, to uninstall WebSphere Commerce Payments on Windows NT or Windows 2000:

1. If you want to remove separately-installed payment cassettes, you must uninstall them *before* uninstalling the WebSphere Commerce Payments Framework. For example, to remove the Cassette for SET or Cassette for CyberCash:
  - a. Click **Add/Remove Programs** in the Windows **Control Panel**.
  - b. Select your WebSphere Commerce Payments payment cassette (for example, SET or CyberCash) from the Add/Remove Programs list.
  - c. To uninstall the payment cassette, click **Remove**.

Repeat these steps to uninstall any additional payment cassettes.

Third-party cassettes may have different uninstall procedures. For more information, see the information provided with your third-party documentation.

2. After uninstalling your payment cassettes, you can uninstall WebSphere Commerce Payments:
  - a. Click **Add/Remove Programs** in the Windows **Control Panel**.
  - b. Select WebSphere Commerce Payments Framework from the Add/Remove Programs list.
  - c. To uninstall the WebSphere Commerce Payments Framework, click **Remove**.

If a problem occurs with the uninstallation (for example, you still see the WebSphere Commerce Payments Application Server listed or see signs indicating the uninstallation did not work), see “Emergency uninstall procedure” on page 89 for further instruction.

---

## Uninstalling WebSphere Commerce Payments on Solaris

After stopping WebSphere Commerce Payments and all servlets, you must uninstall any payment cassettes *before* uninstalling the WebSphere Commerce Payments Framework. To uninstall the cassettes and WebSphere Commerce Payments:

1. Logon as root.
2. Change to the WebSphere Commerce Payments installation directory. By default, WebSphere Commerce Payments is installed to /opt/Payments.
3. From the command prompt, run these scripts (this example assumes the Cassette for CyberCash and the Cassette for SET have been installed):

```
./UninstallCyberCash.sh  
./UninstallSET.sh  
./UninstallFramework.sh
```

**Note:** If you decide to reinstall WebSphere Commerce Payments on Solaris, ensure the packages corresponding to the WebSphere Commerce Payments Framework and the payment cassettes are deleted from /var/spool/pkg and /var/sadm/pkg. (See Solaris instructions in “Registry, packaging, and directory cleanup” on page 90 for more information.)

If a problem occurs with the uninstallation (for example, you still see the WebSphere Commerce Payments Application Server listed or see signs indicating the uninstallation did not work), see “Emergency uninstall procedure” on page 89 for further instruction.

---

## Uninstalling WebSphere Commerce Payments on AIX

After stopping WebSphere Commerce Payments and all servlets, uninstall any payment cassettes *before* uninstalling the WebSphere Commerce Payments Framework. Use **smit** or **wsm** to:

1. Search for the WebSphere Commerce Payments products.
2. Uninstall your payment cassettes (for example, SET or CyberCash).
3. Uninstall the WebSphere Commerce Payments Framework.

**Note:** **Do not use** the preview uninstall, as this actually performs a live, or real, uninstall.

If a problem occurs with the uninstallation (for example, you still see the WebSphere Commerce Payments Application Server listed or see signs indicating the uninstallation did not work), see “Emergency uninstall procedure” on page 89 for further instruction.



---

## Uninstalling WebSphere Commerce Payments on Linux

After stopping WebSphere Commerce Payments and all servlets, you must uninstall any payment cassettes *before* uninstalling the WebSphere Commerce Payments Framework. To uninstall the cassettes and WebSphere Commerce Payments:

1. Logon as root.
2. Change to the WebSphere Commerce Payments installation directory. By default, WebSphere Commerce Payments is installed to `/opt/Payments`
3. From the command prompt, run these scripts in the order presented (this example assumes the only cassette installed is the Cassette for CyberCash):  

```
./UninstallCyberCash.sh  
./UninstallFramework.sh
```

If a problem occurs with the uninstallation (for example, you still see the WebSphere Commerce Payments Application Server listed or see signs indicating the uninstallation did not work), see “Emergency uninstall procedure” for further instruction.

---

## Uninstalling WebSphere Commerce Payments on iSeries

After stopping all of the WebSphere Commerce Payments instances on your iSeries system, you can uninstall the WebSphere Commerce Payments and all of the payment cassettes using the Delete Licensed Program command as follows:

```
DLTLICPGM LICPGM(5733PY3)
```

This command removes the product, but does not remove any of the configuration or data associated with your WebSphere Commerce Payments instances. To delete the database tables and configuration data, you must use the Delete Commerce Payments instance (DLTPYMMGR) command. Do not delete your instance if you plan to migrate that instance to the new release.

---

## Emergency uninstall procedure

### Removing WebSphere Commerce Payments from WebSphere Application Server configuration

After you have uninstalled WebSphere Commerce Payments from your operating system, the WebSphere Commerce Payments configuration in the WebSphere Application Server should be removed. In the event it is not, you can follow these instructions to remove the WebSphere Commerce Payments configuration in WebSphere Application Server.

For **Windows, AIX, Solaris, and Linux** platforms, follow these instructions to remove WebSphere Commerce Payments from the WebSphere Application Server configuration.

On iSeries, the WebSphere Commerce Payments Application Server should be removed when a WebSphere Commerce Payments instance is deleted. If it is not, follow these instructions to remove it.

Do the following:

1. Start the WebSphere Application Server administrative console:
  - **On Windows:** click Start-> Programs -> IBM WebSphere -> Application Server V4.0 AE -> Administrator's Console

- **On AIX, Linux, and Solaris:** change directory to where WebSphere Application Server is installed and enter: `./adminclient.sh`
2. If it is not already stopped, stop the WebSphere Commerce Payments Application Server:
    - a. Under **Nodes**, navigate to **WebSphere Commerce Payments** under **Application Servers** and right-click the mouse. Click on **Stop** or **Force Stop**.
  3. Remove the WPM DataSource:
    - a. Expand **Resources**.
    - b. Expand **JDBC Providers**.
    - c. Expand **WPM DB Driver**.
    - d. Click **Data Sources**.
    - e. On the frame on the right, select and right-click on **WPM DataSource** and click **Remove**.
  4. In the tree view, right-click on **WPM DB Driver** and click **Remove** to remove it.
  5. Under **Enterprise Applications**, remove the **IBM\_Payments** Enterprise Application. (There is no need to export it.)
  6. Under **Nodes**, navigate to and remove the **WebSphere Commerce Payments** Application Server.

This will remove all associated servlets and other configuration entries.

## Registry, packaging, and directory cleanup

Occasionally, the Uninstall option or the Uninstall application will not successfully remove WebSphere Commerce Payments. If that happens, use these instructions to manually uninstall WebSphere Commerce Payments. (This section does not apply to iSeries.)

1. Drop your database. You can use scripts or a utility provided by your database product.
2. Clean the registry:
  - **On Windows 2000 or NT:** delete the node  
HKEY\_LOCAL\_MACHINE\Software\IBM\Payment Server
  - **On Solaris or AIX:** remove all lines starting with "SOFTWARE/IBM/Payment Server" from the file `/usr/bin/jitk.db`. For example:
 

```
#mv /usr/bin/jitk.db /usr/bin/jitk.bak
#cat /usr/bin/jitk.bak | grep -v 'SOFTWARE/IBM/Payment Server' > /usr/bin/jitk.db
```
  - **On Linux:** remove all lines starting with "SOFTWARE/IBM/Payment Server" from the file `/root/bin/jitk.db`. For example:
 

```
#mv /root/bin/jitk.db /root/bin/jitk.bak
#cat /root/bin/jitk.bak | grep -v 'SOFTWARE/IBM/Payment Server' > /root/bin/jitk.db
```
  - Handle platform packaging issues:
    - **On Solaris:** You must uninstall any payment cassettes *before* uninstalling the WebSphere Commerce Payments Framework. Use `pkgrm` or `admintool` to:
      - a.
        - 1) Search for the WebSphere Commerce Payments products.
        - 2) Uninstall your payment cassettes (for example, SET or CyberCash).
        - 3) Uninstall the WebSphere Commerce Payments Framework.
      - b. At the shell prompt, display a list of packages by entering:



```
#pkginfo | grep itj
```

- c. To remove the WebSphere Commerce Payments packages, enter:

```
#cd /var/sadm/pkg  
#rm -r <packagename1> <packagename2>
```

where *<packagename>* are the applicable package names from the list you generated earlier, separated by spaces.

Repeat this removal procedure for the `/var/spool/pkg` directory.

– **On AIX:**

- a. To view a list of packages at the shell prompt, enter:

```
#export ODMDIR=/usr/lib/objrepos  
#odmget lpp (find your product name here)
```

- b. To remove WebSphere Commerce Payments (whose name is `WebSphere.Commerce.Payments.Framework`), enter:

```
#odmdelete -o lpp -q name="WebSphere.Commerce.Payments.Framework"  
#odmdelete -o product -q name="WebSphere.Commerce.Payments.Framework"
```

3. All WebSphere Commerce Payments-specific files and directories should be removed from the system. If you have not installed another product in a directory under *<Payments\_installdir>*, you can delete the entire tree. If you have installed another product underneath this directory, then you should remove these files, if any of them remain (where *<Payments\_installdir>* is the directory into which WebSphere Commerce Payments was installed):

```
<Payments_installdir>/*           (all files in this directory)  
<Payments_installdir>/archive     (the entire subtree)  
<Payments_installdir>/docs        (the entire subtree)  
<Payments_installdir>/include     (the entire subtree)  
<Payments_installdir>/src         (the entire subtree)  
<Payments_installdir>/lib         (the entire subtree)  
<Payments_installdir>/LicenseLog (the entire subtree)  
<Payments_installdir>/profiles    (the entire subtree)  
<Payments_installdir>/pspl        (the entire subtree)  
<Payments_installdir>/samples     (the entire subtree)  
<Payments_installdir>/Service     (the entire subtree)  
<Payments_installdir>/UninstallData (the entire subtree)  
<Payments_installdir>/UserExit    (the entire subtree)  
<Payments_installdir>/!pm21Backup! (the entire subtree - if it exists)  
<Payments_installdir>/!pm22Backup! (the entire subtree - if it exists)
```

4. **On Windows:** Remove the shortcut folder as follows:

- For Windows 2000: At a command prompt, enter the following:

```
%SystemDrive%  
cd %ALLUSERSPROFILE%\Start Menu\Programs  
rmdir /s /q "WebSphere Payments"
```

- For Windows NT: At a command prompt, enter the following:

```
%SystemDrive%  
cd %SystemRoot%\Profiles\All Users\Start Menu\Programs  
rmdir /s /q "WebSphere Payments"
```

You must enter the single double quotation mark because spaces exist in the program name.

---

## Uninstalling WebSphere Application Server

To uninstall WebSphere Application Server, use the Uninstall option available on your operating system. For example, on Windows NT, you can uninstall WebSphere Application Server using the Add/Remove Programs option of the Windows Control Panel. As an alternative on Windows, you can run the `uninstwas40.exe` file in the main WebSphere Application Server directory, respond Yes to the uninstall prompt, and reboot your system.

If you installed IBM HTTP Server as part of the WebSphere Application Server installation, you may need to separately uninstall IBM HTTP Server.

Similarly, on all operating systems except for Windows, if you installed a Java Development Kit as part of the WebSphere Application Server, you must separately uninstall the Java Development Kit to remove it from your machine.

For more information, see the WebSphere Application Server InfoCenter.

---

## Uninstalling and reinstalling UDB

This section includes *mandatory* prerequisites for uninstalling and then *reinstalling* UDB. It does *not* apply to iSeries.

**Note:** Uninstall WebSphere Commerce Payments **before** uninstalling the database used by WebSphere Commerce Payments.

If you do not want to delete the database instances and drop the database tables when uninstalling UDB, you must *rename* the instances and the tables before reinstalling the product.

### Before uninstalling UDB on Windows

Before uninstalling and reinstalling UDB, you must delete the database. To delete the database used by the WebSphere Commerce Payments, at a command prompt, enter:

```
db2 drop database <dbname>
```

where *<dbname>* is the name of the database used by WebSphere Commerce Payments.

### Before uninstalling UDB on Solaris

Before uninstalling and reinstalling UDB, you must delete the database, the database instance, and the Administration Server instance:

1. Drop the database used by the WebSphere Commerce Payments, enter: `db2 drop database <dbname>` where *<dbname>* is the name of the database used by the WebSphere Commerce Payments.
2. Determine the names of the existing WebSphere Commerce Payments database instances, enter: `db2ilist`
3. Drop database instances used by WebSphere Commerce Payments, enter: `db2idrop <instname>` where *<instname>* is the name of the instances used by WebSphere Commerce Payments. You may have to enter this command multiple times.
4. Determine the names of existing Administration Server instances (if such instances exist), enter: `dasilist`

5. Delete the Administration Server instance, enter: `dasidrop <asiname>` where `<asiname>` is the name of the instance.

**Note:** The default Administration Server instance name is `db2as`.

6. Delete the user and home directory corresponding to the instance names you deleted. For example, for the instance `instname`, delete the user named `instname` and the corresponding home directory `/export/home/<instname>`.

## Before uninstalling UDB on AIX

Before uninstalling and reinstalling UDB, you must delete the database, the database instance, and the Administration Server instance:

1. Drop the database used by WebSphere Commerce Payments, enter: `db2 drop database <dbname>` where `<dbname>` is the name of the database used by WebSphere Commerce Payments.
2. Determine the names of the existing WebSphere Commerce Payments database instances, enter: `db2ilist`
3. Drop the database instance used by WebSphere Commerce Payments, enter: `db2idrop <instname>` where `<instname>` is the name of the instance.

**Note:** The default database instance name is `psadmin`.

4. Determine the names of existing Administration Server instances (if such instances exist), enter: `dasilist`
5. Delete the Administration Server instance, enter `dasidrop <asiname>` where `<asiname>` is the name of the instance.

**Note:** The default Administration Server instance name is `db2as`.

6. Delete the user and home directory corresponding to the instance names you deleted. For example, for the instance `instname`, delete the user named `instname` and the corresponding home directory.

## Before uninstalling UDB on Linux

Before uninstalling and reinstalling UDB, you must delete the database, the database instance, and the Administration Server instance:

1. Drop the database used by WebSphere Commerce Payments, enter: `db2 drop database <dbname>` where `<dbname>` is the name of the database used by WebSphere Commerce Payments.
2. Determine the names of the existing WebSphere Commerce Payments database instances, enter: `db2ilist`
3. Drop the database instance used by WebSphere Commerce Payments, enter: `db2idrop <instname>` where `<instname>` is the name of the instance.

**Note:** The default database instance name is `psadmin`.

4. Determine the names of existing Administration Server instances (if such instances exist), enter: `dasilist`
5. Delete the Administration Server instance, enter `dasidrop <asiname>` where `<asiname>` is the name of the instance.

**Note:** The default Administration Server instance name is `db2as`.

6. Delete the user and home directory corresponding to the instance names you deleted. For example, for the instance `instname`, delete the user named `instname` and the corresponding home directory.



---

## Appendix A. Customizing the WebSphere Commerce Payments relational database

**Note:** This appendix does not apply to the iSeries environment. If you are using WebSphere Commerce Payments on iSeries, you can ignore this appendix.

DB2 UDB is the default database in the WebSphere Commerce Payments standard installation. As an option, you can customize your WebSphere Commerce Payments installation by configuring the Oracle database. Oracle is supported on Windows NT or Windows 2000, Solaris, AIX, or Linux (on Intel workstations). Oracle is not supported on Linux for zSeries and S/390. If you choose to use Oracle, review this section for software prerequisites and platform-specific setup instructions.

This chapter describes these tasks:

- Installing the database software (see “Installing the database software”)
- Making necessary changes to the system variables and services (see “Setting up the administrator’s environment” on page 96)
- Creating the WebSphere Commerce Payments database (see “Creating the WebSphere Commerce Payments database” on page 96)

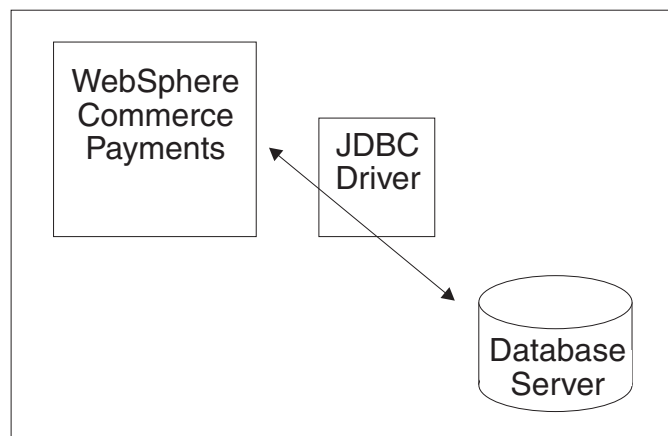
After reviewing the task descriptions, use the instructions for the database you select:

- “Installing and configuring Oracle” on page 97

---

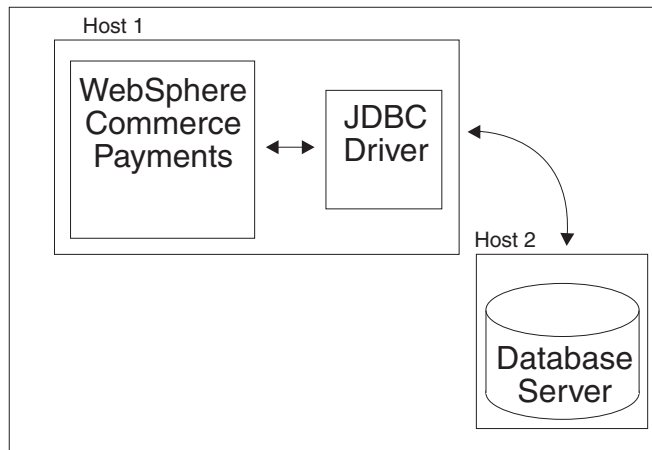
### Installing the database software

You can install WebSphere Commerce Payments and the relational database on the same machine, as shown here:



Alternatively, you can also install WebSphere Commerce Payments with a JDBC driver on one machine, and the database server on another machine. Installing the database on a separate machine can reduce the load on WebSphere Commerce

Payments, thereby improving the performance of payment processing.



If you decide to put the database and WebSphere Commerce Payments on separate machines, you must install a database client on the WebSphere Commerce Payments machine. UDB requires a database client on the WebSphere Commerce Payments machine. For Oracle, you only need to install the JDBC driver on the machine on which you install WebSphere Commerce Payments. To determine whether you have to install a client, see the installation instructions for Oracle.

For additional information and instructions for installing Oracle software, see the Oracle documentation as well as “Using a remote database with WebSphere Commerce Payments” on page 97.

**Note:** The user ID specified as the database administrator (for Oracle) should be the user ID of an existing Windows NT or Windows 2000 administrator. If the specified user ID does not exist as a Windows NT user ID (or if it *does* exist but does not have administrator authority), you must create the user ID and assign it administrator authority.

For information about setting up a remote database on Linux for zSeries and S/390, see “Using DB2 UDB for OS/390 as a remote database on Linux for zSeries and S/390” on page 51.

## Setting up the administrator’s environment

System variables are set up when the database software is installed. In some cases, however, you will need to change and add some environment variables for the database administrator to manage and modify the WebSphere Commerce Payments integration. Where changes are required, and the environment variable already exists, ensure that you merge changes into existing variables rather than overwriting them. Select the correct platform for the database product installed on your system and complete the configuration steps to set up this environment.

## Creating the WebSphere Commerce Payments database

To integrate your database application into the WebSphere Commerce Payments environment, you need to:

- Create a WebSphere Commerce Payments database instance.
- Designate a database owner and create an administrative user account.

- Grant permission for users to select, update, and insert records into the WebSphere Commerce Payments tables.

There are various methods for creating a WebSphere Commerce Payments database. Consult with your database administrator to determine if your installation has special policies or procedures for creating databases or designating database owners.

**Attention**

After your WebSphere Commerce Payments database has been created, you should not modify the payment database tables in any way. Table modification can cause the payment system to function incorrectly, or possibly fail.

## Installing and configuring Oracle

Use the installation instructions provided with Oracle to install the database product. If you are planning on using a client-server setup for the database, install the Oracle thin JDBC driver on the machine where WebSphere Commerce Payments is installed and add it to your classpath before installing WebSphere Commerce Payments.

### Oracle configuration

To configure Oracle:

- **On Windows NT and Windows 2000:** Edit the CLASSPATH to include the directory where the JDBC driver is located.
- **On AIX and Solaris:** Edit the CLASSPATH in the WebSphere Commerce Payments administrator's .kshrc file (located in the home directory for that user ID) to include the directory where the JDBC driver is located.
- **On Linux:** Edit the CLASSPATH in the WebSphere Commerce Payments administrator's .bashrc file (located in the home directory for that user ID) to include the directory where the JDBC driver is located.

**Note:** WebSphere Commerce Payments does not support the use of Oracle in Linux for zSeries and S/390 environments.

### WebSphere Commerce Payments database for Oracle

Follow the Oracle standard installation instructions to create a WebSphere Commerce Payments database.

---

## Using a remote database with WebSphere Commerce Payments

To use a remote UDB database with WebSphere Commerce Payments, you have to configure a server and client.

### Server configuration

First, select a UDB Server, verify that it is configured to accept requests from remote clients, and gather the information needed to configure the client.

A remote UDB Server does not have to be installed on the same operating system as the client. You will need to know the hostname and/or IP address for the server.

Verify that the server is configured to accept requests from remote clients.

1. At the server, verify that the db2comm registry value includes the value tcpip. At a command prompt, enter:

```
db2set DB2COMM
```

This should return the value TCPIP. If it does not return TCPIP, set it at a command prompt by entering:

```
db2set DB2COMM=TCPIP
```

2. Verify that the services file includes a unique entry for the connection port/service to be used for the instance where your remote database will reside. For example, many server installations will include this entry when an instance has been created in UDB:

```
db2cDB2          50000/tcp    # Connection port for DB2 instance DB2
```

The service name for the DB2 instance connection port is db2cDB2, the port number is 50000.

3. Verify that the database manager configuration file for the instance has been updated to include the service name defined in the services file. At a command prompt, enter:

```
db2 get dbm cfg
```

Look for the TCP/IP Service name entry and verify that it is set to the service name shown in the services file. If it is not, at command prompt, enter:

```
db2 update dbm cfg using svcename <svcename>
```

where the TCP/IP Service name (SVCENAME) is db2cDB2

4. Determine the authentication method used by this instance. The authentication method identifies which system authenticates the user ID and password used to connect to the database. At a command prompt, enter:

```
db2 get dbm cfg
```

The output shows the value of the Database manager authentication entry and will either be SERVER or CLIENT. By default, the server does authentication, as shown in this example:

```
Database manager authentication (AUTHENTICATION) = SERVER
```

If the authentication is CLIENT, set it to SERVER. As a command prompt, enter:

```
db2 update dbm cfg using authentication SERVER
```

5. On Windows NT servers only, the security server needs to be started. To verify whether the security server has started or start it if necessary, enter:

```
net start db2ntseclserver
```

6. Create the database that you will be using from your remote client. At a command prompt, enter:

```
db2 create db <databasename>
```

7. It is recommended that a db2stop and db2start command be issued at this point especially if it was necessary to set DB2COMM or update the database manager configuration.

## Client configuration on Solaris

Before installing on Solaris systems, you should ensure the Solaris kernel configuration is set to these recommended values:

Kernel Parameter	Recommended Value
------------------	-------------------



msgsys:msginfo_msgmax	65,535
msgsys:msginfo_msgmnb	65,535
msgsys:msginfo_msgseg	8,192
msgsys:msginfo_msgssz	16
msgsys:msginfo_msgmnb	65535 or higher
msgsys:msginfo_msgmax	65535 or higher

To set a kernel parameter, add a line at the end of the `/etc/system` files. For example:

```
set msgsys:msginfo_msgmax = 65535
```

After changing the kernel parameters, restart the system.

Install the client software. You can use the DB2 CDROM provided. To install the UDB client:

1. Mount the DB2 CDROM
2. Login as a user with root authority (for Solaris or AIX) or a user ID with administrator privileges (for Windows)
3. Change to the directory containing the install image for UDB
4. To start the install, enter: `db2setup`
5. From the product install list, select: **DB2 Administration Client**

After the install completes, configure the client to access the remote UDB server. You must create an instance at the client host.



---

## Appendix B. Notices

This information was developed for products and services offered in the U.S.A. IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing  
IBM Corporation  
North Castle Drive  
Armonk, NY 10504-1785  
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation  
Licensing  
2-31 Roppongi 3-chome, Minato-ku  
Tokyo 106, Japan

**The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:**

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this publication to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligations to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs

and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation  
Department TL3B/Building 062  
P.O. Box 12195  
3039 Cornwallis Road  
RTP, NC 27709-2195  
U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

The licensed program described in this information and all licensed material available for it are provided by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement, or any equivalent agreement between us.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

---

## Trademarks

The following terms are trademarks of the IBM Corporation in the United States or other countries or both:

- AIX
- AS/400
- DB2
- IBM
- IBM Payment Server
- iSeries
- OS/400
- RS/6000
- S/390
- WebSphere
- zSeries

Lotus Domino Go Webserver is a trademark of Lotus Development Corporation in the United States or other countries or both.

Tivoli, Tivoli Enterprise Console, and Tivoli Ready are trademarks of Tivoli Systems, Inc. in the United States, other countries, or both.

ActionMedia, LANDesk, MMX, Pentium and ProShare are trademarks of Intel Corporation in the United States, other countries, or both.

C-bus is a trademark of Corollary, Inc. in the United States, other countries, or both.

Java and all Java-based trademarks and logos are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

SET, SET Secure Electronic Transaction, and the SET Logo are trademarks owned by SET Secure Electronic Transaction LLC.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Other company, product, and service names may be trademarks or service marks of others.



---

# Index

## A

- admin user 57
- administrator ID 58
- AIX
  - pre-installation caveats 38
  - starting IBM HTTP Server 68
  - uninstalling WebSphere Commerce Payments 88
  - WebSphere Application Server 70
- AS/400
  - installing on 53

## B

- basic settings 84

## C

- cassettes, installing 60
- checklist installation 1
- configurations, standard 5
- configuring for remote WebSphere Commerce Payments 59
- configuring realms 58
- customizing WebSphere Commerce Payments database 95

## D

- database drivers
  - MSSQL 7
  - Oracle 7
- database migration, MS SQL to UDB 21
- database products, supported 6, 14
- database, customizing WebSphere Commerce Payments 95
- DB2 UDB for OS/390 tablespace, altering 52
- DB2 Universal Database, installing 11
- debugging 73
- decisions, planning 6
- drivers, JDBC 7

## E

- emergency uninstall procedure 89
- error logs 74
- errors
  - IBM HTTP Server startup, on Windows 80
  - initializing the user interface on Windows 80
  - reading configuration table 83
  - setting the WebSphere Commerce Payments hostname 84
  - time zone 84
  - troubleshooting WebSphere Commerce Payments startup 79
  - WebSphere Commerce Payments hangs 79
  - with database connections 83

- EventListener SocksHost length limitation 18

## H

- hardware and software requirements
  - WebSphere Commerce Payments
    - AIX 37
    - iSeries 53
    - Linux, Intel 41
    - Linux, zSeries and S/390 45
    - payment cassettes 15
    - Solaris 31
    - Windows 25
- hostname
  - error setting the WebSphere Commerce Payments 84

## I

- IBM HTTP Server
  - starting 68
    - on AIX 68
    - on Linux 68
    - on Solaris 68
    - on UNIX platforms 68
    - on Windows 68
  - startup errors on Windows 80
- IBMPayServer command syntax 65
- initializing the user interface on Windows, error 80
- installation planning 3
- installing
  - checklist 1
  - Oracle 97
  - payment cassettes 60
  - standard installs 3
  - trace files used when 74
  - troubleshooting 75
  - UDB 11
  - WebSphere Application Server, manually 13
  - WebSphere Commerce Payments
    - on AIX 39
    - on iSeries 53
    - on Linux, Intel 43
    - on Linux, zSeries and S/390 47
    - on Solaris 34
    - on Windows 27
- iSeries
  - installing on 54
  - pre-installation caveats 54
  - uninstalling WebSphere Commerce Payments 89

## J

- JDBC drivers 7



## L

- Linux
  - starting IBM HTTP Server 68
  - uninstalling WebSphere Commerce Payments 89
  - WebSphere Application Server 70
- Linux, Intel
  - pre-installation caveats 42
- Linux, zSeries and S/390
  - pre-installation caveats 46
  - remote database connection 51
- logs, error and trace 74

## M

- manually installing WebSphere Application Server 13
- migratedb utility 21
- migrating
  - databases supported 7
  - test cassette 18
  - V2.2.x to V3.1 17
- migrating from a previous version 17
- migration
  - scenarios 7, 8, 9, 10
  - troubleshooting 75
- MSSQL
  - database drivers 7

## N

- Notices 101

## O

- Oracle
  - database drivers 7
  - installing and configuring 97

## P

- password file 65
- payment cassettes
  - installing 60
- planning, installation 3
- PMCustomUI.properties 60
- PMError log 74
- PMTTrace logs 74
- pre-installation caveats
  - AIX 38
  - iSeries 54
  - Linux, Intel 42
  - Linux, zSeries and S/390 46
  - Solaris 32
  - Windows 26
- pre-migration considerations 18
- procedure, emergency uninstall 89
- PSWAS2Realm migration 19

## R

- realm name, specifying 59

- realms
  - configuring 58
  - migration 19
  - PSDefaultRealm 58
  - PSOS400Realm 58
  - WCSRealm 58
- remote WebSphere Commerce Payments 59

## S

- service menu, iSeries 75
  - settings, basic 84
  - SetupWebServerEnvironment script 68
  - Solaris
    - pre-installation caveats 32
    - starting IBM HTTP Server 68
    - starting WebSphere Application Server 69
    - uninstalling WebSphere Commerce Payments 88
  - space considerations for cassettes 15
  - standard configurations 5
  - standard installs 3
  - starting
    - IBM HTTP Server 68
      - on AIX 68
      - on Linux 68
      - on Solaris 68
      - on Windows 68
    - Web servers 68
    - WebSphere Application Server
      - on AIX 70
      - on Linux 70
      - on Solaris 69
      - on Windows 69
    - WebSphere Commerce Payments 65
    - WebSphere Commerce Payments user interface 71
  - startup
    - errors on Windows, IBM HTTP Server 80
    - troubleshooting 79
  - StopIBMPayServer command syntax 86
  - stopping
    - WebSphere Commerce Payments 86
  - stylesheets 60
  - summary files 73
  - supported
    - companion products 10
    - database products 6
    - Web browsers 14
    - Web servers 14
- ## T
- tablespace, altering 52
  - time zone errors 84
  - trace files, installation 74
  - trademarks 102
  - troubleshooting
    - error and trace files 73
    - migration 75
    - WebSphere Commerce Payments installation 75
    - WebSphere Commerce Payments startup 79

## U

### UDB

- installing 11
  - software notes 11
  - unattended operation 67
  - uninstall procedure, emergency 89
  - uninstalling
    - on AIX 88
    - on iSeries 89
    - on Linux 89
    - on Solaris 88
    - on Windows 87
  - UDB 92
  - WebSphere Application Server 92
  - WebSphere Commerce Payments 85
- UNIX platforms x

## V

- version levels, checking 10

## W

- wcsadmin administrator ID 58
- Web browsers, supported 14
- Web servers
  - starting 68
  - supported 14
- WebSphere Application Server
  - configuration, removing WebSphere Commerce Payments from 85, 89
  - fixing problems 77
  - manually installing 13
  - migrating customized configurations 59
  - required version for WebSphere Commerce Payments 3
  - starting
    - on AIX 70
    - on Linux 70
    - on Solaris 69
    - on Windows 69
  - stopping WebSphere Commerce Payments servlets 87
  - uninstalling 92
- WebSphere Commerce Payments
  - hardware and software requirements
    - AIX 37
    - iSeries 53
    - Linux, Intel 41
    - Linux, zSeries and S/390 45
    - Solaris 31
    - Windows 25
  - installing on
    - AIX 39
    - iSeries 53
    - Linux, Intel 43
    - Linux, zSeries and S/390 47
    - Solaris 34
    - Windows 27

- WebSphere Commerce Payments (*continued*)
  - removing from WebSphere Application Server configuration 89
  - starting 65
  - startup errors, troubleshooting 79
  - stopping 86
  - uninstalling 85
    - on AIX 88
    - on iSeries 89
    - on Linux 89
    - on Solaris 88
    - on Windows 87
- Windows
  - error initializing the user interface on 80
  - pre-installation caveats 26
  - starting IBM HTTP Server 68
  - starting WebSphere Application Server 69
  - uninstalling WebSphere Commerce Payments 87
- workstation platforms x



---

# Readers' Comments — We'd Like to Hear from You

IBM WebSphere Commerce Payments for Multiplatforms  
Installation Guide  
Version 3.1

**Overall, how satisfied are you with the information in this book?**

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Overall satisfaction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**How satisfied are you that the information in this book is:**

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
Accurate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Complete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Easy to find	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Easy to understand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Well organized	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Applicable to your tasks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Please tell us how we can improve this book:**

Thank you for your responses. May we contact you?  Yes  No

When you send comments to IBM, you grant IBM a nonexclusive right to use or distribute your comments in any way it believes appropriate without incurring any obligation to you.

---

Name

---

Address

---

Company or Organization

---

Phone No.



Fold and Tape

Please do not staple

Fold and Tape



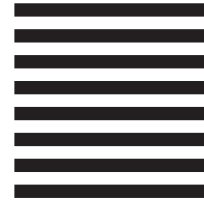
NO POSTAGE  
NECESSARY  
IF MAILED IN THE  
UNITED STATES

# BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 40 ARMONK, NEW YORK

POSTAGE WILL BE PAID BY ADDRESSEE

IBM Corporation  
Software Reengineering  
Department G71A/ Bldg 503  
P.O. Box 12195  
Research Triangle Park, NC  
27709-9990



Fold and Tape

Please do not staple

Fold and Tape





Printed in U.S.A.