

IBM WebSphere Commerce Suite  
Version 5.4.0.4



# Code Transition Guide



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Version 5.4.0.4



# Code Transition Guide

**Note:**

Before using this information and the product it supports, be sure to read the information in the Notices section.

**First Edition (October 2002), Second Revision (February 2003)**

This edition applies to the following product:

- IBM® WebSphere Commerce 5.4.0.4

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## Before you begin

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### Conventions used in this book

This book uses the following highlighting conventions:

**Boldface type** indicates commands or graphical user interface (GUI) controls such as names of fields, buttons, or menu choices.

Monospaced type indicates examples of text you enter exactly as shown. It is also used for directory paths and file names.

*Italic type* is used for emphasis and variables for which you substitute your own values.



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

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### Where to find more information

For information related to WebSphere Commerce, refer to the following Web sites:

- For Business Edition:

[http://www.ibm.com/software/webervers/commerce/wc\\_be/  
lit-tech-general.html](http://www.ibm.com/software/webervers/commerce/wc_be/lit-tech-general.html)

- For Professional Edition:

[http://www.ibm.com/software/webervers/commerce/wc\\_pe/  
lit-tech-general.html](http://www.ibm.com/software/webervers/commerce/wc_pe/lit-tech-general.html)

For information related to WebSphere Commerce Studio, refer to the following Web site:

[http://www.ibm.com/software/webervers/commerce/commercestudio/  
lit-tech-general.html](http://www.ibm.com/software/webervers/commerce/commercestudio/lit-tech-general.html)





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## Chapter 1. Introduction

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### Reasons to transition to the WC\_5404.dat code repository

When you originally set up your development environment, you probably performed the following steps:

1. On the development machine, installed WebSphere Commerce Studio and selected to create back-office business logic. This installs VisualAge<sup>®</sup> for Java<sup>™</sup>.
2. Configured the WebSphere Test Environment in VisualAge for Java. As part of the configuration steps, you imported the WC\_54.dat, WC\_5401.dat, WC\_5402.dat, or WC\_5403.dat file. You then successfully ran your store within the WebSphere Test Environment.
3. Separately installed WebSphere Commerce 5.4.0.4. This acts as the target WebSphere Commerce Server to which customized code can be deployed.

Equivalency between the code contained in VisualAge for Java and the WebSphere Commerce Server to which you deploy customized code is required. If the code contained in the VisualAge for Java workspace is an earlier version than WebSphere Commerce Server to which you deploy code, it is possible to bring some features and functions in the target machine back to the earlier level by deploying customized code. This is not a desired outcome. As a result you should only upgrade the level of code in your VisualAge for Java workspace to the WebSphere Commerce 5.4.0.4 level if you are deploying your code to a target WebSphere Commerce server that is already at the WebSphere Commerce 5.4.0.4 level.

After you have applied WebSphere Commerce 5.4.0.4 to your target WebSphere Commerce Server, the code in the WebSphere Commerce Server has been upgraded to the WebSphere Commerce 5.4.0.4 level. The corresponding WebSphere Commerce code repository to be used within VisualAge for Java is the WC\_5404.dat repository. Since applying WebSphere Commerce 5.4.0.4 to your development machine does not automatically upgrade the level of code within VisualAge for Java, you must follow the instructions contained in this document to do so.

Transitioning to the WC\_5404.dat repository within VisualAge for Java will enable you to create customized code that can be deployed to WebSphere Commerce Servers running at the WebSphere Commerce 5.4.0.4 level.

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### Pre-requisites

Before you complete the steps outlined in this document, you should have completed the following tasks:

1. The WebSphere Commerce FixPak 5.4.0.4 needs to be installed on your development machine. For more information on how to accomplish this, refer to the *IBM WebSphere Commerce FixPak Version 5.4.0.4 Installation Guide*.
2. WebSphere Commerce 5.4.0.4 needs to be installed on your development machine. For more information on how to accomplish this, refer to the *WebSphere Commerce 5.4.0.4 Installation Guide*.
3. Ensure that your target WebSphere Commerce server to which you will deploy customized code is also at the WebSphere Commerce 5.4.0.4 level.

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## Transitioning scenarios

The steps to upgrade the repository of code are different, depending upon whether or not you have started to create customized code using the WC\_54.dat, WC\_5401.dat, WC\_5402.dat, or WC\_5403.dat code repository. This document describes the following scenarios:

- If you have imported the WC\_54.dat, WC\_5401.dat, WC\_5402.dat, or WC\_5403.dat code repository but not created any customized code that you want to transition to the new repository, perform the steps outlined in Chapter 3, “Upgrading your repository without transitioning customized code” on page 5.
- If you have imported the WC\_54.dat, WC\_5401.dat, WC\_5402.dat, or WC\_5403.dat code repository and have created customized code, perform the steps outlined in Chapter 4, “Upgrading your repository and transitioning customized code” on page 7.

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## Chapter 2. Preparing your development machine

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### Backing up WebSphere Commerce Studio assets

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Back up the following WebSphere Commerce Studio assets:

- VisualAge for Java assets
- Studio assets

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### Preparing VisualAge for Java

If your workspace contains any customized code, you must prepare your VisualAge for Java environment before upgrading to the new WebSphere® Commerce repository. To prepare your environment, complete the following steps:

- \_\_\_ 1. Perform the following steps to back up your user data. Create backup copies of your repository and resource files in case problems occur during the transition.
  - \_\_\_ a. Save your workspace repository file (*ivj.dat*) as well as the IDE workspace file *ide.icx* to a new location outside your VisualAge for Java directory tree.

The path of the workspace repository file, *ivj.dat*, is *drive:\VAJava\ide\repository*. The path for the IDE workspace file, *ide.icx*, is *drive:\IBM\VAJava\ide\program*. In the above path names, *drive:\VAJava* is the VisualAge for Java installation directory.
- \_\_\_ 2. Start VisualAge for Java.
- \_\_\_ 3. Ensure that the workspace owner is set to WC Developer, by doing the following:
  - a. From the **Workspace** menu, select **Change Workspace Owner**.
  - b. Select **WC Developer** and click **OK**.
- \_\_\_ 4. If you have created any of the following types of code, you must version the projects containing that code:
  - Your own commands and data beans
  - Extensions to WebSphere Commerce commands and data beans
  - Your own entity beans

Examples of such projects are *MyProject*, *\_WCSamples*, and *\_WCSamples\_EntityBeans*.

Creating a version of the project creates a snapshot of your code in its current state. In the future, if you need to revert to this state, you can replace the project in your workspace with code that you have explicitly versioned. For more information about switching between versions of code, refer to the VisualAge for Java documentation.

Version all of your code that is packaged separately from the WebSphere Commerce projects and remove these projects from the workspace, by doing the following:

- a. Click the **Projects** tab.
- b. Right-click your project(s) (for example, **MyProject**, **\_WCSamples**, or **\_WCSamplesEntityBeans**), and select **Manage > Version**.



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If the **Version** option is not available, you must create an open edition for your project and its contents before versioning.

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- c. Select the **One Name** radio button and enter an appropriate name for your version. For example, enter `Transition_new_logic`. Click **OK**.
  - d. Right-click your project(s) and select **Delete**. Confirm your selection when prompted.
- \_\_\_ 5. If you have modified any of the WebSphere Commerce public entity beans, version the IBM WC Enterprise Beans project, by doing the following:
  - a. Expand the **IBM WC Enterprise Beans** project.
  - b. For any package that is marked as a scratch edition, right-click the package and select **Manage > Create Open Edition**.
  - c. Right-click the **IBM WC Enterprise Beans** project and select **Manage > Create Open Edition**.
  - d. Right-click the **IBM WC Enterprise Beans** project and select **Manage > Version**.
  - e. Select **One Name**, enter `Transition EJB` and click **OK**.
- \_\_\_ 6. Remove the IBM WC Commerce Server and IBM WC Enterprise Beans projects from the workspace, by doing the following:
  - a. Select both the **IBM WC Commerce Server** and **IBM WC Enterprise Beans** projects.
  - b. With both projects highlighted, right-click and select **Delete**. Click **Yes** to confirm the delete. Note, do not purge the projects from the workbench.
- \_\_\_ 7. Remove the original EJB server configuration, by doing the following:
  - a. Click the **EJB** tab.
  - b. From the **EJB** menu, select **Open To > Server Configuration**. The EJB Server Configuration window opens.
  - c. Right-click the EJB server that you have configured for the WebSphere Commerce entity bean groups (for example, **EJB Server (server 1)**) and select **Remove Server**.
- \_\_\_ 8. Save your workspace by clicking **File > Save Workspace**.

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## Chapter 3. Upgrading your repository without transitioning customized code

This section describes how to upgrade the level of WebSphere Commerce code within your VisualAge for Java workspace if you have not started to create customized code using the WC\_54.dat, WC\_5401.dat, WC\_5402.dat, or WC\_5403.dat code repository.

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### Extracting the code repository

Before upgrading to the WC\_5404.dat code repository, you need to extract it to your WebSphere Commerce Studio, Version 5.4 machine. You are required to have at least 200 MB of disk space on one of your drives for the repository to extract successfully. To extract the code repository to your WebSphere Commerce Studio machine, do the following:

1. Download the WebSphere Commerce repository from the following Web site:  
<http://www.ibm.com/software/webservers/commerce/support.html>

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### Upgrading the code repository

To upgrade to the WC\_5404.dat repository, do the following:

1. Start VisualAge for Java.
2. Import the WC\_5404.dat file by doing the following:
  - a. From the **File** menu, select **Import**.  
The Import SmartGuide opens.
  - b. Select the **Repository** radio button and click **Next**.
  - c. Select the **Local repository** radio button, then in the **Repository name** field, enter the fully qualified name of the WC\_5404.dat code repository on your machine. For example, *drive:\repository\WC\_5404.dat*
  - d. Select the **Projects** radio button and click **Details**.  
The Project import window opens.
  - e. Select the **IBM WC Commerce Server** project and select the available version.
  - f. Select the **IBM WC Enterprise Beans** project and select the available version. Click **OK**.
  - g. Ensure that the **Add most recent project edition to workspace** check box is selected.
  - h. Click **Finish**.  
Importing the code takes several minutes.
3. When the import is complete, ensure that your workspace owner is set to WC Developer, by doing the following:
  - a. From the **Workspace** menu, select **Change Workspace Owner**.
  - b. Select **WC Developer** and click **OK**.
4. Configure an EJB server for the WebSphere Commerce entity beans, by doing the following:
  - a. Click the **EJB** tab.
  - b. Highlight all of the WebSphere Commerce EJB groups (the names begin with WC).

- c. With all of the WebSphere Commerce EJB groups highlighted, right-click and select **Add To > Server Configuration**.  
The EJB Server Configuration window opens.
- d. Right-click your new EJB server, for example, **EJB Server (server 1)**, and select **Properties**.
- e. Set the properties for the server as follows, and click **OK**.

Table 1. EJB server properties

Property	DB2 <sup>®</sup> value (enter exactly as shown)	Oracle <sup>®</sup> value (enter exactly as shown)
Data Source	WebSphere Commerce DB2 DataSource <i>instance_name</i>	WebSphere Commerce Oracle DataSource <i>instance_name</i>
Connection Type	<DataSource>	<DataSource>
Database User Id	<i>database_user</i>	<i>database_user</i>
Database Password	<i>database_user_password</i>	<i>database_user_password</i>

5. Modify the class path for the servlet engine component of the WebSphere Test Environment, by doing the following:
  - a. From the **Workspace** menu, select **Tools > WebSphere Test Environment**.  
The WebSphere Test Environment Control Center opens.
  - b. In the Servers pane, click **Servlet Engine**.
  - c. In the Servlet Engine pane, click **Edit Class Path**.
  - d. Click **Select All → OK**.
6. Start the WebSphere Test Environment, as described in the *WebSphere Commerce Suite 5.4 Programmer's Guide*.
7. If you had previously configured a store to run in the WebSphere Test Environment, launch your sample store to ensure the WebSphere Test Environment is configured properly.
8. Save your workspace by clicking **File > Save Workspace**.

Note that you are not required to drop and recreate the PNS database.

The WebSphere Commerce code repository is now upgraded and you can use it to create customized code for your WebSphere Commerce application. Refer to the *WebSphere Commerce Suite 5.4 Programmer's Guide* for further details.

**Note:** When starting the WebSphere Test Environment, ensure that the Commerce projects are included in the class path for the servlet engine in the WebSphere Test Environment. Information about setting up the servlet engine is included in the *WebSphere Commerce Studio 5.4 Installation Guide*, which is available on the following Web site:

<http://www.ibm.com/software/webservers/commerce/commercestudio/lit-tech-general.html>

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## Chapter 4. Upgrading your repository and transitioning customized code

This section describes how to upgrade the level of WebSphere Commerce code within your VisualAge for Java workspace when you used the WC\_54.dat, WC\_5401.dat, WC\_5402.dat, or WC\_5403.dat repository to create customized code. This scenario covers how to transition customized code that is packaged separately from the WebSphere Commerce projects as well as how to transition modifications to existing WebSphere Commerce public entity beans.

The type of customized code that is packaged separately from the WebSphere Commerce projects (IBM WC Commerce Server and IBM WC Enterprise Beans projects) includes:

- New commands
- New data beans
- New entity beans
- Extensions to existing commands and data beans created by subclassifying the existing classes. These new classes must be packaged in your own project, for example MyProject or \_WCSamples.

Modifications to existing WebSphere Commerce public entity beans are packaged in the IBM WC Enterprise Beans project.

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### Extracting the code repository

Before upgrading to the WC\_5404.dat code repository, you need to extract it to your WebSphere Commerce Studio, Version 5.4 machine. You are required to have at least 200 MB of disk space on one of your drives for the repository to extract successfully. To extract the code repository to your WebSphere Commerce Studio machine, do the following:

1. Download the WebSphere Commerce repository from the following Web site:  
<http://www.ibm.com/software/webservers/commerce/support.html>

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### Transitioning customized code

This section provides the details on how to transition your customized code to the WebSphere Commerce 5.4.0.4 level.

To transition your code, do the following:

1. Start VisualAge for Java.
2. Import the WC\_5404.dat file by doing the following:
  - a. From the **File** menu, select **Import**.  
The Import SmartGuide opens.
  - b. Select the **Repository** radio button and click **Next**.
  - c. Select the **Local repository** radio button, then in the **Repository name** field, enter the fully qualified name of the WC\_5404.dat code repository. For example:  
`drive:\repository\WC_5404.dat`

- d. Select the **Projects** radio button and click **Details**.  
The Project import window opens.
  - e. Select the **IBM WC Commerce Server** project and select the available version.
  - f. Select the **IBM WC Enterprise Beans** project and select the available version. Click **OK**.
  - g. Ensure that the **Add most recent project edition to workspace** check box is selected.
  - h. Click **Finish**.  
Importing the code takes several minutes.
3. When the import is complete, ensure that your workspace owner is set to WC Developer, by doing the following:
    - a. From the **Workspace** menu, select **Change Workspace Owner**.
    - b. Select **WC Developer** and click **OK**.
  4. Import all of your projects that were removed in step 4 on page 3, by doing the following:
    - a. Click the **Projects** tab.
    - b. From the **Selected** menu, select **Add > Project**.  
The Add Project SmartGuide opens.
    - c. Select **Add projects from the repository**.
    - d. From the **Available project names** list, select your projects. For example, select **\_WCSamples** or **\_WCSamplesEntityBeans**. From the **Available editions** list, select the appropriate version of the project.
    - e. Click **Finish**.
  5. If you have modified any of the WebSphere Commerce entity beans, do the following to merge your customized code back into the workspace:
    - a. Expand the **IBM WC Enterprise Beans** project.
    - b. For each of the packages where you created an open edition in step 5b on page 4, plus any package that was already an open edition before that step, right-click the package and select **Compare With > Another Edition**. Select the version name used in step 5 as the edition to compare it with and click **OK**.  
For example, compare the new version of the `com.ibm.commerce.user.objects` package with the Transition EJB version.
    - c. When differences are found between the two versions of code, a window opens displaying the exact differences.
    - d. Right-click a displayed class and select **Load Right** or **Load Left**, as appropriate, to merge the customized code into the workspace.
    - e. Merge the metadata within VisualAge for Java, in the following three places:
      - 1) The CMP field list.
      - 2) The Schema browser.
      - 3) The Map browser.
    - f. Repeat the compare and merge steps, until you have merged all customized code into the IBM WC Enterprise Beans project.
  6. Configure an EJB server for the WebSphere Commerce entity beans and your own entity beans, by doing the following:
    - a. Click the **EJB** tab.



- b. Highlight all of the WebSphere Commerce EJB groups (the names begin with WC) as well as your own EJB groups.
- c. With all of the WebSphere Commerce and your own EJB groups highlighted, right-click and select **Add To > Server Configuration**. The EJB Server Configuration window opens.
- d. Right-click your new EJB server, for example, **EJB Server (server 1)**, and select **Properties**.
- e. Set the properties for the server as follows, and click **OK**.

Table 2. EJB server properties

Property	DB2 value (enter exactly as shown)	Oracle value (enter exactly as shown)
Data Source	WebSphere Commerce DB2 DataSource <i>instance_name</i>	WebSphere Commerce Oracle DataSource <i>instance_name</i>
Connection Type	<DataSource>	<DataSource>
Database User Id	<i>database_user</i>	<i>database_user</i>
Database Password	<i>database_user_password</i>	<i>database_user_password</i>

7. Regenerate the deployed code and access beans for your own enterprise beans, by doing the following:
  - a. Click the **EJB** tab.
  - b. Expand your EJB group. For example, expand the **\_WCSamplesEntityBeans** EJB group.
  - c. Right-click your enterprise bean (for example, **Bonus**) and select **Generate Deployed Code**.
  - d. Right-click your enterprise bean again and select **Add > Access Bean**. The Create Access Bean SmartGuide opens. It should contain the values that you used when originally creating the access bean for your enterprise bean. Accept the values and create the access bean.
  - e. Repeat steps 7c and 7d for all of your enterprise beans.
8. Regenerate the deployed code and access beans for the modified WebSphere Commerce public entity beans, by doing the following:
  - a. Click the **EJB** tab.
  - b. Expand the EJB group that contains the modified WebSphere Commerce public entity bean. For example, expand the **WCUser** EJB group.
  - c. Right-click your enterprise bean (for example, **User**) and select **Generate Deployed Code**.
  - d. Right-click the enterprise bean again and select **Add > Access Bean**. The Create Access Bean SmartGuide opens. Accept the values and create the access bean.
  - e. Repeat steps 8c and 8d for all modified WebSphere Commerce public entity beans.
9. Modify the class path for the servlet engine component of the WebSphere Test Environment, by doing the following:
  - a. From the **Workspace** menu, select **Tools > WebSphere Test Environment**. The WebSphere Test Environment Control Center opens.
  - b. In the Servers pane, click **Servlet Engine**.
  - c. In the Servlet Engine pane, click **Edit Class Path**.
  - d. Click **Select All → OK**.

10. Start the WebSphere Test Environment, as described in Appendix A of the *WebSphere Commerce Suite 5.4 Programmer's Guide*.
11. Test your customized code using the WebSphere Test Environment.
12. Save your VisualAge for Java workspace (Click **File > Save Workspace**).

## **Redeployment of customized code**

After you have completed testing your customized code within the WebSphere Test Environment, you must redeploy the code to your store running on the target WebSphere Commerce Server. For deployment details, refer to the *WebSphere Commerce Suite 5.4 Programmer's Guide*.

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