



**WebSphere Commerce
Enterprise Java Bean
to
Java Persistence API
Conversion Tool
Users Manual**

**Version 1.0
June 18, 2018**

**Prepared By
Brian Steinbach
bsteinba@us.ibm.com**

Table of Contents

- 1 Purpose.....3
- 2 Overview.....3
- 3 Installation.....3
- 4 Configuration.....3
- 5 Generate and Replace JPA Entities.....4
- 6 Restore.....4

1 Purpose

The purpose of this document is to provide instructions on how to install and utilize the WCJPA tool to convert WebSphere Commerce Enterprise Java Bean entities to Java Persistence API entities. This operation is typically performed as part of a WebSphere Commerce v9 migration.

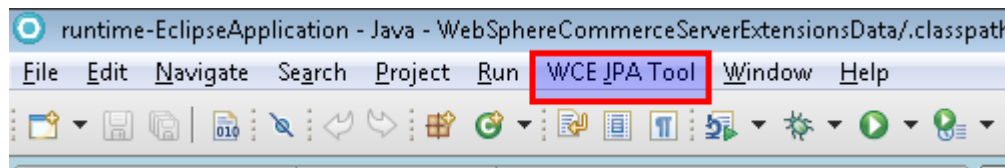
2 Overview

WebSphere Commerce v9 requires a migration from Enterprise Java Bean entities to Java Persistence API entities. In order to make this mandatory migration faster and more accurate, IBM Lab Services supports a tool to automatically perform this conversion via a plugin to the WC Toolkit. The tool will convert EJB entities as well as access beans. This document will provide instructions on how to install and configure this plugin, as well as how to execute the various steps to perform the migration of these entities.

3 Installation

The tool is provided in the format of an Eclipse plugin. Eclipse plugins are packaged as jars and can be installed by placing the jar file in a monitored directory called “dropins”. Complete the following steps to install and configure the plugin in a WC v8 Toolkit:

- Create the following directory on the toolkit system, if it does not exist
<SDP_INSTALL_DIR>/dropins (i.e W:\IBM\SDP\dropins)
- Copy the WCJPA_plugin.zip file into the dropins directory.
- Restart the WC Toolkit
- Notice the new menu item “WCE JPA Tool”



4 Configuration

The tool will generate JPA entities within the same project and package as the matching EJB entity. It is very important that everything compile before and during the generation process. Add the WebSphere Commerce JPA entity base classes to the classpath of ALL projects that contain EJB entity beans:

- Right click on the project in the Navigator/Project Explorer/Enterprise Explorer and select Properties
- Select Java Build Path from the Properties tree on the left side.
- Select the Libraries tab.
- Click on the “Add External JARs...” button.

- Navigate to the location of the V9 VERSION of the Enablement-BaseComponentsData.jar file. Select the jar and click on OK.
- Click on the Order and Export tab.
- Select the Enablement-BaseComponentsData.jar file from the list and click on the Up button to move it to the very top of the list.
- Check the box next to the Enablement-BaseComponentsData.jar file to export the jar file to including projects.
- Repeat these steps for each project that contains entity EJB's.

5 Generate and Replace JPA Entities

There JPA migration is broken down into two steps.

The first step is to generate the JPA entities. The generation can be invoked by selecting the WCE JPA Tool → Generate JPA Entities menu item. JPA entities and access beans will be generated and placed in the same package as the matching EJB entity. They will be named identical to the EJB entity, but will have a suffix of “JPA” initially. After this step is complete, you should verify that all of the generated code compiled cleanly.

If there are errors in your EJB metadata, or your EJB's do not follow WC best practices, manual updates to the generated code may be necessary. You may see a warning dialog popup during the execution of the generation step. The tool attempts to display warnings in this dialog about discrepancies found in the EJB and DB schema metadata files that could impact the generated code. If you see this warning, it is highly recommended to resolve the issues noted in the warning and run this step again before proceeding.

The second step is to delete the EJB and access beans and to rename the JPA entities by removing the “JPA” suffix. This step can be invoked by selecting the “WCE JPA Tool → Replace EJBs” menu item. When this step completes, verify that your entities are now JPA entities instead of EJB entities and that everything compiles cleanly.

You can now copy the generated JPA entities into a v9 WC Toolkit.

6 Restore

The tool tracks modified and generated files via metadata XML files that are saved at the root of each modified project. At any point, you can use the WCE JPA Tool → Restore menu item to remove all generated JPA entities and access beans and replace them with the original EJB entities and access beans. Do not alter or delete the metadata files or you will lose your ability to use this restore feature!