

Maven Tools Reference Guide

Version: 3.3.0.GA

1. Introduction	1
2. Creating a Maven Project	3
3. Creating a Maven Module	9
4. Adding Maven support to an existing project	19

Introduction

In the context of application development, Maven allows you to extend your applications by referencing and utilizing resources from local and remote repositories.

Covered in this reference guide is how to create Maven projects and modules, and how to add Maven functionality to an existing project or application.

This guide does not cover how to setup a Maven repository. For information on how to setup a Maven repository consult the documentation associated with your application server or framework kit.

Creating a Maven Project

To create a new **Maven Project**, from your workspace navigate to **File** → **New** → **Other** and from the wizard selection screen select **Maven** → **Maven Project**.

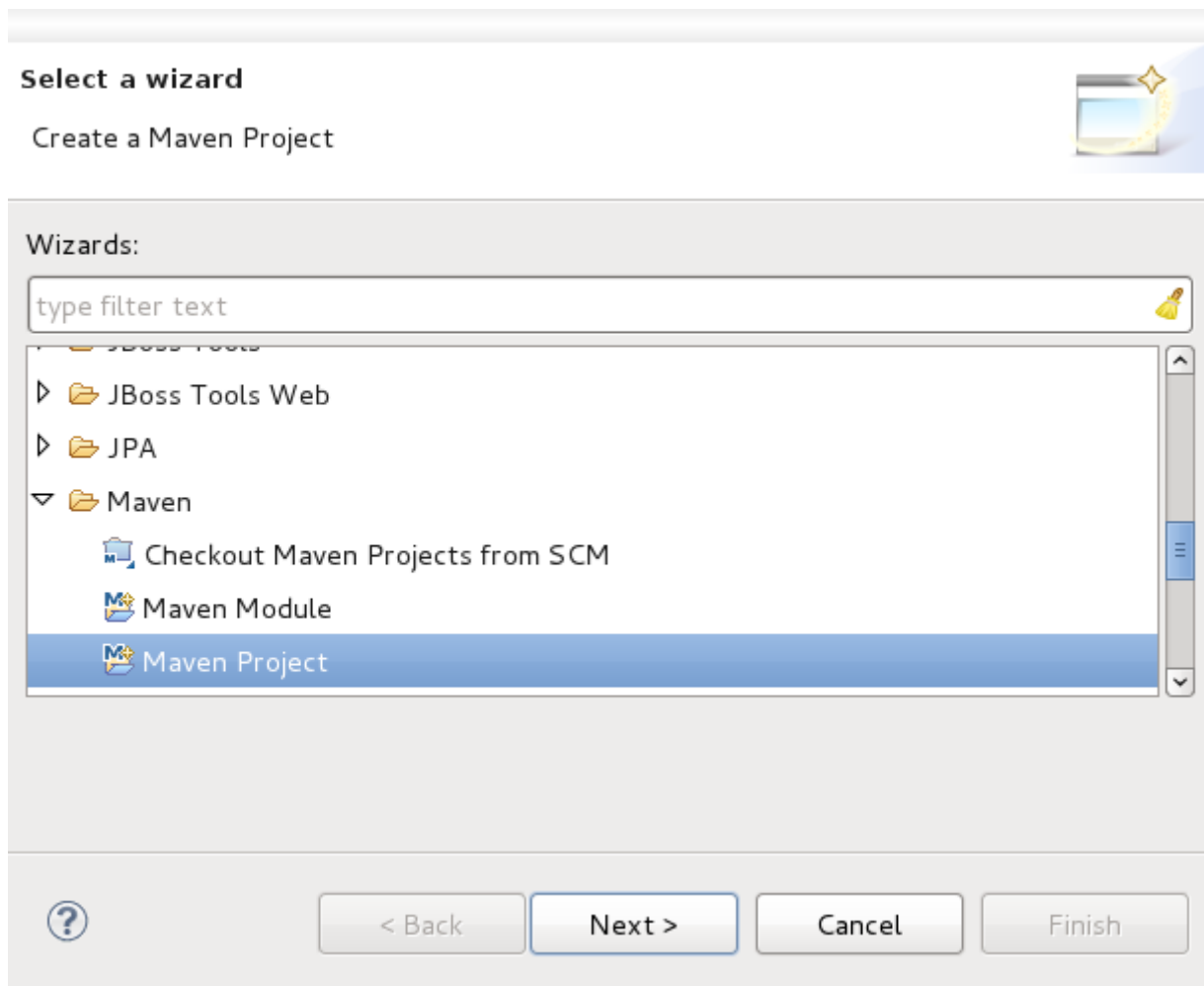


Figure 2.1. Selecting the Maven Project wizard

The first screen of the wizard will ask you if you wish to create a simple project (selecting this will skip the ability to select an archetype), to select a location for the project and if any projects should be added to the working set.

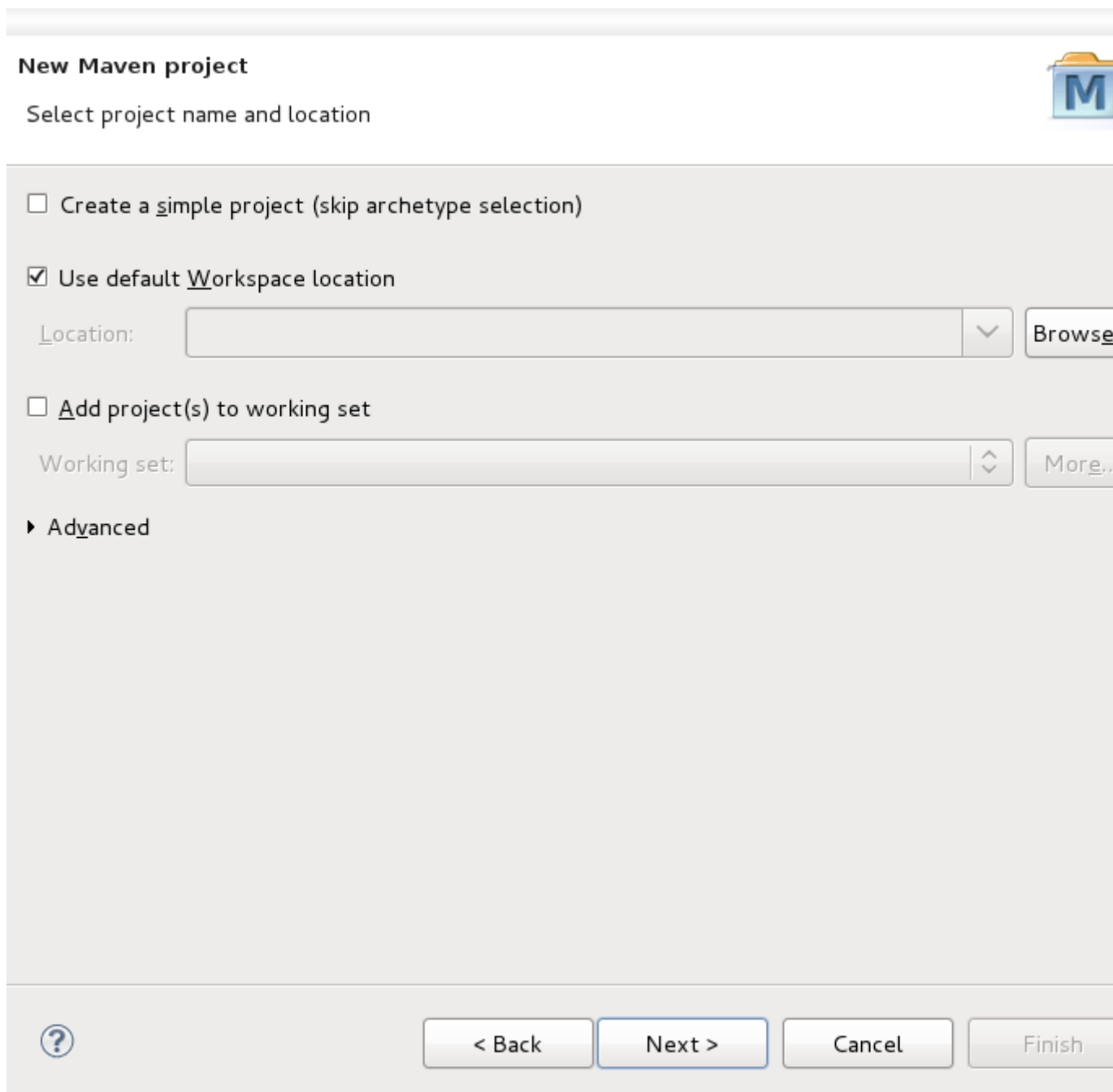


Figure 2.2. Maven project location and basic settings

You can also select **Advanced** options concerning existing workspace projects and the naming convention to use.

New Maven project

Select project name and location

Create a simple project (skip archetype selection)

Use default Workspace location

Location:

Add project(s) to working set

Working set:

▼ Advanced

Resolve Workspace projects

Profiles:

Name template:

- [artifactId]
- [artifactId]-TRUNK
- [artifactId]-[version]
- [groupId].[artifactId]
- [groupId].[artifactId]-[version]

Figure 2.3. Maven project location and advanced settings

The following screen is the **Archetype** selection screen, and will only appear when you have not selected to create a **simple project** on the previous screen.

Select an archetype based on the purpose of the project you are creating.

New Maven project

Select an Archetype

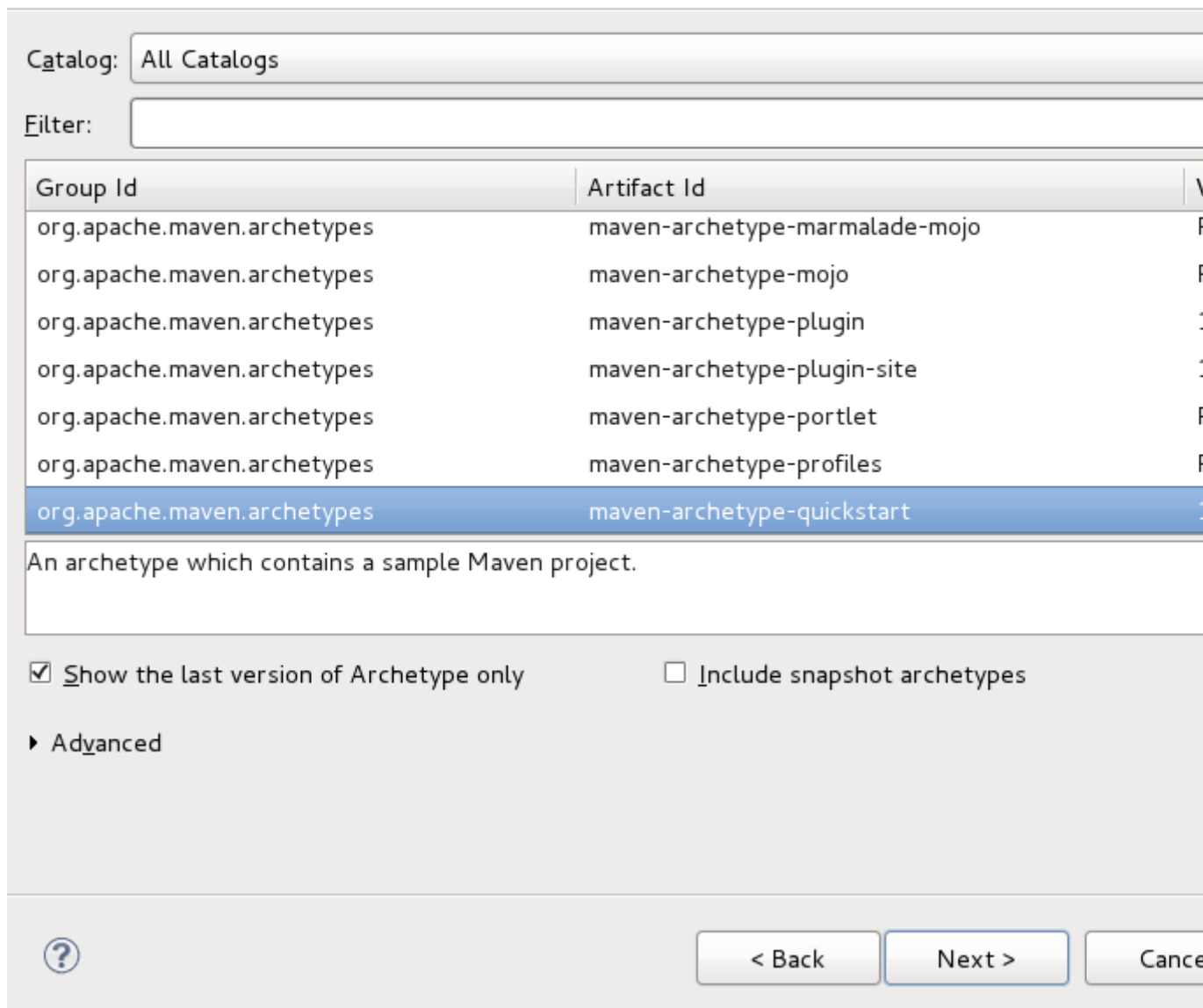


Figure 2.4. Archetype selection

The final screen of the wizard is where you will set the **Group Id**, **Artifact Id** and project **Version**. The **Package** name will be created based on the **Group Id** and **Artifact Id** values.

You can also add specific properties associated with the chosen archetype, to the project.

New Maven project

Specify Archetype parameters

Group Id:	<input type="text" value="group_id"/>
Artifact Id:	<input type="text" value="artifact_id"/>
Version:	<input type="text" value="0.1-SNAPSHOT"/> ▼
Package:	<input type="text" value="group_id.artifact_id"/>

Properties available from archetype:

Name	Value
------	-------

▶ Advanced




Figure 2.5. Final project naming

Clicking **Finish** will bring you back to the workbench and your Maven project will appear in the **Project Explorer**.

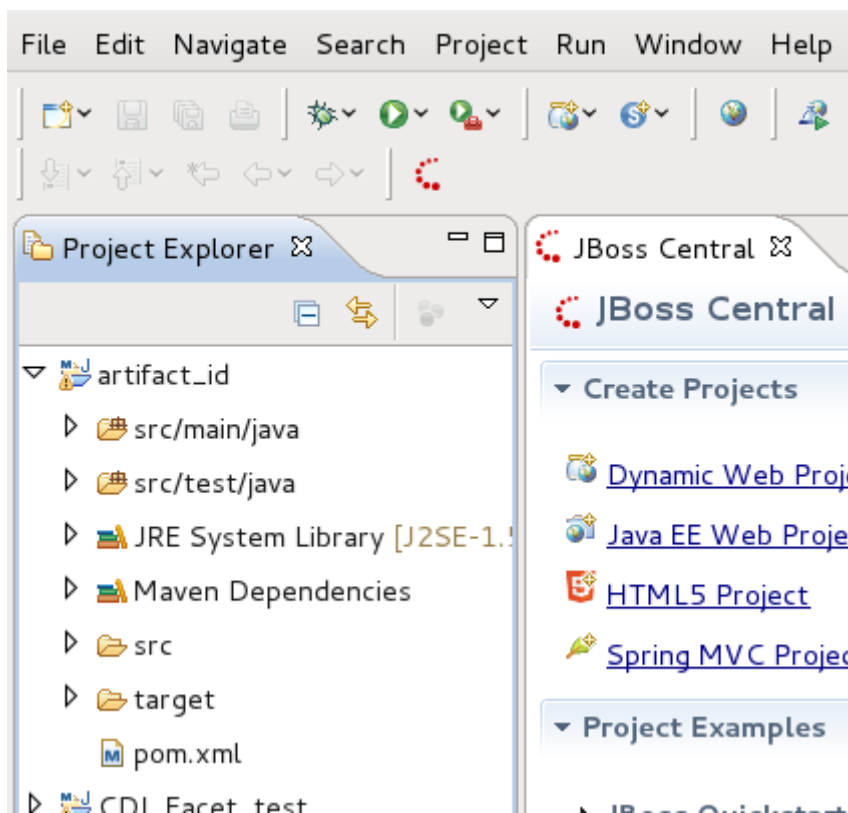


Figure 2.6. Project in the Project Explorer

Creating a Maven Module

A Maven module is a sub-project. To create a Maven module you will need to already have a Maven project available.

The parent project must have its **Packaging** option be pre-configured to **pom**, for a module to be created and associated with it. To ensure your parent project has this option set correctly before proceeding, double-click on the `pom.xml` file of your parent project in the **Project Explorer**.

In the **Overview** settings page that is now displayed in your workbench, confirm that the option **Packaging** is set to **pom**. If it is not, select **pom** from the list menu and save the changes to your `pom.xml` file.

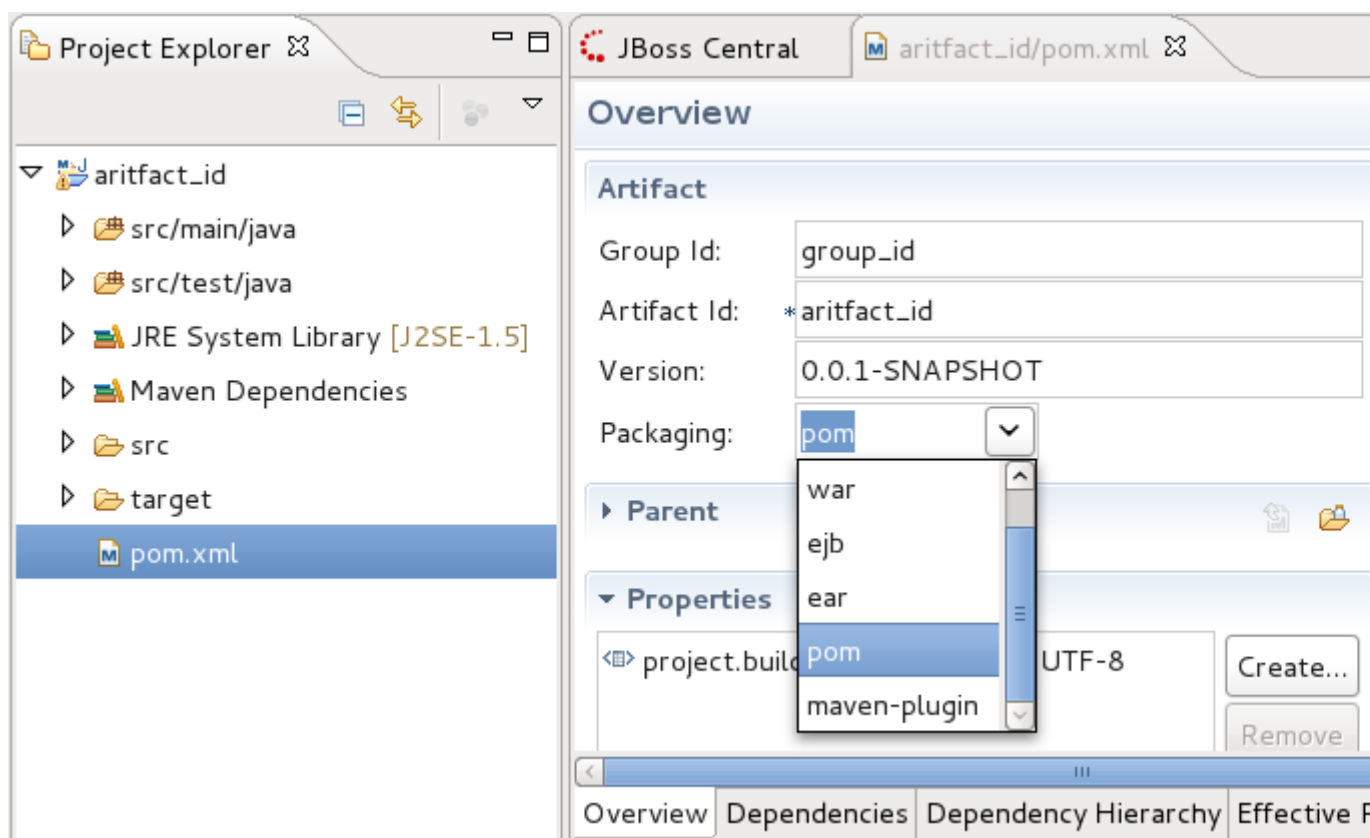


Figure 3.1. Parent project pom.xml file settings

From your workspace navigate to **File** → **New** → **Other** and from the wizard selection screen select **Maven** → **Maven Module**.

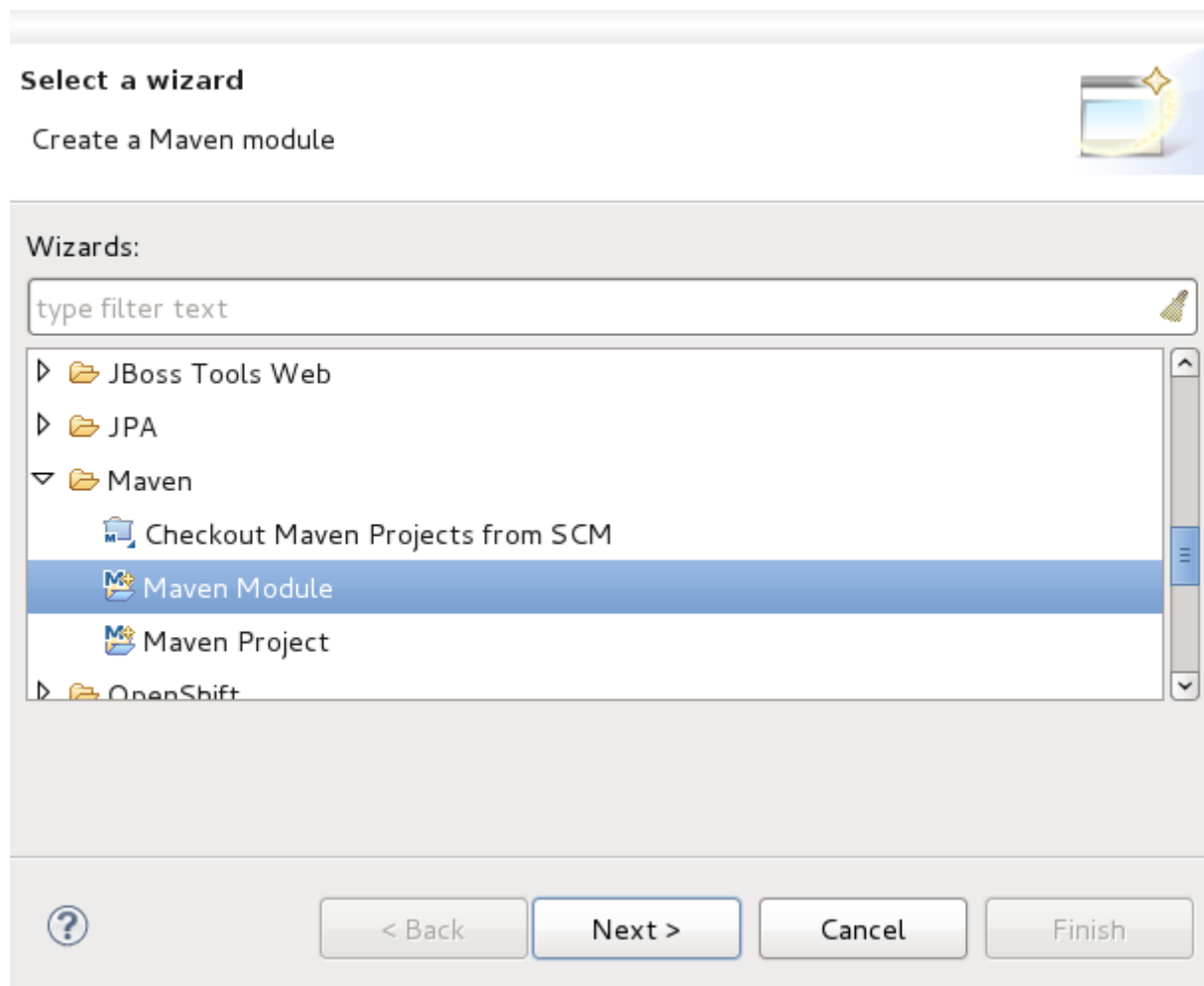


Figure 3.2. Selecting the Maven Module wizard

Type a name for the module in the **Module Name** field.

New Maven Module

Select a parent project.



Create a simple project (skip archetype selection)

Module Name:

Parent Project:

Add project(s) to working set

Working set:

▶ Advanced



Figure 3.3. Naming the module

Click the **Browse** button beside the **Parent Project** field. This will launch a project selection box.

Select the project to be used as the parent project of the module you are creating, and click **OK**.

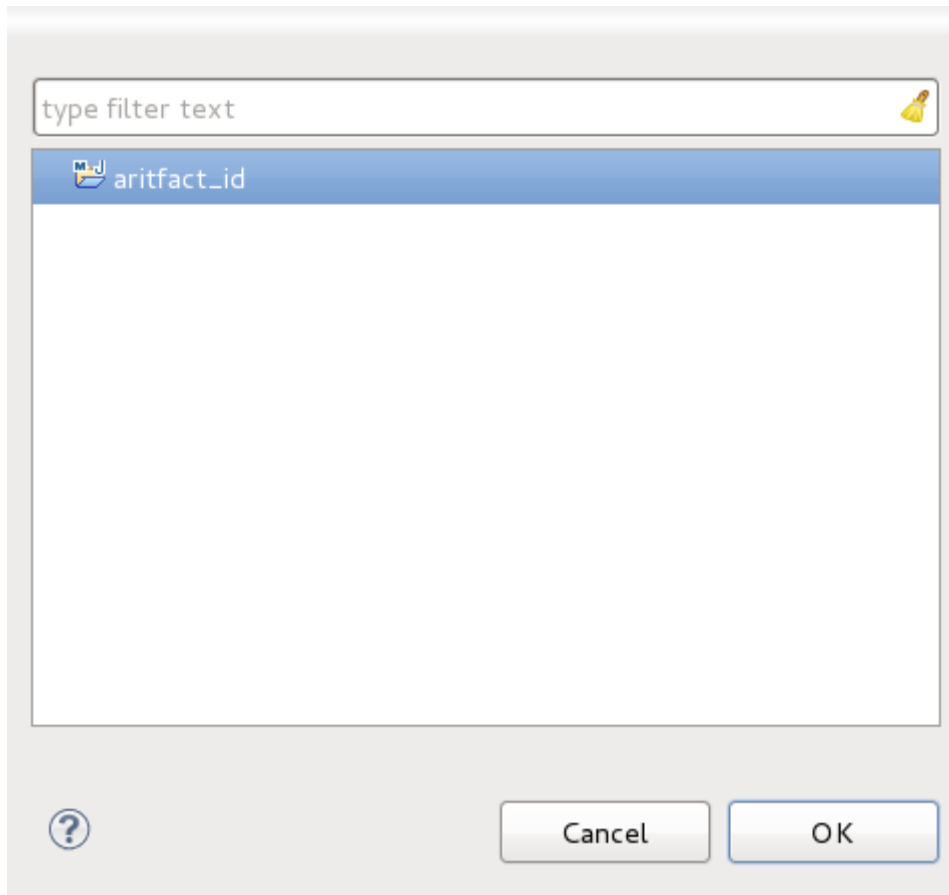


Figure 3.4. Selecting the parent project

You will be returned to the **Select a parent project** screen and the **Parent Project** field will contain the name of the project you selected.

New Maven Module

Select the module name and parent

Create a simple project (skip archetype selection)

Module Name:

Parent Project: Browse...

Add project(s) to working set

Working set: More...

▶ **A**dvanced

? < Back Next > Cancel Finish

Figure 3.5. Parent Project field populated with project name

Click the **Next** button.

Select an archetype available in the list displayed. For the purposes of this example the **maven-archetype-quickstart** is selected.

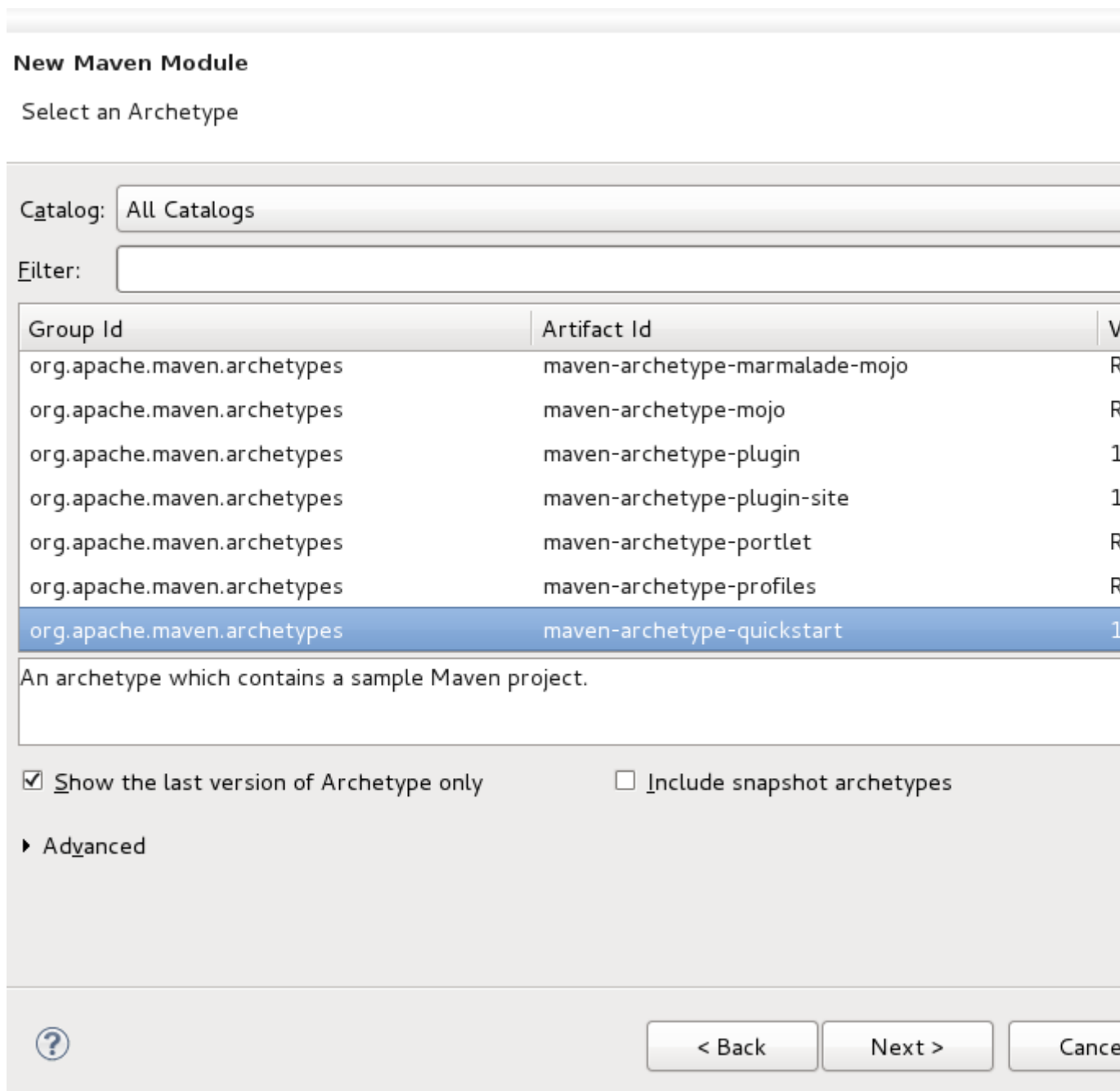


Figure 3.6. Archetype selection screen

Click the **Next** button.

Specify archetype parameters **Group Id** and **Version**. Ensure that the values you specify for these fields are unique from those set in the parent project.

In this example, the **Group Id** and **Version** settings of the parent project used are set to `group_id` and `0.0.1-SNAPSHOT` respectively. For the module, **Group Id** and **Version** settings are being specified as `sub_group_id` and `0.1.1-SNAPSHOT` respectively, to avoid conflict.

New Maven Module

Specify Archetype parameters

Group Id:	<input type="text" value="sub_group_id"/>
Artifact Id:	<input type="text" value="module_id"/>
Version:	<input type="text" value="0.1.1-SNAPSHC"/> <input type="button" value="v"/>
Package:	<input type="text" value="org.module_id"/>

Properties available from archetype:

Name	Value
------	-------

▶ Advanced

Figure 3.7. Archetype parameter settings

Click the **Finish** button.

The module will now be created and appear in your **Project Explorer**.

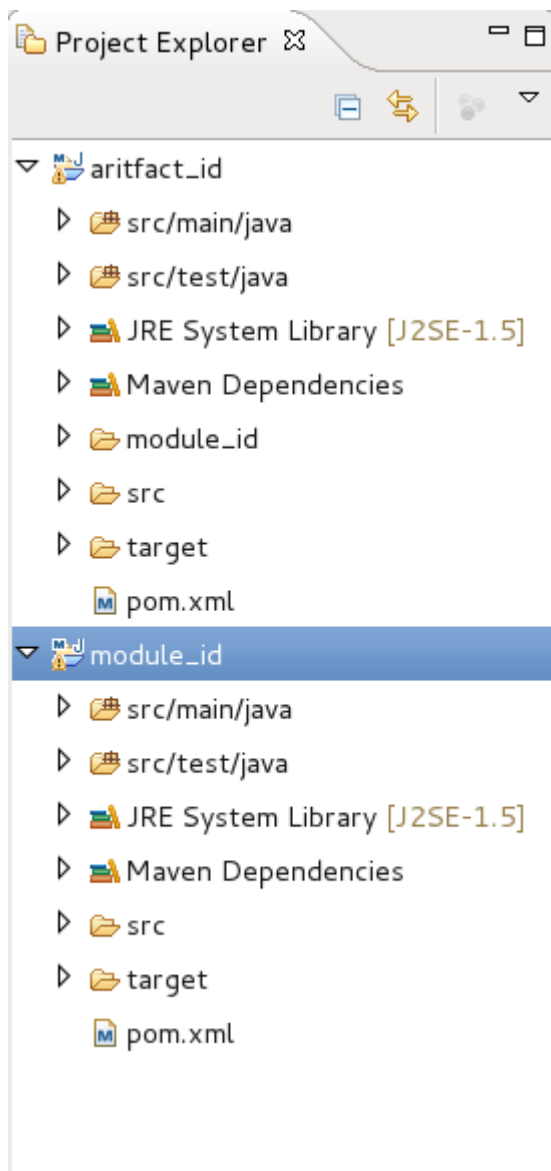


Figure 3.8. Created module in the Project Explorer

You can view and change settings associated with the module by selecting the module's `pom.xml` file from the **Project Explorer** and double-clicking on it. This will launch an **Overview** screen containing the module settings.

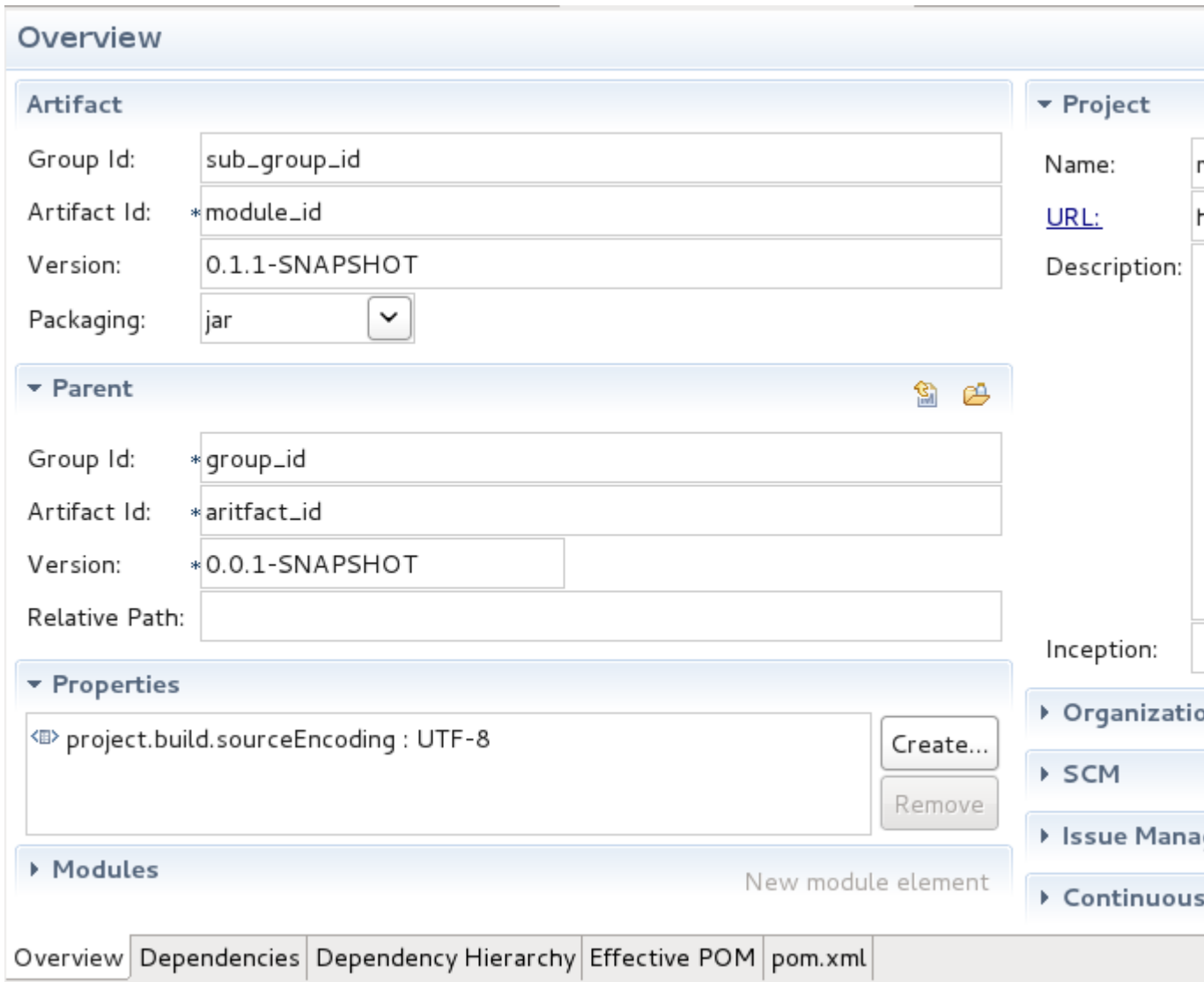


Figure 3.9. Module Overview screen

Adding Maven support to an existing project

Select the project that Maven support will be added to from the **Project Explorer**.

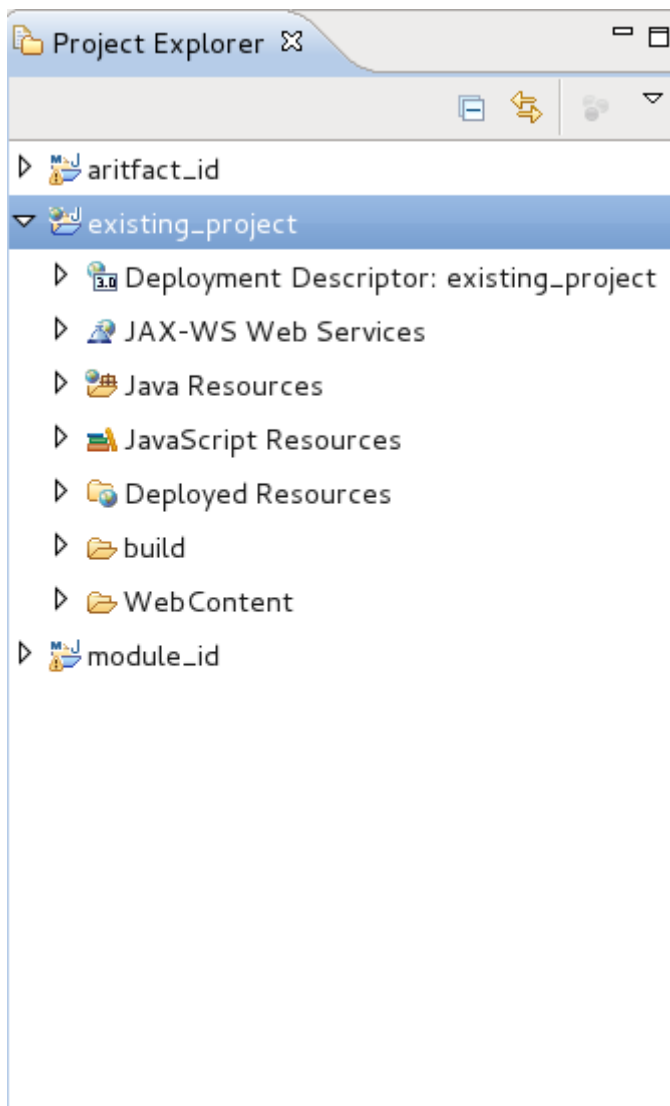


Figure 4.1. Selecting Maven project conversion

Right-click on the project to bring up the context menu.

From the context menu navigate to **Configure** → **Convert to Maven Project**.

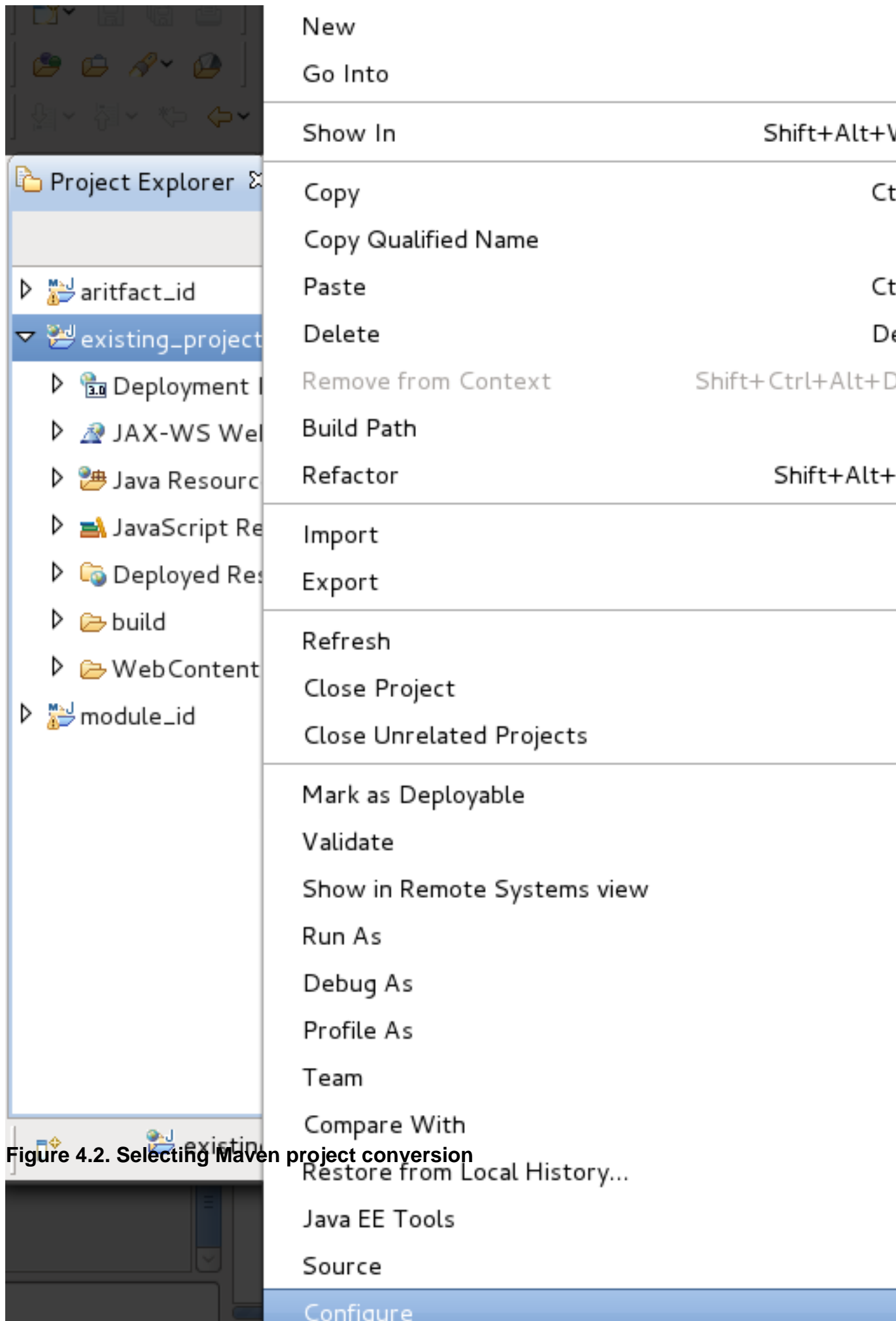


Figure 4.2. Selecting Maven project conversion

Click on the **Convert to Maven Project** menu option.

A **Maven POM** wizard will launch. The wizard will create a `pom.xml` file for your project. This file will contain the projects Maven settings. All necessary fields of the wizard will be automatically filled.

The screenshot shows the 'Maven POM' wizard dialog box. At the top, it says 'Maven POM' and 'This wizard creates a new POM (pom.xml) descriptor for Maven.' Below this, there are several input fields: 'Project:' with the value '/existing_project'; 'Artifact' section containing 'Group Id:' (existing_project), 'Artifact Id:' (existing_project), 'Version:' (0.0.1-SNAPSHC), and 'Packaging:' (jar); 'Name:' (empty); and 'Description:' (empty). At the bottom, there is a help icon (question mark in a circle), a 'Cancel' button, and a 'Finish' button.

Figure 4.3. Maven POM wizard

It is recommended that you change the **Packaging** option to **pom** to avoid any issues in expansion of the project with Maven modules in the future.

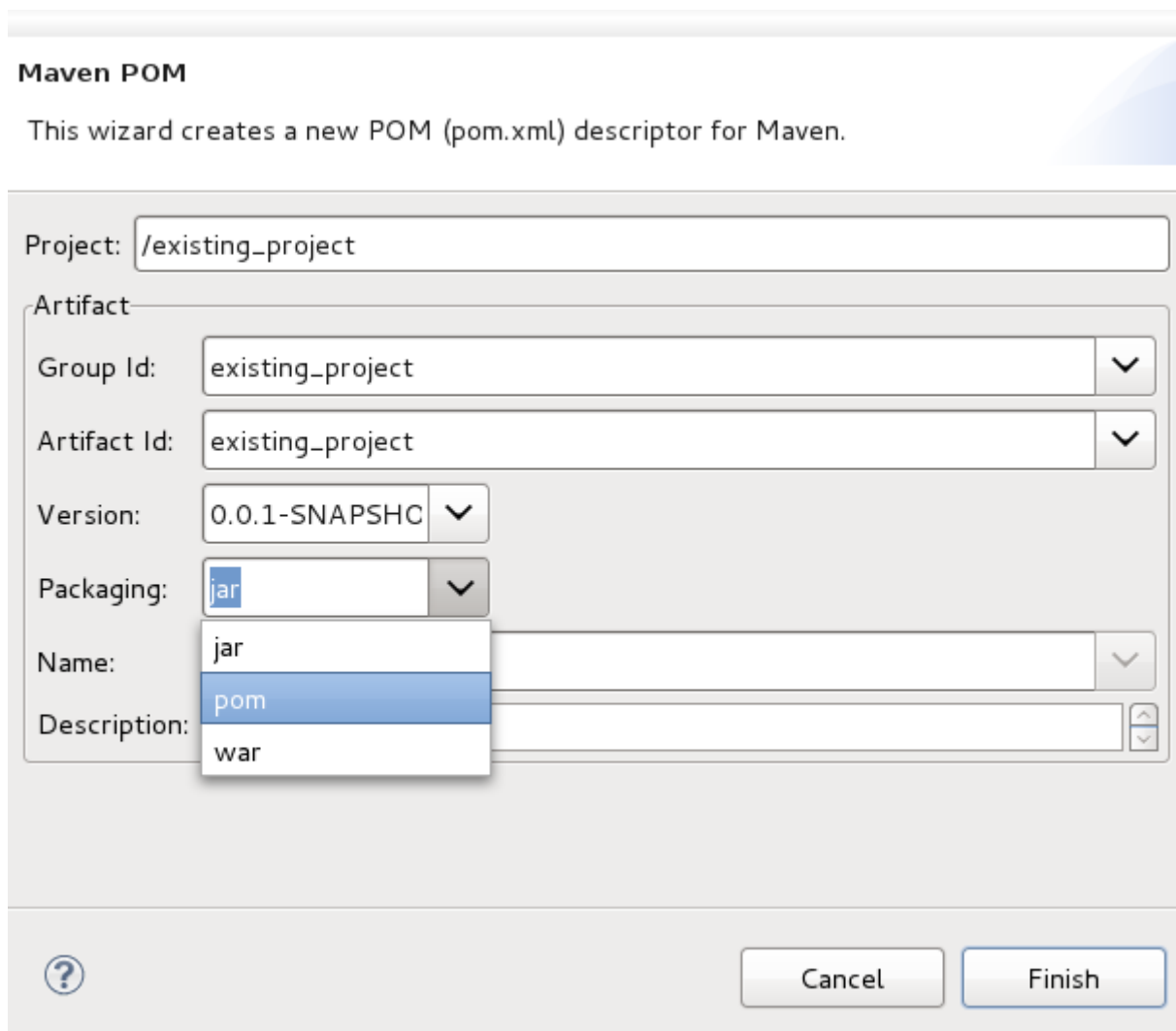


Figure 4.4. Changing Packaging setting to pom

Click **Finish**.

Once Maven support has been added to the project, a new `pom.xml` file will appear in the list of files for the project. This can be viewed in the **Project Explorer**.

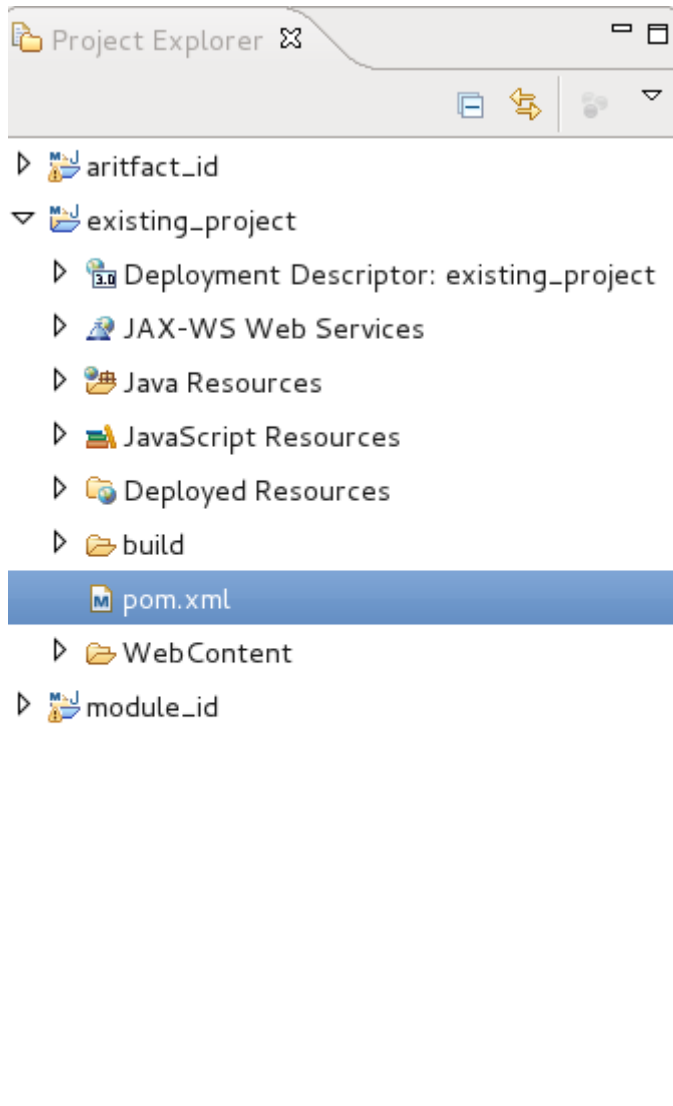


Figure 4.5. New pom.xml file

Double-click on the `pom.xml` file to view the settings associated with it. The settings here were set in the **Maven POM** wizard and can be edited from this **Overview** screen.

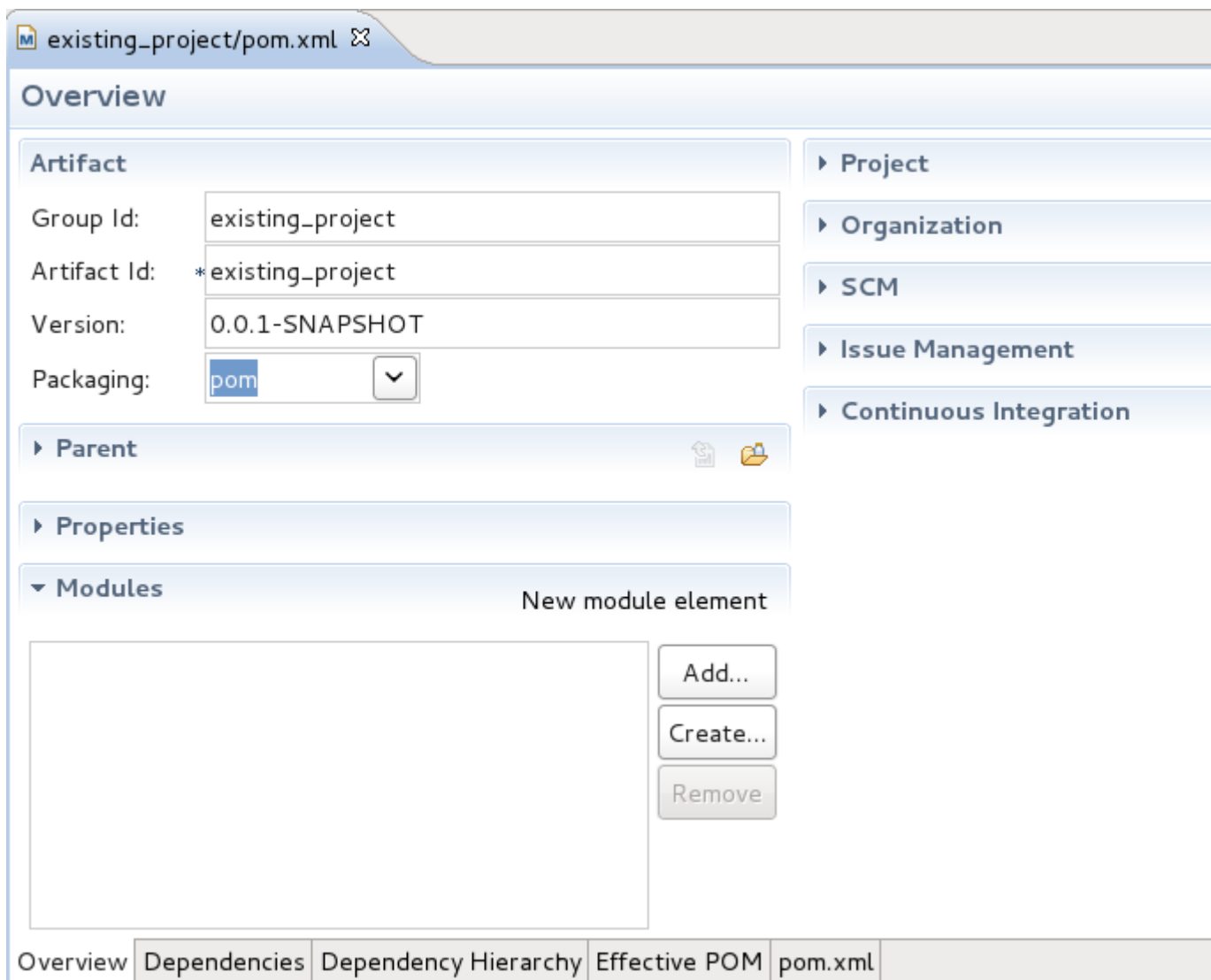


Figure 4.6. Overview screen for pom.xml