

Maven Tools Reference Guide

Version: 4.2.0.Final-SNAPSHOT

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Introduction

In the context of application development, Maven allows you to extend your applicaitons 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**.

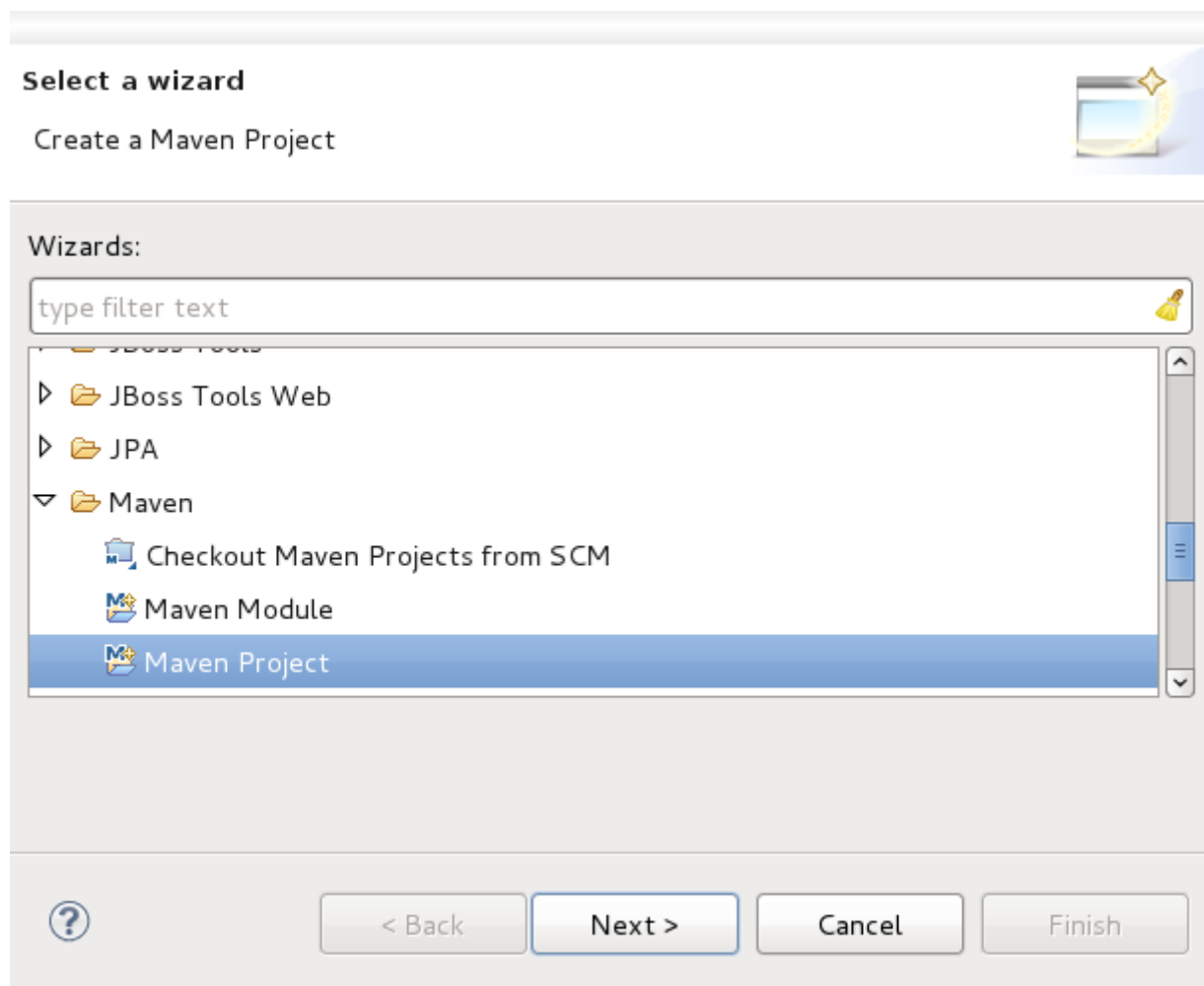


Figure 2.1. Selecting the Maven Project wizard

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.

New Maven project

Select project name and location

☐ Create a simple project (skip archetype selection)

☒ Use default Workspace location

Location: ▼ Browse...

☐ Add project(s) to working set

Working set: ⬆ ⬆ More...

► **Advanced**

? < Back Next > Cancel Finish

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:



Browse...

☐ Add project(s) to working set

Working set:



More...

▼ Advanced

☒ Resolve Workspace projects

Profiles:

Name template:

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



< Back

Next >

Cancel

Finish

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.

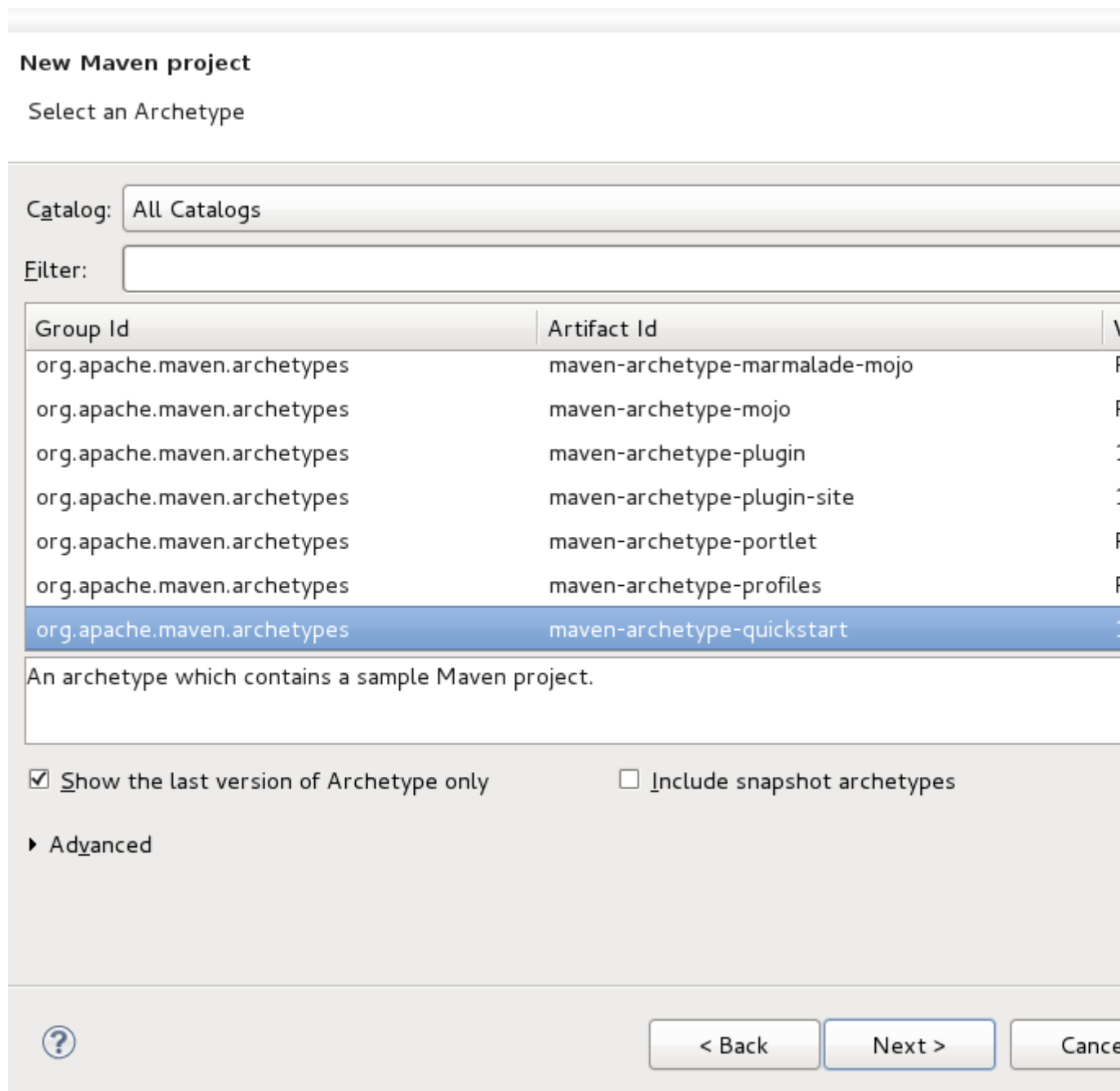


Figure 2.4. Archetype selection

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**.

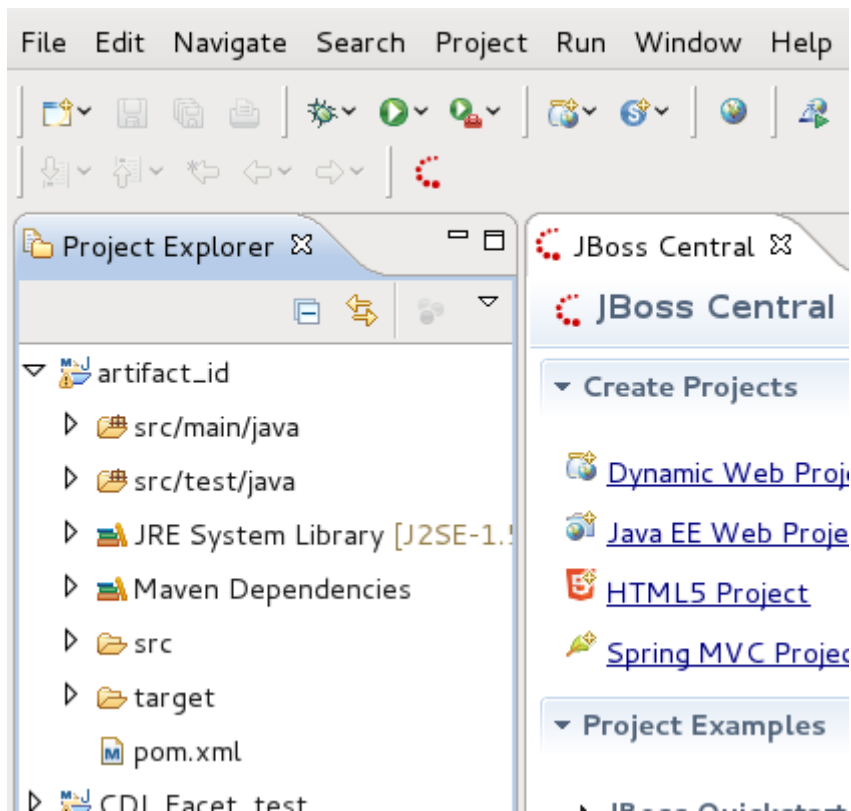


Figure 2.6. Project in the Project Explorer

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 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.

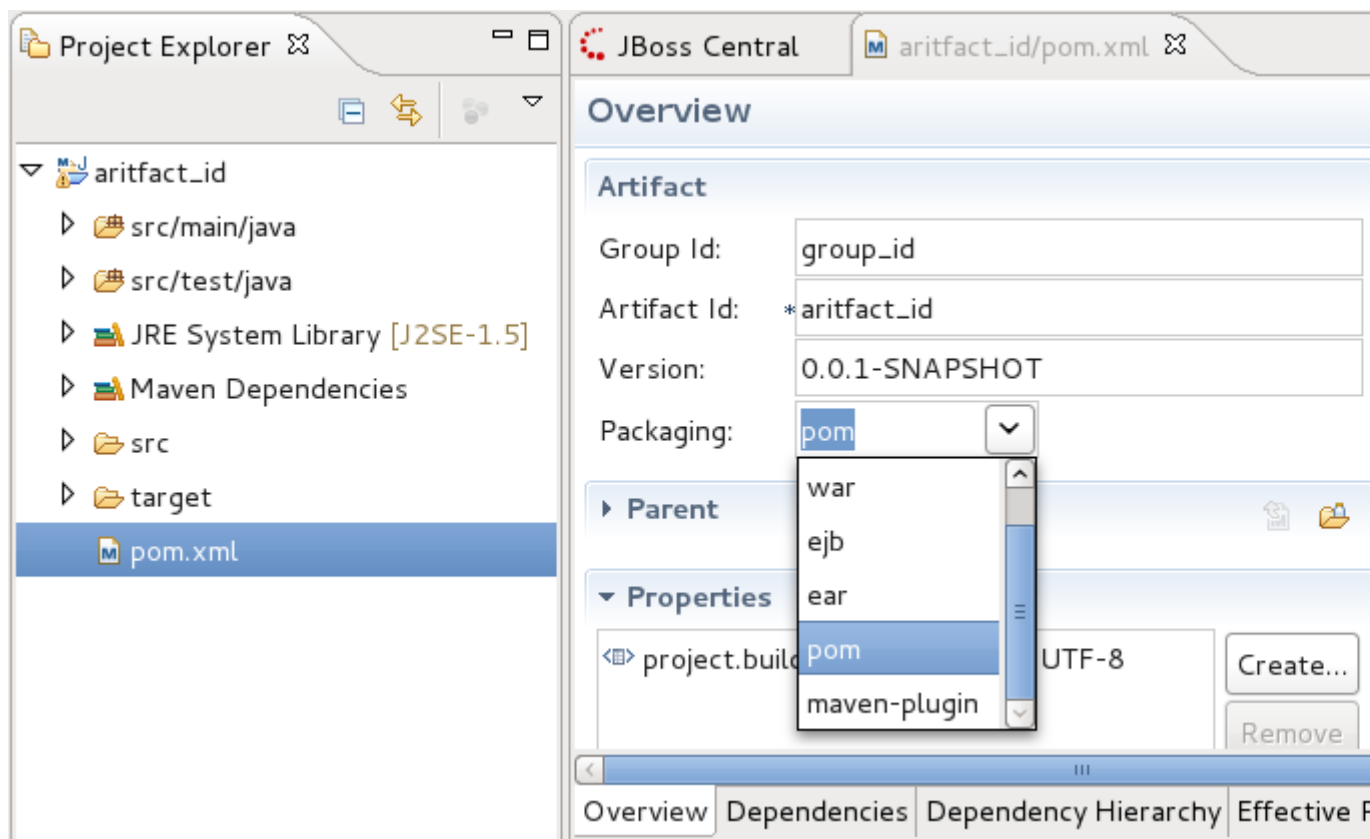


Figure 3.1. Parent project pom.xml file settings

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

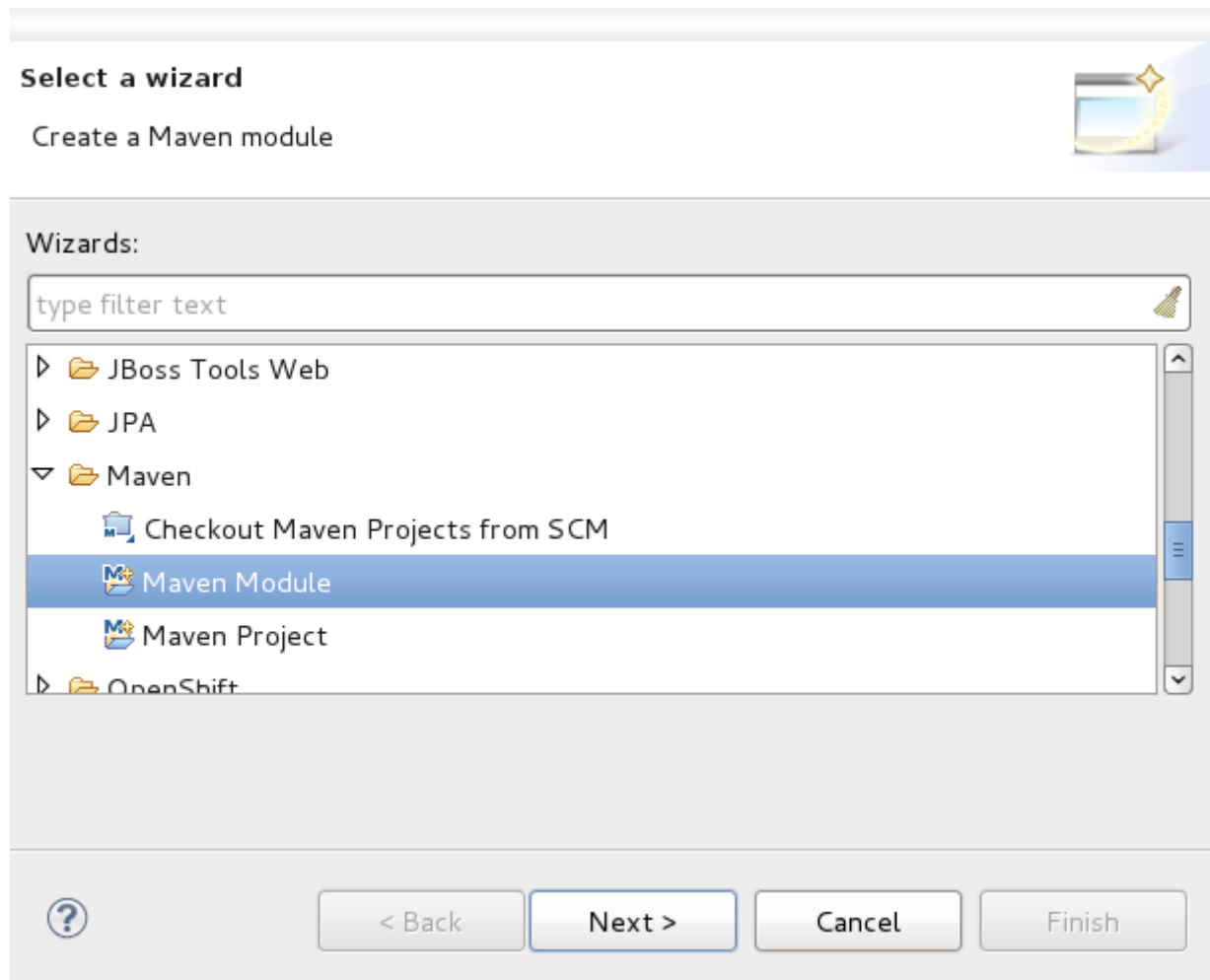


Figure 3.2. Selecting the Maven Module wizard

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:

Browse

☐ Add project(s) to working set

Working set:

More..

► **A**dvanced



< Back

Next >

Cancel

Finish

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**.

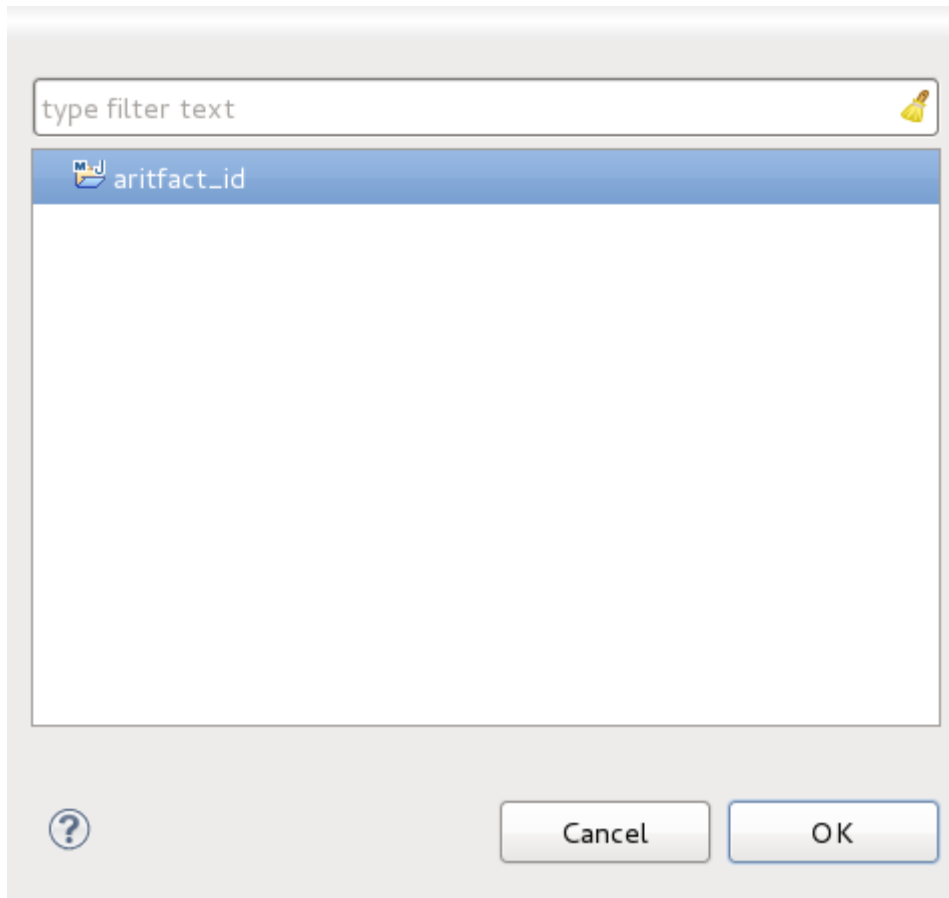


Figure 3.4. Selecting the parent project

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:

☐ Add project(s) to working set

Working set:

► Advanced



< 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.

New Maven Module

Select an Archetype

Catalog: All Catalogs

Filter:

Group Id	Artifact Id	V
org.apache.maven.archetypes	maven-archetype-marmalade-mojo	R
org.apache.maven.archetypes	maven-archetype-mojo	R
org.apache.maven.archetypes	maven-archetype-plugin	1
org.apache.maven.archetypes	maven-archetype-plugin-site	1
org.apache.maven.archetypes	maven-archetype-portlet	R
org.apache.maven.archetypes	maven-archetype-profiles	R
org.apache.maven.archetypes	maven-archetype-quickstart	1

An archetype which contains a sample Maven project.

☒ Show the last version of Archetype only ☐ Include snapshot archetypes

► Advanced


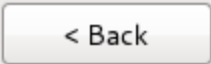


   

Figure 3.6. Archetype selection screen

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**.

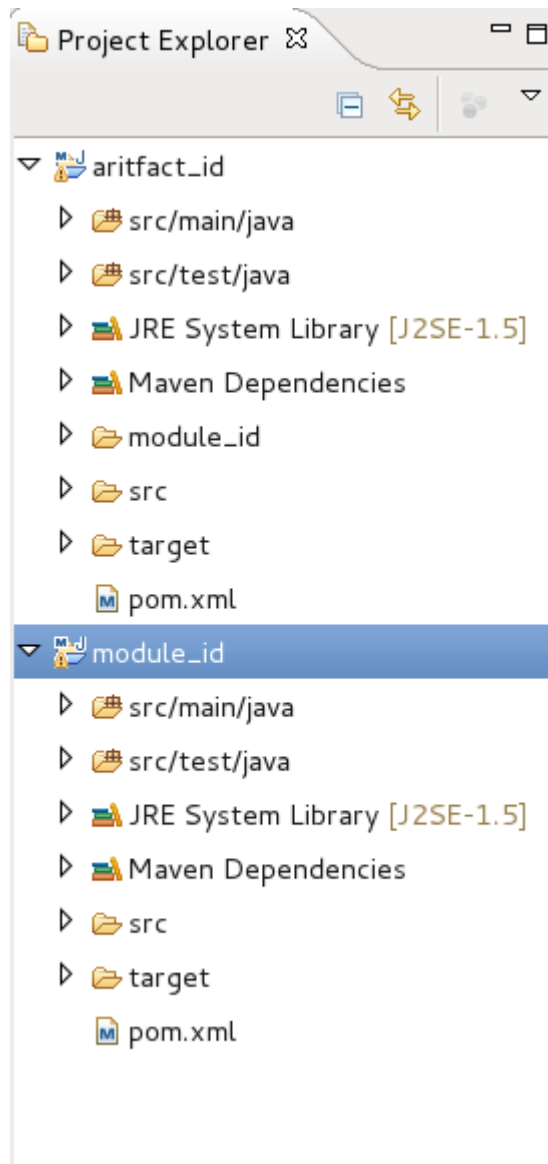


Figure 3.8. Created module in the Project Explorer

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.

Overview

Artifact

Group Id:

sub_group_id

Artifact Id:

*module_id

Version:

0.1.1-SNAPSHOT

Packaging:

jar

Parent

Group Id:

*group_id

Artifact Id:

*aritfact_id

Version:

*0.0.1-SNAPSHOT

Relative Path:

Properties

<> project.build.sourceEncoding : UTF-8

Create...

Remove

Modules

New module element

Project

Name:

URL:

Description:

Inception:

Organization

SCM

Issue Mana

Continuous

Overview

Dependencies

Dependency Hierarchy

Effective POM

pom.xml

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**.

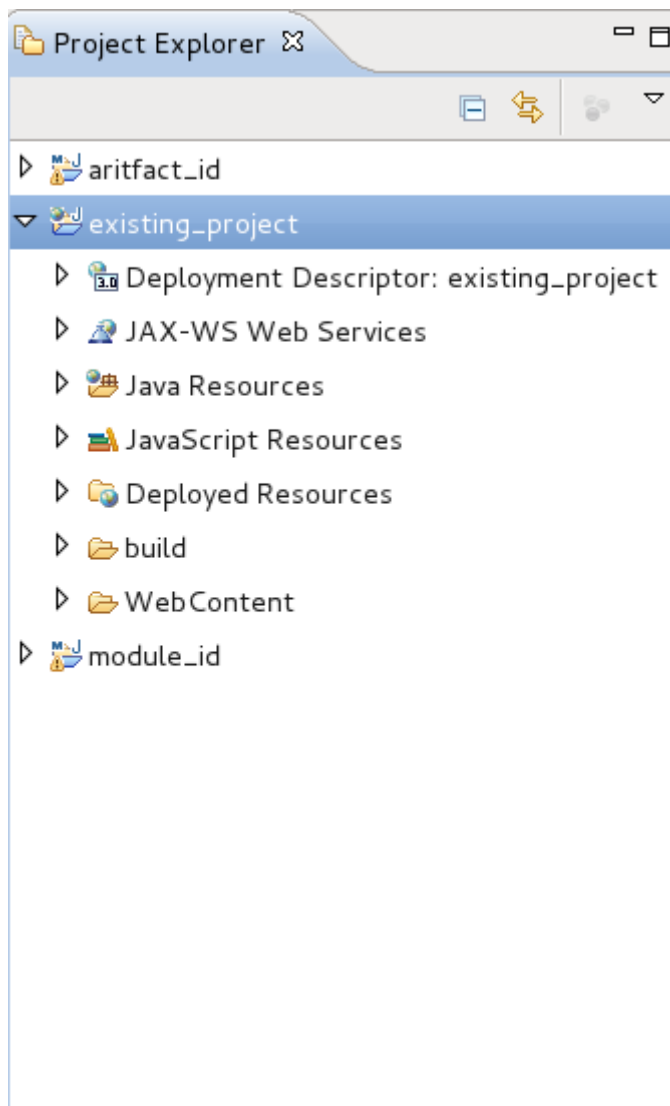


Figure 4.1. Selecting Maven project conversion

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

From the **Properties** screen click on **Project Facets**.

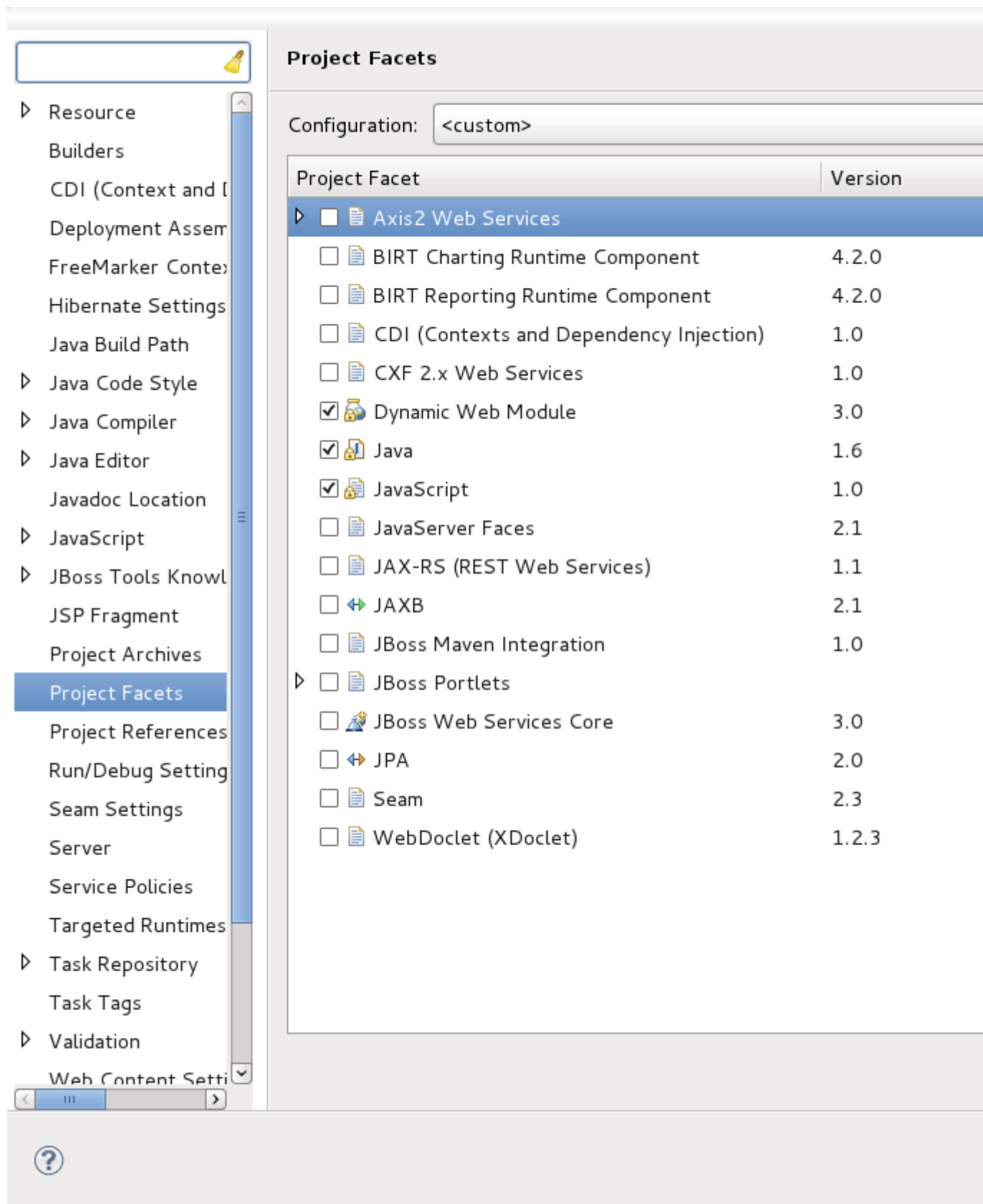


Figure 4.2. Project Facets screen

Select **JBoss Maven Integration** from the facets list. You will notice that a **Further configuration required** button appears at the bottom of the screen.

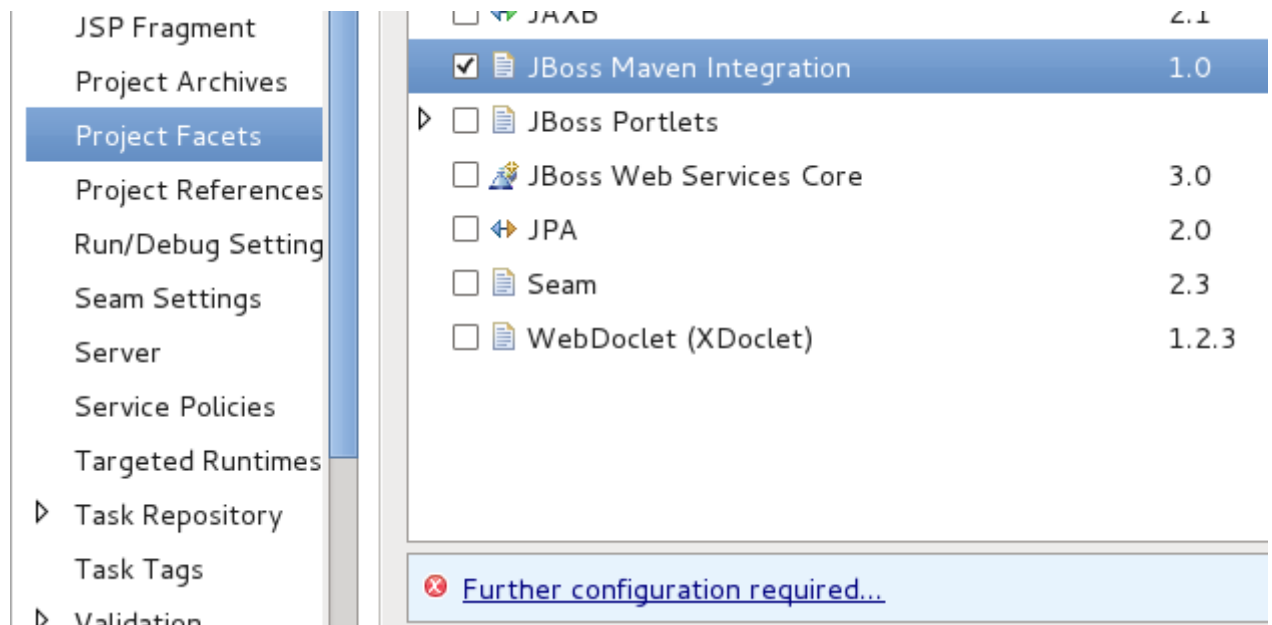
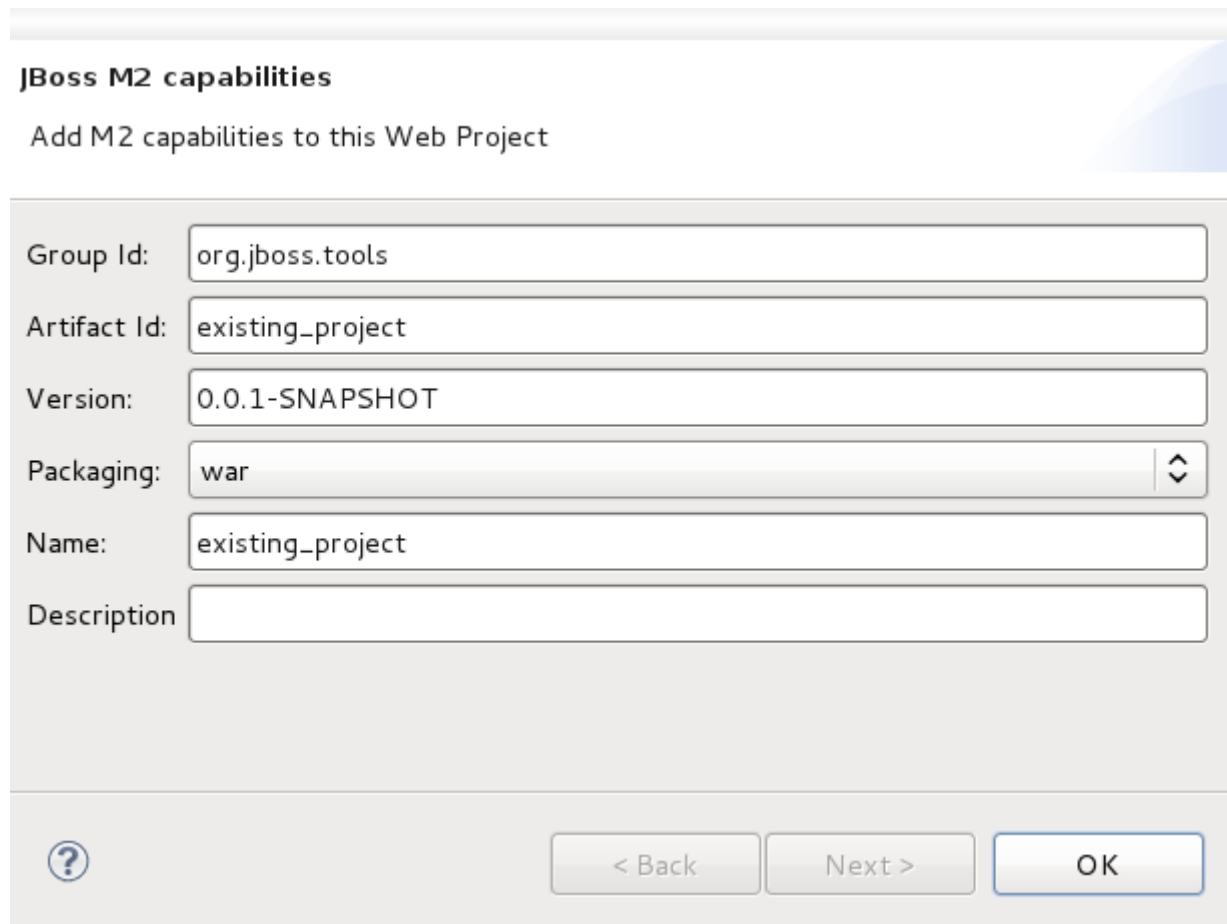


Figure 4.3. Maven Integration facet selected

Click on the **Further configuration required** button and you can either modify or accept the default values for all fields. Click the **OK** button to return to the facets screen.



The image shows a dialog box titled "JBoss M2 capabilities" with the subtitle "Add M2 capabilities to this Web Project". The dialog contains several input fields: "Group Id" with the value "org.jboss.tools", "Artifact Id" with "existing_project", "Version" with "0.0.1-SNAPSHOT", "Packaging" with a dropdown menu showing "war", "Name" with "existing_project", and an empty "Description" field. At the bottom, there is a help icon (question mark in a circle), and three buttons: "< Back", "Next >", and "OK".

JBoss M2 capabilities
Add M2 capabilities to this Web Project

Group Id:

Artifact Id:

Version:

Packaging:

Name:

Description:




Figure 4.4. Maven Integration facet settings

The **Further configuration required** button has now changed to **Further configuration available**. Click the **Apply** button and then the **OK** button to complete the addition of Maven support to your project.

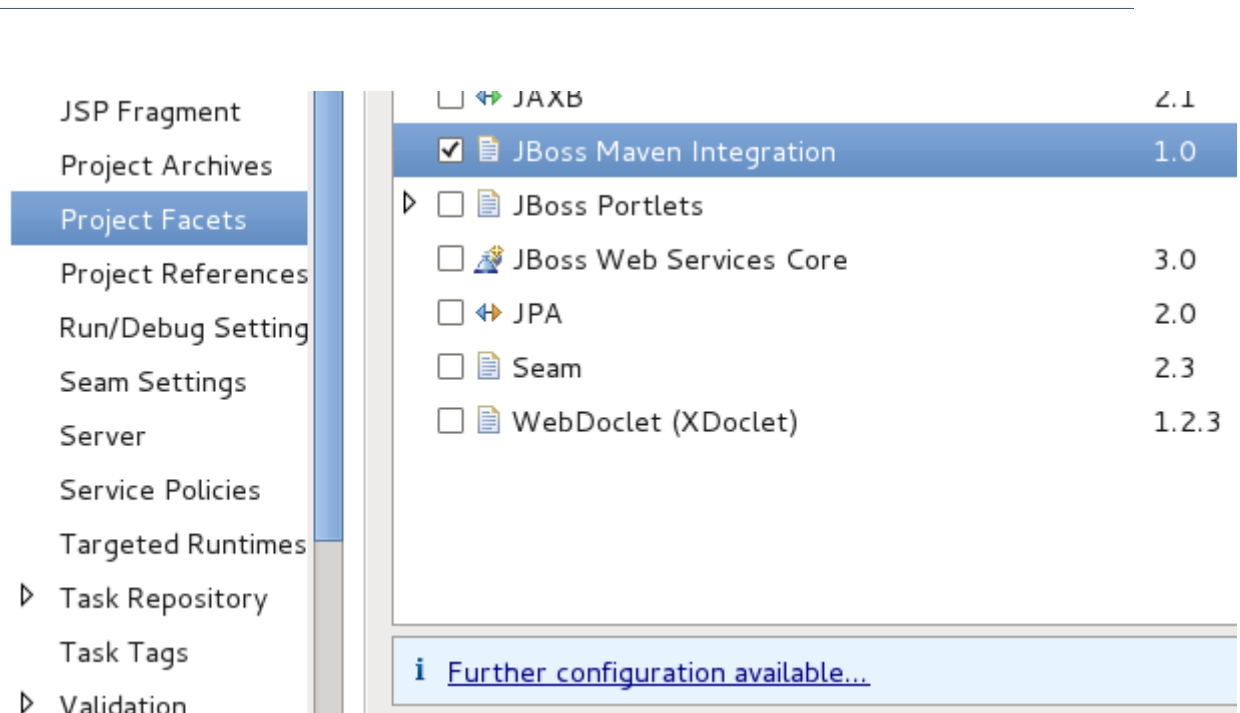


Figure 4.5. Maven Integration facet configured

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

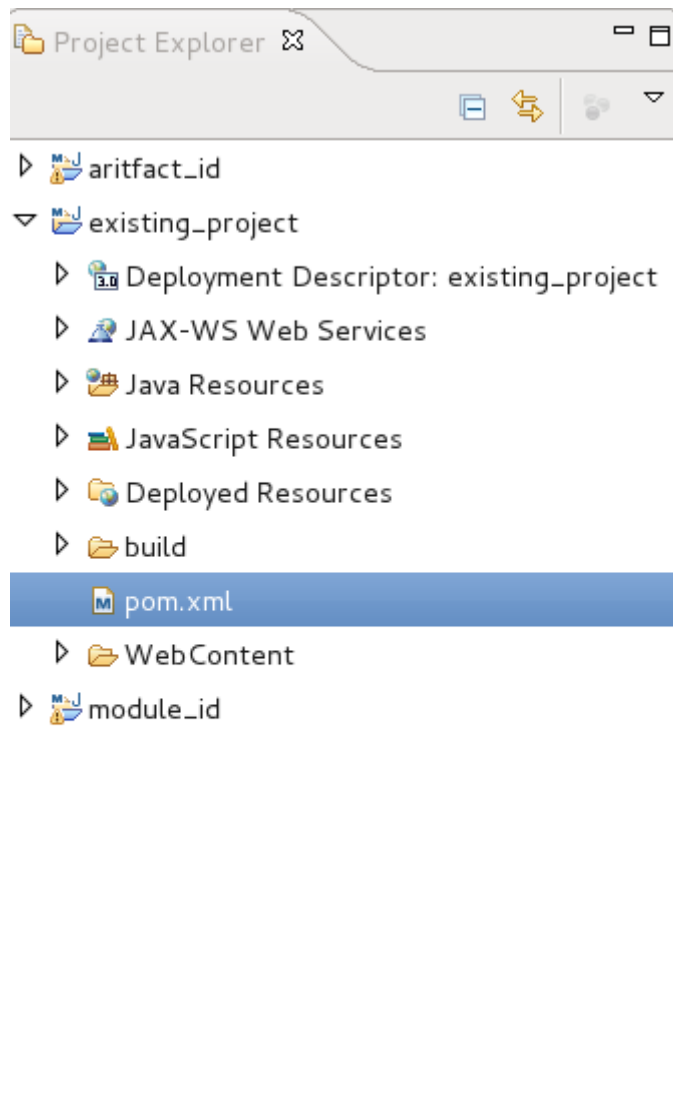


Figure 4.6. New pom.xml file

Double-click on the `pom.xml` file to view the settings associated with it. The settings here were set in the **Further configuration required** step, and can be edited from this **Overview** screen.

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.

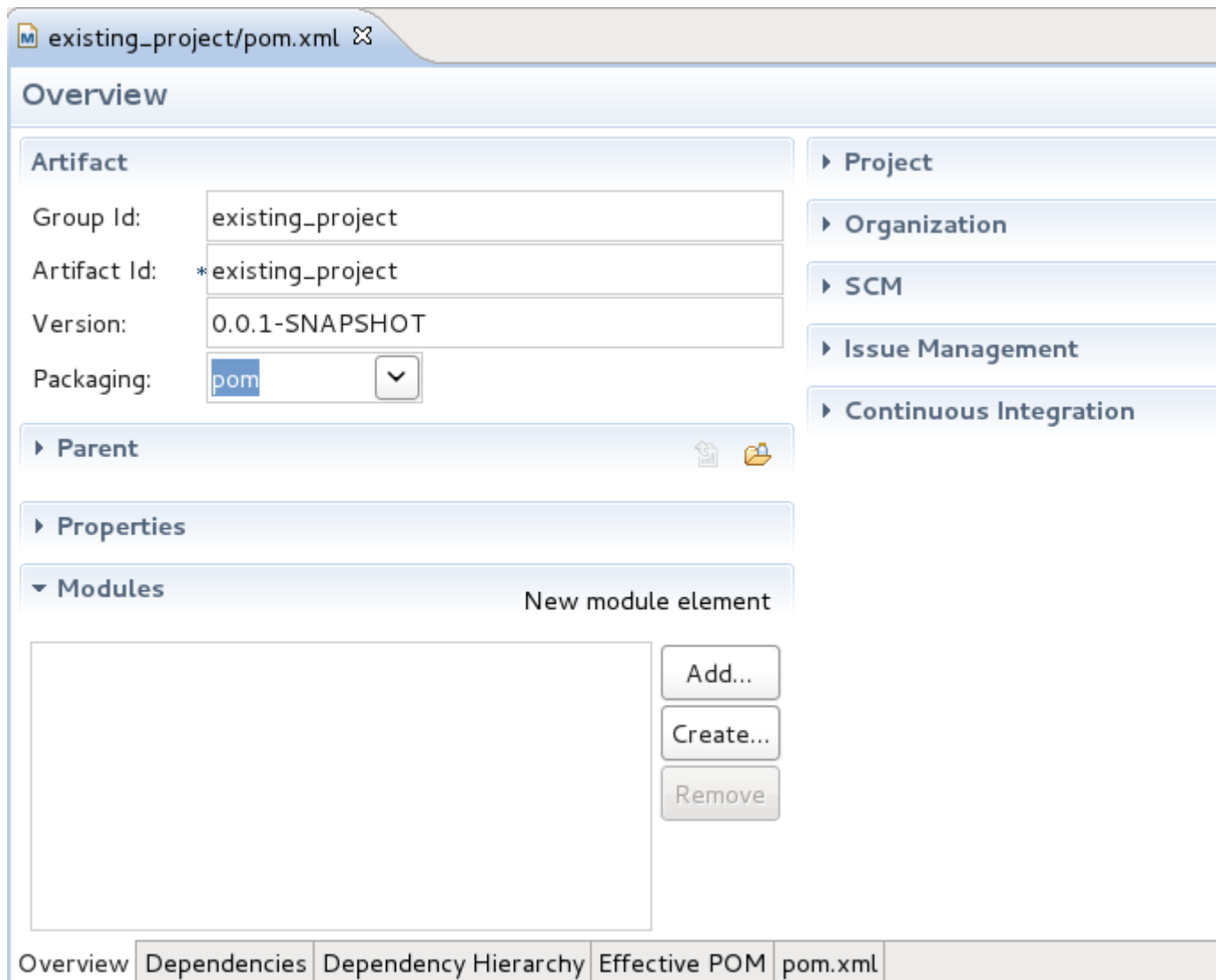


Figure 4.7. Overview screen for pom.xml

