

Maven Concepts Introduction

Maven 2 aims to promote patterns and best practices to the build of a project.

In order to understand how Maven 2 works for your project, a little bit of theory is required.

The basic concepts in the center of Maven 2 are :

- The [project object model](#) or project descriptor which holds the definition of all the information needed by Maven 2 to build your project.
- The [Dependencies](#) are mainly the jar files of classes libraries used by the project during the build. The dependencies are defined in the project descriptor.
- The [directory convention](#) used by Maven to promote the uniformity of Java projects.
- The [build life cycle](#) which shows the steps for building the project. Maven 2 is based on the fact that a project needs to pass through some predefined steps to be released, like always generating the sources before compiling and before running the unit tests on it.
- The [Plugins](#) are units of behaviour for building the project. They are used by Maven 2 to perform each part of the build. Maven 2 in itself does nothing more than calling the plugins in the right order.
- The [Artifacts](#) are the results of a project's build. Maven 2 assumes there is one and only one artifact per project. The way the artifact is created depends on its packaging. There are also some results of the build that could be attached to the main artifact and are called attached artifacts.
- In order to reduce disk space in the source control management of the project, Maven 2 promotes the use of the [Repositories](#) which are mainly Web sites holding the artifacts and project descriptors of projects dependencies.
- The [Archetypes](#) are example projects used as a foundation for creating a project.
- When the build process needs to be configured differently based on the developer or the purpose of the build (QA, production) Maven 2 uses [Profiles](#).