

Maven Setup

Base Setup

Maven is our choice for building and compiling plugins to actually runnable .jar files. An example Maven compile file would look something like this:

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xmlns="http://maven.apache.org/POM/4.0.0"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>

  <groupId>pe.waterdog.examples</groupId>
  <artifactId>MultiServerChat</artifactId>
  <version>1.0-SNAPSHOT</version>

  <repositories>
    <repository>
      <id>waterdog-repo</id>
      <url>https://repo.waterdog.dev/artifactory/main</url>
    </repository>
  </repositories>

  <dependencies>
    <dependency>
      <groupId>dev.waterdog.waterdogpe</groupId>
      <artifactId>waterdog</artifactId>
      <version>1.0.0-SNAPSHOT</version>
      <scope>provided</scope>
    </dependency>
  </dependencies>

  <build>
    <plugins>
```

```
<plugin>
  <groupId>org.apache.maven.plugins</groupId>
  <artifactId>maven-compiler-plugin</artifactId>
  <version>3.8.0</version>
  <configuration>
    <release>11</release>
    <encoding>UTF-8</encoding>
  </configuration>
</plugin>
</plugins>
</build>
</project>
```

Explanation

There are three relevant parts in the pom.xml for the beginning:

- **project configuration:** the `groupId`, `artifactId` and `version` are base configuration variables for your own plugin.
 - **dependencies:** The java frameworks / applications your plugin depends on. By default, only the Waterdog dependency is required there.
 - **build configuration:** the configuration targetting the build / compile process. Here we set the java version the plugin should compile to and the encoding all files should have.
- If you use more dependencies, shading will be required.**

Shading

When using more than just the default waterdog dependency and included libraries, you will be required to *shade* your artifact. What that basically means is that we are including all the dependencies your plugin uses in one artifact (jar). This requires modifying our pom.xml.

```
<plugin>
  <groupId>org.apache.maven.plugins</groupId>
  <artifactId>maven-shade-plugin</artifactId>
  <version>3.1.0</version>
  <executions>
    <execution>
      <phase>package</phase>
```

```
    <goals>
      <goal>shade</goal>
    </goals>
  <configuration>
    <createDependencyReducedPom>false</createDependencyReducedPom>
  </configuration>
</execution>
</executions>
</plugin>
```

Don't be surprised if your artifact file increases in size. As we are now including all the libraries in the artifact, the file size is of course a bit larger.

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