



# Microservices Hands-on with MicroProfile

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# Java Development Kit (JDK) 8

Recommended: OpenJDK Java SE Development Kit (JDK) 8u272-b10



If you're running Linux and already have [OpenJDK 8](#) installed on your machine, you can skip this section. However, you'll still need to know the path where the JDK is installed.

- In your web browser, navigate to <https://adoptopenjdk.net>.
- Choose OpenJDK 8 with Hotspot.
- Click "Other platforms"
- Download the archive by clicking the link that matches your operating system. Zip or tar.gz formats are recommended.
- Set the `JAVA_HOME` environment variable to refer to the extracted folder (jdk8u272-b10) and add the bin subdirectory of that folder to your `PATH` as follows:

*Linux and Mac OS X*

```
$ export PATH="/path/to/jdk8u272-b10/bin:$PATH"
```

*Windows*

See <https://www.java.com/en/download/help/path.xml>.

- Open a terminal and verify you get similar output when you run the `java` command below:

```
$ java -version
openjdk version "1.8.0_272"
OpenJDK SE Runtime Environment (build [...])
OpenJDK 64-Bit Server VM (AdoptOpenJDK)(build [...], mixed mode)
```

- You should also be able to run the `javac` command and get similar output:

```
$ javac -version
javac 1.8.0_272
```

# Apache Maven

Recommended: Apache Maven 3.6.2

- In your web browser, navigate to <https://maven.apache.org/download.cgi>.
- Scroll to the section titled **Files**.
- Download the distribution by clicking the link in the **Binary zip archive** row under the **Link** column.
- When the download completes, extract the distribution (i.e., zip archive).
  - See <https://maven.apache.org/install.html> for installation instructions.
- Add the bin subdirectory of the extracted folder to your **PATH** as follows:

*Linux and Mac OS X*

```
$ export PATH="/path/to/apache-maven-3.6.2/bin:$PATH"
```

*Windows*

See <https://maven.apache.org/install.html>.

- Open a terminal and verify you get similar output when you run the **mvn** command below:

```
$ mvn -v
Apache Maven 3.6.2 (bb52d8502b132ec0a5a3f4c09453c07478323dc5; [...])
Maven home: [...]/apache-maven-3.6.2
Java version: 1.8.0_272, vendor: AdoptOpenJDK
Java home: [...]
Default locale: en_US, platform encoding: UTF-8
OS name: [...]
```

## Alternate installation using SDKMAN!

If you're using a Unix-like operating system, we encourage you to use **SDKMAN!** to manage the installation (and upgrade) of Java-based software such as Maven, (Oracle) Java, Gradle, and so forth. SDKMAN! handles all the details of downloading the software and setting up entries in your **PATH** environment variable.

See the **SDKMAN!** [website](#) to get started.

# Integrated Development Environment (IDE)

*Recommended:*

- IntelliJ IDEA Community Edition or
- Eclipse IDE for Java EE Developers

# Appendix A: Resources

- Oracle Java SE
- Apache TomEE
- Apache Maven
- IntelliJ IDEA
- Eclipse IDE
- [SDKMAN!](#)—a tool for managing parallel versions of multiple Software Development Kits (e.g., Java, Maven, Gradle, etc.) on most Unix based systems.
- [jenv](#)—a tool for managing your Java environment, in particular `JAVA_HOME` and `PATH` entries.