

Software Installation

This document provide instructions on setting up a development environment on your machine. The tools that you set up in this document are required to building App Engine applications in either Python or Java. The tools also allow you to the option of running the applications locally and deploying them to App Engine.

Important: The instructions given below need to be run on your machine. It assumes that you have the rights to install the software.

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Additional Software for Java Development

If you prefer Java as your development language, then ensure that the following is setup on your machine:

Java 7 JDK

App Engine supports Java 7. Make sure you have [Java 7 JDK](#) installed and that JDK is available in the PATH.

Execute **java -version** from the command line / terminal and ensure that it works and is Java 7.

Gradle

Gradle is the preferred build tool to build, run and deploy your App Engine Java applications. This course makes use of Gradle build files (build.gradle) for the App Engine projects that are available with each project source code.

To install Gradle, follow the steps given below:

1. Visit the [Gradle Downloads](#) web page. Click on the Binary only distribution download link. This will download a file to your machine with the following name format : gradle-<version>-bin.zip.
2. Expand the gradle-<version>-bin.zip file in a folder and note down this folder. Let us call this the folder as GRADLE_HOME.
3. Add GRADLE_HOME/bin folder to the PATH environment variable.
4. Open a Command Line / Terminal on your machine and type **gradle -v** . This should execute the Gradle launcher and print the Gradle version.

Google Cloud SDK

Google Cloud SDK gives you tools and libraries to create and manage resources on Google Cloud Platform.

Python 2.7.x

The SDK requires that you have Python 2.7+ setup on your machine. So if you do not have that, visit the [Python Downloads page](#) and install a 2.7+ version for your Operation System (Windows, Mac or Linux).

Set Up Google Cloud SDK (MacOS, Linux)

1. Download and install Google Cloud SDK by running the following command in your shell or Terminal:

```
curl https://sdk.cloud.google.com/ | bash
```

2. If you are developing in Java, follow the prompts to install the Java App Engine package or if you are developing in Python, follow the prompts to install the Python package.
3. Restart your shell or Terminal to pick up environment changes.
4. Sign in to Google Cloud Platform using this command:

```
gcloud auth login
```

5. (if using Java) Install the App Engine package for Java using this command:

```
gcloud components update gae-java
```

6. (if using Python) Install the App Engine package for Java using this command:

```
gcloud components update gae-python
```

Set Up Google Cloud SDK (Windows)

1. Download and launch the [Google Cloud SDK installer](#). If you are using Java, remember to select the App Engine SDK for Java at the installation step where it asks you for which components to install.
2. Open a Command Prompt (cmd.exe) or the Google Cloud SDK Shell from Desktop or Start Menu.
3. Sign in to Google Cloud Platform using this command:

```
gcloud auth login
```

4. (if using Java) Install the App Engine package for Java using this command:

```
gcloud components update gae-java
```

5. (if using Python) Install the App Engine package for Python using this command:

```
gcloud components update gae-python
```