



★ **Google App Engine**

Installing the Java SDK

You develop and upload Java applications for Google App Engine using the App Engine Java software development kit (SDK).

The SDK includes software for a web server that you can run on your own computer to test your Java applications. The server simulates all of the App Engine services, including a local version of the datastore, Google Accounts, and the ability to fetch URLs and send email from your computer using the App Engine APIs.

Getting Java

Google App Engine supports Java 5 and Java 6. When your Java application is running on App Engine, it runs using the Java 6 virtual machine (JVM) and standard libraries. Ideally, you should use Java 6 for compiling and testing your application to ensure that the local server behaves similarly to App Engine.

For developers that don't have easy access to Java 6 (such as developers using Mac OS X), the App Engine SDK is compatible with Java 5. You can upload compiled classes and JARs made with Java 5 to App Engine.

If necessary, [download and install the Java SE Development Kit \(JDK\) for your platform](#). Mac users, see [Apple's Java developer site](#) to download and install the latest version of the Java Developer Kit available for Mac OS X.

Once the JDK is installed, run the following commands from a command prompt (for Windows, Command Prompt; for Mac OS X, Terminal) to verify that you can run the commands, and to determine which version is installed. If you have Java 6 installed, these commands will report a version number similar to `1.6.0`. If you have Java 5 installed, the version number will be similar to `1.5.0`.

```
java -version  
  
javac -version
```

Using Eclipse and the Google Plugin for Eclipse

If you are using [the Eclipse development environment](#), the easiest way to develop, test and upload App Engine apps is to use the [Google Plugin for Eclipse](#). The plugin includes everything you need to build, test and deploy your app, entirely within Eclipse.

The plugin is available for Eclipse versions 3.3, 3.4, and 3.5. You can install the plugin using the Software Update feature of Eclipse. The installation locations are as follows:

- The Google Plugin for Eclipse, for Eclipse 3.3 (Europa):

```
http://dl.google.com/eclipse/plugin/3.3
```

- The Google Plugin for Eclipse, for Eclipse 3.4 (Ganymede):

```
http://dl.google.com/eclipse/plugin/3.4
```

- The Google Plugin for Eclipse, for Eclipse 3.5 (Galileo):

```
http://dl.google.com/eclipse/plugin/3.5
```

For details on how to use Software Update to install the plugin, and how to create a new project, see [Using the Google Eclipse Plugin](#).

Getting the SDK

If you are using Eclipse and the Google Plugin, you can install the App Engine SDK from Eclipse using Software Update. If you haven't already, install the "Google App Engine Java SDK" component using the locations above.

If you are not using Eclipse or the Google Plugin, you can download the App Engine Java SDK as a Zip archive.

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