



Google App Engine

The Java Development Server

The App Engine Java SDK includes a development web server for testing your application on your computer. The development web server simulates the App Engine Java runtime environment and all of its services, including the datastore. The [Google Plugin for Eclipse](#) can run the server in the Eclipse debugger. You can also run the development server from the command line.

- [Running the Development Web Server](#)
- [Using the Datastore](#)
- [Using Users](#)
- [Using URL Fetch](#)
- [The Development Console](#)
- [Command-Line Arguments](#)

Running the Development Web Server

If you are using Eclipse and the Google Plugin, you can run the development web server in the Eclipse debugger. To run the server with the default configuration, select the **Run** menu, **Debug As > Web Application**. For more control over how the server is started, such as which port the server uses, create a new debug configuration using the configuration type "Web Application". For more information, see [Google Eclipse Plugin](#).

Note: When you start the development server from within Eclipse using the Google Plugin for Eclipse (discussed later), the server uses the port 8888 by default. When you start the server using the `dev_appserver` command described below, it uses the port 8080 by default. You can change the port number used by the `dev_appserver` command by providing the `--port=...` argument.

You can also run the development web server from a command prompt. The command to run is in the SDK's `appengine-java-sdk/bin/` directory.

If you are using Windows, the command is as follows:

```
appengine-java-sdk\bin\dev_appserver.cmd [options] war-location
```

If you are using Mac OS X or Linux, the command is as follows:

```
appengine-java-sdk/bin/dev_appserver.sh [options] war-location
```

The command takes the location of your application's WAR directory as an argument.

To stop the web server, press Control-C (on Windows, Mac or Linux).

These commands are OS-specific wrapper scripts that run the Java class `com.google.appengine.tools.KickStart` in `appengine-java-sdk/lib/appengine-tools-api.jar`.

Using the Datastore

The development web server simulates the App Engine datastore using a file on your computer. The file is named `local_db.bin`, and it is created in your application's WAR directory, in the `WEB-INF/appengine-generated/` directory. (It is not uploaded with your application.)

This file persists between invocations of the web server, so data you store will still be available the next time you run the web server. To clear the contents of the datastore, shut down the server, then delete this file.

As described in [Datastore Index Configuration](#), the development server can generate configuration for datastore indexes needed by your application, determined from the queries it performs while you are testing it. This generates a file named `datastore-indexes-auto.xml` in the directory `WEB-INF/appengine-generated/` in the WAR. To disable automatic index configuration, create or edit the `datastore-indexes.xml` file in the `WEB-INF/` directory, using the attribute `autoGenerate="false"` for the `<datastore-indexes>` element. See [Datastore Index Configuration](#) for more information.

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