Google code

Google App Engine

Uploading and Managing a Java App

The App Engine Java SDK includes a command for interacting with App Engine. You can use this command to upload new versions of the code, configuration and static files for your app to App Engine. You can also use the command to manage datastore indexes and download log data.

Uploading the App

If you are using Eclipse and the Google Plugin, you can upload your application directly from within Eclipse. To upload the app, click the App Engine deploy button in the toolbar: For more information, see Google Eclipse Plugin.

You can also upload your application from a command prompt. To use other features of the command, such as downloading logs, you must run the command from the 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\appcfg.cmd [options] <action> <war-location>
```

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

```
./appengine-java-sdk/bin/appcfg.sh [options] <action> <war-location>
```

The command takes the name of an action to perform and the location of your application's WAR directory as arguments.

To upload an application, use the `update` action, as follows:

```
./appengine-java-sdk/bin/appcfg.sh update myapp/war
```

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

Updating Indexes

When you upload an application using the `update` action, the update includes the app's index configuration (the `datastore-indexes.xml` and `generated/datastore-indexes-auto.xml` files). If the index configuration defines an index that doesn't exist yet on App Engine, App Engine creates the new index. Depending on how much data is already in the datastore that needs to be mentioned in the new index, the process of creating the index may take a while. If the app performs a query that requires an index that hasn't finished building yet, the query will raise an exception.

To prevent this, you must ensure that the new version of the app that requires a new index is not the live version of the application until the indexes finish building. One way to do this is to give the app a new version number in `appengine-web.xml` whenever you add or change an index in the configuration. The app is uploaded as a new version, and does not become the default version automatically. When your indexes have finished building, you change the default version to the new one using the "Versions" section of the Admin Console.

Another way to ensure that new indexes are built before the new app goes live is to upload the index configuration separately before uploading the app. To upload only the index configuration for an app, use the `update_indexes` action: