

# GCP Fundamentals: Getting Started with App Engine

## Overview

In this lab, you create a simple App Engine application using the Cloud Shell local development environment, and then deploy it to App Engine.

## Objectives

In this lab, you learn how to perform the following tasks:

- Preview an App Engine application using Cloud Shell.
- Launch an App Engine application.
- Disable an App Engine application.

## Task 1: Sign in to the Google Cloud Platform (GCP) Console

### What you'll need

To complete this lab, you'll need:

- Access to a standard internet browser (Chrome browser recommended).
- Time. Note the lab's **Completion** time in Qwiklabs. This is an estimate of the time it should take to complete all steps. Plan your schedule so you have time to complete the lab. Once you start the lab, you will not be able to pause and return later (you begin at step 1 every time you start a lab).
- The lab's **Access** time is how long your lab resources will be available. If you finish your lab with access time still available, you will be able to explore the Google Cloud Platform or work on any section of the lab that was marked "if you have time". Once the Access time runs out, your lab will end and all resources will terminate.
- You **DO NOT** need a Google Cloud Platform account or project. An account, project and associated resources are provided to you as part of this lab.
- If you already have your own GCP account, make sure you do not use it for this lab.
- If your lab prompts you to log into the console, **use only the student account provided to you by the lab**. This prevents you from incurring charges for lab activities in your personal GCP account.

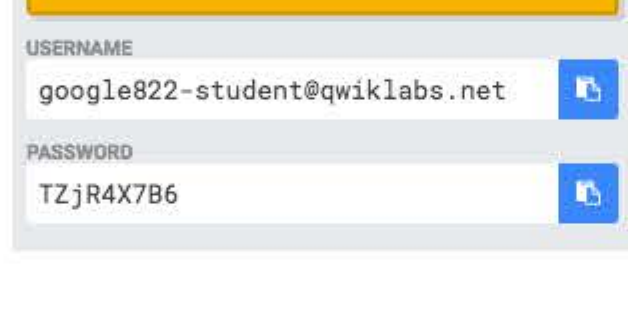
### Start your lab

When you are ready, click **Start Lab**. You can track your lab's progress with the status bar at the top of your screen.

**Important** What is happening during this time? Your lab is spinning up GCP resources for you behind the scenes, including an account, a project, resources within the project, and permission for you to control the resources needed to run the lab. This means that instead of spending time manually setting up a project and building resources from scratch as part of your lab, you can begin learning more quickly.

### Find Your Lab's GCP Username and Password

To access the resources and console for this lab, locate the Connection Details panel in Qwiklabs. Here you will find the account ID and password for the account you will use to log in to the Google Cloud Platform:



If your lab provides other resource identifiers or connection-related information, it will appear on this panel as well.

## Task 2: Preview an App Engine application

- On the **Google Cloud Platform** menu, click **Activate Cloud Shell** . If a dialog box appears, click **Start Cloud Shell**.

- Clone the source code repository for a sample application called **guestbook**:

```
git clone https://github.com/GoogleCloudPlatform/appengine-guestbook-python
```

- Navigate to the source directory:

```
cd appengine-guestbook-python
```

- List the contents of the directory:

```
ls -l
```

- View the **app.yaml** file and note its structure:

```
cat app.yaml
```

YAML is a templating language. YAML files are used for configuration of many Google Cloud Platform services, although the valid objects and specific properties vary with the service. This file is an App Engine YAML file with **handlers** and **libraries**. A Cloud Deployment Manager YAML file, for example, would have different objects.

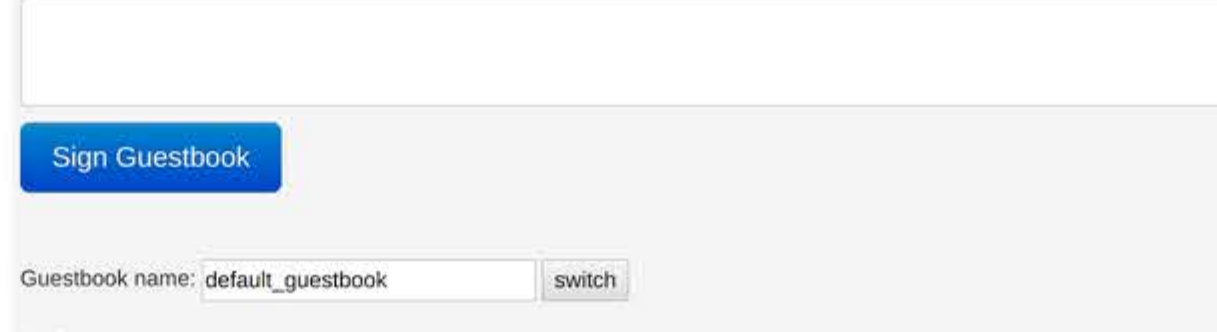
- Run the application using the built-in App Engine development server.

The App Engine development server is now running the guestbook application in the local Cloud Shell. It is using other development tools, including a local simulation of Datastore.

- In **Cloud Shell**, click **Web preview**  **> Preview on port 8080** to preview the application.


To access the **Web preview** icon, you may need to collapse the **Navigation menu**.

Result:



- Try the application. Make a few entries in Guestbook, and click **Sign Guestbook** after each entry.

- Using the Google Cloud Platform Console, verify that the app is not deployed. In the

GCP Console, on the **Navigation menu** (  ), click **App Engine > Dashboard**.

Notice that no resources are deployed. The App Engine development environment is local.

- To end the test, return to Cloud Shell and press **Ctrl+C** to abort the **App Engine development server**.

## Task 3: Deploy the Guestbook application to App Engine

Ensure that you are at the Cloud Shell command prompt.

- Deploy the application to App Engine using this command:

```
gcloud app deploy ./index.yaml ./app.yaml
```

If prompted for a region, enter the number corresponding to the region that Qwiklabs or your instructor assigned you to. Type **Y** to continue.

- To view the startup of the application, in the GCP Console, on the **Navigation menu** (  ), click **App Engine > Dashboard**.

You may see messages about "Create Application". Keep refreshing the page periodically until the application is deployed.

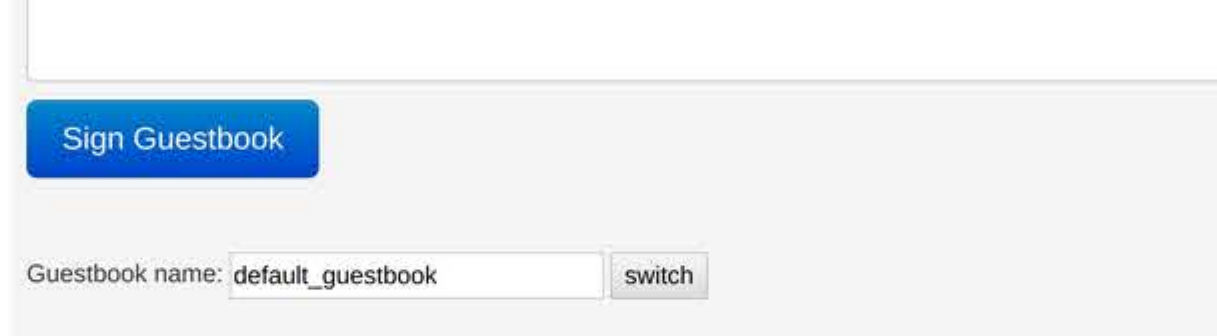
- View the application on the Internet. The URL for your application is `https://PROJECT_ID.appspot.com/` where **PROJECT\_ID** represents your Google Cloud Platform project name. This URL is listed in two places:

- The output of the deploy command: `Deployed service [default] to [https://PROJECT_ID.appspot.com]`
- The upper-right pane of the App Engine Dashboard

Copy and paste the URL into a new browser window.

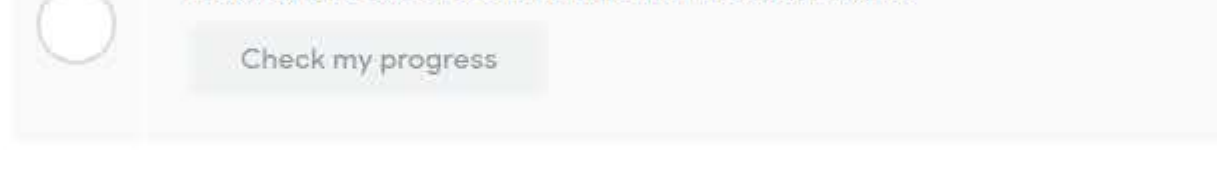
You may see an **INTERNAL SERVER ERROR**. If you read to the bottom of the page, you will see that the error is caused because the Datastore Index is not yet ready. This is a transient error. It takes some time for Datastore to prepare and begin serving the Index for guestbook. After a few minutes, you will be able to refresh the page and see the guestbook application interface.

Result:



Congratulations! You created your first application using App Engine, including exercising the local development environment and deploying it. It is now available on the internet for all users.

Click **Check my progress** to verify the objective.



## Task 4: Disable the application

App Engine offers no option to **undeploy** an application. After an application is deployed, it remains deployed, although you could instead replace the application with a simple page that says something like "not in service."

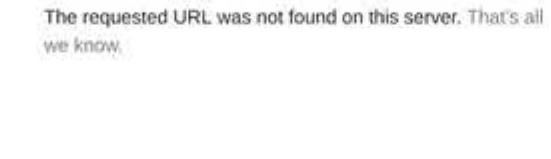
However, you can disable the application, which causes it to no longer be accessible to users.

- In the GCP Console, on the **Navigation menu** (  ), click **App Engine > Settings**.

- Click **Disable application**.

- Read the dialog message. Enter the App ID and click **DISABLE**.

If you refresh the browser window you used to view to the application site, you'll get a 404 error.



## Congratulations!

In this lab, you deployed an application on App Engine.

## End your lab

When you have completed your lab, click **End Lab**. Qwiklabs removes the resources you've used and cleans the account for you.

You will be given an opportunity to rate the lab experience. Select the applicable number of stars, type a comment, and then click **Submit**.

The number of stars indicates the following:

- 1 star = Very dissatisfied
- 2 stars = Dissatisfied
- 3 stars = Neutral
- 4 stars = Satisfied
- 5 stars = Very satisfied

You can close the dialog box if you don't want to provide feedback.

For feedback, suggestions, or corrections, please use the **Support** tab.

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## More resources

Read a [detailed explanation of this example App Engine application](#).



## Overview

### Objectives

Task 1: Sign in to the Google Cloud Platform (GCP) Console

Task 2: Preview an App Engine application

Task 3: Deploy the Guestbook application to App Engine

Task 4: Disable the application

End your lab

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