Lab Overview: Getting Started with Cloud Storage

Overview	In this lab you explore Google App Engine using the Guestbook sample application. Guestbook uses Cloud Storage to store application data. You deploy the application to the App Engine production environment, and then you verify it.

Duration	The timing of this lab is as follows:

Component	Timing
Introduction	5 minutes
Lab	25 minutes
Total	**30 minutes**

What you need	To complete this lab, you need:

- The Google Cloud SDK installed and configured on your labs instance
- A Google Cloud project and project ID

What you will learn	In this lab, you:

- Deploy an App Engine application that uses Cloud Storage to the production environment
- Enable the Google Cloud Storage API for your Application
- Create a Google Cloud Storage bucket to store your data
- Use the Google Cloud Storage Browser to view the objects in your bucket

Java Lab: Getting Started with Cloud Storage

Overview   In this lab, you explore Google App Engine using the Guestbook sample application. The application used in this lab writes application data to Cloud Storage. In the lab you:

- Deploy an App Engine application to the production environment
- Create a Google Cloud Storage bucket to store your data
- Use the Google Cloud Storage Browser to view the objects in your bucket

Create a bucket   Before deploying your application, you create a Google Cloud Storage bucket to store your data. To create a bucket:

Step	Action
1	Access the Google Developers Console by typing the following URL in your browser: **https://console.developers.google.com**
2	In the navigator pane, click the **Gallery** icon (to the left of Google Developers Console at the top of the page).
3	Click **Storage > Browser**.
4	Click **Create bucket**.
5	In the 'New bucket' dialog: ● For **Name**, type: **cp100_bucket_<your_initials>** and replace <your_initials> with the first letter of your first, middle, and last name. Bucket names must be unique. If the name you type is in use, modify the name so it is unique. ● Accept the default storage class - **Standard**. ● For **Location** choose the appropriate geographic area for your bucket. ● Click **Create**.

Google Cloud Platform

Clone the project

When you created your Compute Engine labs instance, you installed Git on the machine. In this section of the lab, you use Git to clone the repository containing your application.

To clone the project:

Step	Action
1	In the Google Developers Console, click the **Gallery** icon.
2	Click **Compute Engine > VM instances**.
3	To the right of the **cp100-labs** instance, in the **Connect** column, click **SSH**.

4	Type the following command to clone the code repository.
	
	`git clone \`
	`https://github.com/GoogleCloudPlatformTraining/`
	`cp100-appengine-cloudstorage-python.git`

5	Leave the SSH connection open.

Deploy the app

To deploy and test the Guestbook application:

Step	Action
1	In the SSH window, type the following command to change to the cp100-appengine-cloudstorage-python directory. `cd cp100-appengine-cloudstorage-python`
2	Type the following command to open **guestbook.py** in a text editor. `nano guestbook.py` If you are comfortable with Linux, you may use any

		plain text editor to open the file instead of nano. **Important**: Open this file in a simple text editor. Do not use a rich text editor.
	3	Replace the value cp100_bucket with your bucket name, leaving the quotes around the value (use the arrow keys to move the cursor). For example: **BUCKET_NAME = 'cp100_bucket_jad'** **Note**: The application code stores Guestbook entries in Cloud Storage as objects with unique names. Each Cloud Storage object contains the text from the Guestbook entry.
	4	Save and close the file. **Note**: In nano, **Ctrl+X**, then **Y**, then **Enter** closes the file and saves your changes.
	6	To deploy the application to production, type the following command and replace <Project ID> with the ID of your cp100 project. You can view your Project ID in the title bar of the SSH window (just after /projects/). **appcfg.py -A <Project ID> update . --noauth_local_webserver**
	7	When the application is successfully deployed, open your browser, type the following URL, and replace <Project ID> with the ID of your cp100 project. **http://<Project ID>.appspot.com** Leave the Guestbook tab open.
	8	Switch to your SSH window and type **exit** to close it.

View data   Once you have deployed the application, you can use the Cloud Storage browser to view the application data in your bucket. To view data using the Cloud Storage browser:

Step	Action
1	On the Guestbook tab in your browser, create a few entries in the Guestbook application. It is normal to see existing entries on the page.
2	In the Google Developers Console, click **Gallery > Storage > Browser**.
3	Click your bucket name and examine the list of objects. You can click an object and download it to your machine, or you can click it to view it in your browser.
4	Close the Guestbook tab. Leave the Google Developers Console open.

Clean up   To clean up the resources used in the lab:

Step	Action
1	In the Google Developers Console, click the **Buckets** link at the top of the page. You may also click **Browser** in the navigator.
2	Check the bucket you created and then click **Delete**.