

# (1)AK8S-02 Working with Cloud Build

## Objectives

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

- Use Cloud Build to build and push containers
- Use Container Registry to store and deploy containers

← AK8S-02 Working with Cloud Build

End Lab

00:39:08

Open Google Console

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)

Username

student-04-7c6292cb9005@

Password

cF3QwR7g2xy

GCP Project ID

qwiklabs-gcp-04-cad575bf

```
Container process caused 'exec: "/bin/echo": file not found in $PATH": unknown "
-----
ERROR: (gcloud.builds.submit) build f3e94c28-fba4-4012-a419-48e90fca7491 completed with status "FAILURE"
```

4. Confirm that your command shell knows that the build failed:

echo \$?

The command will reply with a non-zero value. If you had embedded this build in a script, your script would be able to act up on the build's failure.

Click *Check my progress* to verify the objective.

✓

Build and Test Containers with a build configuration file and Cloud Build

Check my progress

Overview

Objectives

Task 0. Lab Setup

Task 1. Confirm that needed APIs are enabled

Task 2. Building Containers with DockerFile and Cloud Build

Task 3. Building Containers with a build configuration file and Cloud Build

Task 4. Building and Testing Containers with a build configuration file and Cloud Build

End your lab

10/10

# (2)AK8S-03 Creating a GKE Cluster via GCP Console

## Objectives

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

- Use the GCP Console to build and manipulate GKE clusters
- Use the GCP Console to deploy a Pod
- Use the GCP Console to examine the cluster and Pods

The screenshot displays the Google Cloud Platform (GCP) console interface during a lab session. The top navigation bar shows the lab title "AK8S-03 Creating a GKE Cluster via GCP Console" and a timer at 00:56:46. On the left, a sidebar contains a "Caution" message and fields for Username, Password, and GCP Project ID. The main content area is titled "Kubernetes Engine" and shows a list of clusters. A cluster named "standard-cluster-1" is highlighted with a green checkmark. Below the cluster list, a "Deploy GKE cluster" button is visible, along with a "Check my progress" button. On the right, a sidebar lists the lab's objectives and tasks. The bottom of the screen shows a detailed view of the "standard-cluster-1" cluster, including its location, size, and status.

End Lab 00:56:46

Open Google Console

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)

Username  
student-03-399f2bcc5fcf@

Password  
hpQ2XV5s69Lyh

GCP Project ID  
qwiklabs-gcp-03-68c9a495

Kubernetes Engine

Kubernetes clusters

CREATE CLUSTER DEPLOY REFRESH DELETE

A Kubernetes cluster is a managed group of VM instances for running containerized applications. [Learn more](#)

Filter by label or name

| Name               | Location      | Cluster size | Total cores | Total memory | Workload status | Labels |
|--------------------|---------------|--------------|-------------|--------------|-----------------|--------|
| standard-cluster-1 | us-central1-a | 3            | 3 vCPUs     | 11.25 GB     | Connect         |        |

Click *Check my progress* to verify the objective.

Deploy GKE cluster

Check my progress

5. Click the cluster name **standard-cluster-1** to view the cluster details

Google Cloud Platform

qwiklabs-gcp-ddeb083b1672285

Kubernetes Engine

Clusters EDIT DELETE DEPLOY CONNECT

standard-cluster-1

Pods Storage Nodes

Chat

End Lab

00:42:38

Open Google Console

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)

Username

student-03-399f2bcc5fcf@

Password

hpQ2XV5s69Lyh

GCP Project ID

qw1klabs-gcp-03-68c9a495

Cluster

standard-cluster-1

Namespaces

default

Labels

app: nginx-1

Logs

Container logs: [Audit logs](#)

Replicas

3 updated, 3 ready, 3 available, 0 unavailable

Pod specification

Revision 1, containers: nginx

Active revisions

| Revision | Name    | Status | Summary | Created on               | Ready | Public running | Public total |
|----------|---------|--------|---------|--------------------------|-------|----------------|--------------|
| 1        | nginx-1 | Ready  | nginx   | Dec 16, 2016, 1:00:15 PM | 3/3   |                |              |

Click [Check my progress](#) to verify the objective.

Deploy a sample nginx workload

Check my progress

We're having trouble checking your progress. Try again later.

Overview

Objectives

Task 0. Lab Setup

Task 1. Deploy GKE clusters

Task 2. Modify GKE clusters

Task 3. Deploy a sample workload

Task 4. View details about workloads in the GCP Console

End your lab

5/10

Chat

## (3)Building a DevOps Pipeline

### Objectives

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

- Create a Git repository
- Create a simple Python application
- Test Your web application in Cloud Shell
- Define a Docker build
- Manage Docker images with Cloud Build and Container Registry
- Automate builds with triggers
- Test your build changes

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← Building a DevOps Pipeline

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End Lab

01:02:56

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked.  
[Learn more.](#)

Open Google Console

Username

student-02-ee7ddcca3842@

Password

H7TZP8HWrx

GCP Project ID

qwiklabs-gcp-02-6b49a0ca

4. When the machine is created, test your change by making a request to the VM's external IP address in your browser. Your new message should be displayed.

You might have to wait a few minutes after the VM is created for the Docker container to start.

Click *Check my progress* to verify the objective.

Test your Build Changes.

Check my progress

## Congratulations!

In this lab, you built a continuous integration pipeline using the Google Cloud tools Cloud Source Repositories, Cloud Build, build triggers, and Container Registry.

Overview

20/20

Objectives

Set up your lab environment

Task 1: Create a Git Repository

Task 2: Create a Simple Python Application

Task 3: Test Your Web Application in Cloud Shell

Task 4: Define a Docker Build

Task 5: Manage Docker Images with Cloud Build and Container Registry

Task 6: Automate Builds with Triggers

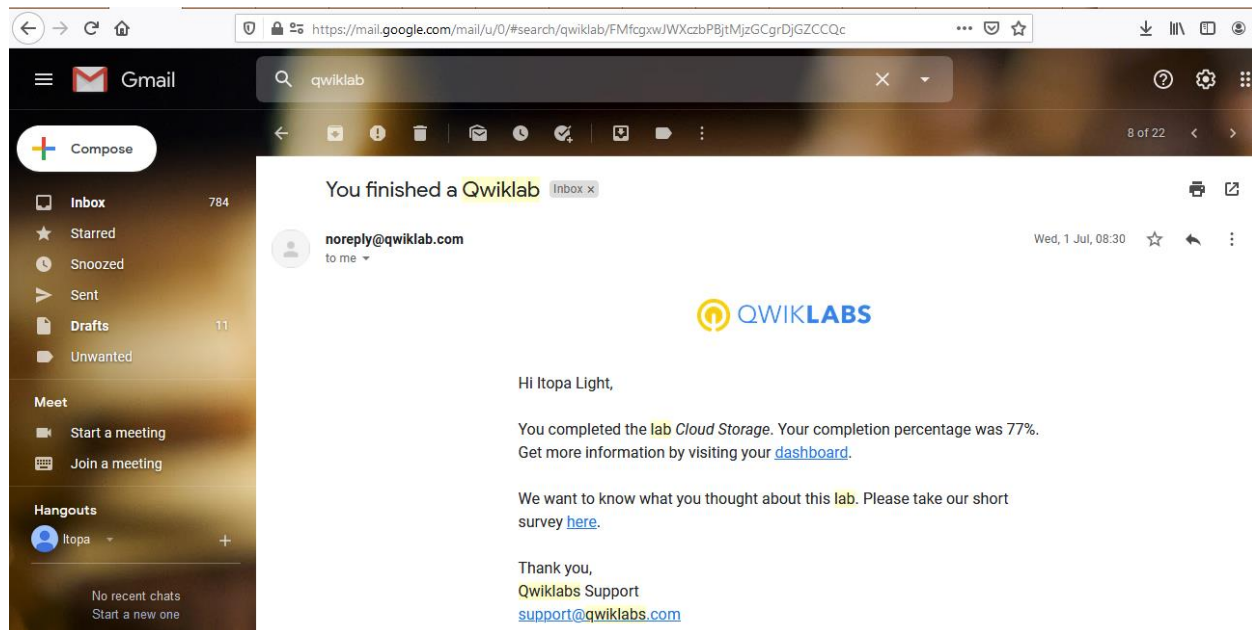
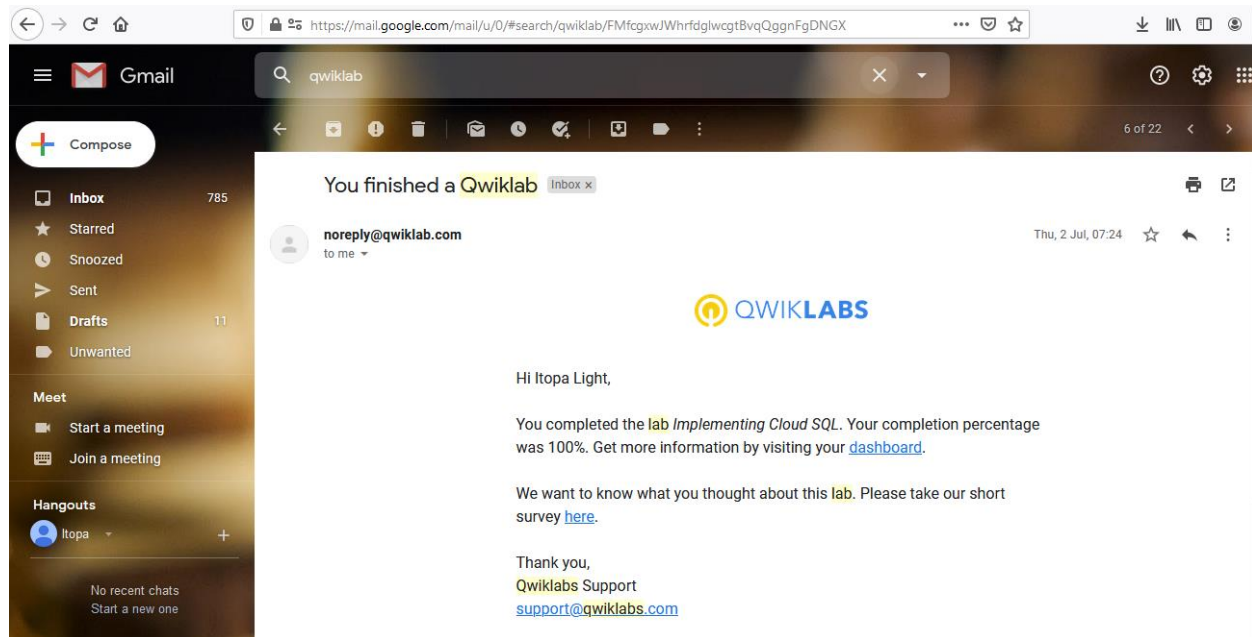
Task 7: Test Your Build Changes

Congratulations!

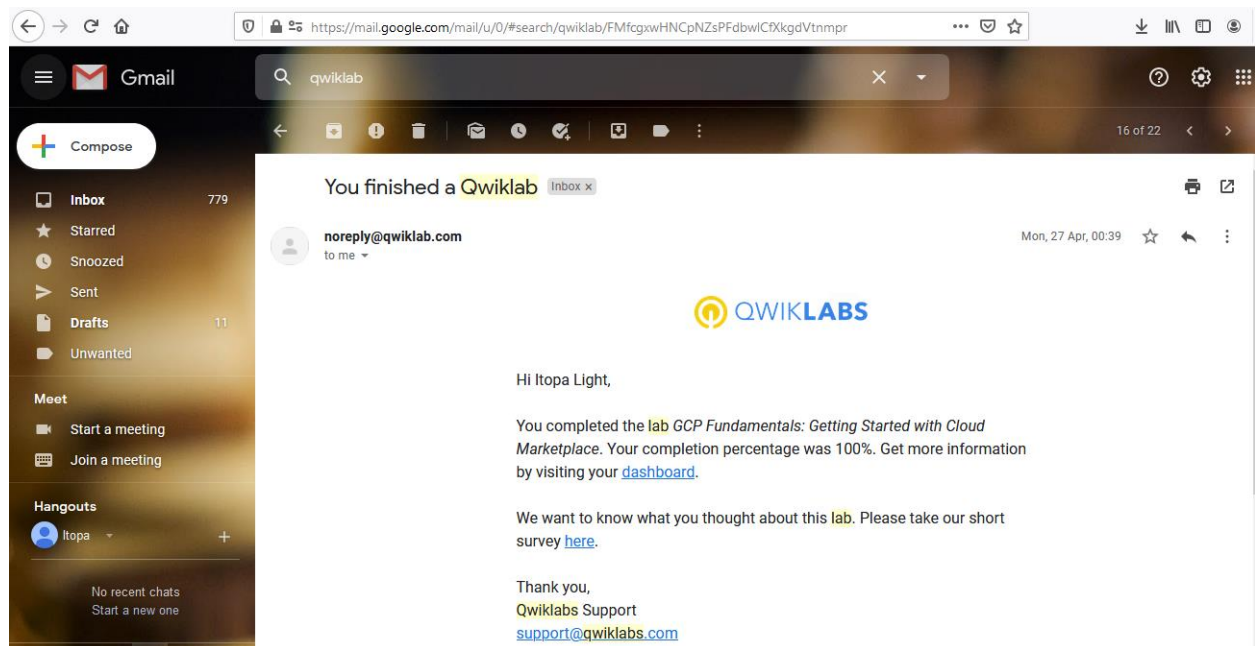
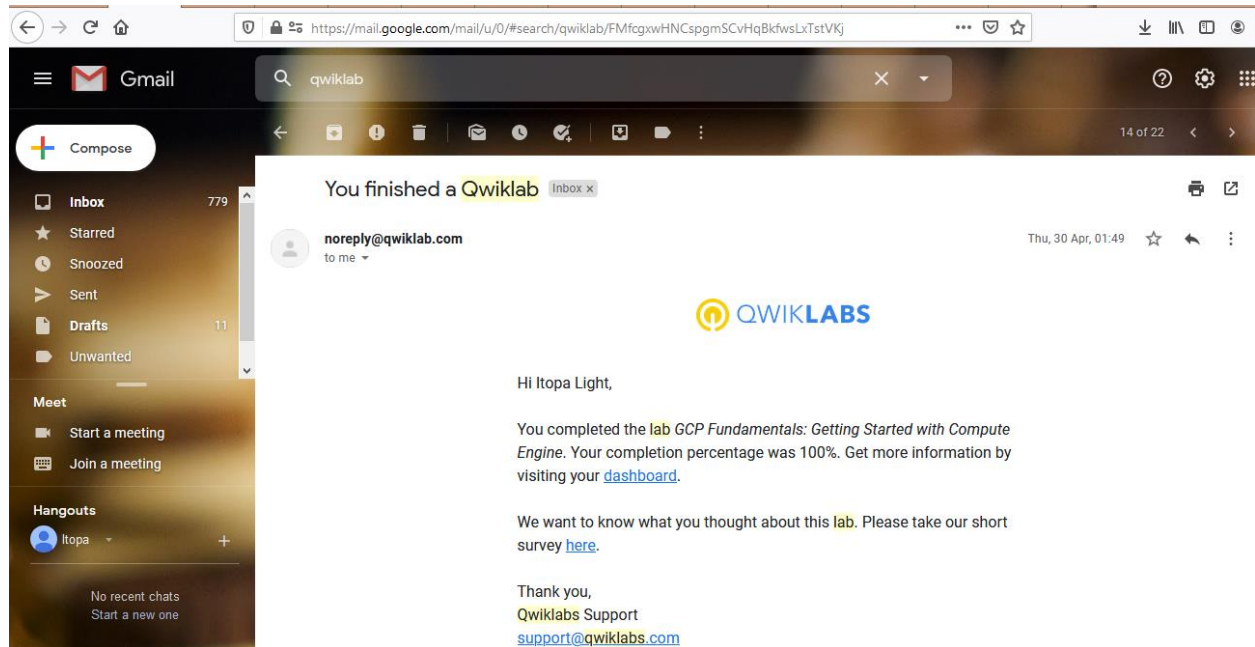
End your lab

Chat

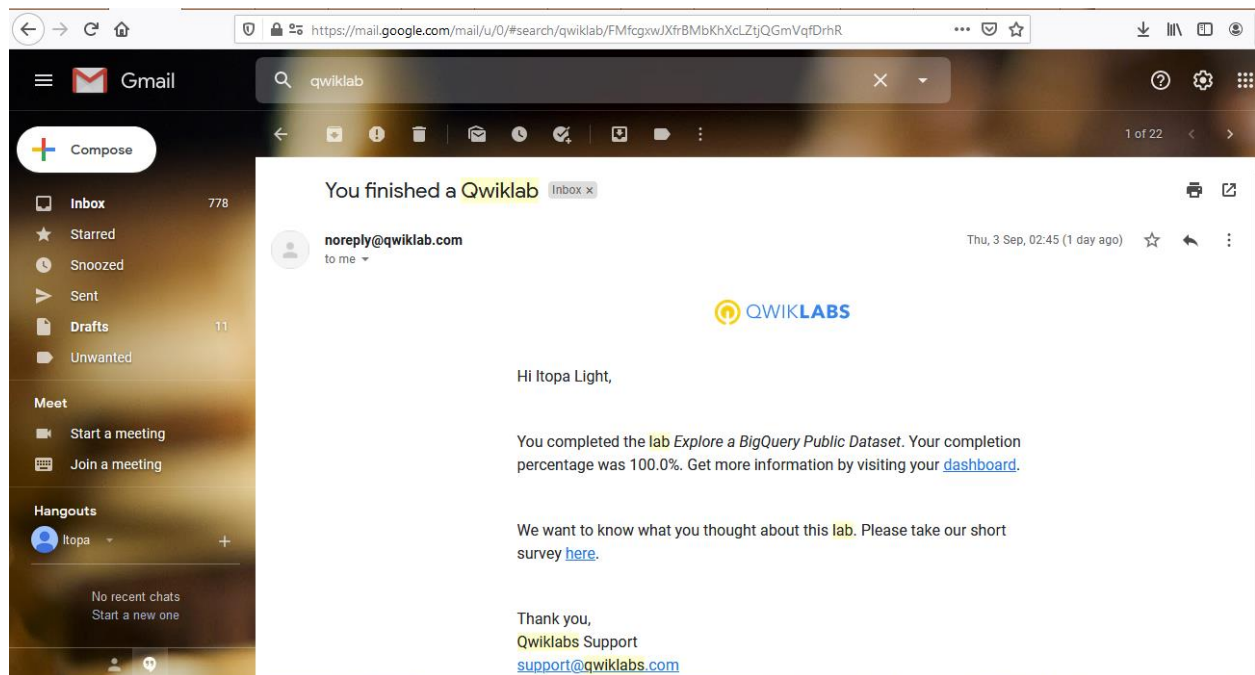
## (4)Implementing Cloud SQL



## (5)GCP Fundamentals: Getting Started with Compute Engine



## (6) Explore a BigQuery Public Dataset



# (7)Google Cloud Fundamentals: Getting Started with Cloud Storage and Cloud SQL Objectives

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

- Create a Cloud Storage bucket and place an image into it.
- Create a Cloud SQL instance and configure it.
- Connect to the Cloud SQL instance from a web server.
- Use the image in the Cloud Storage bucket on a web page.

Instance can take about two minutes to launch and be fully available for use.

12. On the **VM instances** page, copy the **bloghost** VM instance's internal and external IP addresses to a text editor for use later in this lab.

Click *Check my progress* to verify the objective.

Deploy a web server VM instance

Check my progress

**Task 3: Create a Cloud Storage bucket using the gsutil command line**

All Cloud Storage bucket names must be globally unique. To ensure that your bucket

Overview

Objectives

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

Task 2: Deploy a web server VM instance

Task 3: Create a Cloud Storage bucket using the gsutil command line

Task 4: Create the Cloud SQL instance

Task 5: Configure an application in a Compute Engine instance to use Cloud SQL

Task 6: Configure an application in a Compute Engine instance to use a Cloud Storage object

Congratulations!

End your lab

More resources

Chat

Google Cloud Platform

Search products and resources

Compute Engine

VM instances

Instance groups

Instance templates

Sole-tenant nodes

Filter VM instances

| Name     | Zone          | Recommendation | In use by | Internal IP       | External IP   | Connect |
|----------|---------------|----------------|-----------|-------------------|---------------|---------|
| bloghost | us-central1-a |                |           | 10.128.0.2 (nic0) | 34.122.163.88 | SSH     |

Cloud Shell

Terminal

```
(qwiklabs-gcp-00-9d53d62e9702) $
```

```
Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to qwiklabs-gcp-00-9d53d62e9702.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
student_00_63b7f1b22e00@cloudshell:~ (qwiklabs-gcp-00-9d53d62e9702) $ export LOCATION=US
student_00_63b7f1b22e00@cloudshell:~ (qwiklabs-gcp-00-9d53d62e9702) $ export DEVSHLL_PROJECT_ID=qwiklabs-gcp-00-9d53d62e9702
student_00_63b7f1b22e00@cloudshell:~ (qwiklabs-gcp-00-9d53d62e9702) $ gsutil mb -l $LOCATION gs://$DEVSHLL_PROJECT_ID
Creating gs://qwiklabs-gcp-00-9d53d62e9702/...
student_00_63b7f1b22e00@cloudshell:~ (qwiklabs-gcp-00-9d53d62e9702) $ gsutil cp gs://cloud-training/gcpfci/my-excellent-blog.png my-excellent-blog.png
Copying gs://cloud-training/gcpfci/my-excellent-blog.png...
/ [1 files] [ 8.2 KiB/ 8.2 KiB]
Operation completed over 1 objects/8.2 KiB.
student_00_63b7f1b22e00@cloudshell:~ (qwiklabs-gcp-00-9d53d62e9702) $ gsutil cp my-excellent-blog.png gs://$DEVSHLL_PROJECT_ID/my-excellent-blog.png
Copying file://my-excellent-blog.png [Content-Type=image/png]...
/ [1 files] [ 8.2 KiB/ 8.2 KiB]
Operation completed over 1 objects/8.2 KiB.
student_00_63b7f1b22e00@cloudshell:~ (qwiklabs-gcp-00-9d53d62e9702) $ gsutil acl ch -u allUsers:R gs://$DEVSHLL_PROJECT_ID/my-excellent-blog.png
Updated acl on gs://qwiklabs-gcp-00-9d53d62e9702/my-excellent-blog.png
student_00_63b7f1b22e00@cloudshell:~ (qwiklabs-gcp-00-9d53d62e9702) $
```



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← Google Cloud Fundamentals: Getting Started with Cloud Storage and Cloud SQL

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End Lab

00:38:19

Open Google Console

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)

Username

student-00-63b7f1b22e00@

Password

4TG7DMj jk6

GCP Project ID

qwiklabs-gcp-00-9d53d62e

Region

us-central1

Zone

us-central1-a

5. Copy the banner image to your newly created Cloud Storage bucket:

```
gsutil cp my-excellent-blog.png gs://$DEVSHELL_PROJECT_ID/my-excellent-blog.png
```

6. Modify the Access Control List of the object you just created so that it is readable by everyone:

```
gsutil acl ch -u allUsers:R gs://$DEVSHELL_PROJECT_ID/my-excellent-blog.png
```

Click *Check my progress* to verify the objective.

✓

Create a Cloud Storage bucket using the gsutil command line

Check my progress

Overview

Objectives

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

Task 2: Deploy a web server VM instance

Task 3: Create a Cloud Storage bucket using the gsutil command line

Task 4: Create the Cloud SQL instance

Task 5: Configure an application in a Compute Engine instance to use Cloud SQL

Task 6: Configure an application in a Compute Engine instance to use a Cloud Storage object

Congratulations!

End your lab

More resources

10/15

Chat

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← Google Cloud Fundamentals: Getting Started with Cloud Storage and Cloud SQL

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End Lab

00:27:00

Open Google Console

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)

Username

student-00-63b7f1b22e00@

Password

4TG7DMj jk6

GCP Project ID

qwiklabs-gcp-00-9d53d62e

Region

us-central1

Zone

us-central1-a

35.192.288.2/32

Be sure to use the external IP address of your VM instance followed by /32. Do not use the VM instance's internal IP address. Do not use the sample IP address shown here.

16. Click **Done** to finish defining the authorized network.

17. Click **Save** to save the configuration change.

Click *Check my progress* to verify the objective.

✓

Create the Cloud SQL instance

Check my progress

Overview

Objectives

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

Task 2: Deploy a web server VM instance

Task 3: Create a Cloud Storage bucket using the gsutil command line

Task 4: Create the Cloud SQL instance

Task 5: Configure an application in a Compute Engine instance to use Cloud SQL

Task 6: Configure an application in a Compute Engine instance to use a Cloud Storage object

Congratulations!

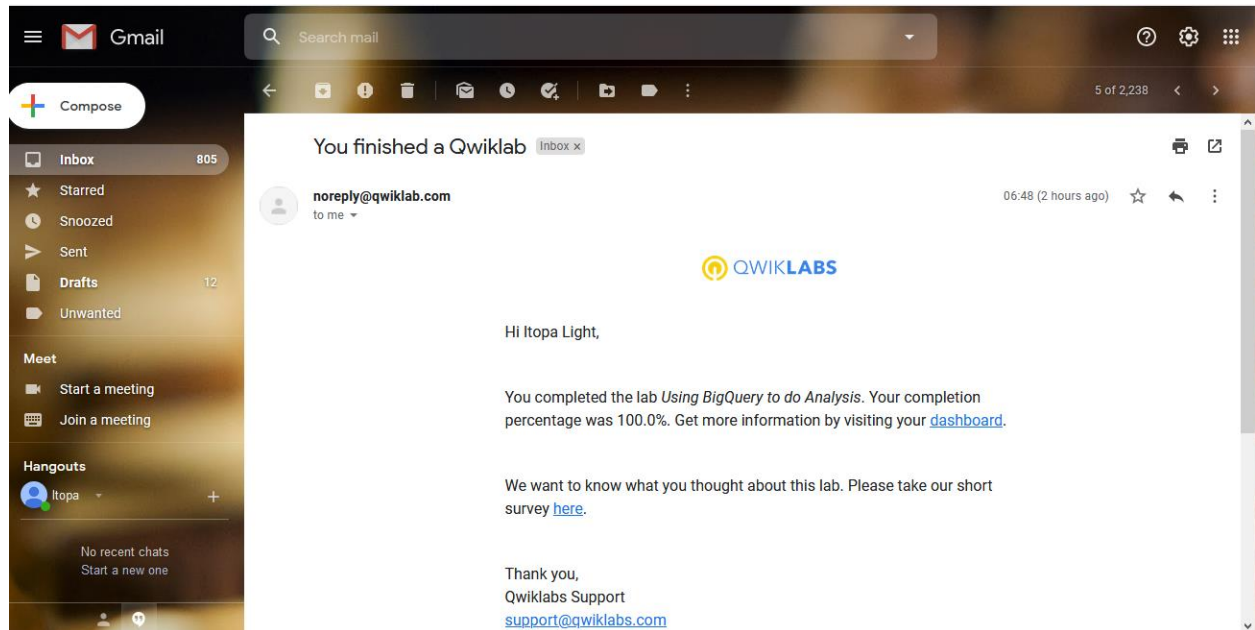
End your lab

More resources

15/15

Chat

## (8) Using BigQuery to Do Analysis



# (9)Loading Taxi Data into Google Cloud SQL

## Objectives

- Create Cloud SQL instance
- Create a Cloud SQL database
- Import text data into Cloud SQL
- Check the data for integrity

← Loading Taxi Data into Google Cloud SQL

End Lab 00:43:43

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)

Open Google Console

Username  
student-04-df19a1b94fa5@

Password  
MR5BQyf63tT9

GCP Project ID  
qwiklabs-gcp-04-b67757c9

### Test Completed Task

Click **Check my progress** to verify your performed task. If you have completed the task successfully you will be granted with an assessment score.

✓

Create a Cloud SQL instance and trips table.

Check my progress

In the `mysql` command line interface check the import by entering the following commands:

```
describe trips;
```

Query the `trips` table:

```
select distinct(pickup_location_id) from trips;
```

Overview 15/15

Objectives

Setup and Requirements

Preparing your Environment

Create a Cloud SQL instance

Add data to Cloud SQL instance

Checking for data integrity

End your lab

Chat

# (10)Deploying Apps to Google Cloud Objectives

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

- Download a sample app from GitHub
- Deploy to App Engine
- Deploy to Kubernetes Engine
- Deploy to Cloud Run

The screenshot shows a web browser window with the URL `googlepluralsight.qwiklabs.com/fociuses/11045719`. The page title is "Deploying Apps to Google Cloud". On the left, there is a sidebar with a red "End Lab" button, a timer at "00:52:07", and a "Caution" message. Below this is a "Open Google Console" button and a form with fields for "Username" (student-03-4c4023122481@), "Password" (nmZX6cHTG5), and "GCP Project ID" (qwiklabs-gcp-03-fef2dfad). The main content area has a "Hello Cloud Run." message and a "Deploy to Cloud Run" button with a green checkmark. Below this is a "Check my progress" button. A "Congratulations!" message follows, stating: "In this lab, you deployed applications to the Google Cloud services App Engine, Kubernetes Engine, and Cloud Run." On the right, there is a sidebar with a "15/15" badge and a list of tasks: "Overview", "Objectives", "Set up your lab environment", "Task 1: Download a sample app from GitHub", "Task 2: Deploy to App Engine", "Task 3: Deploy to Kubernetes Engine", "Task 4: Deploy to Cloud Run" (highlighted), "Congratulations!", and "End your lab". A "Chat" button is at the bottom right.

End Lab 00:52:07

Caution: When you are in the console, do not deviate from the lab instructions. Doing so may cause your account to be blocked. [Learn more.](#)

[Open Google Console](#)

Username  
student-03-4c4023122481@

Password  
nmZX6cHTG5

GCP Project ID  
qwiklabs-gcp-03-fef2dfad

Hello Cloud Run.

Click *Check my progress* to verify the objective.

Deploy to Cloud Run

Check my progress

**Congratulations!**

In this lab, you deployed applications to the Google Cloud services App Engine, Kubernetes Engine, and Cloud Run.

Overview  
Objectives  
Set up your lab environment  
Task 1: Download a sample app from GitHub  
Task 2: Deploy to App Engine  
Task 3: Deploy to Kubernetes Engine  
Task 4: Deploy to Cloud Run  
Congratulations!  
End your lab

15/15

Chat