

# Google Cloud Fundamentals: Getting Started with Cloud Marketplace Objectives

In this lab, you learn how to launch a solution using Cloud Marketplace.

← Google Cloud Fundamentals: Getting Started with Cloud Marketplace

End Lab

00:17:50

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-01-9969870f4ab8@

Password  
5tBPcdm9z

After the software is installed, a summary of the details for the instance, including the site address, is displayed.

Click *Check my progress* to verify the objective.

✓

Use Cloud Marketplace to deploy a LAMP stack

Check my progress

Overview

Objectives

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

Task 2: Use Cloud Marketplace to deploy a LAMP stack

Task 3: Verify your deployment

Congratulations!

End your lab

More resources

10/10

Compose

Inbox 846

Starred

Snoozed

Sent

Drafts 11

Unwanted

Meet

Start a meeting

Join a meeting

Hangouts

Itopa

No recent chats  
Start a new one


Search mail

2 of 2,344

You finished a Qwiklab

noreply@qwiklab.com to me

14:22 (44 minutes ago)



Hi Itopa Light,

You completed the lab *Google Cloud Fundamentals: Getting Started with Cloud Marketplace*. Your completion percentage was 100.0%. Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

Thank you,  
Qwiklabs Support

new message from noreply@qwiklab.com [Show](#) [log](#)

# Google Cloud Fundamentals: Getting Started with Compute Engine Objectives

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

- Create a Compute Engine virtual machine using the Google Cloud Platform (GCP) Console.
- Create a Compute Engine virtual machine using the gcloud command-line interface.
- Connect between the two instances.

googlepluralsight.qwiklabs.com/focuses/11413185?parent=lti\_session

Google Cloud Fundamentals: Getting Started with Compute Engine

End Lab 00:17:50

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-00-93c6c27bb231@

Password  
bfQrd6jGF9wS

GCP Project ID  
qwiklabs-gcp-00-2f351822

Region  
us-central1

## Congratulations!

In this lab, you created virtual machine (VM) instances in two different zones and connected to them using ping, ssh, and HTTP.

## 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.

Overview 10/10

Objectives

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

Task 2: Create a virtual machine using the GCP Console

Task 3: Create a virtual machine using the gcloud command line

Task 4: Connect between VM instances

Congratulations!

End your lab

More Resources

Compose

Inbox 845

Starred

Snoozed

Sent

Drafts 11

Unwanted

Meet

Start a meeting

Join a meeting

Hangouts

Itopa

No recent chats  
Start a new one

noreply@qwiklab.com  
to me

28 Sep 2020, 22:48 (8 hours ago)

QWIKLABS

Hi Itopa Light,

You completed the lab *Google Cloud Fundamentals: Getting Started with Compute Engine*. Your completion percentage was 100.0%. Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

Thank you,  
Qwiklabs Support

# 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.

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

End Lab

00:17:09

Warning: 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-01-734461341349@

Password

..xKRv8D2n3C

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

15/15

Compose

Inbox 845

Starred

Snoozed

Sent

Drafts 11

Unwanted

Meet

Start a meeting

Join a meeting

Hangouts

Itopa

No recent chats

Start a new one

Search mail

2 of 2,344

noreply@qwiklab.com


to me

15:07 (1 minute ago)

☆

↶

⋮



Hi Itopa Light,

You completed the lab *Google Cloud Fundamentals: Getting Started with Cloud Storage and Cloud SQL*. Your completion percentage was 100.0%. Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

Thank you,  
Qwiklabs Support

# Google Cloud Fundamentals: Getting Started with GKE

## Objectives

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

- Provision a [Kubernetes](#) cluster using [Kubernetes Engine](#).
- Deploy and manage Docker containers using `kubectl`.

The screenshot shows the Google Cloud Fundamentals: Getting Started with GKE lab interface. The top navigation bar is blue with the title "Google Cloud Fundamentals: Getting Started with GKE". Below the bar, the lab title "Google Cloud Fundamentals: Getting Started with GKE" is repeated. On the left, there is a sidebar with a red "End Lab" button, a timer showing "00:23:08", and a "Caution" message. Below the caution, there is a "Open Google Console" button and a form for "Username", "Password", "GCP Project ID", and "Region". The main content area shows a terminal window with the command `kubectl get services`. Below the terminal, there is a list of tasks: "9. Return to the web browser tab in which you viewed your cluster's external IP address. Refresh the page to confirm that the nginx web server is still responding." and "Click Check my progress to verify the objective." A green checkmark icon indicates that the objective "Run and deploy a container" has been completed. A "Check my progress" button is also visible. On the right, there is a sidebar with a "10/10" score and a list of tasks: "Task 1: Sign in to the Google Cloud Platform (GCP) Console", "Task 2: Confirm that needed APIs are enabled", "Task 3: Start a Kubernetes Engine cluster", and "Task 4: Run and deploy a container". Below the tasks, there is a "Congratulations!" message and a link to "End your lab".

The screenshot shows a Qwiklab completion email. The email is from `noreply@qwiklab.com` to the user. The subject is "You finished a Qwiklab". The email body contains the Qwiklabs logo, a greeting "Hi Itopa Light," and a message stating: "You completed the lab Google Cloud Fundamentals: Getting Started with GKE. Your completion percentage was 100.0%. Get more information by visiting your [dashboard](#)." Below this, there is a link to a survey: "We want to know what you thought about this lab. Please take our short survey [here](#)." The email is dated "Mon, 28 Sep, 22:09 (9 hours ago)".

# Google Cloud Fundamentals: Getting Started with App Engine Objectives

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

- Initialize App Engine.
- Preview an App Engine application running locally in Cloud Shell.
- Deploy an App Engine application, so that others can reach it.
- Disable an App Engine application, when you no longer want it to be visible.

The screenshot shows the lab interface for "Google Cloud Fundamentals: Getting Started with App Engine". At the top, there's a navigation bar with the lab title and a user profile icon. Below the bar, on the left, is a sidebar with a red "End Lab" button, a timer showing "00:08:30", and a "Caution" message. Below the caution is a button to "Open Google Console". Underneath are fields for "Username" (student-00-fd5f32b37269@), "Password" (8vp9YckfV), "GCP Project ID" (qwiklabs-gcp-00-4027fc63), and "Region". The main content area has a "Congratulations!" heading, followed by the text "You created your first application using App Engine!". Below this is a section titled "End your lab" with instructions to click "End Lab" when finished. On the right side, there's a table of contents with links to "Overview", "Objectives", "Set up your lab environment", "Task 1: Initialize App Engine", "Task 2: Run Hello World application locally", "Task 3: Deploy and run Hello World on App Engine", "Task 4: Disable the application", "Congratulations!", and "End your lab". A yellow badge in the top right corner of the table of contents shows "10/10".

The screenshot shows an email from "noreply@qwiklab.com" to "me" (Itopa Light), dated "28 Sep 2020, 22:29 (8 hours ago)". The email body features the Qwiklabs logo and a congratulatory message: "Hi Itopa Light, You completed the lab Google Cloud Fundamentals: Getting Started with App Engine. Your completion percentage was 100.0%. Get more information by visiting your [dashboard](#)." Below this, it says "We want to know what you thought about this lab. Please take our short survey [here](#)." and ends with "Thank you, Qwiklabs Support". The email is viewed in a Gmail interface, with a sidebar on the left showing the "Compose" button and various folders like "Inbox" (846), "Starred", "Snoozed", "Sent", "Drafts" (11), and "Unwanted". The "Meet" section shows options to "Start a meeting" or "Join a meeting". The "Hangouts" section shows a chat with "Itopa" and a note "No recent chats. Start a new one".

# Google Cloud Fundamentals: Getting Started with Deployment Manager and Cloud Monitoring Objectives

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

- Create a Deployment Manager deployment.
- Update a Deployment Manager deployment.
- View the load on a VM instance using Cloud Monitoring.

operation was completed successfully.

End Lab 00:31:01

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-01-15b7d99a8b8f@

Password  
R72wsnkpCQ

GCP Project ID  
qwiklabs-gcp-01-53505a59

Region

6. In the GCP console, on the **Navigation menu** (☰), click **Compute Engine > VM instances**.

7. Click on the **my-vm** VM instance's name to open its **VM instance details** pane.

8. Scroll down to the **Custom metadata** section. Confirm that the startup script has been updated to the value you declared in your Deployment Manager template.

Click *Check my progress* to verify the objective.

Update the Deployment Manager deployment

Check my progress

It doesn't look like you've completed this step yet. Try again.

Overview

Objectives

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

Task 2: Confirm that needed APIs are enabled

Task 3: Create a Deployment Manager deployment

Task 4: Update a Deployment Manager deployment

Task 5: View the Load on a VM using Cloud Monitoring

End your lab

Compose

Inbox 846

Starred

Snooked

Sent

Drafts 11

Unwanted

Meet

Start a meeting

Join a meeting

Hangouts

Itopa

No recent chats  
Start a new one

noreply@qwiklab.com  
to me

28 Sep 2020, 23:10 (8 hours ago)

QWIKLABS

Hi Itopa Light,

You completed the lab *Google Cloud Fundamentals: Getting Started with Deployment Manager and Cloud Monitoring*. Your completion percentage was 50.0%. Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

Thank you,  
Qwiklabs Support  
[support@qwiklabs.com](mailto:support@qwiklabs.com)



# Google Cloud Fundamentals: Getting Started with BigQuery

## Objectives

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

- Load data from Cloud Storage into BigQuery.
- Perform a query on the data in BigQuery.

The screenshot shows the end of a lab on the Qwiklabs platform. At the top, a blue header bar reads "Google Cloud Fundamentals: Getting Started with BigQuery". Below this, on the left, is a sidebar with a red "End Lab" button, a timer at "00:20:23", and a caution note. The main area displays "Congratulations!" and a summary of the lab tasks. On the right, a vertical sidebar lists the lab's objectives and tasks, with a "10/10" score badge at the top.

**End Lab** 00:20:23

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-00-804d31b43cc9@

Password  
25HWSbstr5

GCP Project ID  
qwiklabs-gcp-00-ec681d93

## Congratulations!

In this lab, you loaded data stored in Cloud Storage into a table hosted by Google BigQuery. You then queried the data to discover patterns.

## 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.

Overview 10/10

Objectives

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

Task 2: Load data from Cloud Storage into BigQuery

Task 3: Perform a query on the data using the BigQuery web UI

Task 4: Perform a query on the data using the bq command

Congratulations!

End your lab

The screenshot shows an email interface with a sidebar on the left containing folders like "Compose", "Inbox", "Starred", "Snoozed", "Sent", "Drafts", and "Unwanted". The main email content is from "noreply@qwiklab.com" and includes the Qwiklabs logo, a greeting, a completion message, a survey link, and a sign-off.

Compose

Inbox 846

Starred

Snoozed

Sent

Drafts 11

Unwanted

Meet

Start a meeting

Join a meeting

Hangouts

Itopa

No recent chats  
Start a new one

2 of 2,354

noreply@qwiklab.com to me

28 Sep 2020, 23:15 (8 hours ago)

**QWIKLABS**

Hi Itopa Light,

You completed the lab *Google Cloud Fundamentals: Getting Started with BigQuery*. Your completion percentage was 100.0%. Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

Thank you,  
Qwiklabs Support

# Section 2

## Working with GCP Cloud Console and Cloud Shell Objectives

- Get access to Google Cloud.
- Create a Cloud Storage bucket using the Cloud Console.
- Create a Cloud Storage bucket using Cloud Shell.
- Become familiar with Cloud Shell features.

← Working with GCP Cloud Console and Cloud Shell

End Lab 00:32:20

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-02-2d91628f47dd@

Password  
MqXQ49k32vcT

GCP Project ID  
qwiklabs-gcp-02-cf86ba6a

• A path to automation through scripting

### 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:

Overview

Objectives

Task 1: Create a bucket using the Cloud Console

Task 2: Access Cloud Shell

Task 3: Create a bucket using Cloud Shell

Task 4: Explore more Cloud Shell features

Task 5: Create a persistent state in Cloud Shell

Task 6: Review the Google Cloud interface

End your lab

15/15

Compose

Inbox 860

Starred

Snoozed

Sent

Drafts 11

Unwanted

Meet

Start a meeting

Join a meeting

Hangouts

Itopa


No recent chats

Start a new one

noreply@qwiklab.com to me

29 Sep 2020, 22:07 (14 hours ago)

7 of 2,378



Hi Itopa Light,

You completed the lab *Working with GCP Cloud Console and Cloud Shell*. Your completion percentage was 100.0%. Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

Thank you,  
Qwiklabs Support  
[support@qwiklabs.com](mailto:support@qwiklabs.com)

ps://mail.google.com/mail/u/0/#inbox



# Infrastructure Preview

## Objectives

- Use Marketplace to build a Jenkins Continuous Integration environment.
- Verify that you can manage the service from the Jenkins UI.
- Administer the service from the Virtual Machine host through SSH.

Infrastructure Preview

End Lab

00:19:04

Warning: 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-04-9166de0aaab1@

Password

j6qCp5s8M8H9

GP Project ID

qwiklabs-gcp-04-6120d9e2

### 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

Overview

Objectives

Task 1: Use Marketplace to build a deployment

Task 2: Examine the deployment

Task 3: Administer the service

Task 4: Review

End your lab

10/10

Compose

Inbox 860

Starred

Snoozed

Sent

Drafts 11

Unwanted

Meet

Start a meeting

Join a meeting

Hangouts

Itopa

No recent chats


Start a new one

noreply@qwiklab.com

to me

29 Sep 2020, 22:22 (14 hours ago)

7 of 2,378



Hi Itopa Light,

You completed the lab *Infrastructure Preview*. Your completion percentage was 100.0%. Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

Thank you,  
Qwiklabs Support  
[support@qwiklabs.com](mailto:support@qwiklabs.com)

# VPC Networking

## Objectives

- Explore the default VPC network
- Create an auto mode network with firewall rules
- Convert an auto mode network to a custom mode network
- Create custom mode VPC networks with firewall rules
- Create VM instances using Compute Engine
- Explore the connectivity for VM instances across VPC networks

← VPC Networking

End Lab

00:47:02

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-01-d9e526c17de4e

Password

5fWrzG384nVJ

GCP Project ID

qwiklabs-gcp-01-9f64668e

✓ mynet-eu-vm

☐ privatenet-us-vm

☐ managementnet-us-vm

Submit

1. In the Cloud Console, on the **Navigation menu**, click **Compute Engine** > **VM instances**. Note the internal IP addresses for **mynet-eu-vm**, **managementnet-us-vm**, and **privatenet-us-vm**.
2. Return to the **SSH terminal** for **mynet-us-vm**.
3. To test connectivity to **mynet-eu-vm**'s internal IP, run the following command, replacing **mynet-eu-vm**'s internal IP:

```
ping -c 3 <Enter mynet-eu-vm's internal IP here>
```

You can ping the internal IP address of **mynet-eu-vm** because it is on the same

Overview

30/30

Task 1. Explore the default network

Task 2. Create an auto mode network

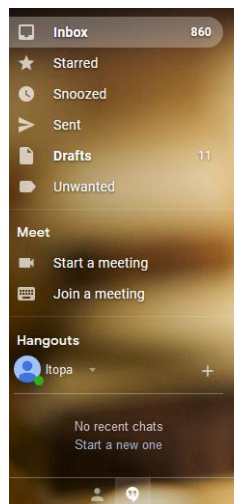
Task 3. Create custom mode networks

Task 4. Explore the connectivity across networks

Task 5. Review

End your lab

Chat



You finished a Qwiklab

Inbox x

noreply@qwiklab.com

to me

29 Sep 2020, 21:20 (15 hours ago)

QWIKLABS

Hi Itopa Light,

You completed the lab *VPC Networking*. Your completion percentage was 100.0%. Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

Thank you,  
Qwiklabs Support  
[support@qwiklabs.com](mailto:support@qwiklabs.com)

# Implement Private Google Access and Cloud NAT Objectives

- Configure a VM instance that doesn't have an external IP address
- Connect to a VM instance using an Identity-Aware Proxy (IAP) tunnel
- Enable Private Google Access on a subnet
- Configure a Cloud NAT gateway
- Verify access to public IP addresses of Google APIs and services and other connections to the internet.

[← Implement Private Google Access and Cloud NAT](#)?

End Lab

00:52:34

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-01-33d6c407414e@

Password

bRL674zhLYFr

GCP Project ID

qw1k1abs-gcp-01-79b1f22c

## 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

Overview

Task 1. Create the VM instance

Task 2. Enable Private Google Access

Task 3. Configure a Cloud NAT gateway

Task 4. Configure and view logs with Cloud NAT Logging

Task 5. Review

End your lab

15/15

Compose

Inbox 860

Starred

Shooved

Sent

Drafts 11

Unwanted

Meet

Start a meeting

Join a meeting

Hangouts

itopa

No recent chats

Start a new one

noreply@qwiklab.com

to me

29 Sep 2020, 21:59 (14 hours ago)

☆ ↶ ⋮

Hi Itopa Light,

You completed the lab *Implement Private Google Access and Cloud NAT*. Your completion percentage was 100.0%. Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

Thank you,  
Qwiklabs Support  
[support@qwiklabs.com](mailto:support@qwiklabs.com)

# Creating Virtual Machines

## Objectives

- Create several standard VMs
- Create advanced VMs

→ ↻ 🔒 googlepluralsight.qwiklabs.com/focuses/11489467?parent=lti\_session ☆ Incognito

Creating Virtual Machines ? 👤

End Lab 00:43:25

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-01-7d4931dced2d@

Password

d2xRSnjvGh9

GCP Project ID

qwiklabs-gcp-01-03335bcb

## 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

Overview

Objectives

Task 1: Create a utility virtual machine

Task 2: Create a Windows virtual machine

Task 3: Create a custom virtual machine

Task 4: Review

End your lab

15/15

# Working with Virtual Machines

## Objectives

- Customize an application server
- Install and configure necessary software
- Configure network access
- Schedule regular backups

End Lab 00:49:32

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-02-1bde06c1f66@

Password  
d8WNFRmHV94

GCP Project ID  
qwiklabs-gcp-02-f6f2cfb2

1. Click **mc-server**.
2. Click **Edit**.
3. For **Custom metadata**, specify the following:

Key	Value
startup-script-url	https://storage.googleapis.com/cloud-training/archinfra/mcserver/startup.sh
shutdown-script-url	https://storage.googleapis.com/cloud-training/archinfra/mcserver/shutdown.sh

You'll have to click **Add item** to add the shutdown-script-url. When you restart your instance, the startup script automatically mounts the Minecraft disk to the appropriate directory, starts your Minecraft server in a screen session, and detaches the session. When you stop the instance, the shutdown script shuts down your Minecraft server before the instance shuts down. It's a best practice to store these scripts in Cloud Storage.

Overview 20/25

Objectives

Task 1: Create the VM

Task 2: Prepare the data disk

Task 3: Install and run the application

Task 4: Allow client traffic

Task 5: Schedule regular backups

Task 6: Server maintenance

Task 7: Review

End your lab

Search mail

2 of 2,464

You finished a Qwiklab

noreply@qwiklab.com  
to me

07:55 (1 hour ago)

Hi Itopa Light,

You completed the lab *Working with Virtual Machines*. Your completion percentage was 80.0%. Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

Thank you,  
Qwiklabs Support  
[support@qwiklabs.com](mailto:support@qwiklabs.com)

9:00 AM  
10/8/2020

# Section 3

## Cloud IAM

### Objectives

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

- Use Cloud IAM to implement access control
- Restrict access to specific features or resources
- Use the Service Account User role

Cloud IAM

End Lab 00:25:23

Task 7: Explore the Service Account User role

At this point, you might have the user test access by connecting via SSH to the VM and performing the next actions. As the owner of the project, you already possess the Service Account User role. So you can simulate what the user would experience by just using SSH to access the VM from the Cloud Console.

The actions you perform and results will be the same as if you were the target user.

Use the Service Account User

1. For **demoiam**, click **SSH** to launch a terminal and connect.
2. Run the following command:

```
gcloud compute instances list
```

Task 7: Explore the Service Account User role

You finished a Qwiklab

noreply@qwiklab.com

11 Oct 2020, 22:10 (4 days ago)

Hi Itopa Light,

You completed the lab *Cloud IAM*. Your completion percentage was 80.0%.  
Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

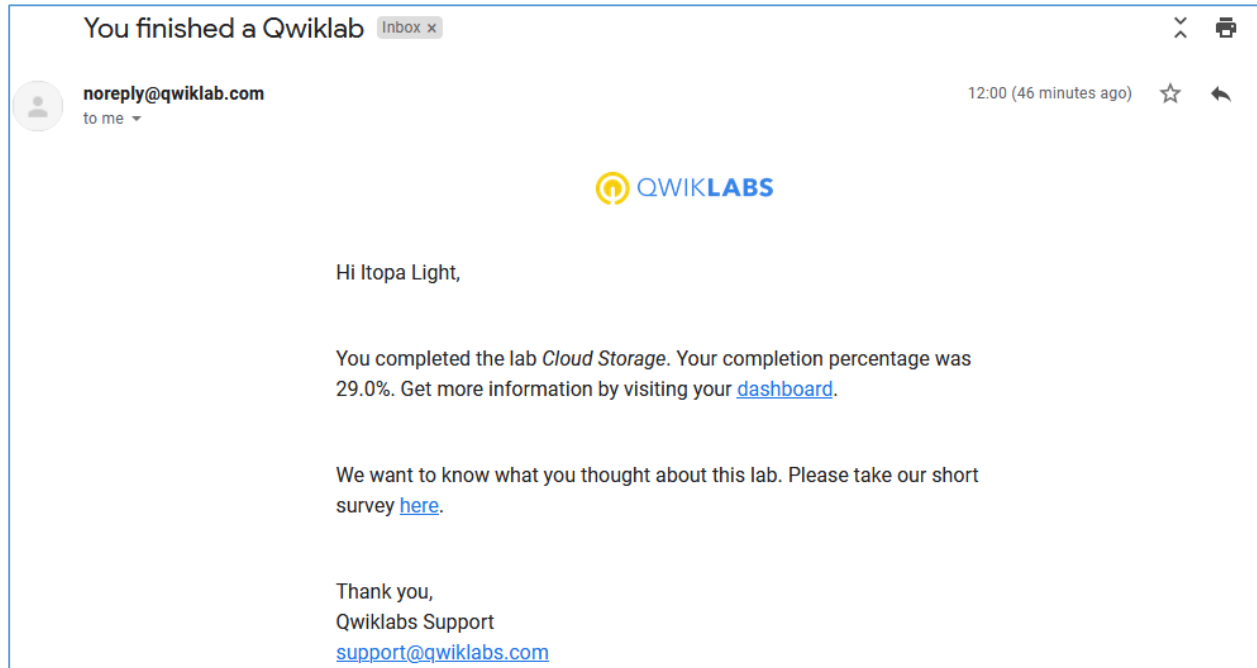
Thank you,  
Qwiklabs Support  
[support@qwiklabs.com](mailto:support@qwiklabs.com)



# Cloud Storage

## Objectives

- Create and use buckets
- Set access control lists to restrict access
- Use your own encryption keys
- Implement version controls
- Use directory synchronization
- Share a bucket across projects using IAM



# Implementing Cloud SQL Objectives

- Create a Cloud SQL database
- Configure a virtual machine to run a proxy
- Create a connection between an application and Cloud SQL
- Connect an application to Cloud SQL using Private IP address

Implementing Cloud SQL

End Lab 01:12:01

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-00-65ab19c0e25a@

Password  
cZNd6x3zgBNy

GCP Project ID  
qwiklabs-gcp-00-ba842c2a

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

Overview

Objectives

Task 1: Create a Cloud SQL database

Task 2: Configure a proxy on a virtual machine

Task 3: Connect an application to the Cloud SQL instance

Task 4: Connect to Cloud SQL via internal IP

Task 5: Review

End your lab


10/10

Chat

noreply@qwiklab.com

Mon, 12 Oct, 06:58 (3 days ago)

to me



Hi Itopa Light,

You completed the lab *Implementing Cloud SQL*. Your completion percentage was 100.0%. Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

Thank you,  
Qwiklabs Support  
[support@qwiklabs.com](mailto:support@qwiklabs.com)

# Examining Billing data with BigQuery

## Objectives

- Sign in to BigQuery from the Cloud Console
- Create a dataset
- Create a table
- Import data from a billing CSV file stored in a bucket
- Run complex queries on a larger dataset

Examining Billing data with BigQuery

End Lab

00:46:03

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

[Open Google Console](#)

Username

student-01-94549752e3a5@

Password

5j4D6Fh9

Project ID

qwiklabs-gcp-01-2211e640

### 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.

Copyright 2020 Google LLC All rights reserved. Google and the Google logo are trademarks of Google LLC. All other company and product names may be trademarks of their respective owners.

Overview

Objectives

Task 1: Use BigQuery to import data

Task 2: Examine the table

Task 3: Compose a simple query

Task 4: Analyze a large billing dataset with SQL

Task 5: Review

End your lab


10/10

Chat

noreply@qwiklab.com

Mon, 12 Oct, 07:16 (3 days ago)

to me



Hi Itopa Light,

You completed the lab *Examining Billing data with BigQuery*. Your completion percentage was 100.0%. Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

Thank you,  
Qwiklabs Support

# Resource Monitoring

## Objectives

- Explore Cloud Monitoring
- Add charts to dashboards
- Create alerts with multiple conditions
- Create resource groups
- Create uptime checks

**Resource Monitoring**

End Lab

00:23:31

Warning: 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-04-1eac4fd2e4e20

Password

/bW7wM8z

CP Project ID

qwiklabs-gcp-04-12051b58

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

✓

Create uptime monitoring

Check my progress

Overview

Objectives

Task 1: Create a Cloud Monitoring workspace

Task 2: Custom dashboards

Task 3: Alerting policies

Task 4: Resource groups

Task 5: Uptime monitoring

Task 6: Review

End your lab

10/10

Chat

### Task 6: Review

In this lab, you learned how to:

- Monitor your projects
- Create a Cloud Monitoring workspace
- Create alerts with multiple conditions
- Add charts to dashboards
- Create resource groups
- Create uptime checks for your services


You finished a Qwiklab

Inbox x

✕

🖨

🔗




Hi Itopa Light,

You completed the lab *Resource Monitoring*. Your completion percentage was 100.0%. Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

Thank you,  
Qwiklabs Support  
[support@qwiklabs.com](mailto:support@qwiklabs.com)

**noreply@qwiklab.com**  
to me ▾

Tue, 13 Oct, 16:02 (2 days ago) ☆ ↶ ⋮

# Error Reporting and Debugging

## Objectives

- Launch a simple Google App Engine application
- Introduce an error into the application
- Explore Cloud Error Reporting
- Use Cloud Debugger to identify the error in the code
- Fix the bug and monitor in Cloud Operations

← Error Reporting and Debugging

End Lab

00:42:28

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-a53404823c96@

Password

Vz4y7TLCDSb

GCP Project ID

qwiklabs-gcp-03-75779504

7. On the Cloud Error Reporting page, ensure that Auto Reload is enabled to and see that no new errors are added.

What would not be considered a benefit of Cloud Operations?

☐ Reduces monitoring overhead

☐ Multi-cloud monitoring

☒ Boosts all network performance

☐ Faster problem resolution

Submit

Overview

Objectives

Task 1: Create an application

Task 2: Explore Cloud Error Reporting

Task 3: Review


End your lab

10/10

noreply@qwiklab.com

Tue, 13 Oct, 16:21 (2 days ago)

to me



Hi Itopa Light,

You completed the lab *Error Reporting and Debugging*. Your completion percentage was 100.0%. Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

Thank you,  
Qwiklabs Support  
[support@qwiklabs.com](mailto:support@qwiklabs.com)

# Virtual Private Networks (VPN)

## Objectives

- Create VPN gateways in each network
- Create VPN tunnels between the gateways
- Verify VPN connectivity



# Automating the Deployment of Infrastructure Using Deployment Manager

## Objectives

- Create a configuration for an auto mode network
- Create a configuration for a firewall rule
- Create a template for VM instances
- Create and deploy a configuration
- Verify the deployment of a configuration

End Lab

00:27:54

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-00-168186720d7d0

password

KQdwQJ628

CP Project ID

qwiklabs-gcp-00-ddc46fd2

Click Check my progress to verify the objective.

Create network, firewall rules and VM instances

Check my progress

Overview

40/40

Task 1. Configure the network

Task 2. Configure the firewall rule

Task 3. Create a template for VM instances

Task 4. Deploy the configuration

Task 5. Verify your deployment

Task 6. Review

End your lab

## Task 5. Verify your deployment

Verify your network in the Cloud Console

**noreply@qwiklab.com**  
to me

13:21 (1 hour ago)

Hi Itopa Light,

You completed the lab *Automating the Deployment of Infrastructure Using Deployment Manager*. Your completion percentage was 100.0%. Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

Thank you,  
Qwiklabs Support  
[support@qwiklabs.com](mailto:support@qwiklabs.com)

# Automating the Deployment of Infrastructure Using Terraform

## Objectives

- Create a configuration for an auto mode network
- Create a configuration for a firewall rule
- Create a module for VM instances
- Create and deploy a configuration
- Verify the deployment of a configuration

Automating the Deployment of Infrastructure Using Terraform

End Lab

00:27:50

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-01-4389abe7e7be@

Password

j8m5GqDx6H

GCP Project ID

qwiklabs-gcp-01-e232964c

yes

The output should look like this (**do not copy; this is example output**):

...  
Apply complete! Resources: 4 added, 0 changed, 0 destroyed.

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

✓

Create mynetwork and its resources

[Check my progress](#)

If you get an error during the execution, revisit the previous steps to ensure that you have the correct folder/file structure. If you cannot troubleshoot the issue of your configuration, refer to the finished configurations linked above. When you have corrected the issue, rerun the previous command.

Overview

Task 1. Set up Terraform and Cloud Shell

Task 2. Create mynetwork and its resources

Task 3. Verify your deployment

Task 4. Review

End your lab


10/10

noreply@qwiklab.com

to me

12:45 (0 minutes ago)

☆ ↶ ⋮



Hi Itopa Light,

You completed the lab *Automating the Deployment of Infrastructure Using Terraform*. Your completion percentage was 100.0%. Get more information by visiting your [dashboard](#).

We want to know what you thought about this lab. Please take our short survey [here](#).

Thank you,  
Qwiklabs Support  
[support@qwiklabs.com](mailto:support@qwiklabs.com)