

Google Cloud Fundamentals: Getting Started with Compute Engine

Overview

In this lab, you will create virtual machines (VMs) and connect to them. You will also create connections between the instances

Objectives

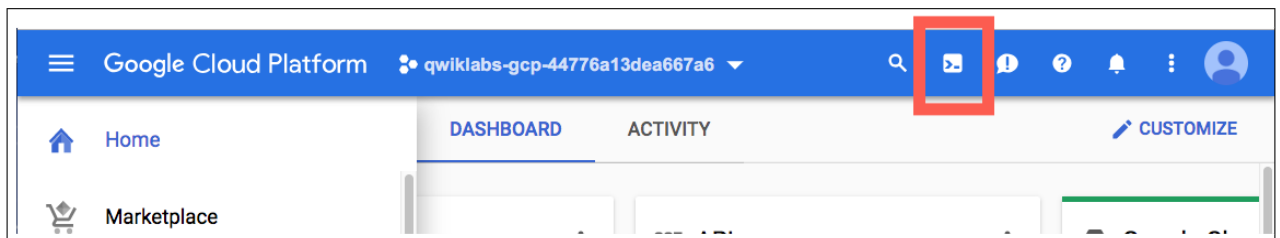
In this lab, you will learn how to perform the following tasks:

- 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.

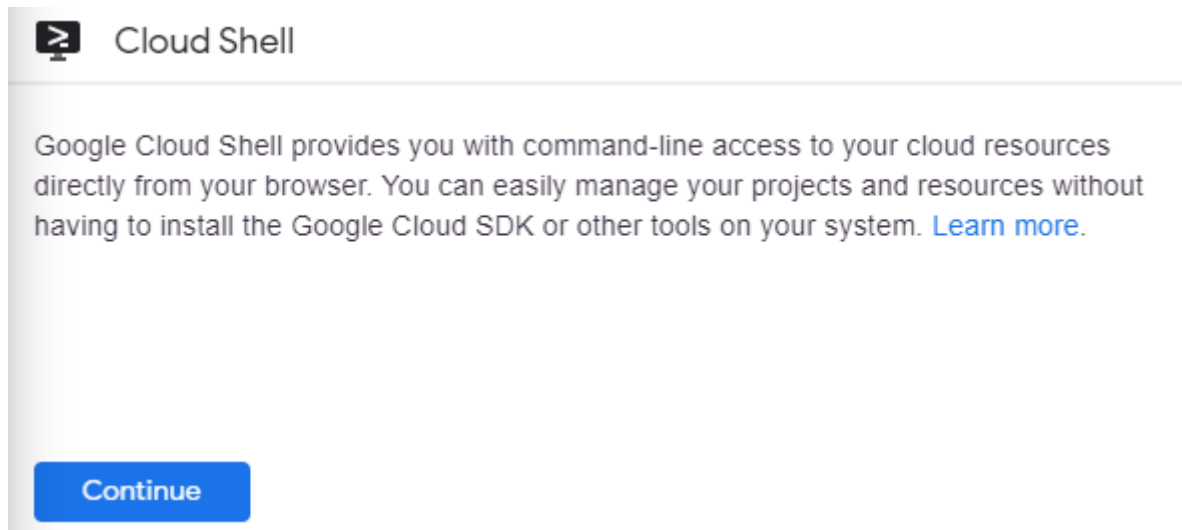
Steps:

1. Create a Virtual Machine Using the gcloud command line

1. In GCP console, on the top right toolbar, click Activate Cloud Shell button



2. Click Continue.



3. To create a VM instance called my-vm1

```
gcloud compute instances create "my-vm-1" \  
--machine-type "n1-standard-1" \  
--image-project "debian-cloud" \  
--image "debian-9-stretch-v20190213" \  
--subnet "default" \  
--tags http
```

```
gcloud compute firewall-rules create allow-http \  
--action=ALLOW \  
--destination=INGRESS \  
--rules=http:80 \  
--target-tags=http
```

2. Create another Virtual Machine Using the gcloud command line

1. To display a list of all the zones in the region to which Qwiklabs assigned you,

```
gcloud compute zones list | grep us-central1
```

2. Choose a zone from that list other than the zone to which Qwiklabs assigned you. For example, if Qwiklabs assigned you to region us-central1 and zone us-central1-a you might choose zone us-central1-b
3. To set your default zone to the one you just chose, enter this partial command gcloud config set compute/zone followed by the zone you chose.

Your completed command will look like this:

```
gcloud config set compute/zone us-central1-b
```

4. To create a VM instance called my-vm-2 in that zone, execute this command:

```
gcloud compute instances create "my-vm-2" \  
--machine-type "n1-standard-1" \  
--image-project "debian-cloud" \  
--image "debian-9-stretch-v20190213" \  
--subnet "default"
```

Note: The VM can take about two minutes to launch and be fully available for use.

3. Connect between VM instances.

Use the ping command to confirm that my-vm-2 can reach my-vm-1 over the network:

1. Connect SSH to my-vm-2:

```
gcloud compute ssh my-vm-2
```

2. ping my-vm-1 from my-vm-2

```
ping -c 4 my-vm-1
```

3. Use the ssh command to open a command prompt on my-vm-1 from my-vm-2:

```
ssh my-vm-1
```

If you are prompted about whether you want to continue connecting to a host with unknown authenticity, enter yes to confirm that you do.

4. At the command prompt on my-vm-1, install the Nginx web server:

```
sudo apt-get install nginx-light -y
```

5. Use the nano text editor to add a custom message to the home page of the web server:

```
sudo nano /var/www/html/index.nginx-debian.html
```

6. Use the arrow keys to move the cursor to the line just below the h1 header. Add text like this, and replace YOUR_NAME with your name:

```
Hi from joyceMimi
```

7. Press Ctrl+O and then press Enter to save your edited file, and then press Ctrl+X to exit the nano text editor.

8. Confirm that the web server is serving your new page. At the command prompt on my-vm-1, execute this command

```
curl http://localhost/
```

The response will be the HTML source of the web server's home page, including your line of custom text

9. To exit the command prompt on my-vm-1, execute this command:

```
exit
```

You will return to the command prompt on my-vm-2

1. To confirm that my-vm-2 can reach the web server on my-vm-1, at the command prompt on my-vm-2, execute this command:

```
curl http://my-vm-1/
```

The response will again be the HTML source of the web server's home page, including your line of custom text.

2. Now get the external IP of the my-vm-1 instance from this command:

```
gcloud compute instances list --zone us-central1-a
```

3. Paste the copied ip address of my-vm-1 into a new browser tab and hit enter.

Result: The response will again be the HTML source of the web server's home page, including your line of custom text

```
from: Mimi Joyce Addingi
```