**LAB:- 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 compute engine virtual machine using the Google Cloud Platform console**

gcloud compute instance create my-vm-1 --machine-type “n-standard-1” --image-project “debian-cloud” --image “debian-9-stretch-20190213” --subnet “default” --tags “http”

gcloud compute instance firewall-rules create allow-http --action=ALLOW --destination=INGRESS --rules=http80 --target-tags=http

1. **Create a compute engine virtual machine using the gcloud command-line interface**

gcloud config set compute/zone us-central1-b

gcloud compute instance create “my-vm-2” \ --machine-type “n1-standard-1” \ --image-project “debian-cloud” \ --image “debian-9-stretch-20190213” \ --subnet “default”

1. **Connect between the two VM instances**
2. Use the ping command to confirm that **my-vm-2** can reach **my-vm-1** over the network:

* Connect to **my-vm-2**

gcloud compute ssh my-vm-2

* Ping **my-vm-1** from **my-vm-2:**

ping -c 4 my-vm-1

* Use **SSH** command to open a command prompt on **my-vm-1 from** **my-vm-2:**

ssh my-vm-1

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

sudo app-get install nginx-light –y

* 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

* 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 Mohammed Ibrahim

* Exit the nano editor and 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 or result will be the HTML source of the web server's home page, including your line of custom text.

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

exit

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

* 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.

1. How to get the external IP address of **my-vm-1** from this command:

gcloud compute instances list --zone us-central1-b

1. Paste the copied IP address of **my-vm-1** into the address bar of a new browser tab and hit enter.

You will see your web server's home page, including your custom text.