**Lab - Google Cloud Fundamentals: Getting Started with Compute Engine**

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 (GCP) Console.**

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

1. **Create a Compute Engine virtual machine using the gcloud command-line interface.**

gcloud compute set compute/zone us-central1-b

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

1. **Connect between the two 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 the ssh command to open a command prompt on my-vm-1:

*Ssh my-vm-1*

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

*sudo apt-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 YOUR\_NAME*

* Exit the 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/*](http://localhost/)

Result: The response 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*

* 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/*](http://my-vm-1/)

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

1. **Get the External IP address for my-vm-1 instance from this command:**

*gcloud compute instance list*

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

Result: You will see your web server’s home page, including your custom text.