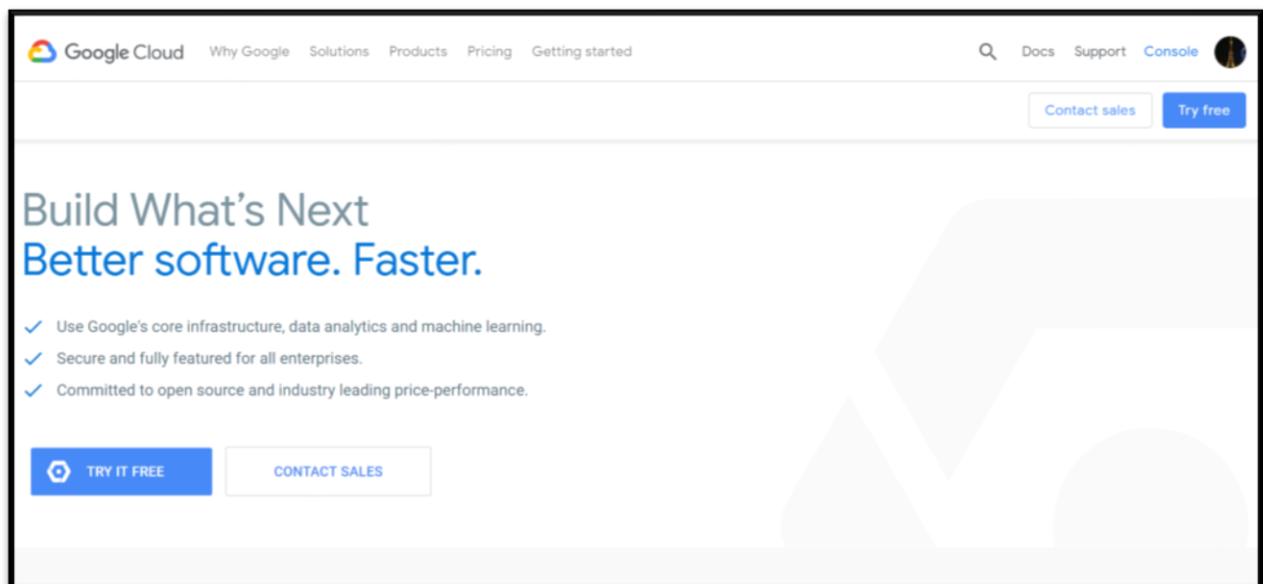


## Google Cloud Platform

### How to create a VM Instance using Google Cloud Platform

Step 1: The below screenshot showcases the initial page that would open after selecting the link,

<https://www.google.com/search?q=google+cloud+platform&oq=google+cloud+platform&aqs=chrome..69i57j69i60l3j69i59l2.4439j0j7&sourceid=chrome&ie=UTF-8>



Step 2: a. Select the “Try free” option

b. \$300 credits will be posted to the Gmail account and can be used for a year for free.

Try Google Cloud Platform for free

Step 1 of 2

Country

United States

Terms of service

☒ I agree to the [Google Cloud Platform Terms of Service](#), and the terms of service of [any applicable services and APIs](#). I have also read and agree to the [Google Cloud Platform Free Trial Terms of Service](#).

Required to continue

AGREE AND CONTINUE

Access to all Cloud Platform Products

Get everything you need to build and run your apps, websites and services, including Firebase and the Google Maps API.

\$300 credit for free

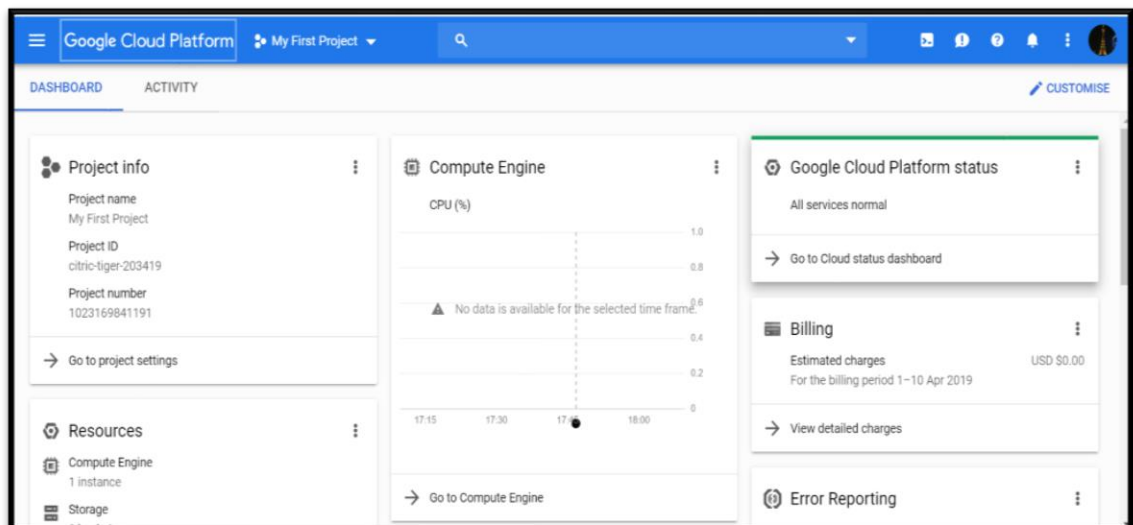
Sign up and get \$300 to spend on Google Cloud Platform over the next 12 months.

No autocharge after free trial ends

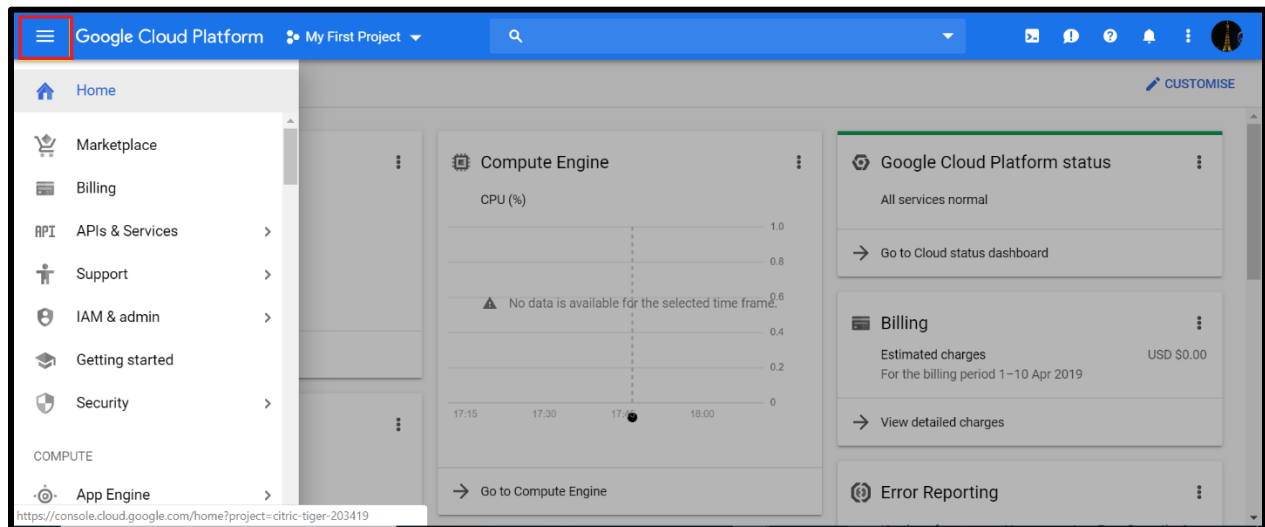
We ask you for your credit card to make sure you are not a robot. You won't be charged unless you manually upgrade to a paid account.

Step 3: Fill in the card details to start and to get access to the console page

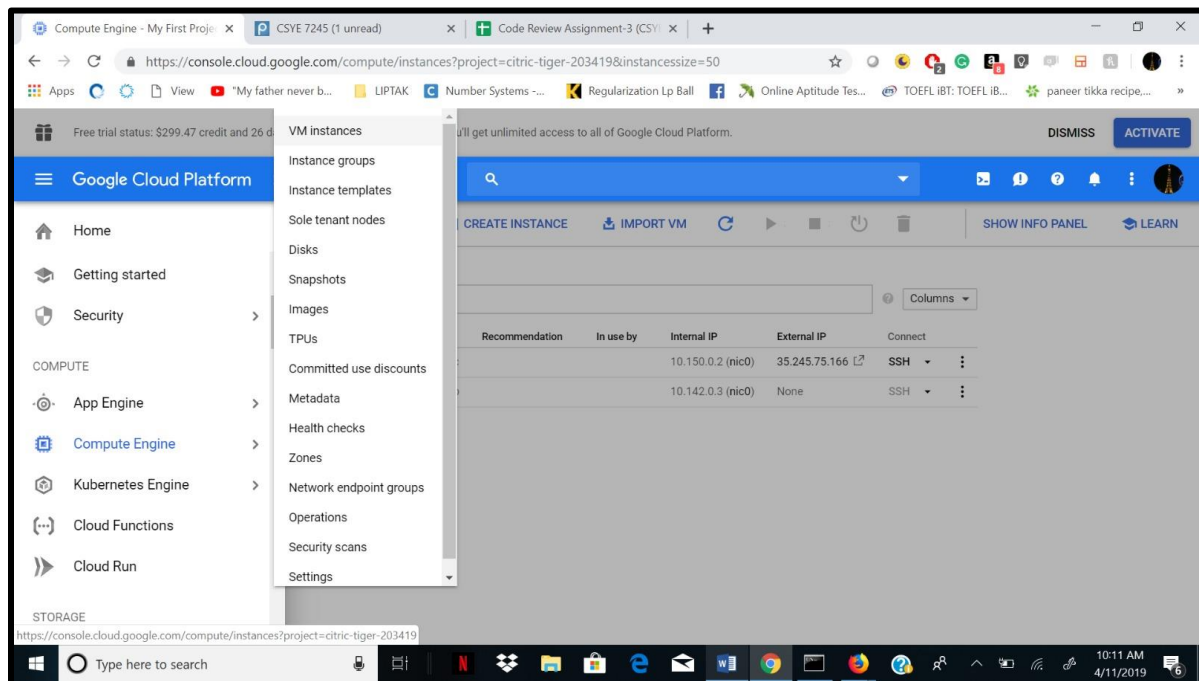
The below screenshot showcases the Console Page of Google Cloud Platform:



Step 4: Select the highlighted area in red in the below screenshot to view more options:



Step 5: To create a VM instance, select “Compute Engine” option -> “VM Instance”



## Step 6: Create a New Project and ensure that the billing option is enabled

The screenshot shows the 'New Project' page in the Google Cloud Platform console. At the top, there's a blue header with the Google Cloud Platform logo and a search bar. Below the header, the page title is 'New Project'. A warning box states: 'You have 24 projects remaining in your quota. Request an increase or delete projects. [Learn more](#) [MANAGE QUOTAS](#)'. The main form has three sections: 'Project name \*' with a text input containing 'Test Project' and a help icon; 'Billing account \*' with a dropdown menu showing 'My Billing Account'; and 'Location \*' with a dropdown menu showing 'No organisation' and a 'BROWSE' button. Below these fields, a note says 'Parent organisation or folder'. At the bottom, there are 'CREATE' and 'CANCEL' buttons.

Google Cloud Platform

New Project

You have 24 projects remaining in your quota. Request an increase or delete projects. [Learn more](#) [MANAGE QUOTAS](#)

Project name \*  
Test Project

Project ID: flash-freehold-237222. It cannot be changed later. [EDIT](#)

Billing account \*  
My Billing Account

Any charges for this project will be billed to the account that you select here.

Location \*  
No organisation [BROWSE](#)

Parent organisation or folder

[CREATE](#) [CANCEL](#)

## Step 7: Below screenshot shows the console from where VM Instances can be created and the instance name should preferably be in lower case

The screenshot shows the 'VM instances' page in the Google Cloud Platform console. The top navigation bar includes the Google Cloud Platform logo, the project name 'My First Project', and a search bar. The left sidebar shows the 'Compute Engine' section with a list of resources: 'VM instances', 'Instance groups', 'Instance templates', 'Sole tenant nodes', 'Disks', 'Snapshots', 'Images', 'TPUs', and 'Marketplace'. The main content area is titled 'VM instances' and features a 'Create instance' button. Below this is a table with columns: 'Name', 'Zone', 'Recommendation', 'In use by', 'Internal IP', 'External IP', and 'Connect'. The table contains one entry: 'ubuntu' in the 'us-east1-b' zone, with an internal IP of '10.142.0.3 (nic0)' and an external IP of 'None'. The 'Connect' column shows 'SSH'. On the right side, there's a 'Learn' panel with sections: 'Start your project', 'Find existing VM solutions', and 'How-to guides and tutorials'. The bottom of the screen shows a Windows taskbar with various application icons and the system clock indicating 6:14 PM on 4/10/2019.

Home - My First Project - Google | x Google Compute Engine and Juju | x Compute Engine - My First Project | x

https://console.cloud.google.com/compute/instances?project=citric-tiger-203419&instancessize=50

Free trial status: \$299.47 credit and 26 days remaining. With a full account, you'll get unlimited access to all of Google Cloud Platform. [DISMISS](#) [ACTIVATE](#)

Google Cloud Platform My First Project

Compute Engine

VM instances [Create instance](#) [SHOW INFO PANEL](#) [Learn](#)

Filter VM instances Columns

Name	Zone	Recommendation	In use by	Internal IP	External IP	Connect
ubuntu	us-east1-b			10.142.0.3 (nic0)	None	SSH

Start your project

Now that you've created a VM instance, learn how to put it to work for you.

[Connect to your instance](#)  
[Transfer files](#)

Find existing VM solutions

[Explore Marketplace](#)

Quickly learn how to build a two-tier web app

[SHOW ME HOW](#)

How-to guides and tutorials

[Setting up your website host name](#)  
[Reserving a Static External IP address](#)  
[Creating and managing Windows instances](#)

Type here to search

6:14 PM 4/10/2019

Step 8: Select Create Instance as shown in the below screenshot and fill in the required details:

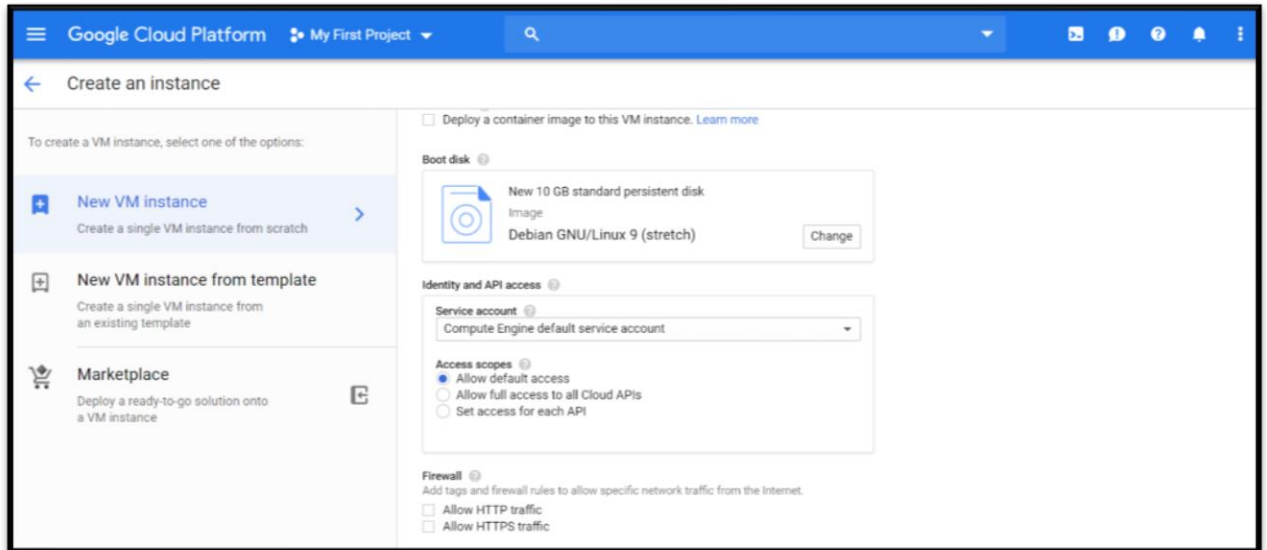
- Specify Name
- Specify the Region: E.g.: us-east1(South Caroline)
- Select the number of CPU's

The screenshot displays the Google Cloud Platform interface for creating a new VM instance. The left sidebar offers three options: 'New VM instance' (selected), 'New VM instance from template', and 'Marketplace'. The main form area contains the following details:

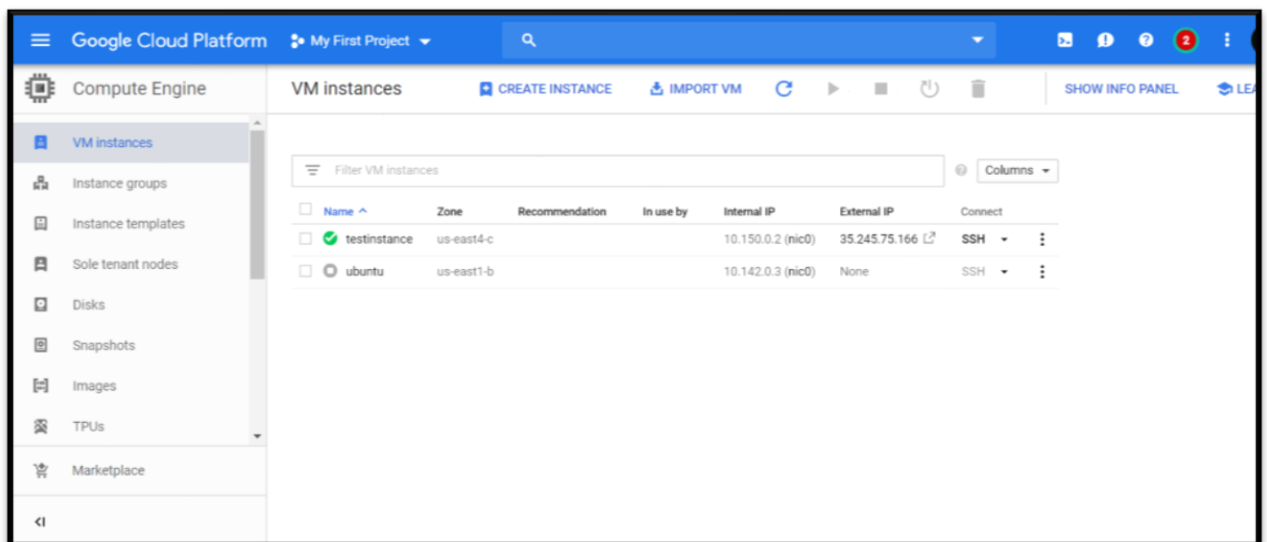
- Name:** instance-1
- Region:** us-east1 (South Carolina)
- Zone:** us-east1-b
- Machine type:** 1 vCPU, 3.75 GB memory. A 'Customise' link is available.
- Container:** A checkbox for 'Deploy a container image to this VM instance' is currently unchecked.
- Boot disk:** A new 10 GB standard persistent disk with the image 'Debian GNU/Linux 9 (stretch)'. A 'Change' button is present.

On the right side of the form, a summary of trial credits is shown: 'You have \$299.465797 free trial credits remaining', '\$24.67 monthly estimate', and 'That's about \$0.034 hourly'. A 'Details' link is also provided.

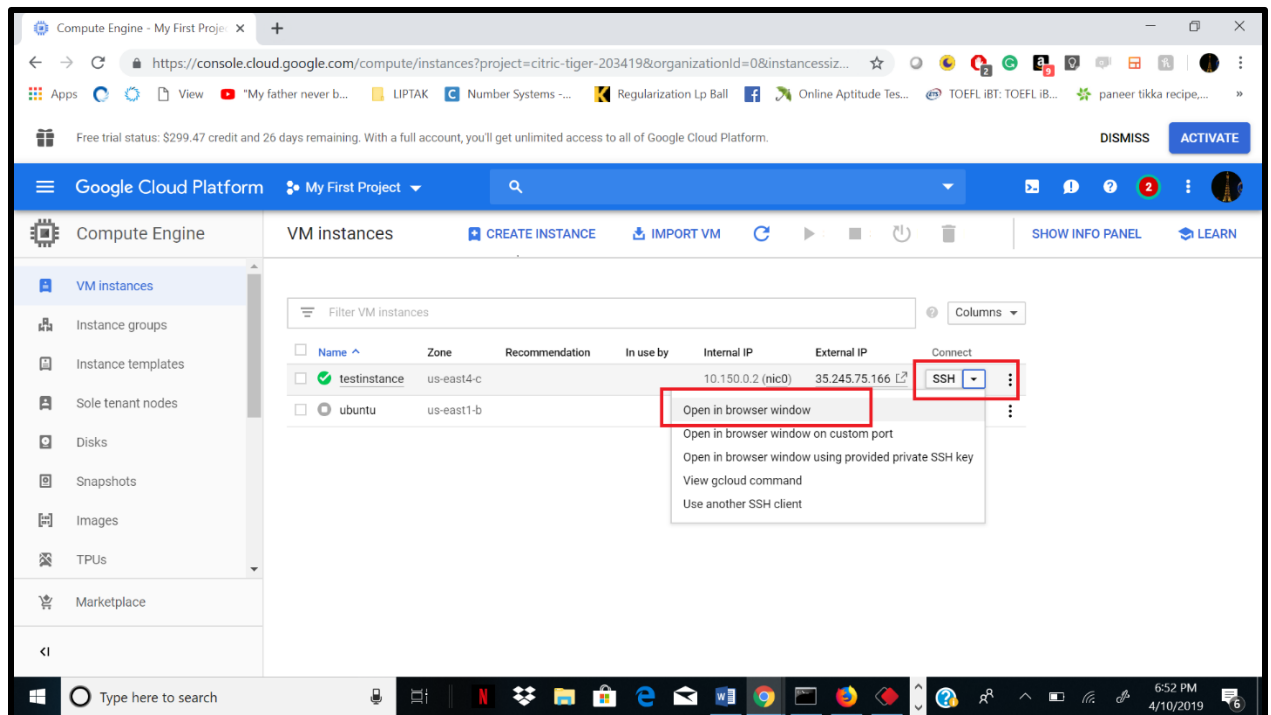
- Change Debian GNU/Linux 9 as per requirement. E.g.: Over here, I have changed Debian GNU/Linux 9 to Ubuntu 16.04LTS
- Specify the size (GB). E.g.: I have selected 50GB.
- Select both the options: Allow HTTP traffic, Allow HTTPS traffic



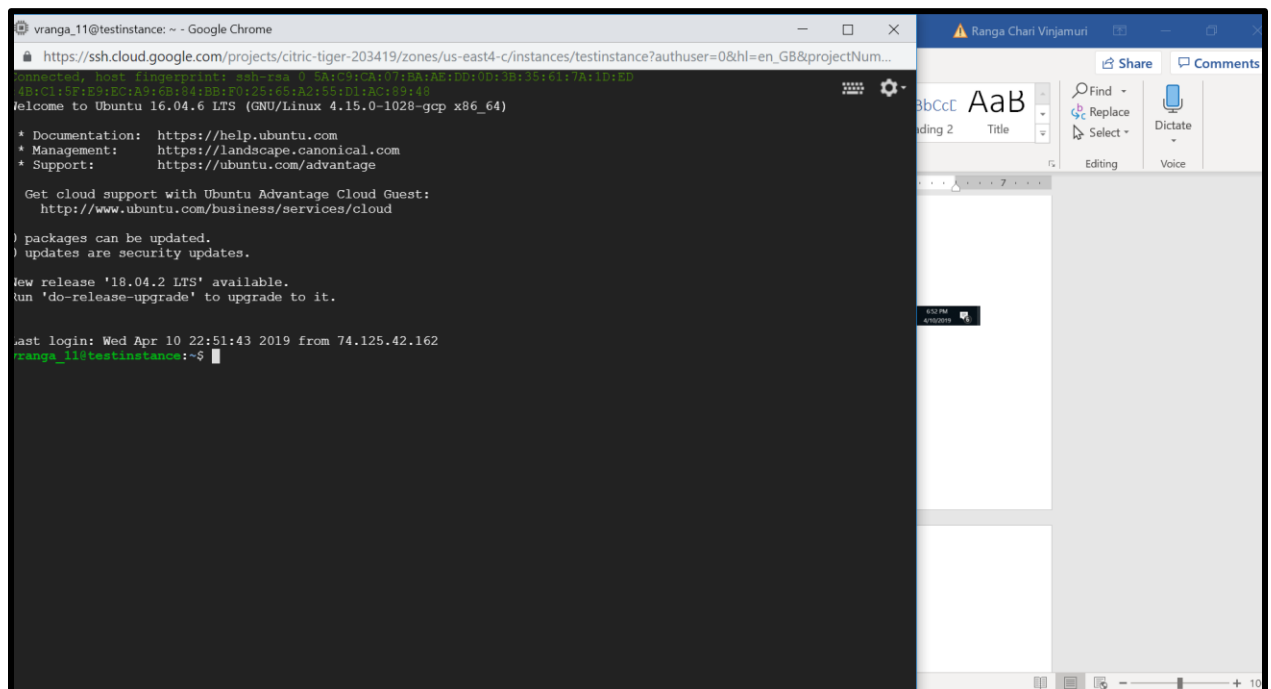
Step 9: Below screenshot shows the VM instance creation:



Step 10a: Select SSH, Open in browser window as shown in the below screenshot



Step 10b: The cmd prompt for the VM instance created, will open as shown in the below screenshot



Step 11a: Write the below commands to install and start python and jupyter notebook

```
sudo apt-get update
```

```
sudo apt-get --assume-yes upgrade
```

```
sudo apt-get --assume-yes install tmux build-essential gcc g++ make binutils
```

```
sudo apt-get --assume-yes install software-properties-common
```

```
sudo apt-get --assume-yes install ipython-notebook
```

```
pip install --user jupyter
```

```
sudo nano ~/.jupyter/jupyter_notebook_config.py
```

```
c=get_config()
```

```
c.NotebookApp.ip='*'
```

```
c.NotebookApp.open_browser=False
```

```
c.NotebookApp.port=5000
```

```
ctrl+o
```

```
ctrl+x
```

jupyter notebook password – This is useful to set the password when you access the notebook

```
jupyter notebook --ip 0.0.0.0 --port 5000
```

Step 11b: Since the default version installed is 2.7, below are the commands to update python to version 3.6.3

```
wget https://www.python.org/ftp/python/3.6.3/Python-3.6.3.tgz
```

```
tar -xvf Python-3.6.3.tgz
```

```
cd Python-3.6.3
```

```
./configure
```

```
sudo apt-get install zlib1g-dev
```

```
sudo make
```

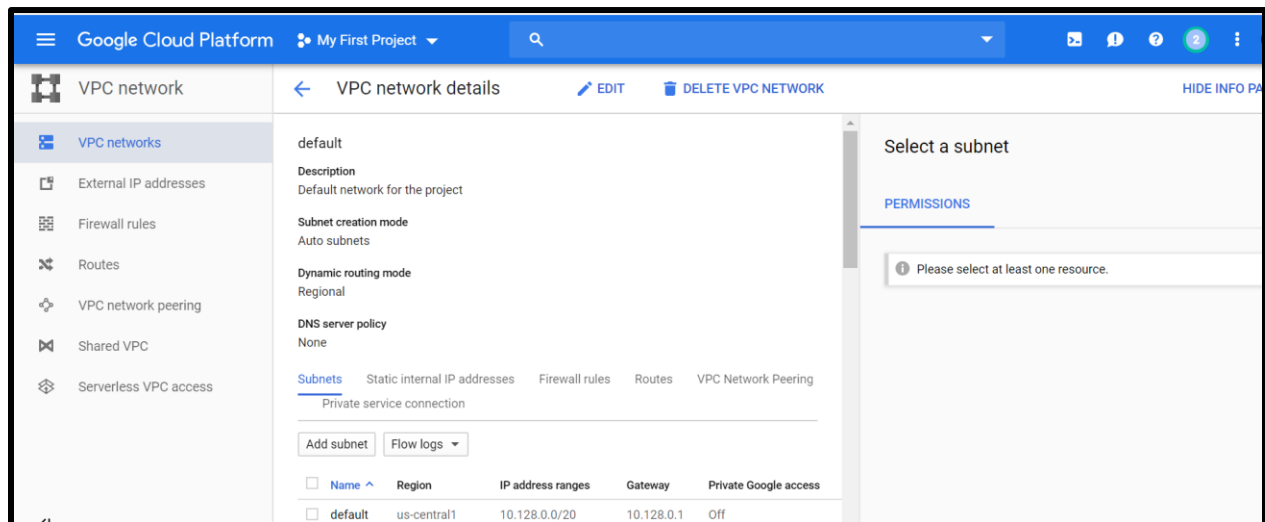
```
sudo make install
```

```
python3 -V
```



Step 12: Create a new firewall and setup rule to give port access and define the port number

- Select Default option for network
- Select Firewall rules -> “Add a new firewall rule”
- Give a name to the Firewall rule
- Select Source IP ranges as 0.0.0.0/0
- Specify protocols and ports as per requirements E.g.: Over here, I have selected tcp:5000



Step 14: Post this, select and copy the external IP address and port number onto the browser as shown in the below screenshot.

For e.g.: 35.245.75.166 is the external IP address and 5000 is the port number to start the jupyter notebook.

