Assignment and Exam Content

Compute Engine

Always Delete your Cloud Resources to Avoid $$ Charges.

Compute Engine lab

Compute Engine Lab Contains – Three major areas below to say complete Lab ☺

A

Launch 1st Virtual Machine – Compute Engine

Understand basic concepts of Compute engine and launch it

B

Additional Compute Engine labs

Try some of the labs on your own.

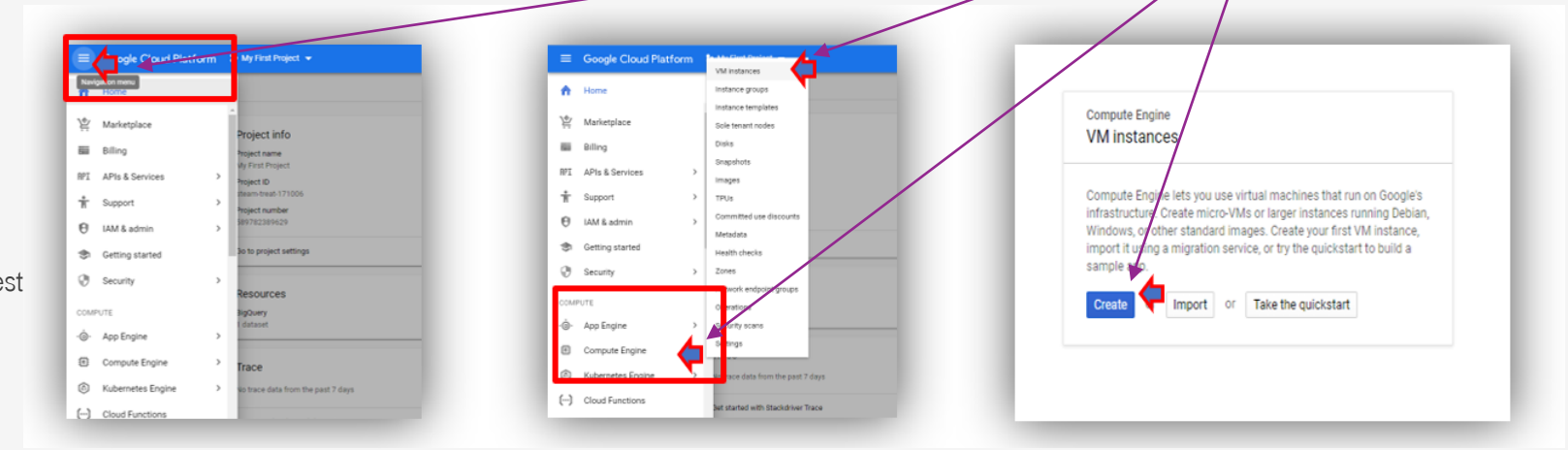
3

Exam Tips

1 Compute Engine – Virtual Machine

1 1st thing 1st –> Login to https://console.cloud.google.com
Go to -> Navigation -> Compute -> Compute Engine -> VM Instances -> Create

Compute Engine



2 Fill in Data

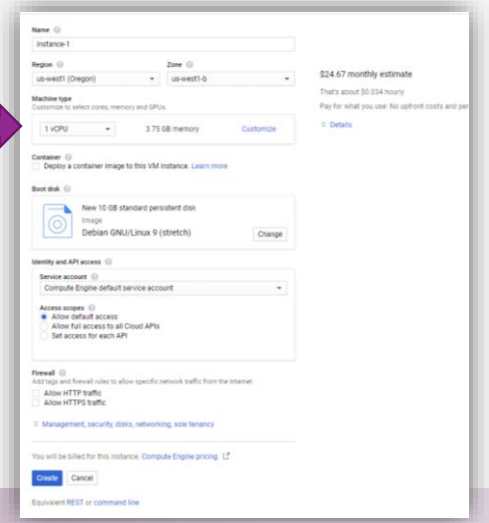
Name: type name for instance -> Observe name restrictions

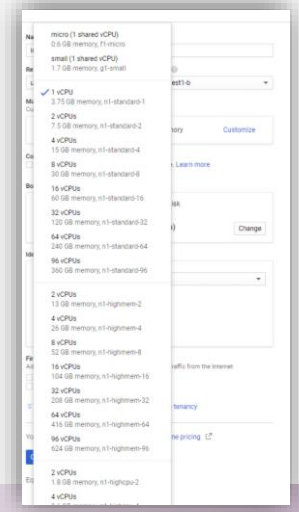
Select Region and Zone. (of Your choice, I would suggest choose near to your location)

-> You can go back and understand Regions and Zone at (https://cloud.google.com/compute/docs/regions-zones/)

Machine Type: Click options -> Observe different machine you can create. Select different configuration and see change in estimated prices.

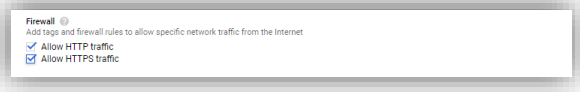
For now-> Select Machine Type as n1-Standard-1





Firewall

Select : Allow HTTP Traffic



1 Compute Engine – Virtual Machine

2 **Container:** - Do not Select - Will see latter stage.

Book Disk: Click on Boot Disk , observe different options for OS, Disk Type and Disk Space

For Now -> Keep Default

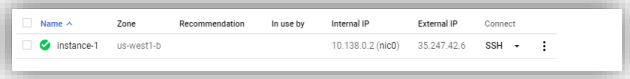
Identity and API Access: Keep Default.

At the very Bottom -> Click on *REST* -> Observe REST API call details

Click on command line -> Observe gcloud command for all options you selected.

Click on Create : Your Virtual machine is being created.

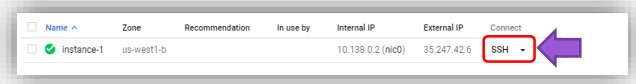
Wait for Machine to be created.

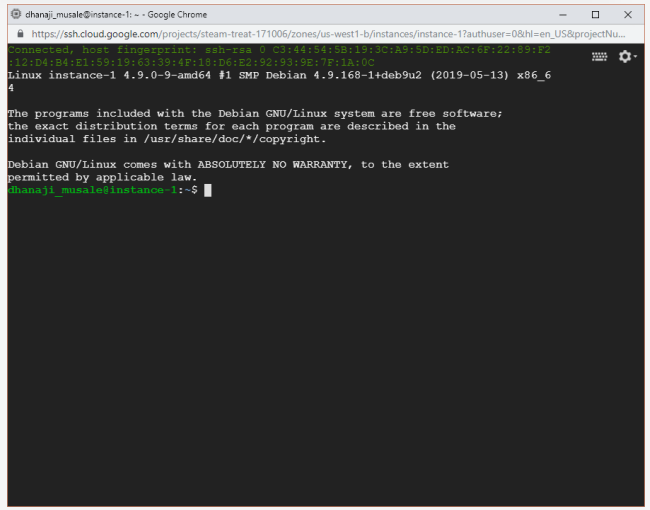


Congratulations – You have created Compute Engine (VM) on Google Cloud Platform.

Connect to Virtual Machine

Click on SSH , You will see connection is establish and you see Linux terminal.





1 Compute Engine – Virtual Machine

2 You have finished creating Virtual Machine and connecting to it.

You can try installing apache or any software

e.g.

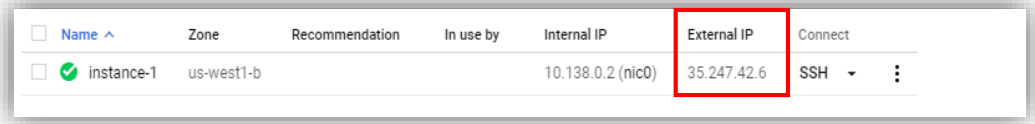
$ sudo apt-get update

$ sudo apt-get install apache2

Please keep in mind – you have not opened ports to access apache from outside.

Open browser – and try to access external IP address to See Apache

http://[EXTERNAL_IP]



Things to remember

Machine Types , CPU. Memory , Disks

Region and Zones

Startup Scripts - > We are going to see details more in Load Balancer demon

Images

Snapshots

Network

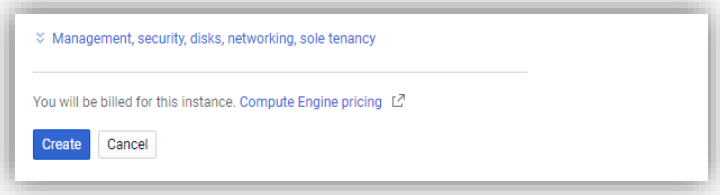
Service Account

2 Further Exercise

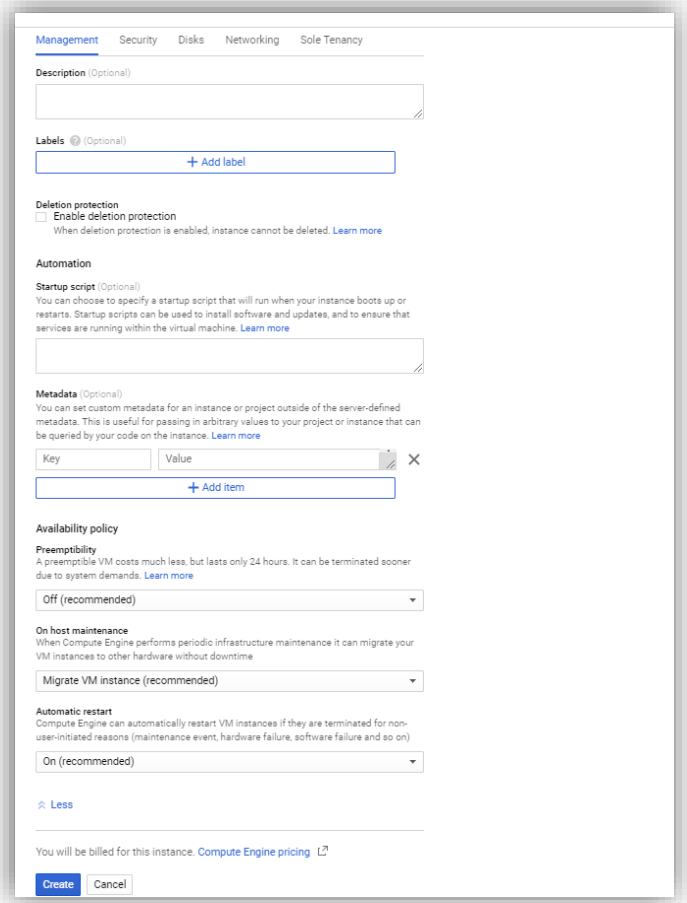
1. Stop Linux VM Created – and Click on Edit ? See what you can change and what parameters you can't change.

2. More Custom Configuration

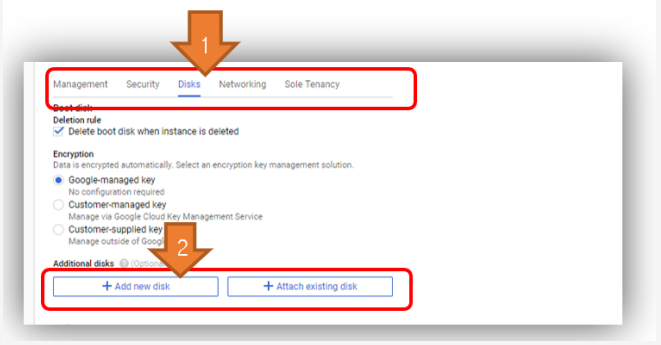
- Click on -> Management, Security, Disks Networking, Sole Tenancy



- Add Labels ,
- Add Metadata ,
- Preemptibility flag to on,
- on Host Maintenance: Different Choices ,
- Automatic Restart: Different Options



3. Add Disks – Select SSD and 10GB.



2 Further Exercise

Adding Disks

Name : You can keep Default or give your own.

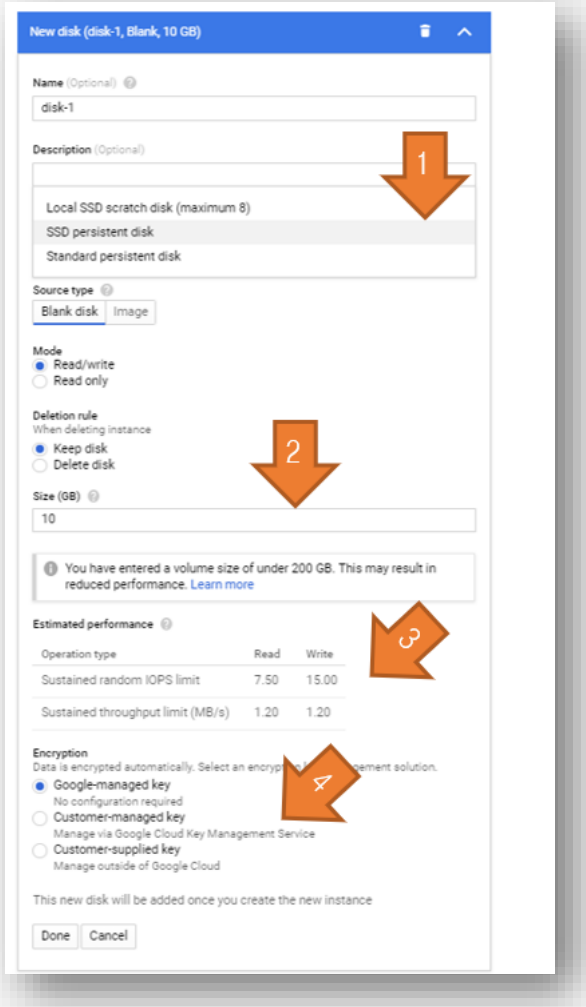
Type : Select SSD Persistent Disk. (you can optionally choose Local SSD)

Source Type : if you want to attach existing Image or new blank – Keep Default.

Size : Enter 10GB.

Observe: The behavior of Disk Performance based on size and type of disk.

Encryptions: Google by default encrypt your data before its written on to disk and it uses its own key. You can optionally choose your own key for encryption.



2 Further Exercise

4. Windows Virtual Machine

Choose – Windows Operating System instead of Linux. Create Password and connect using RDP.

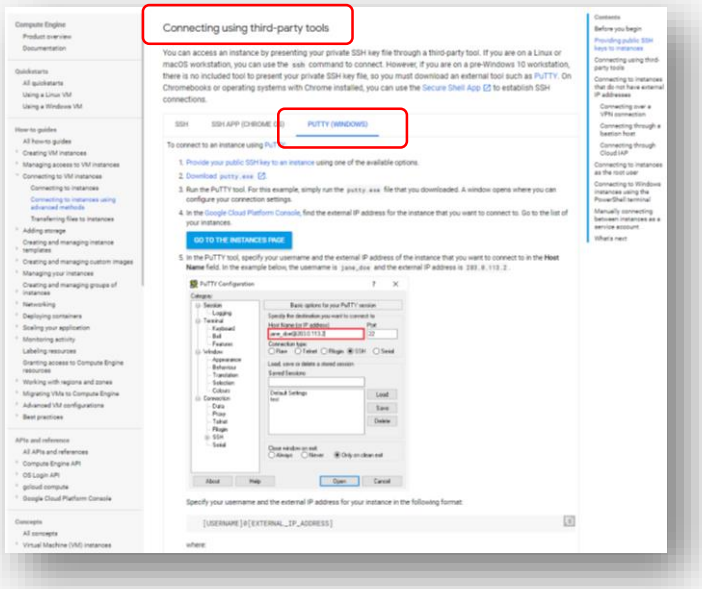
If you Face any problems – Let us know.

5. Connect Linux VM using Putty client.

Follow instructions or see our demo to connect putty client to Linux VM.

(Instructions at https://cloud.google.com/compute/docs/instances/connecting-advanced)

- Go to : Connect using Third-party tools , Click on Putty (Windows) and follow instructions



2 Further Exercise

6. Create VM using Instance Template

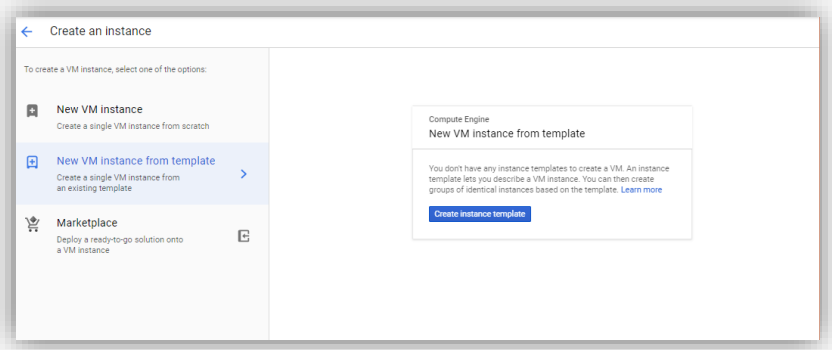
We have not yet created instance template, lets start with it.

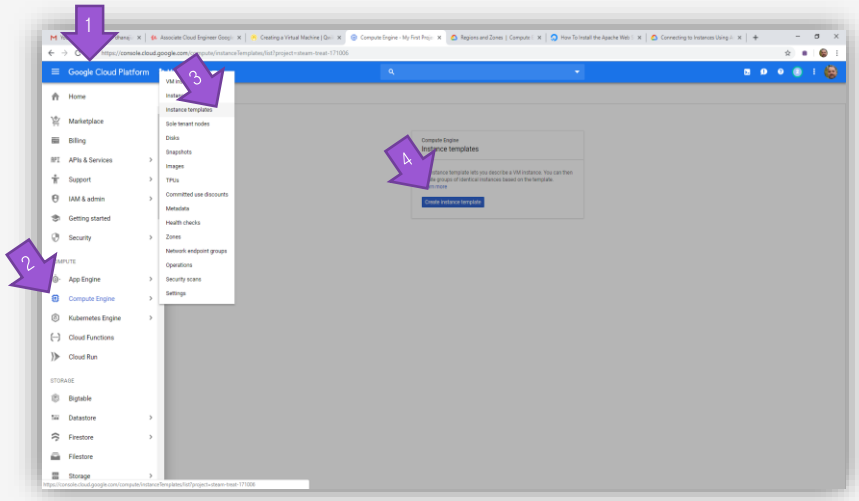
Creating Instance Template is exactly same as Virtual Machine. But when you create instance template , it does not create actual instance but only skeleton (with configuration) you can use to create VM any and as many as times you want.

There are two ways you can create Instance template

1. Go to create VM page like previous method

And Click on “New instance from template” and Click on “Create Instance Template”





2. Go to -> Navigation -> COMPUTE -> Compute Engine -> Instance Template , on Instance Template page – Click on Create new Instance Template.

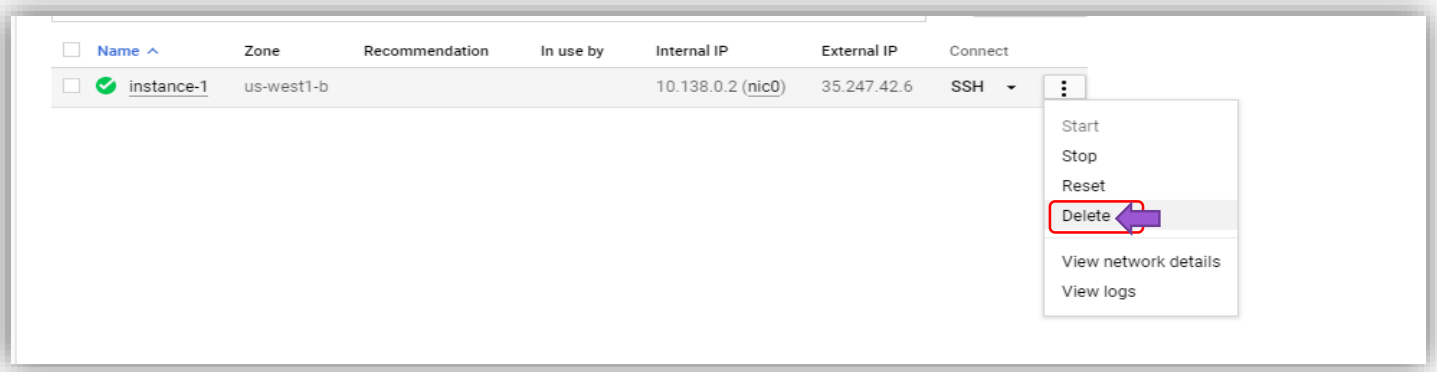
Once You create Instance Template , Now You can go back to VM instance Create page and Click on create VM instance using Instance Template.

2 Further Exercise

Congratulations

- You have now completed Virtual Machine assignments for Certifications and knowledge, We will still create VM in many assignments ahead.
- If you still think we need to cover more – let us know. Load Balancer and related configurations in next assignments.

Please Please $$$$ – Do not forget to delete VM- Google may charge you if you use beyond free tier.



Compute Engine

End of Compute Engine lab

Always Delete your Cloud Resources to Avoid $$ Charges.