Lab: GCP Project – Scalable Resilient Application

Name: Vishwanaath Gopalakrishnan

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Batch: PGPCC_OCT19A

Create instance template with following settings

1. Machine type - f1-micro
2. Boot Disk - Ubuntu 18.04 LTS Image
3. Startup script

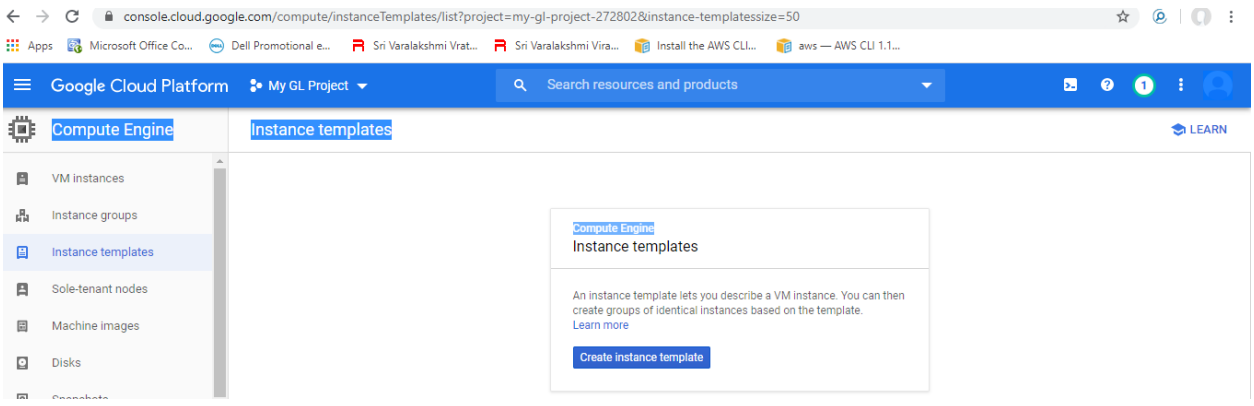
a. Install apache http web server

b. Custom index.html page displaying hostname and zone

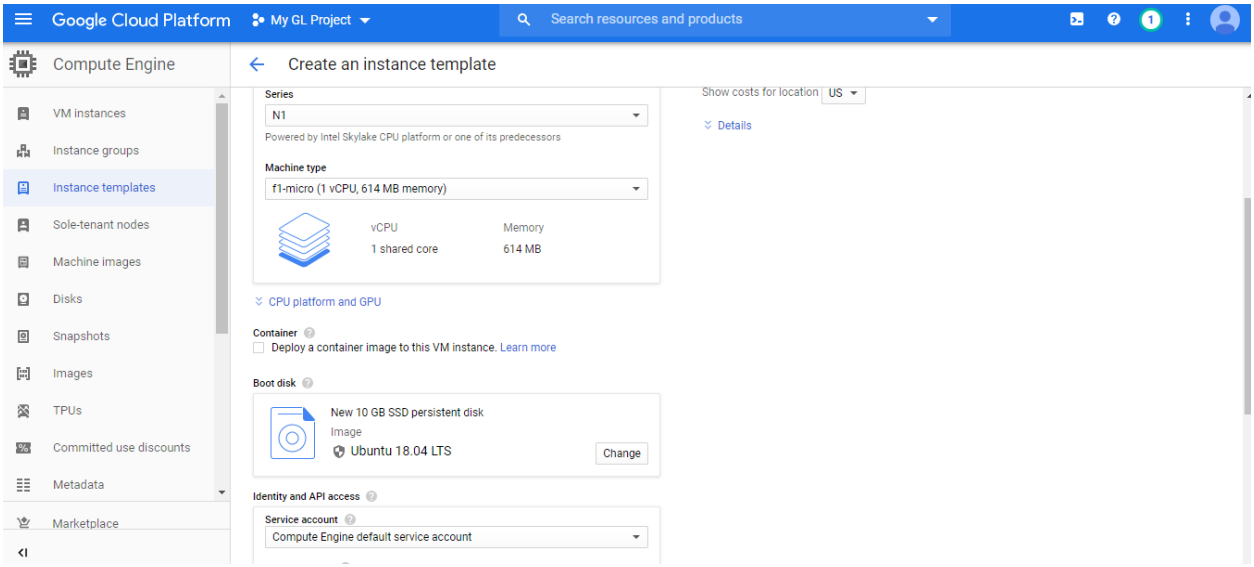
c. Custom lb-health.html page displaying hostname and zone - loadbalancer health page

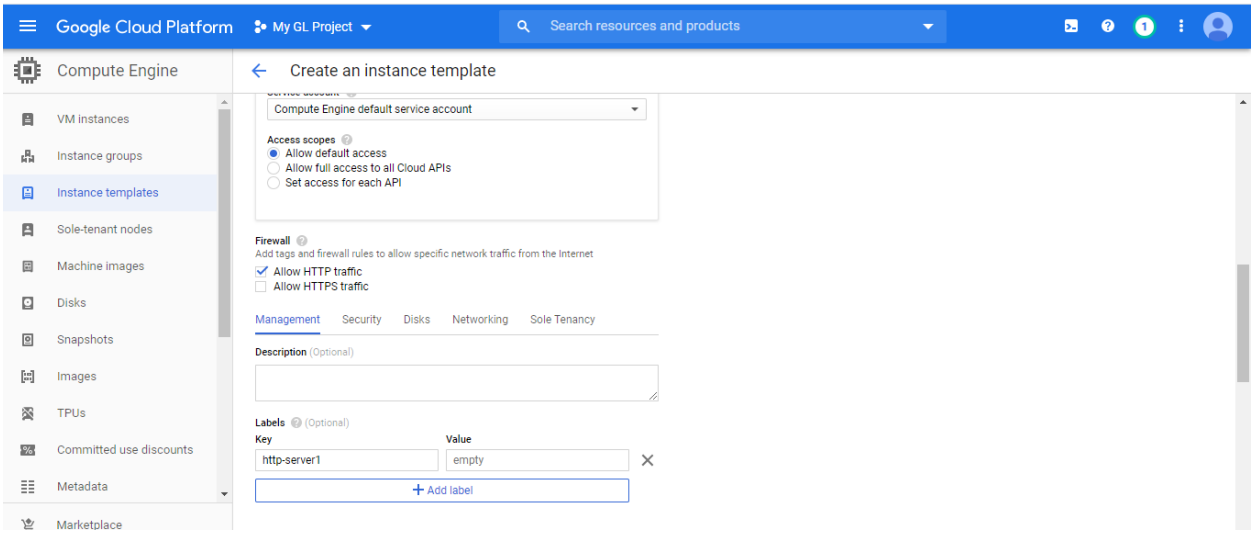
d. Custom ah-health.html page displaying hostname and zone - autoheal health page

Go to Compute Engine option in your GCP console and Create Instance template using the below option



Choose Boot disk as Ubuntu 18.04 LTS and with SSSD 10 GiB and f1 micro in the machine type



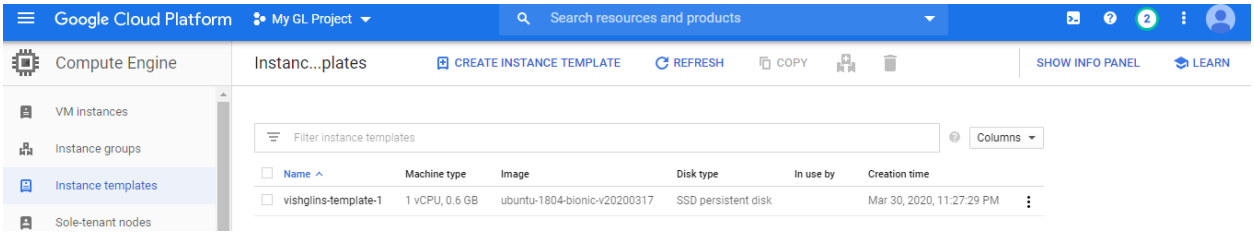


Setup default access, allow http server and create a label as http-server.

Start up scripts:

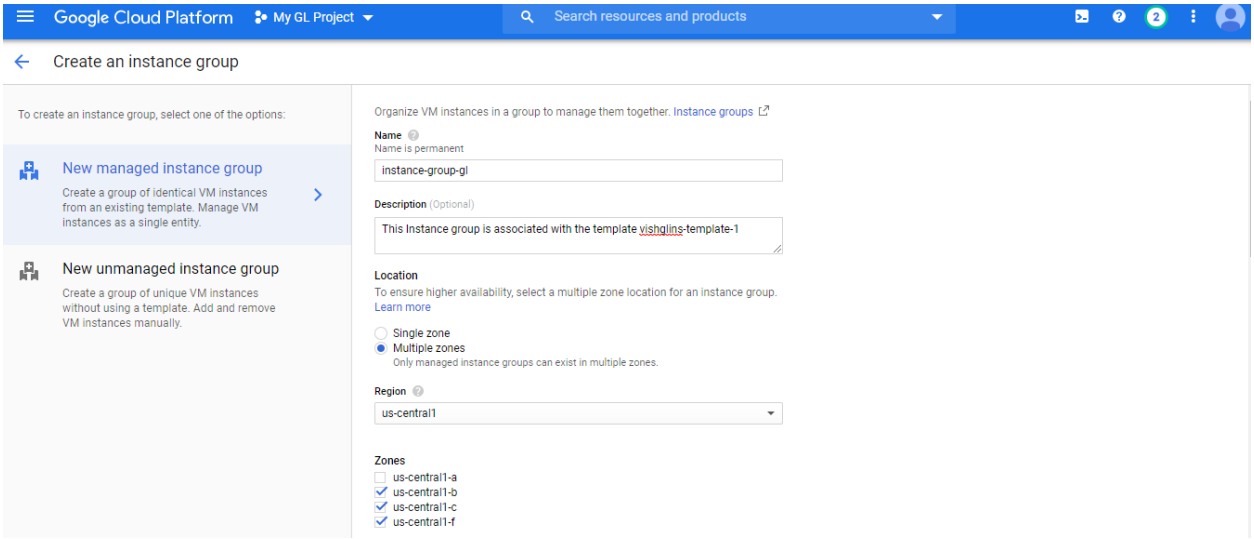
```
#!/bin/bash

apt update -y

apt install apache2 -y

service apache2 start

echo "Google compute engine with Random number $RANDOM Hostname $HOSTNAME and zone
$ZONE" >

/var/www/html/index.html

echo "Google compute engine Auto healing health Hostname $HOSTNAME and zone $ZONE" >
```

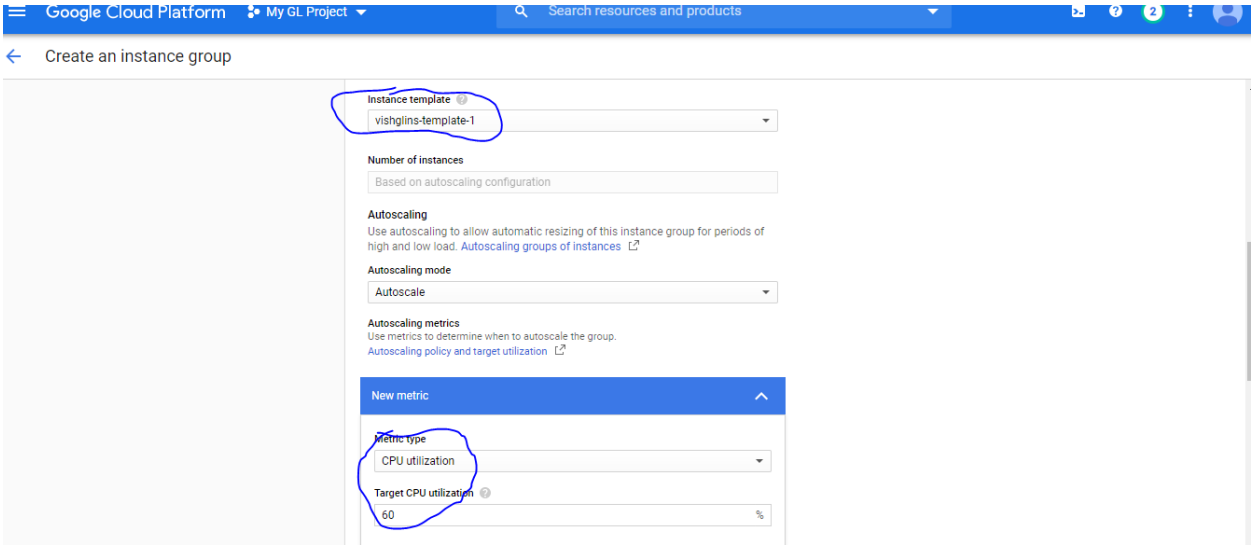
```
/var/www/html/al-health.html

echo "Google compute engine Load balancer healing health Hostname $HOSTNAME and zone $ZONE" >

/var/www/html/lb-health.html
```



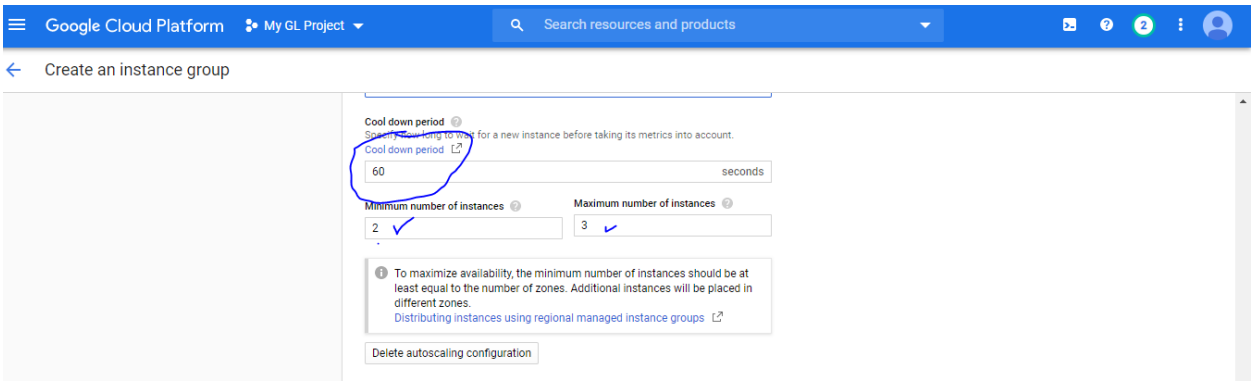
Part 2:

Create am Instance Group in Region – us-central1, 3 zones – us-central-1b, us-central-1c, us-central-1f and refer the instance template created using create new managed instance group





Setup the cool down period to 60 sec, min and max instances to 2 and 3



Setup a health check rule for the auto heal condition as below and click on save and continue

Setup a health check rule

Name
Name is permanent

ah-health

Description (Optional)

auto healing health

Protocol

TCP

Port

80

Proxy protocol

NONE

Request (Optional)

Response (Optional)

Health criteria

Define how health is determined: how often to check, how long to wait for a response, and how many successful or failed attempts are decisive

Check interval

5 seconds

Timeout

5 seconds

Healthy threshold

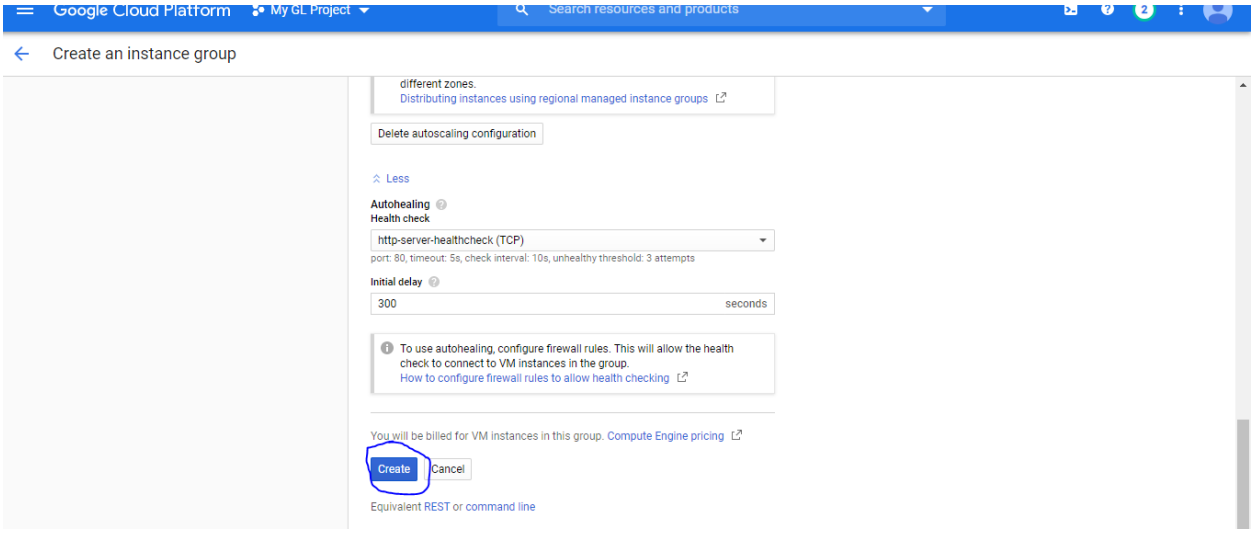
2 consecutive successes

Unhealthy threshold

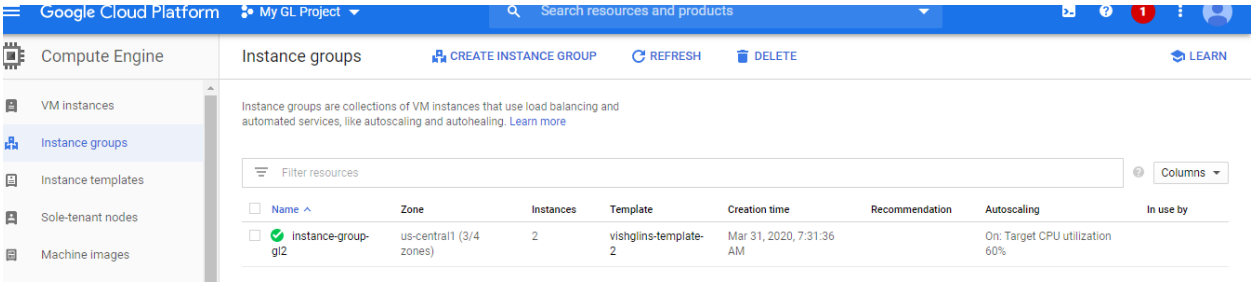
3 consecutive failures

Save and continue

Cancel



The instance group gets created based on the template created

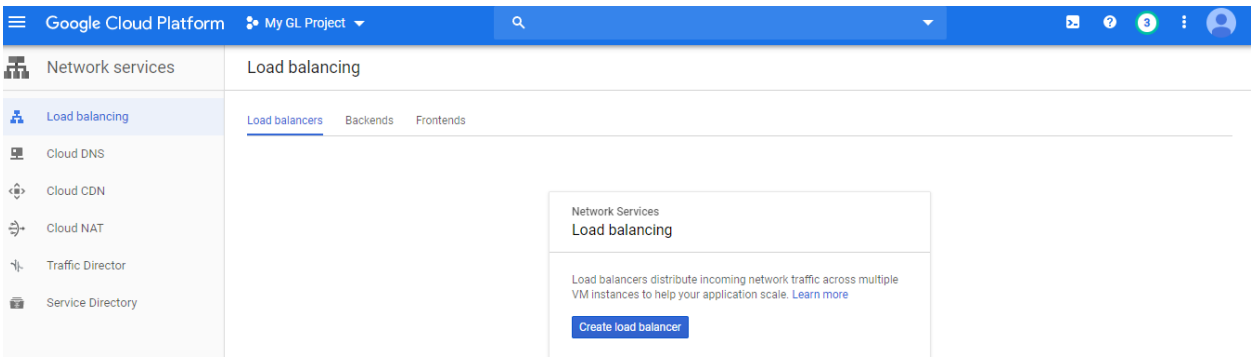


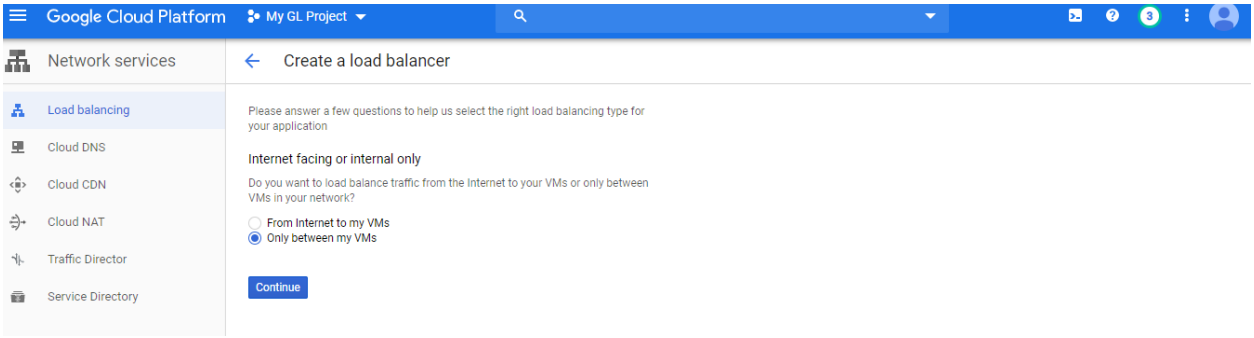
The minimum limit of 2 instances are now created from the template

Try to delete one instance from the list of VM instances –

Observation: We will not be able to delete the VM instances created by using Instance groups

Step 3: Create Load balancer using Network services

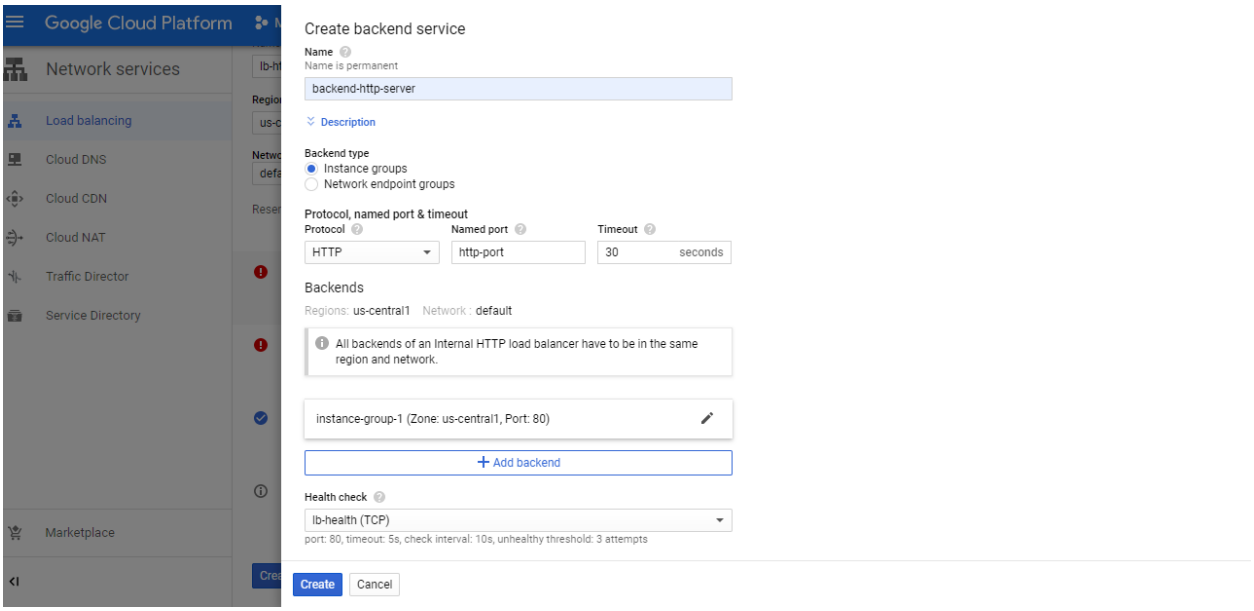




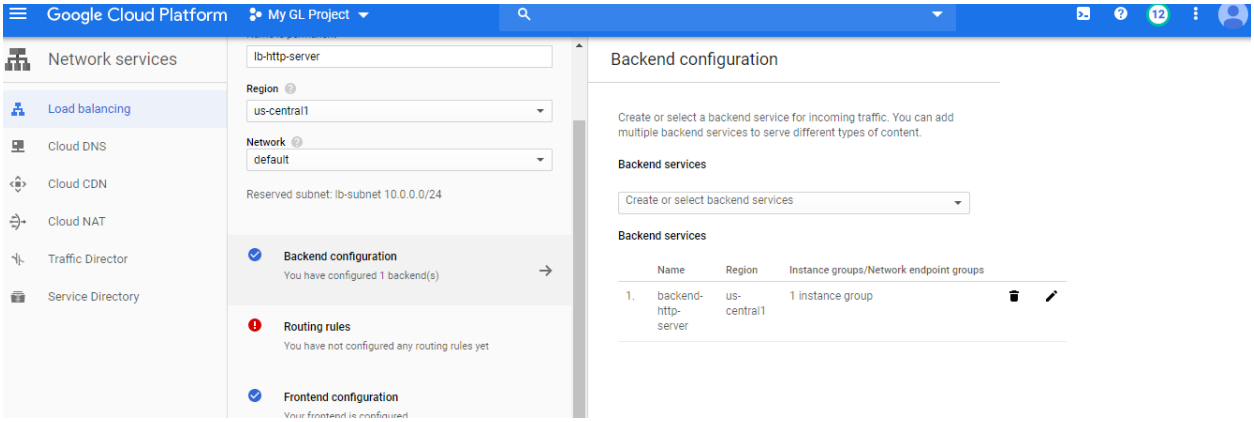
Create backend service from the below screens and click on create

Update the Routing rules and Front end configuration option as well from the screen

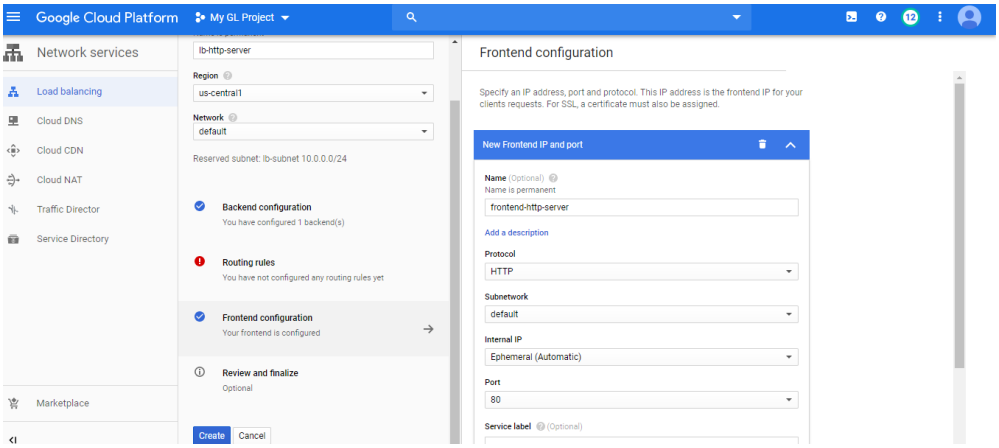
Load balancer setup:

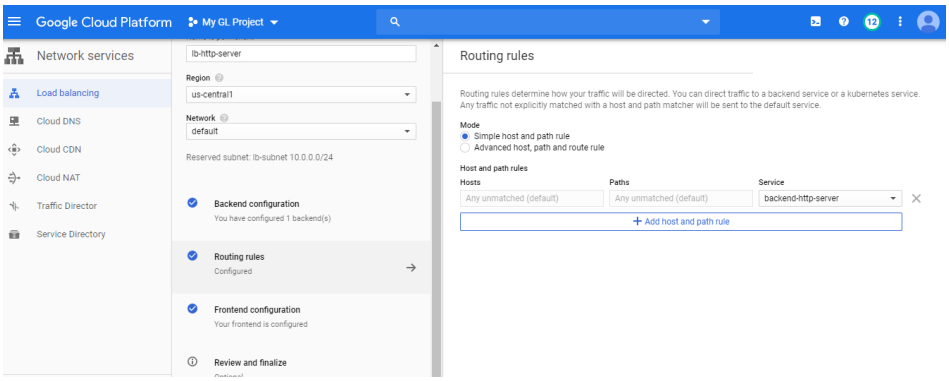


The load balancer health check is also setup

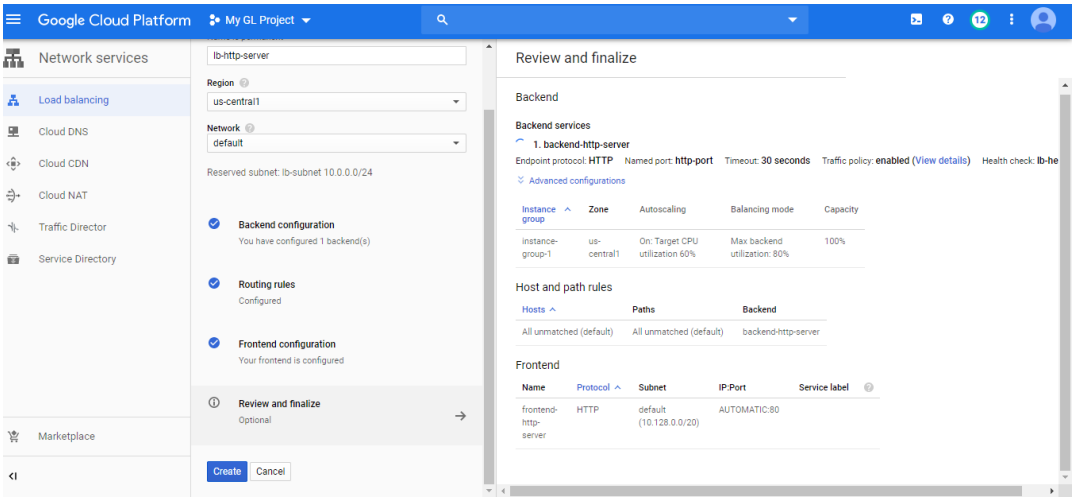


Setup the front end configuration:

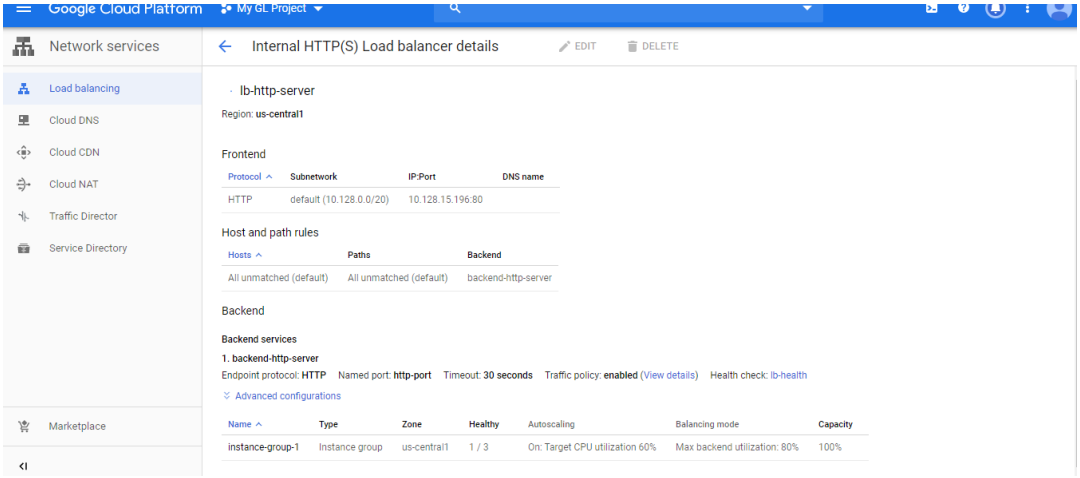




Routing rules setup



Load balancer setup:



Validated that VM instances are healthy up and running