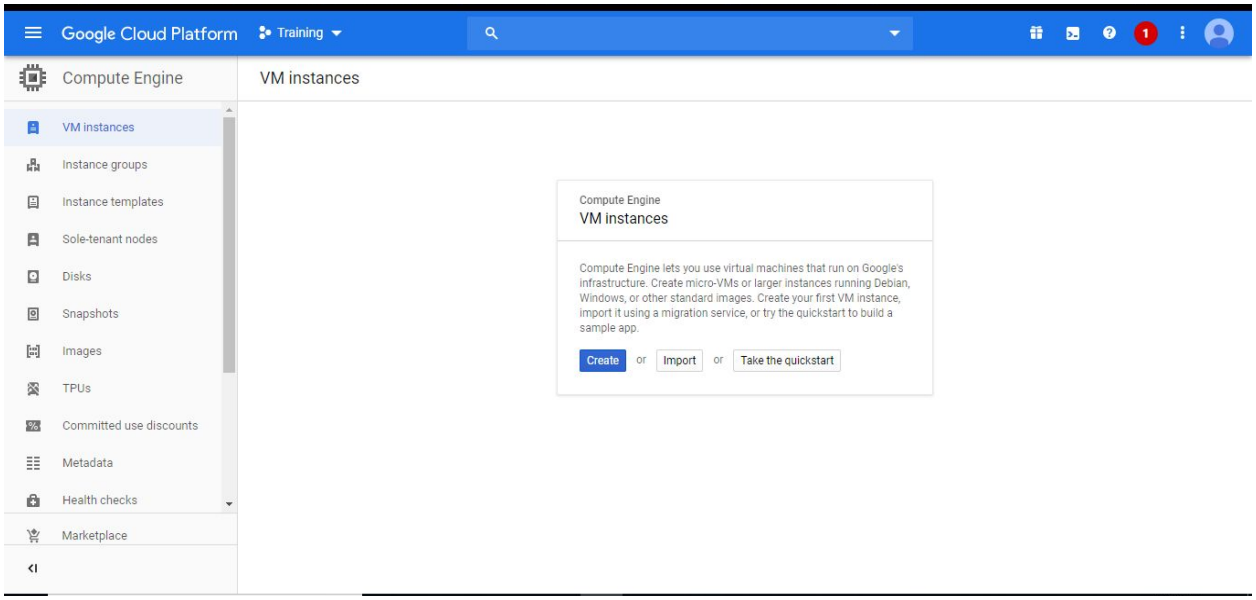
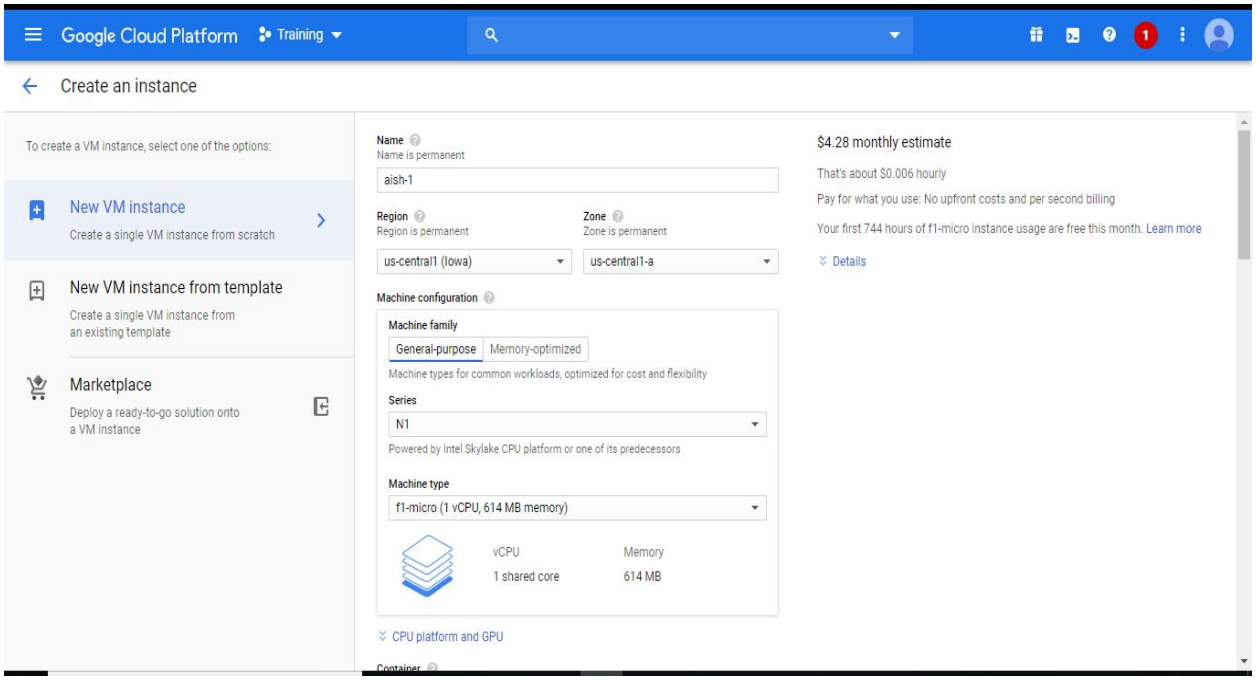
GCP assessment on VPC

Q1) Create an instance A in default VPC.

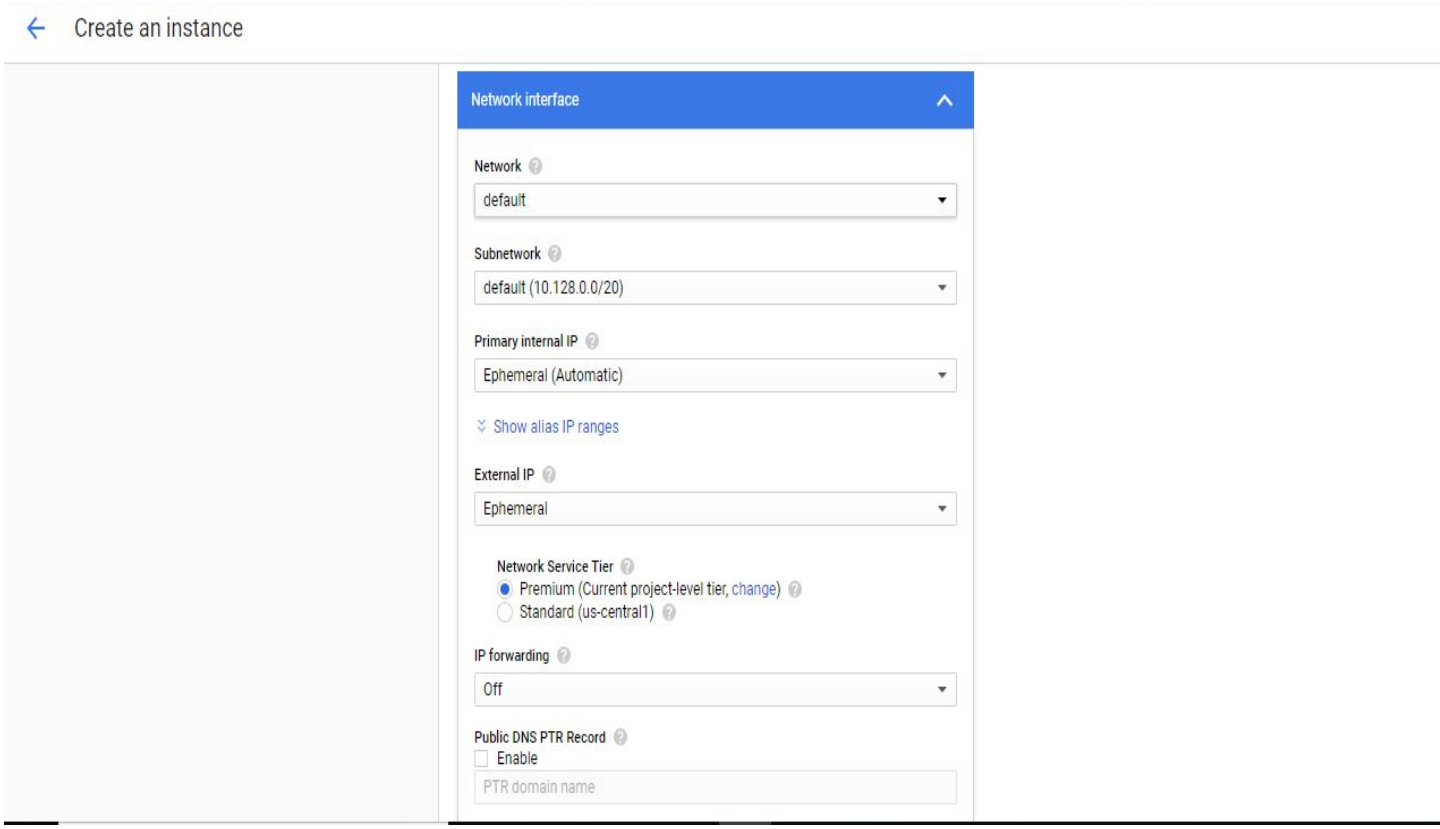
Steps: 1.Go to Compute Engine>>VM instances>>Create Instance



2. Name the Instance and configure it.



3. In Networking Interface select **Default** network.



4. Click on Create. An Gcp instance in default VPC would be created.

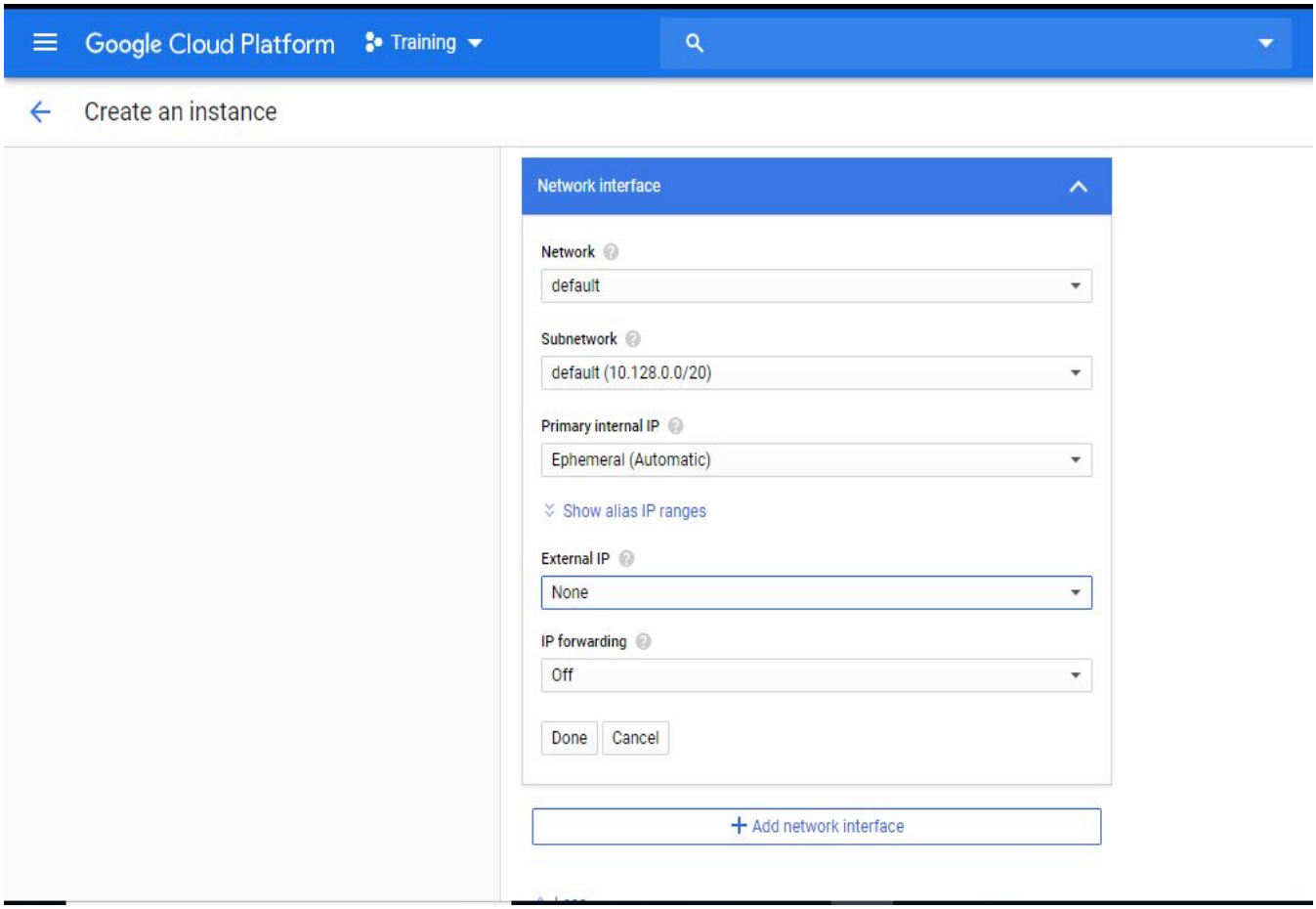
Q2.) Launch instance B with only private ip in default VPC in different zone.

Steps:
1.Go to Compute Engine>>VM instances>>Create Instance

2.Name the Instance and configure it (**Select different Region than that of above instance**)

3. In Networking Interface select **Default** network.

4.Choose Extenal IP as **none**.(To create instance with only private IP).



Q3.configure NAT so instance can access Internet.

Steps:

1.Go to the Cloud NAT page in the Google Cloud Console.

2.Click **Get started** or **Create NAT gateway**.

3.Enter a **Gateway name**.

4.Choose a **VPC network**.

5.Set the **Region** for the NAT gateway.

6.Select or create a **Cloud Router** in the region.

7.Select 'Primary ranges for all subnets' in NAT Mapping (for Compute Engine).

8.Click on create.This will allow all private subnets to connect to internet using **NAT.**

Q4)SSH into Instance B using instance A and try to install nginx.

Steps:

1. SSH to your public instance.
2. In the terminal,type ssh <private-instance-name> (This will take us to the terminal in the private instance).
3. Type sudo apt-get install nginx.

Ssh into private1 using public1 instance:

```
Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
aishwary_chauhan@public1:~$ ssh private1
The authenticity of host 'private1 (10.128.0.32)' can't be established.
ECDSA key fingerprint is SHA256:NWAvgNzM89hVzqrhlXi8X35kALI8B1aYZCzJ8v9zPr4.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'private1,10.128.0.32' (ECDSA) to the list of known hosts.
Linux private1 4.9.0-11-amd64 #1 SMP Debian 4.9.189-3+deb9u2 (2019-11-11) x86_64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
aishwary_chauhan@private1:~$
```

Installing nginx:

```
aishwary_chauhan@private1:~$ sudo apt-get install nginx
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  fontconfig-config fonts-dejavu-core geoip-database libfontconfig1 libgd3 libgeoip1 libicu57 libjbig0
  libjpeg62-turbo libnginx-mod-http-auth-pam libnginx-mod-http-dav-ext libnginx-mod-http-echo
  libnginx-mod-http-geoip libnginx-mod-http-image-filter libnginx-mod-http-subs-filter
  libnginx-mod-http-upstream-fair libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream libtiff5
  libwebp6 libx11-6 libx11-data libxau6 libxcb1 libxdmcp6 libxml2 libxpm4 libxslt1.1 nginx-common nginx-full
  sgml-base xml-core
Suggested packages:
  libgd-tools geoip-bin fcgiwrap nginx-doc ssl-cert sgml-base-doc debhelper
The following NEW packages will be installed:
  fontconfig-config fonts-dejavu-core geoip-database libfontconfig1 libgd3 libgeoip1 libicu57 libjbig0
  libjpeg62-turbo libnginx-mod-http-auth-pam libnginx-mod-http-dav-ext libnginx-mod-http-echo
  libnginx-mod-http-geoip libnginx-mod-http-image-filter libnginx-mod-http-subs-filter
  libnginx-mod-http-upstream-fair libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream libtiff5
  libwebp6 libx11-6 libx11-data libxau6 libxcb1 libxdmcp6 libxml2 libxpm4 libxslt1.1 nginx nginx-common
  nginx-full sgml-base xml-core
0 upgraded, 34 newly installed, 0 to remove and 0 not upgraded.
Need to get 16.4 MB of archives.
After this operation, 53.6 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
0% [Connecting to prod.debian.map.fastly.net (151.101.184.204)]
```