AI Deep Learning with TensorFlow on Google Cloud Platform (GCP)

Set up Deep Learning Virtual Machine (VM)

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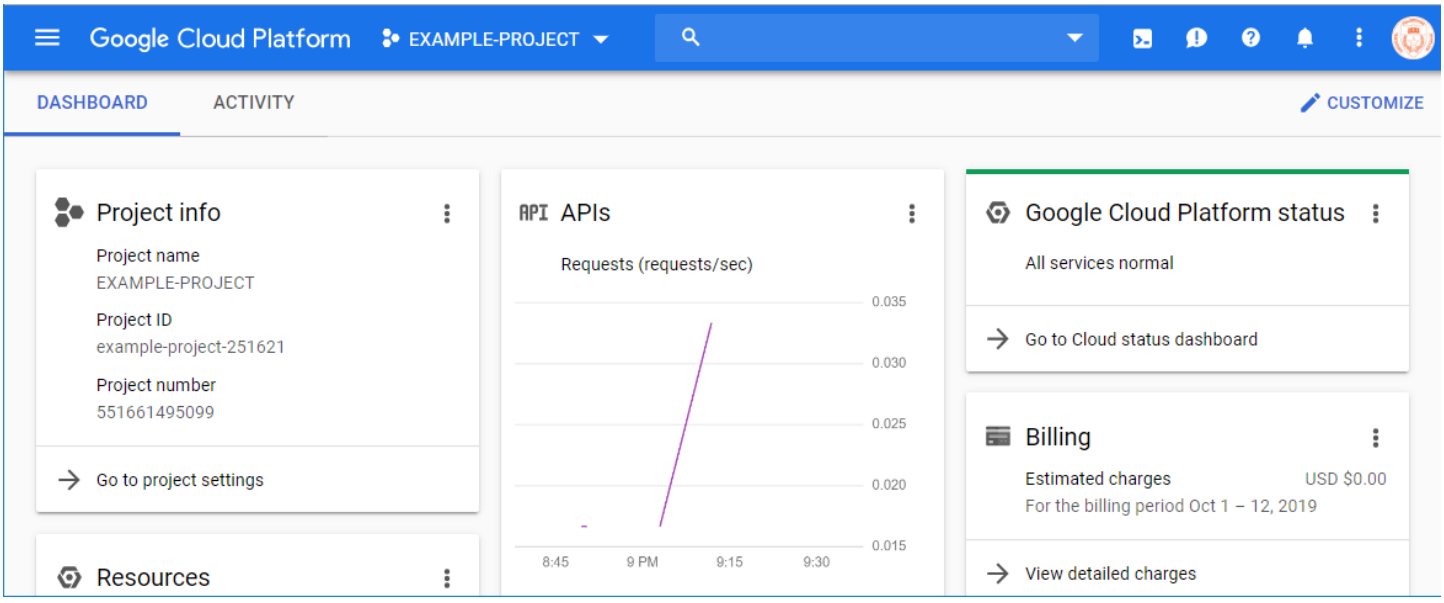
1. Get Free-Credit and Create Project in GCP

See the document: gcp_dls_get_free_credit.pdf

2. Access GCP Console

- Open Chrome browser
- Type: Google Cloud Console into the URL search box



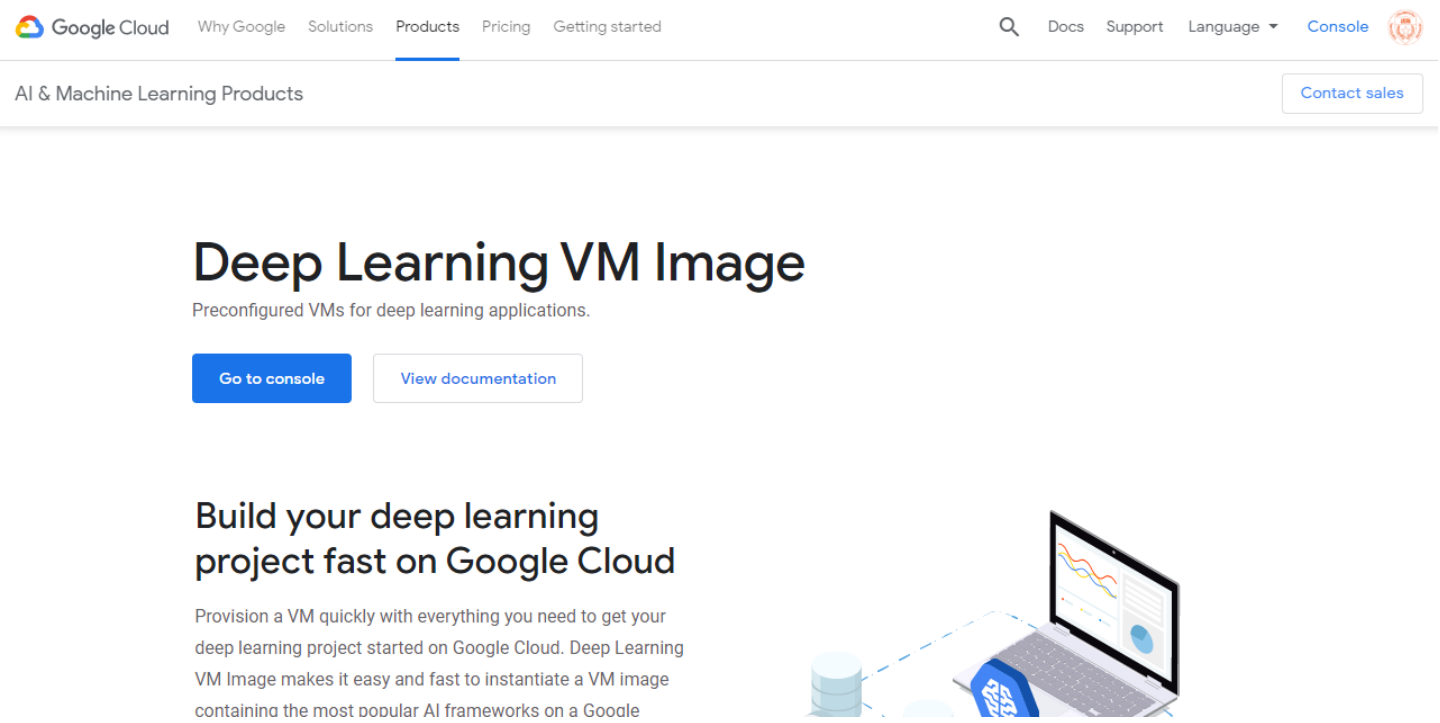
IMPORTANT NOTES:

--) The student should be sure that billing on the project has been enabled and associated with the billing account that has the free-trial credits.

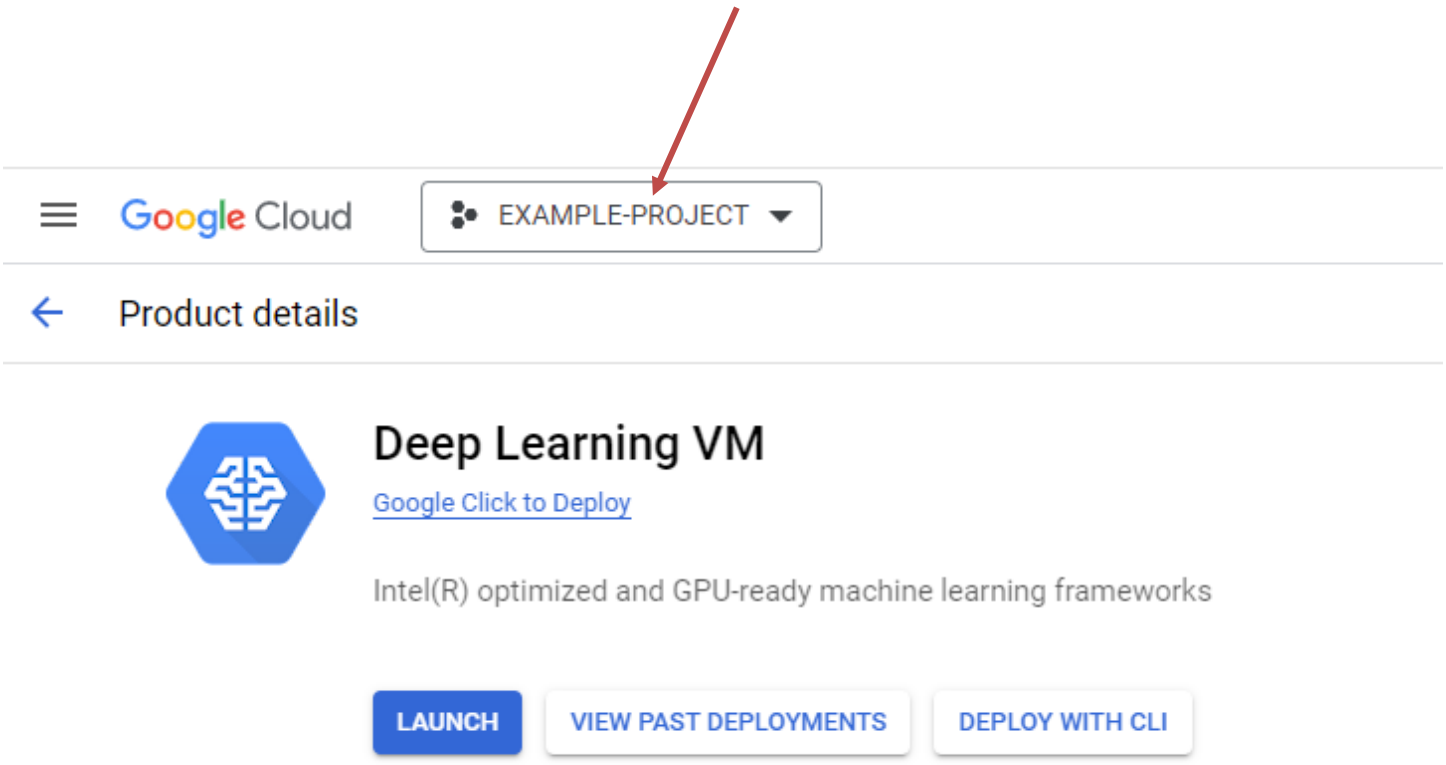
3. Create Deep Learning VM Using GCP Deep Learning Images

Cloud Deep Learning VM Image
https://cloud.google.com/deep-learning-vm/

Access the link:



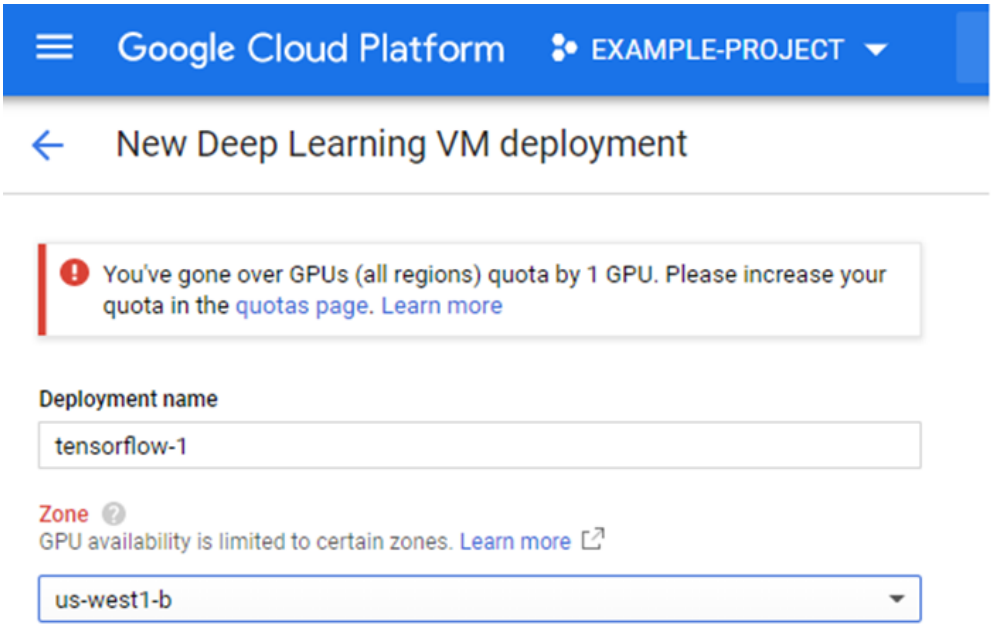
Click Go to console



IMPORTANT NOTES:

- ***Be sure*** *that the project name displayed in the above text field refers to the project that you have created.*
- *Otherwise,*
  - ***Click*** *the arrow to* ***open*** *a drop-down menu and select the correct one.*

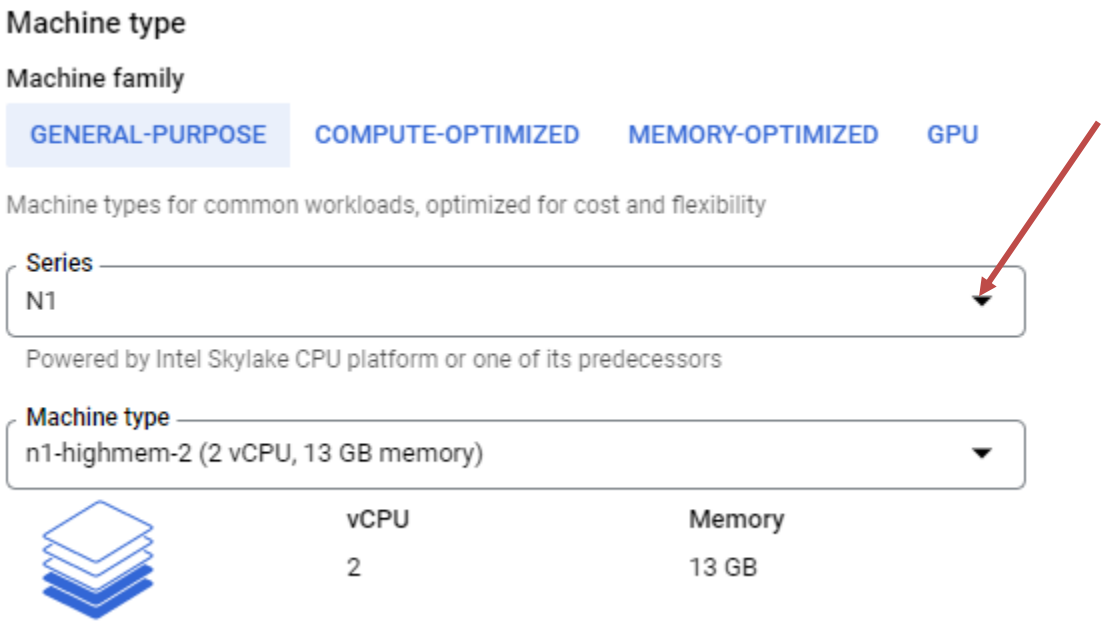
Click **LAUNCH**



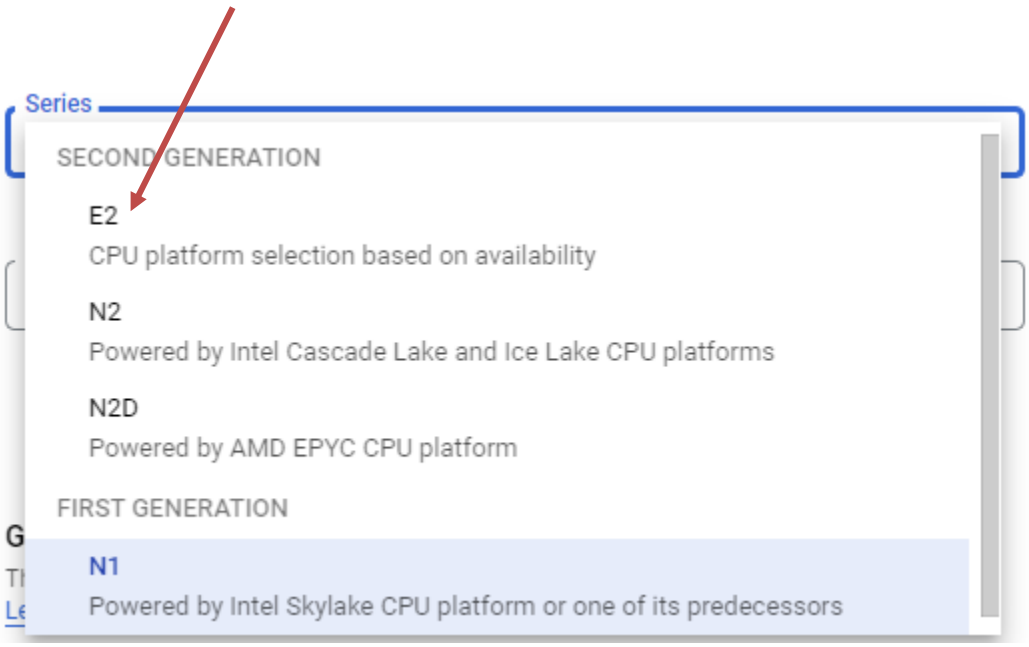
Enter for Deployment name: tf2-keras-ann

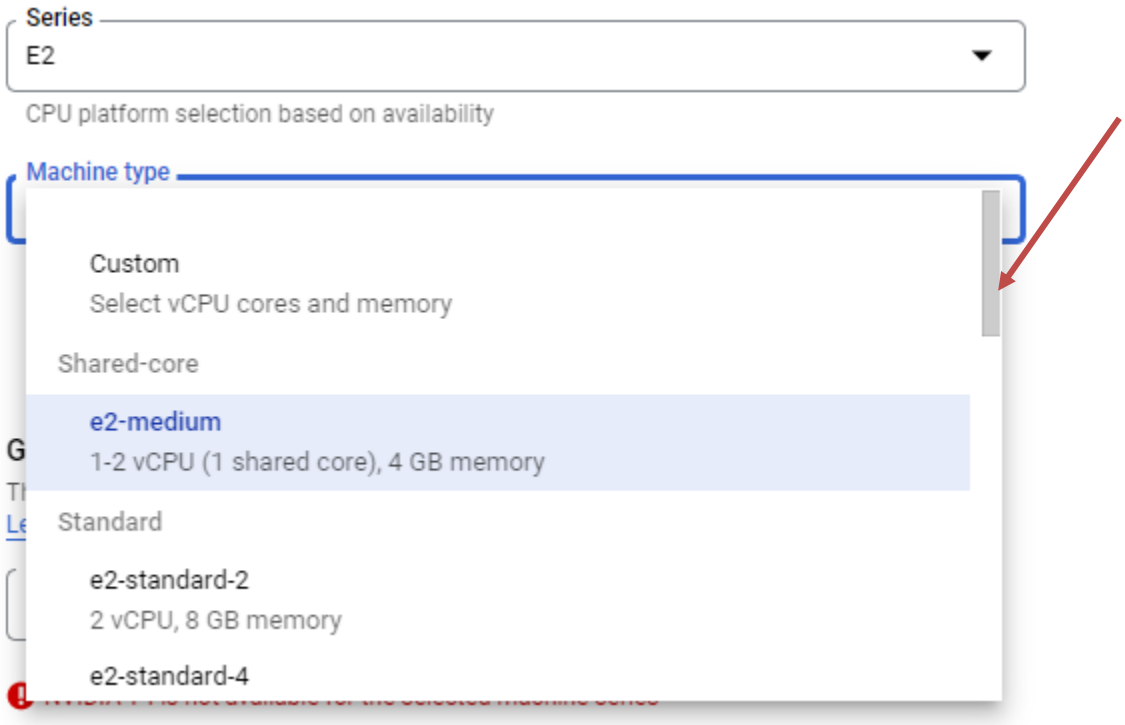
(**NOTES**: *The user can name the instance as he/she wants.* ***This is only an example.***)

Select for Zone: **us-east1-c** OR **us-south1-c** OR **us-central1-c**

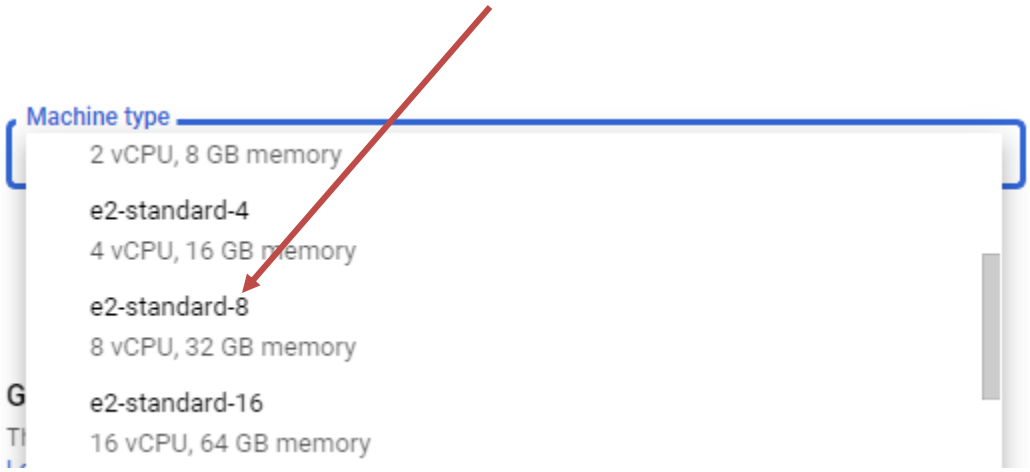


Click the arrow to open a drop-down menu



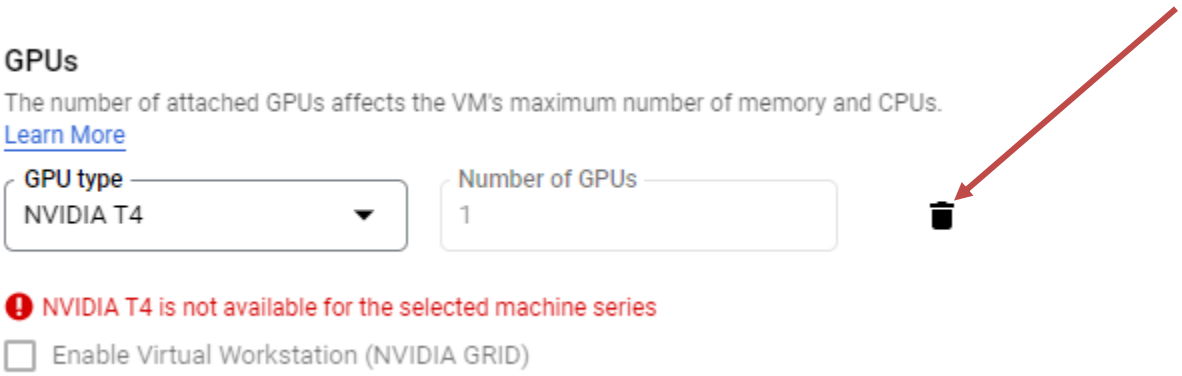


Scroll down to show more options of **e2**-standard machine types



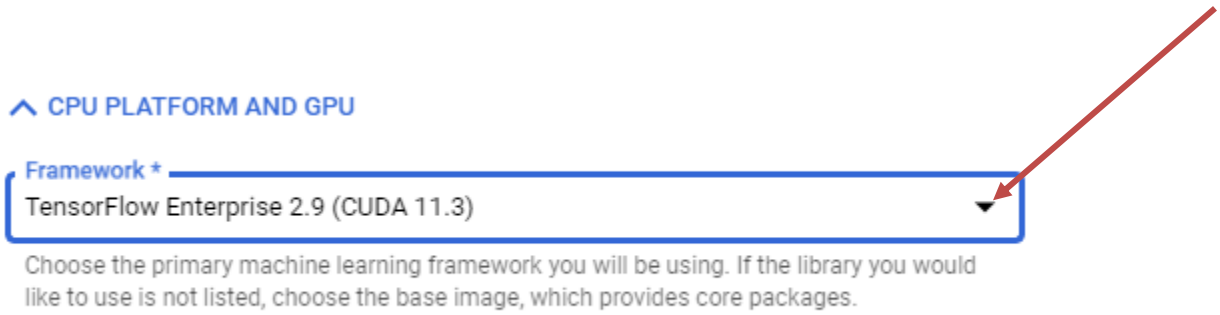
--) **e2**-standard-8: 8 vCPUs, 32 GB memory

IMPORTANT NOTES:
--) Cost-saving is the **best** with **e2**-standard-x



Click to select **None**: NO GPU

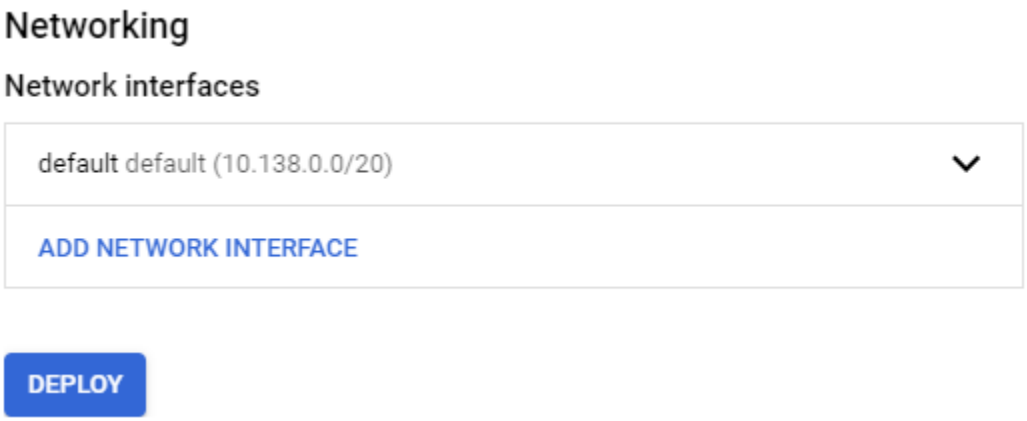
NOTES:
*--) To select "**NONE**" for GPU, click the trash can to delete the option of specifying the number of GPUs.*



BE SURE: TensorFlow **Enterprise 2.7** or LATER is selected.

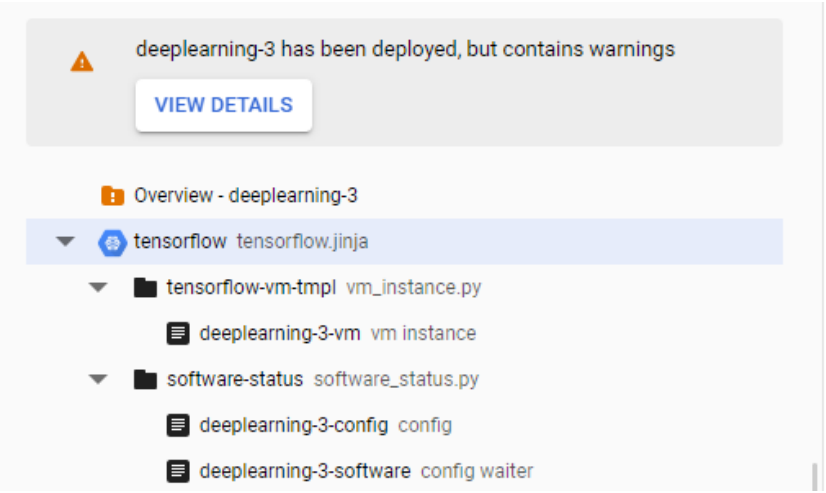
Select for Boot disk type: **Standard** Persistent Disk

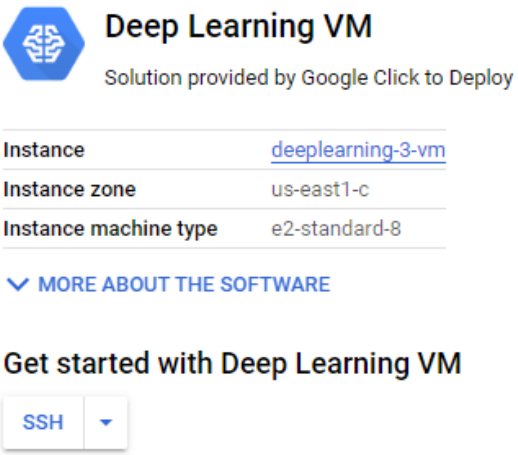
Enter for Boot disk size in GB: **1024** GB (1 TB)



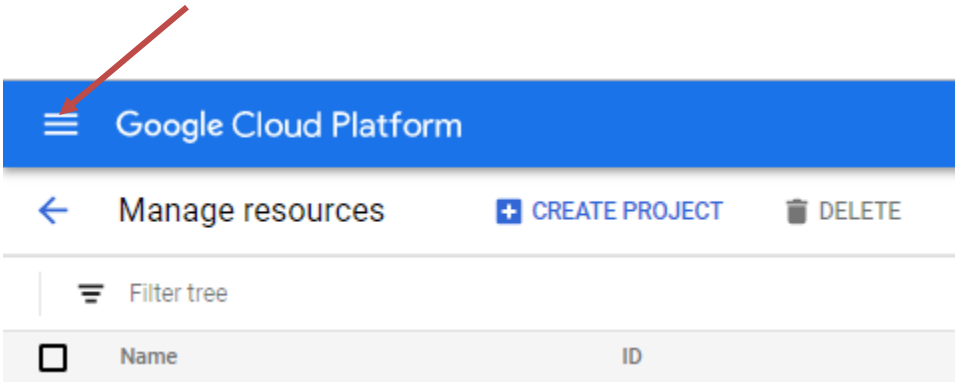
Click **DEPLOY**

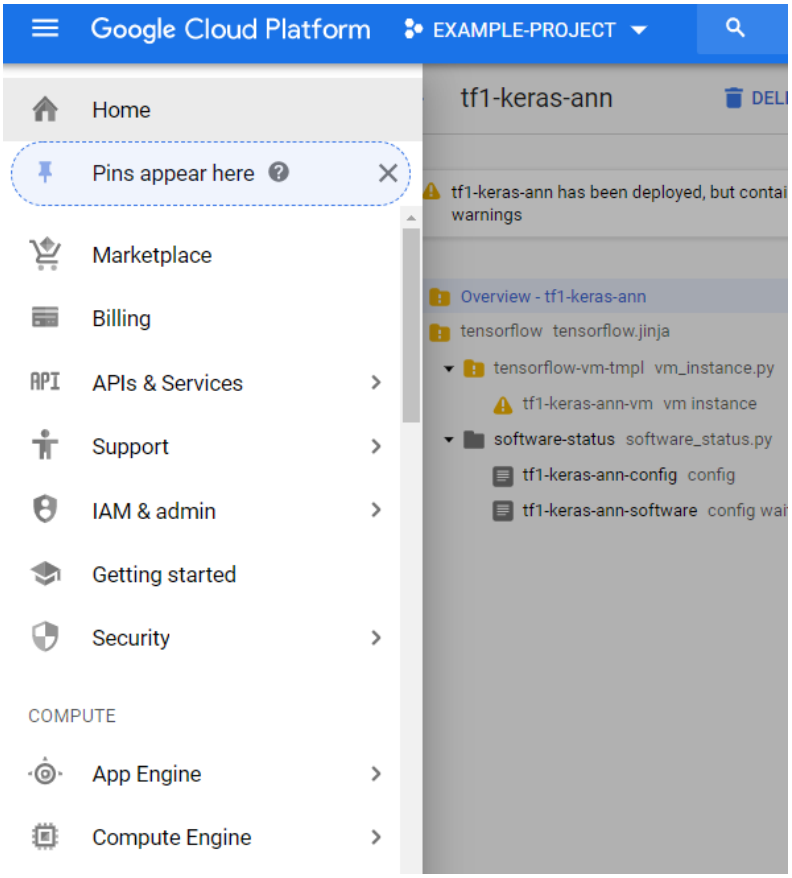
… Wait for the deployment of the Deep Learning Server to be deployed ……..



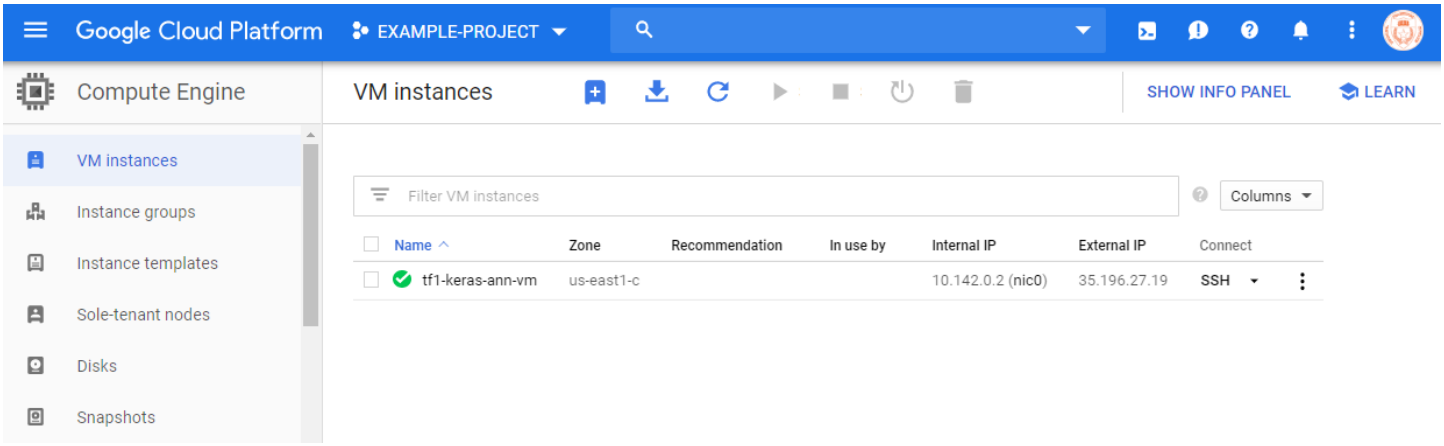


Click Products and Services icon to open a drop-down menu





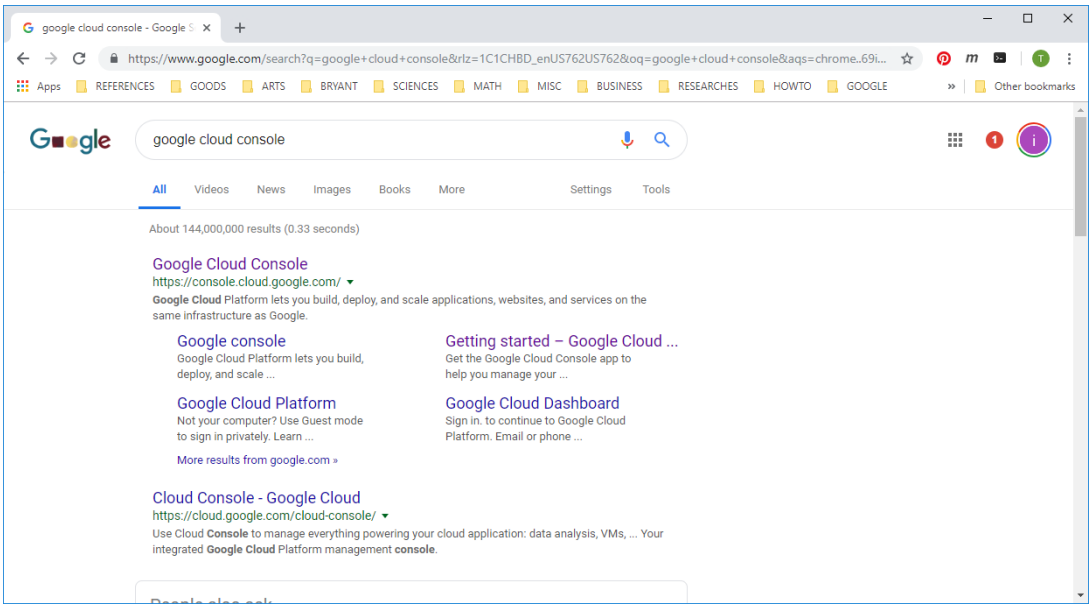
Click to select: Compute Engine



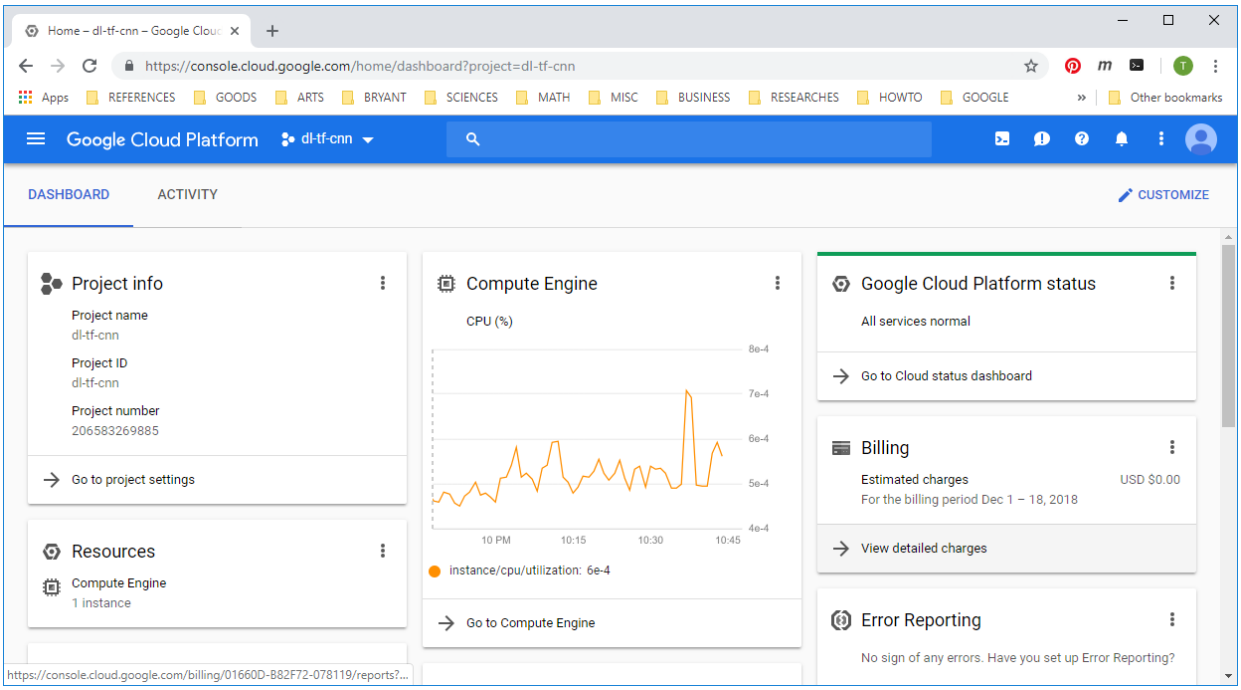
IT'S DONE!
DEEP LEARNING VM ON GCP HAS BEEN SET UP SUCCESSFULLY!

4. Access GCP Remote VM in the Console

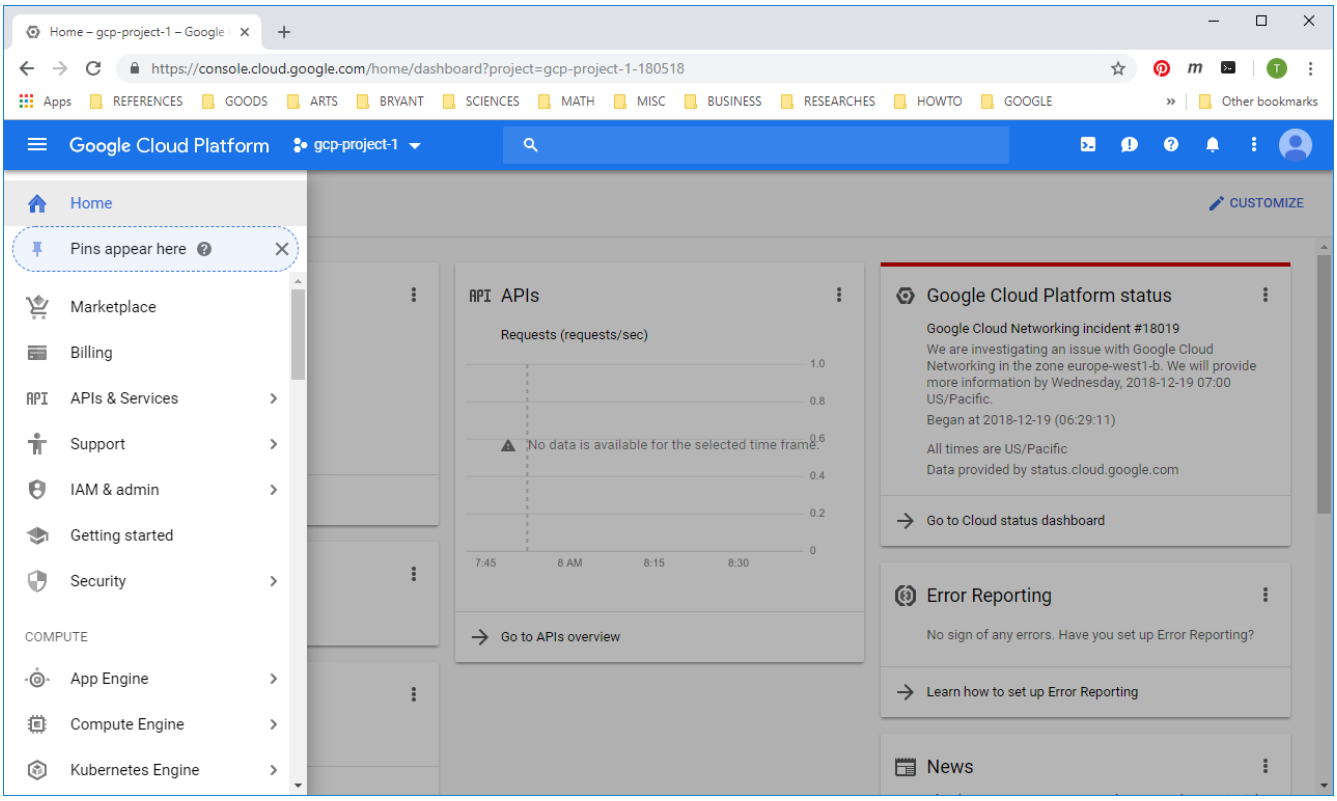
- Access GCP Console
  - Log in the Google account or Gmail account
  - Open Chrome browser
  - Enter: Google cloud console into the URL search box



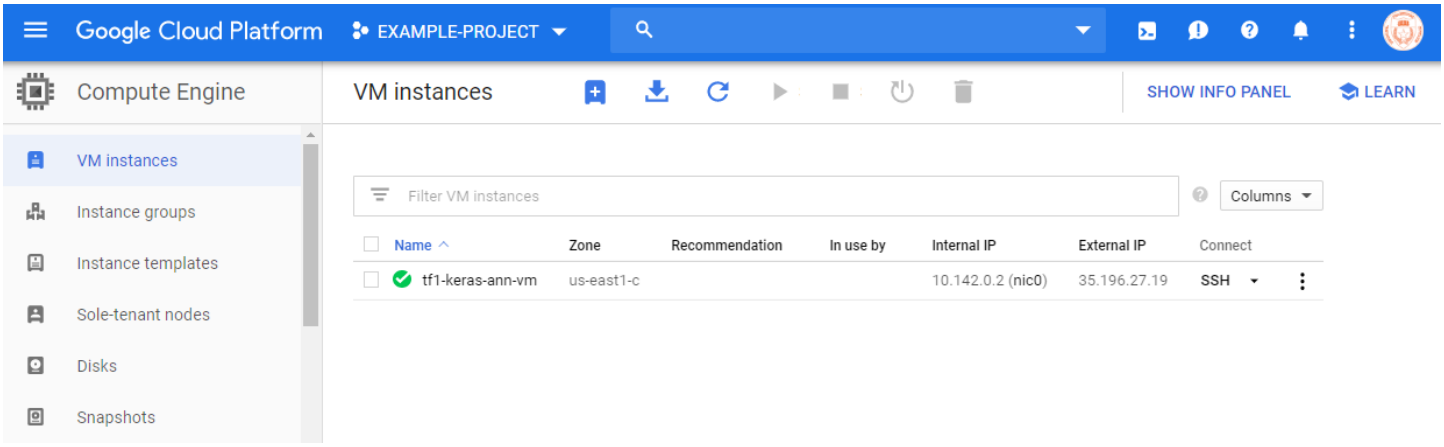
- Click Google Cloud Console



- Click on  on the top left corner.

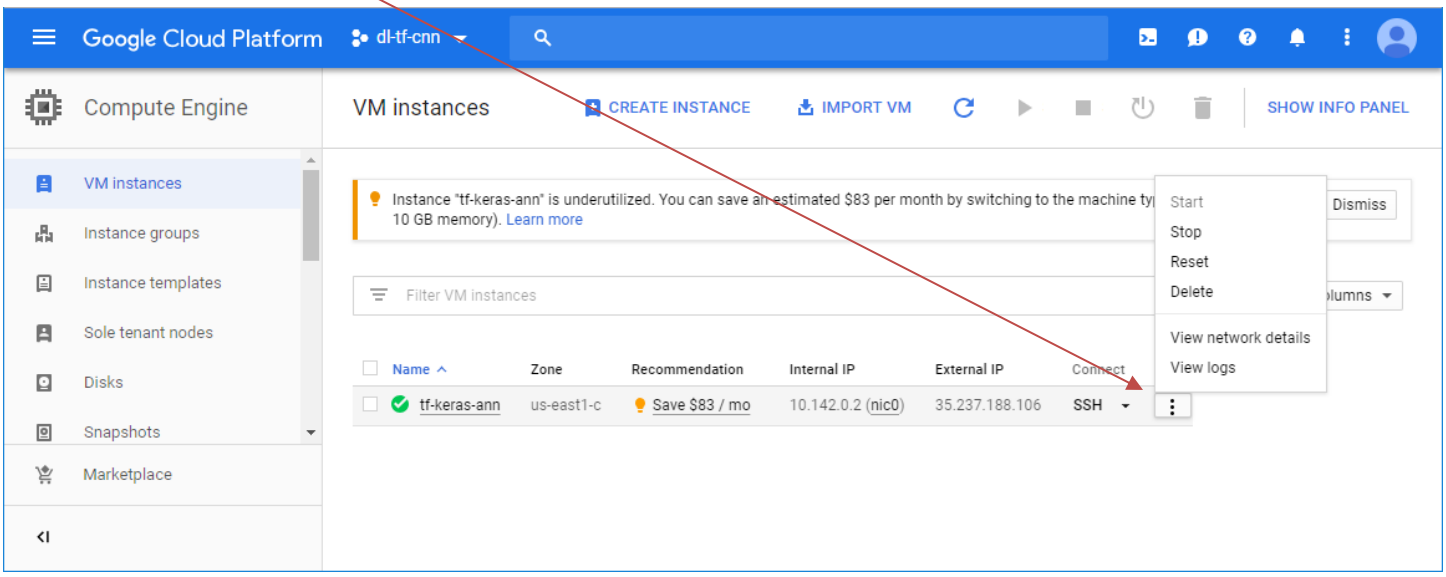


- Click Computer Engine



The remote virtual machine of the deep learning server shows up in the console.

5. Start and Stop GCP Remote Virtual Machine



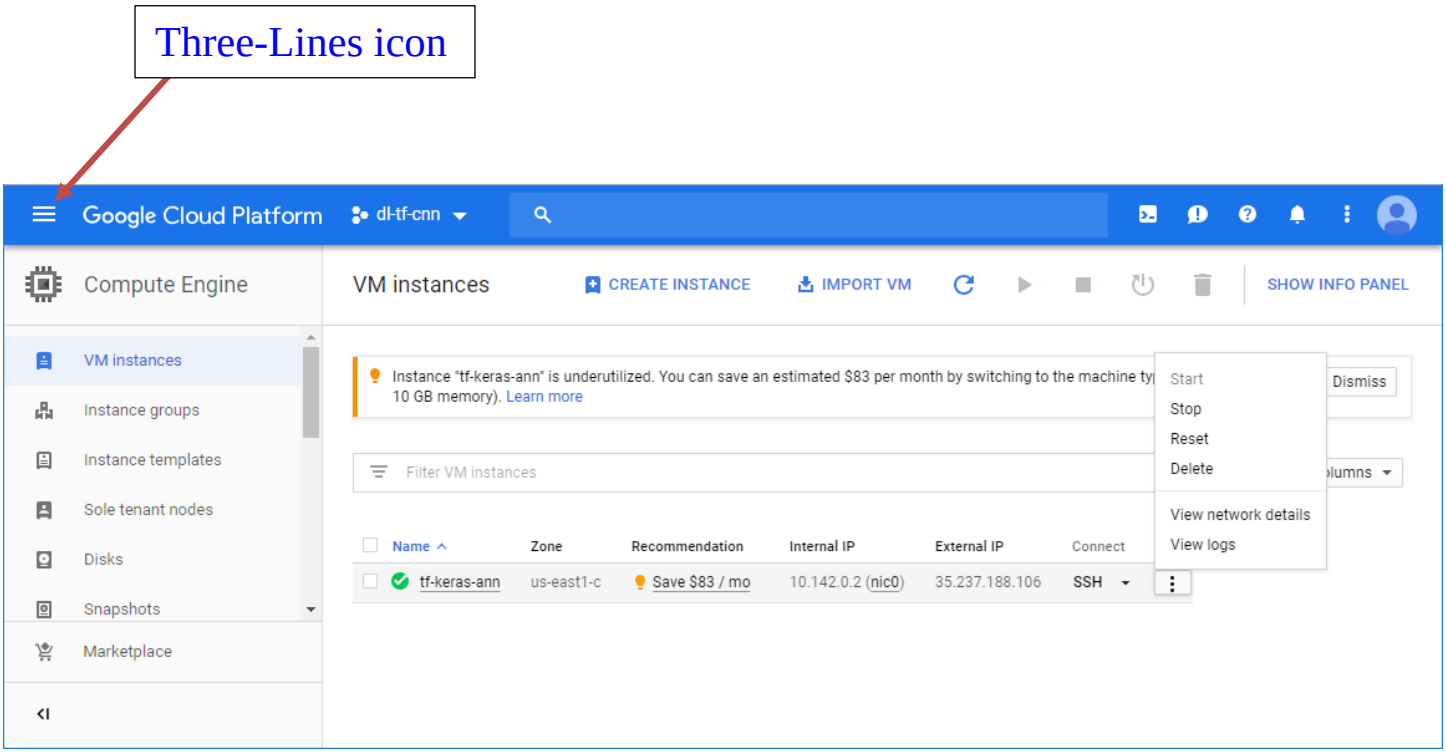
IMPORTANT NOTES:

*--) The user **MUST** **stop the VM** while not using it to **avoid** unnecessary charges.*

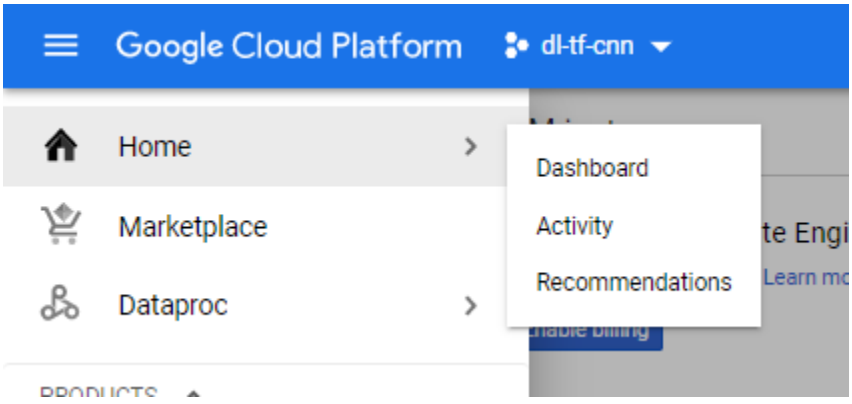
6. Access GCP Project Information

IMPORTANT NOTES:
--) The user should write down the project ID and project name that may be the same or different.

To get important information about a GCP project:

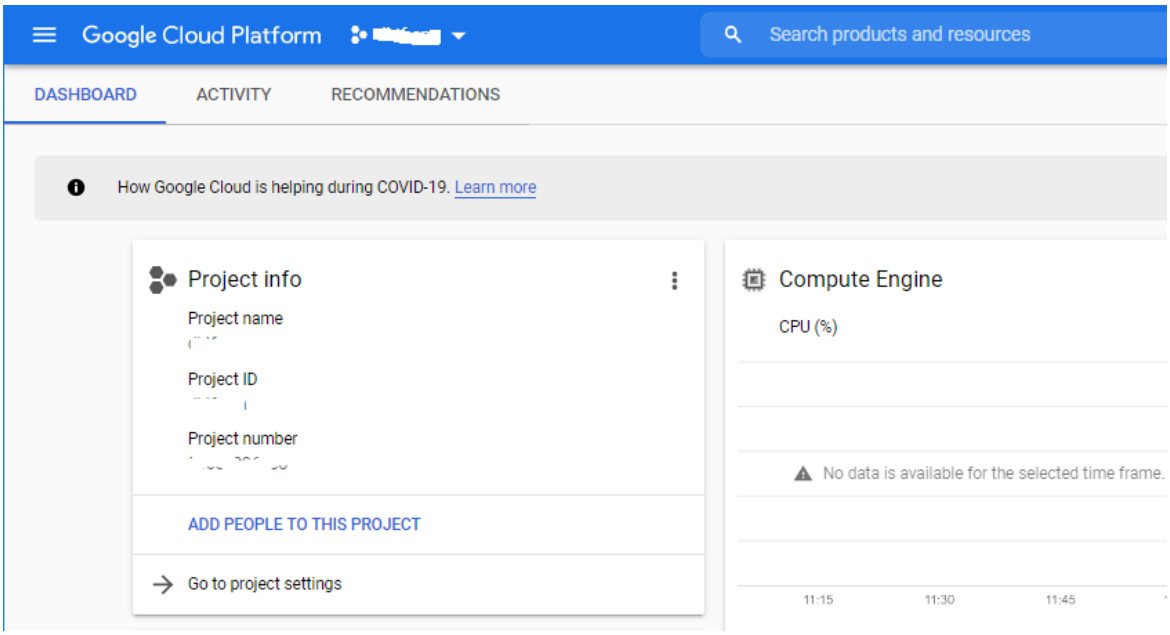


Click to open a menu: Three-Lines icon

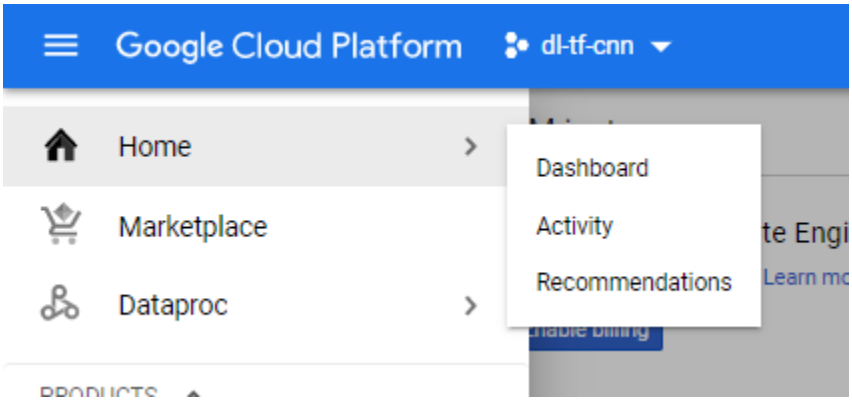


Click **Home**

Click to select: **Dashboard**

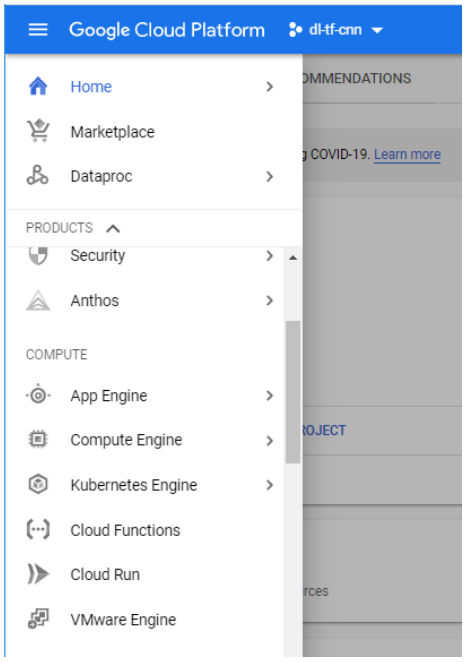


7. Access GCP VM Instance Information: Name, Zone, External IP

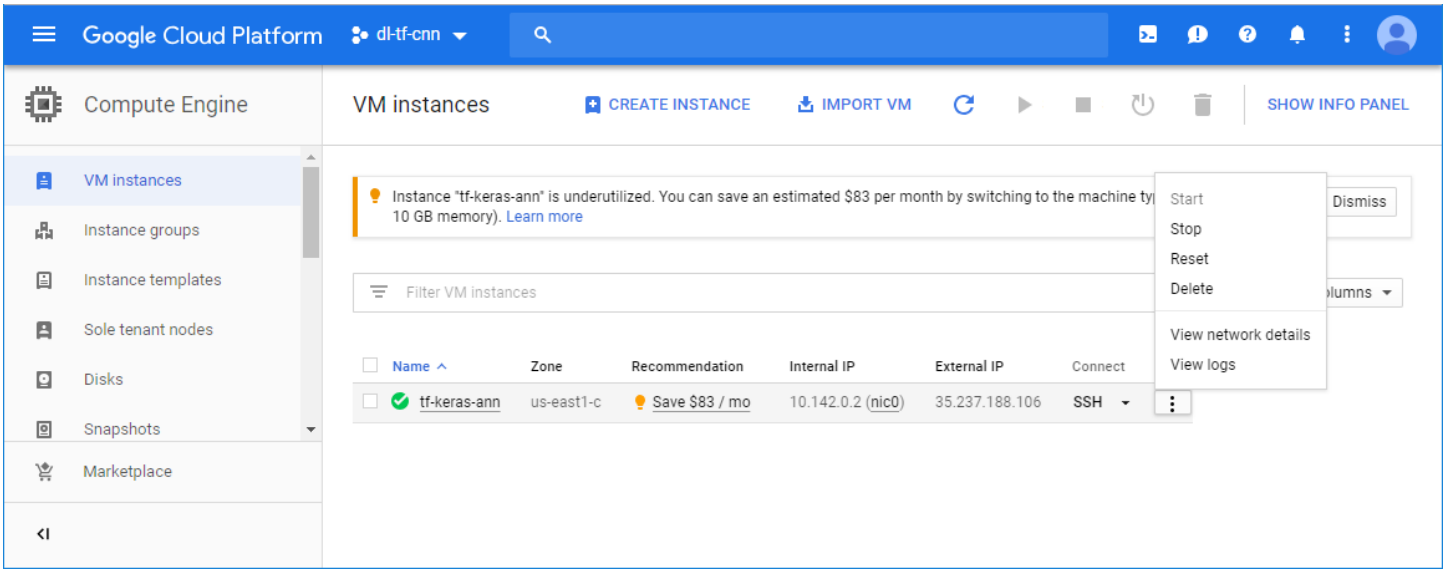


Click to open a menu: Three-Lines icon

Scroll down the menu and look for: Compute Engine



Click to select: **Compute Engine**



IMPORTANT NOTES:

--) The VM instance: name, zone, external IP are displayed in the console.