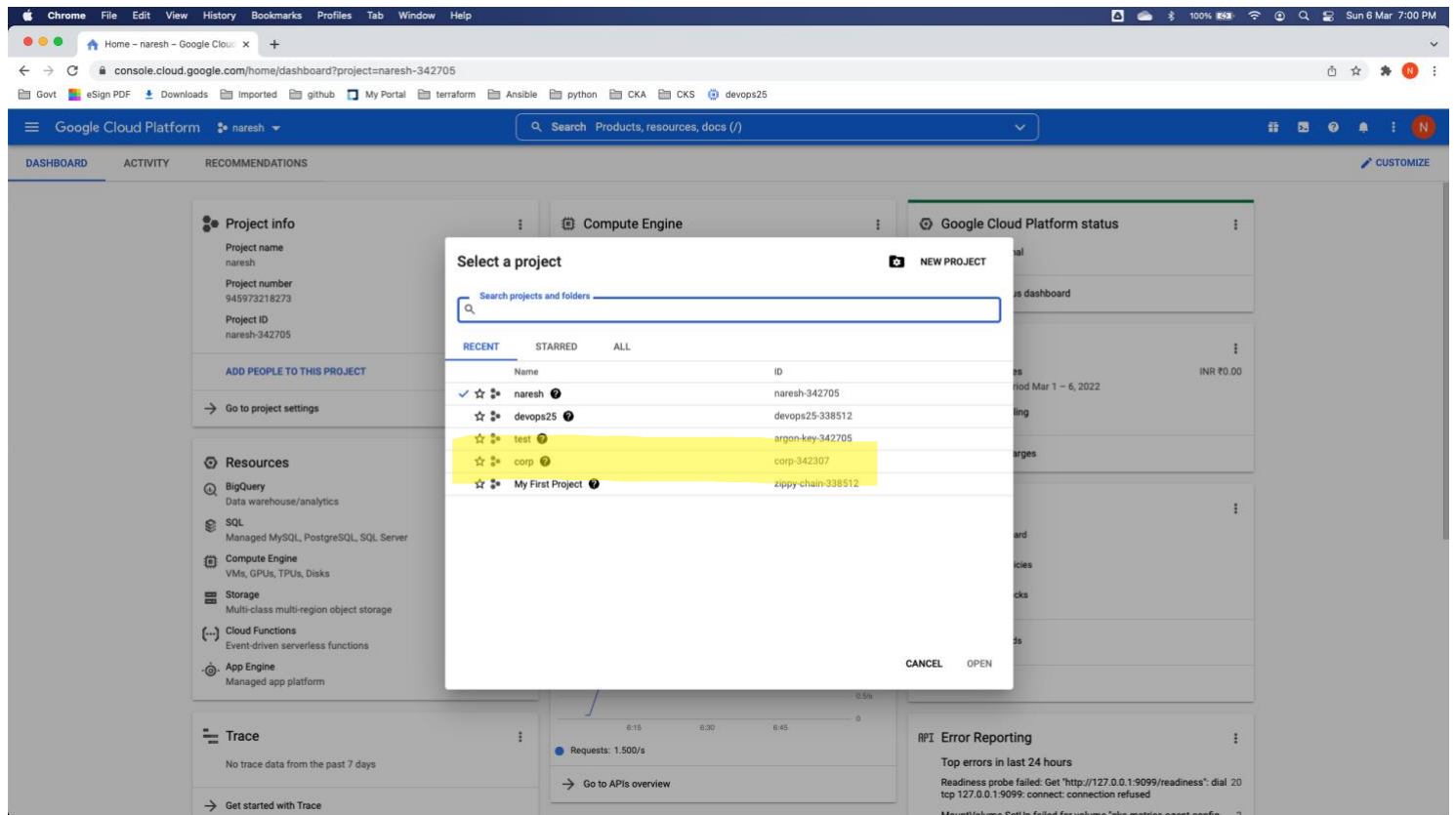


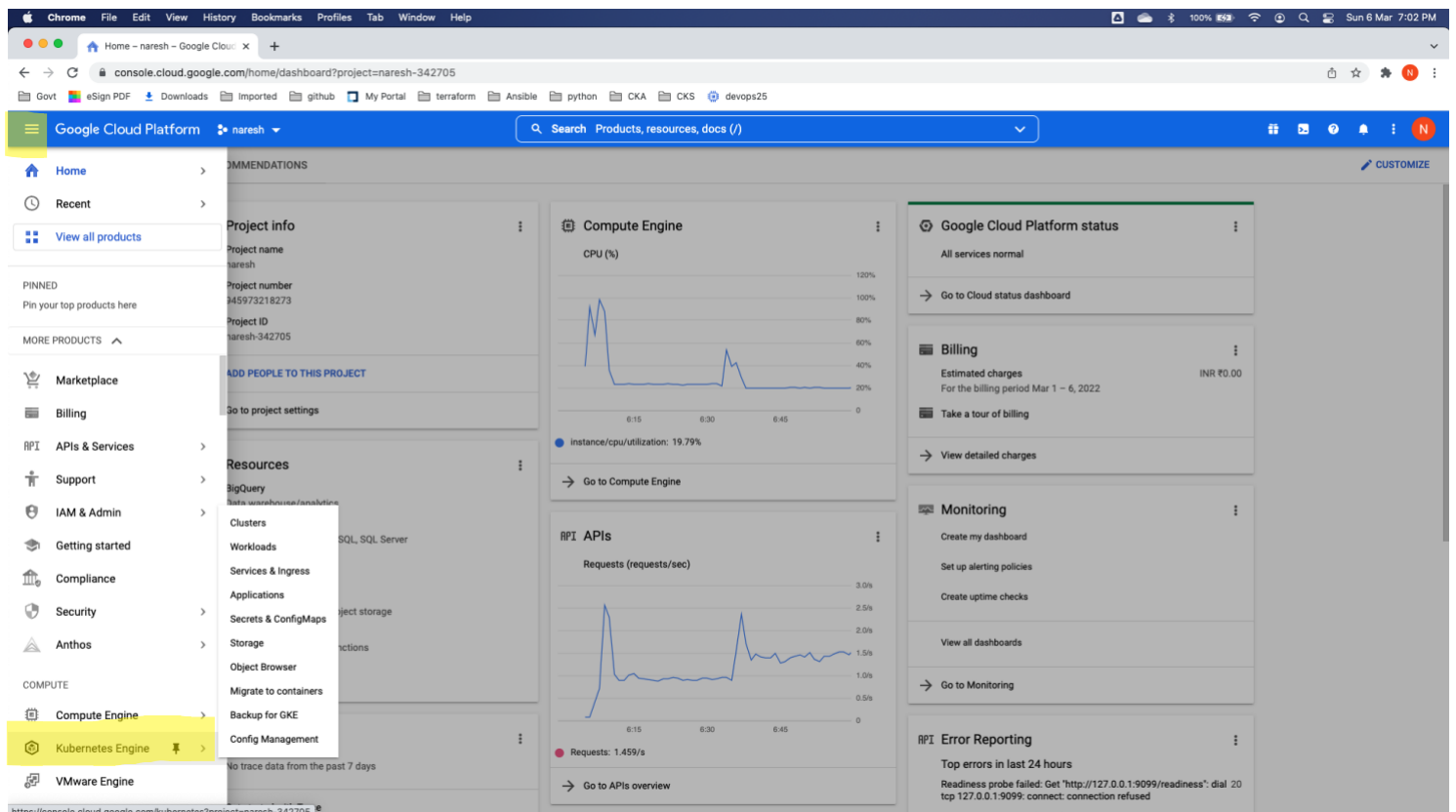
Create GKE Cluster from Google Cloud Console

1) Setup the Google Cloud Account - <https://console.cloud.google.com/>

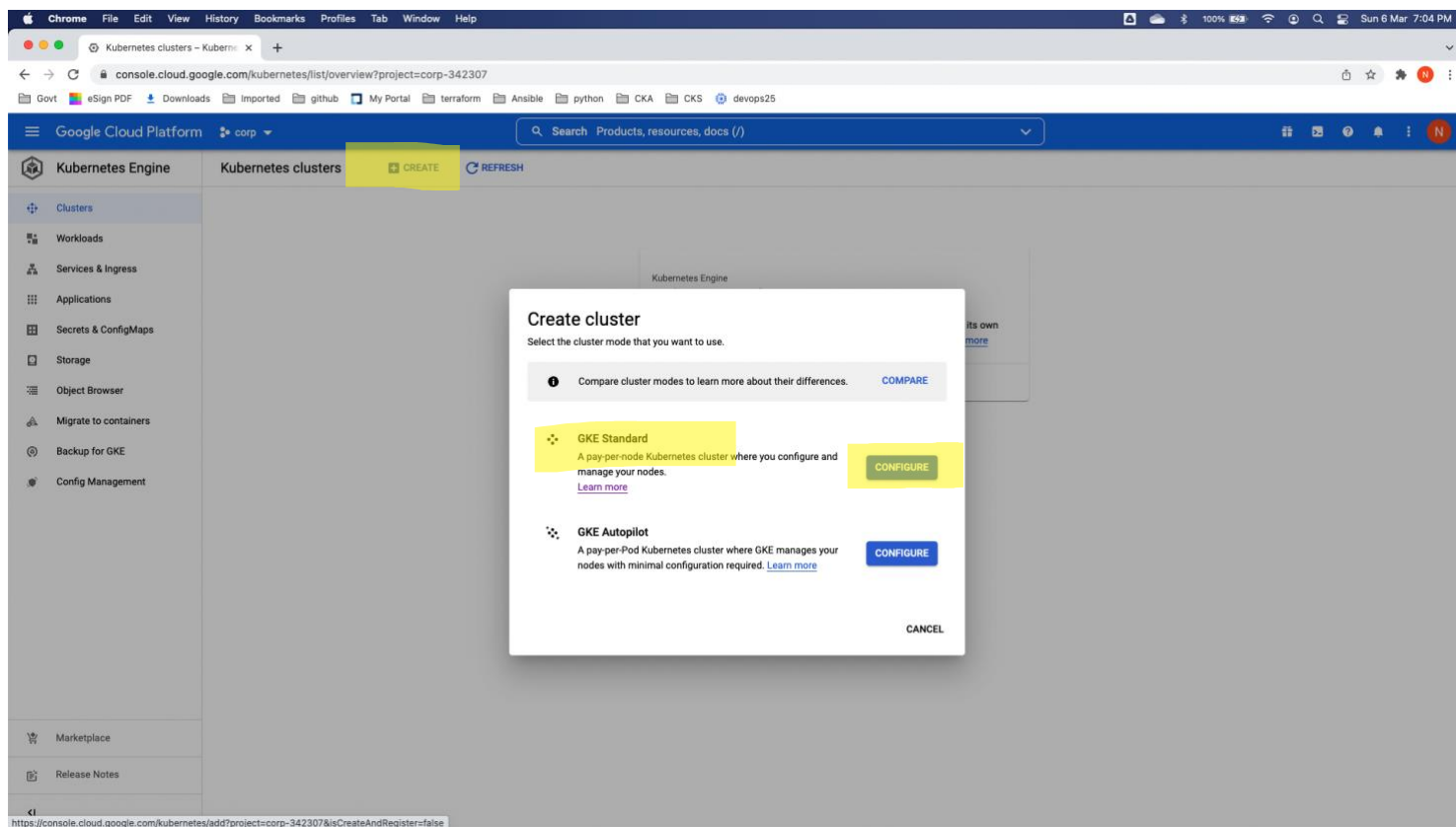
2) Choose Your Project / Create Project



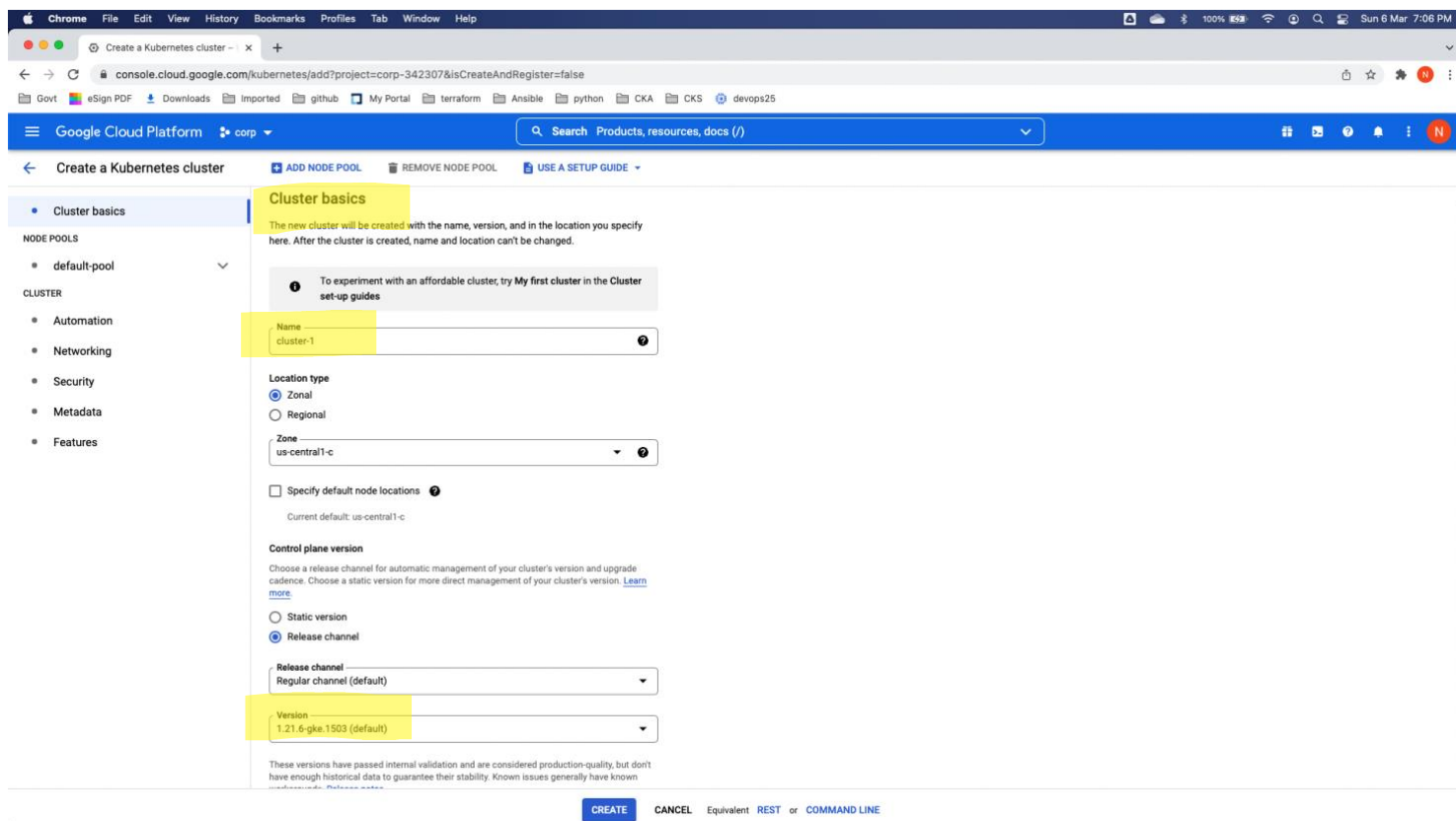
Select the “Kubernetes Engine” from Navigation Menu & Enable API



Once Kubernetes Engine API Enabled - Click on **Create** & Choose **"GKE Standard"**



Fill the Cluster Basics as below



From the left menu choose **“default-pool”** under Node Pools
enter the **name** & **required number of nodes**

Google Cloud Platform console - Create a Kubernetes cluster

Node pool details

The new cluster will be created with at least one node pool. A node pool is a template for groups of nodes created in this cluster. More node pools can be added and removed after cluster creation.

Name
default-pool

Control plane version - 1.21.6-gke.1503

Size
Number of nodes *
3

Pod address range limits the maximum size of the cluster. [Learn more](#)

☐ Enable autoscaling

☐ Specify node locations
Default: us-central1-c

Automation
☒ Enable auto-upgrade
☒ Enable auto-repair

Surge upgrade
Max surge * 1
Max unavailable * 0

CREATE CANCEL Equivalent REST or COMMAND LINE

then Select the **“Nodes”** from **default-pool** drop down

configure the Worker Nodes Configuration as below then **click on create**
Note: Choose the Node Configuration as per the requirement

Google Cloud Platform console - Create a Kubernetes cluster

Nodes

These node settings will be used when new nodes are created using this node pool.

Image type
Ubuntu with Docker (ubuntu)

The default Linux node image for newly created clusters and node pools with version 1.21.6-gke.1503 or later is Container-optimized OS with Containerd. For Windows node pools using version 1.21 or later, Containerd is also the recommended runtime. Since Dockerhim is being deprecated by Kubernetes project, [GKE will deprecate Docker node images](#). We recommend that you [migrate to containerd node images](#) as soon as possible. [Learn more about the different node images](#).

Machine Configuration
Machine family
GENERAL-PURPOSE COMPUTE-OPTIMIZED MEMORY-OPTIMIZED GPU
Machine types for common workloads, optimized for cost and flexibility

Series
E2

CPU platform selection based on availability

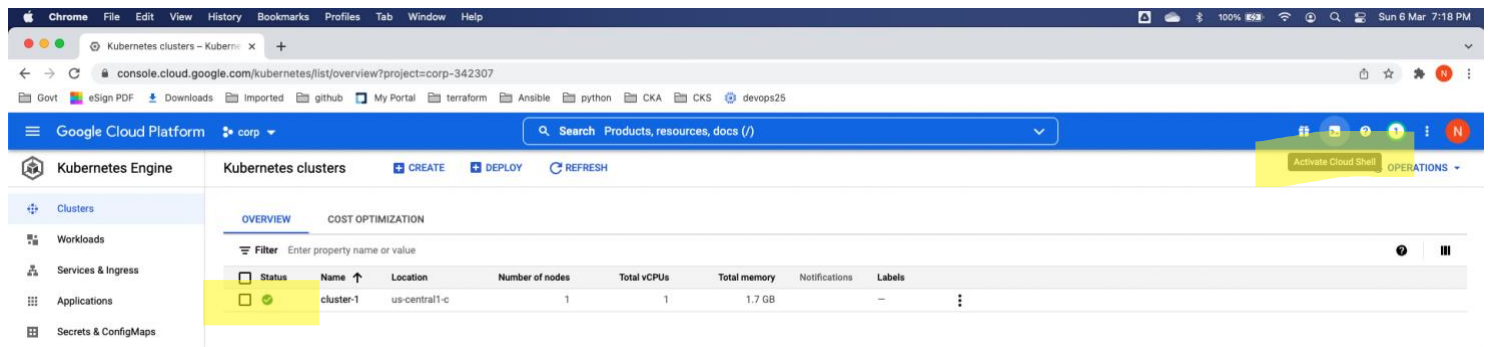
Machine type
e2-medium (2 vCPU, 4 GB memory)

CPU PLATFORM AND GPU
Boot disk type
Standard persistent disk

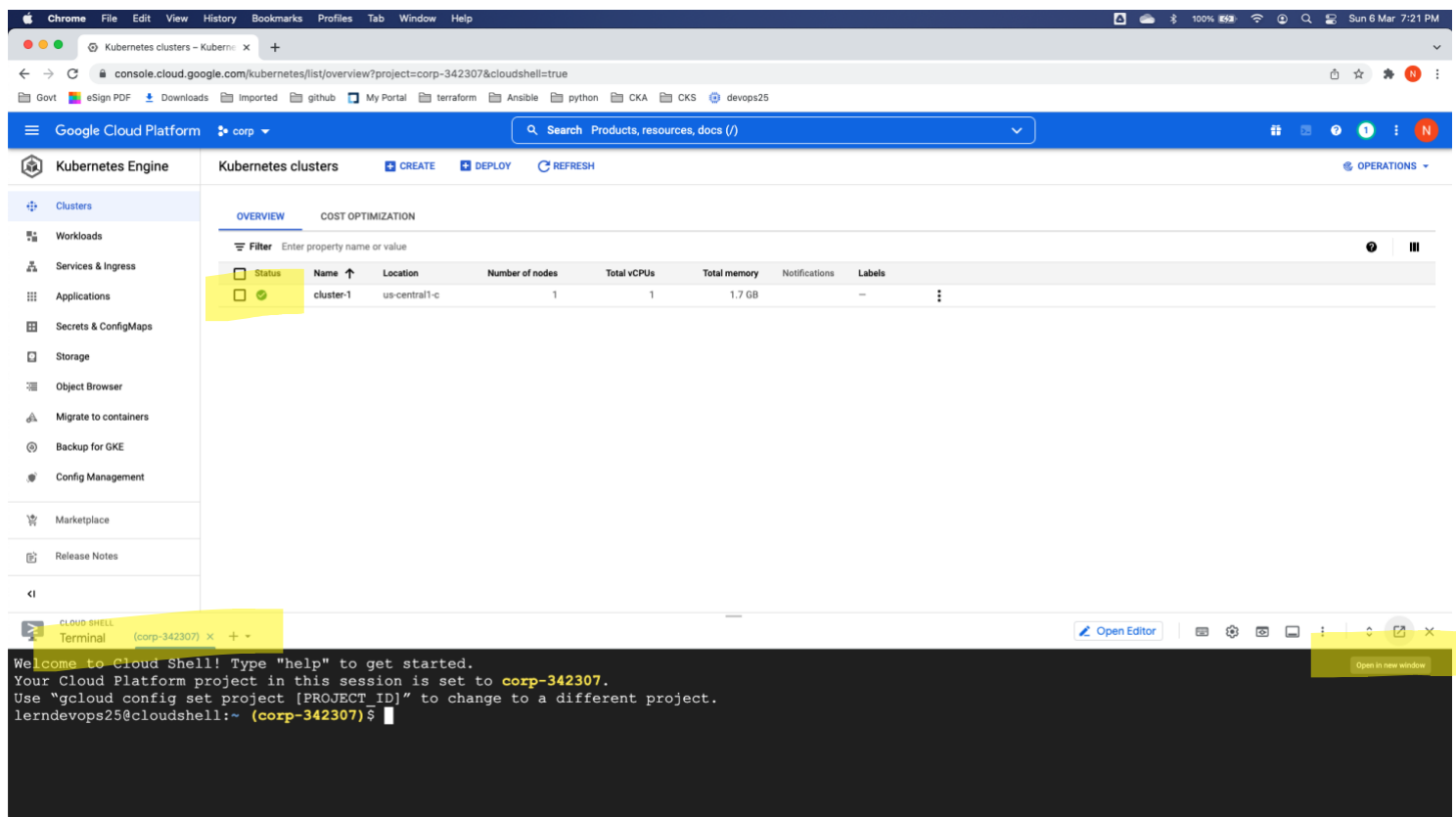
Boot disk size (GB)
15

CREATE CANCEL Equivalent REST or COMMAND LINE

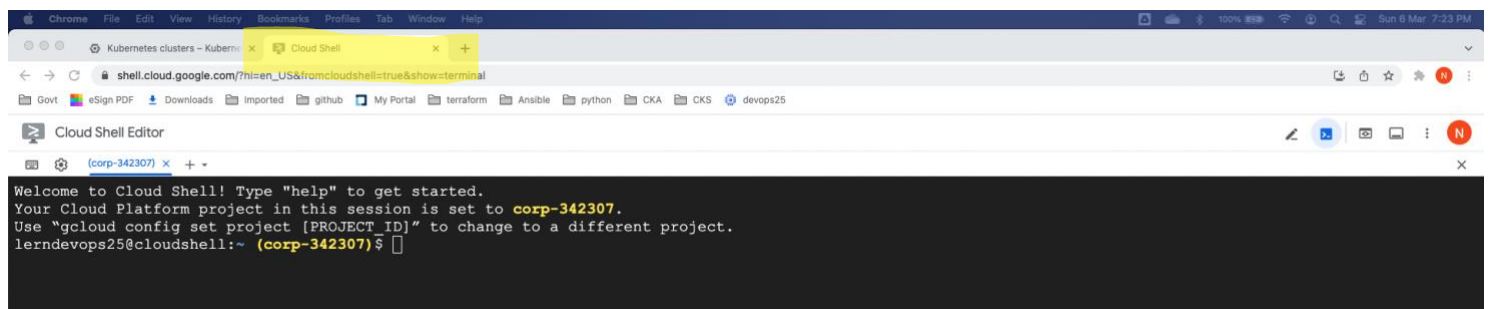
wait until cluster is created - takes a few minutes



Click on Activate Cloud Shell from top right corner as shown above

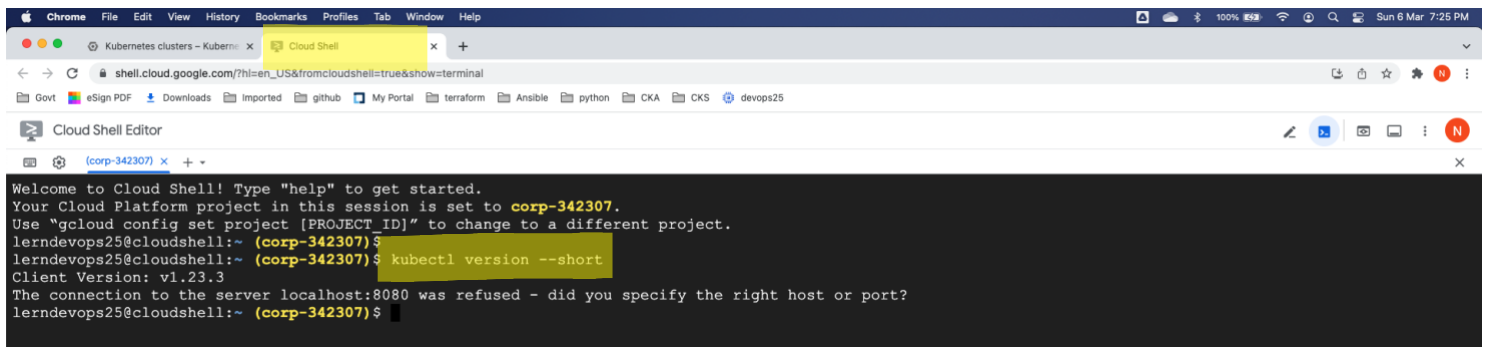


you can use "open in new window" to open the cloud shell in new TAB



the cloud shell by default will have the kubectl client installed

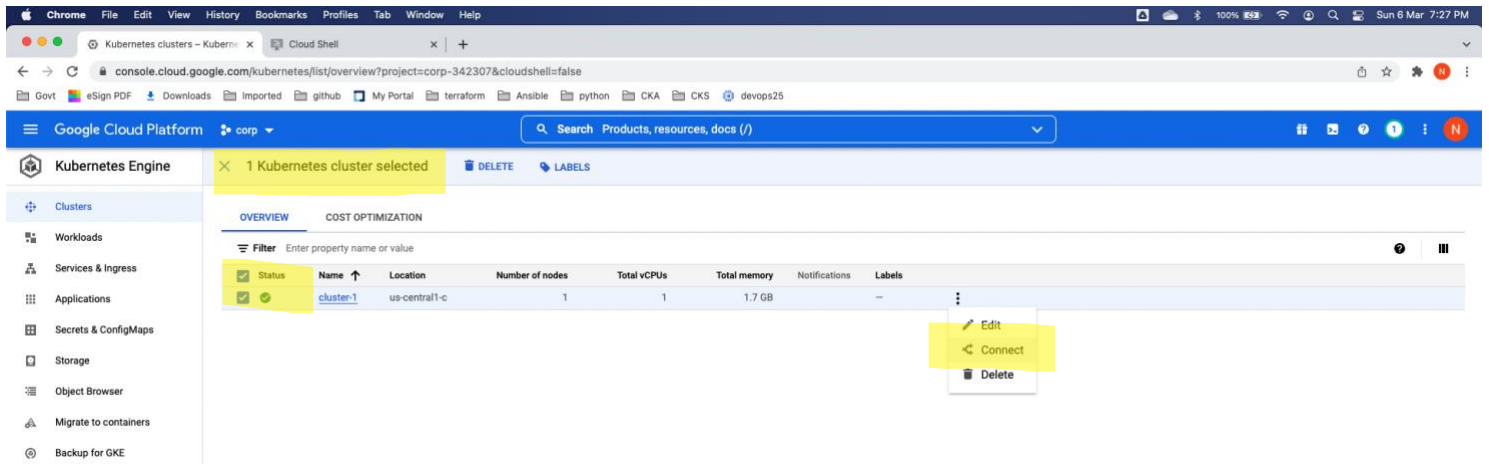
we will use the same kubectl to connect to the cluster



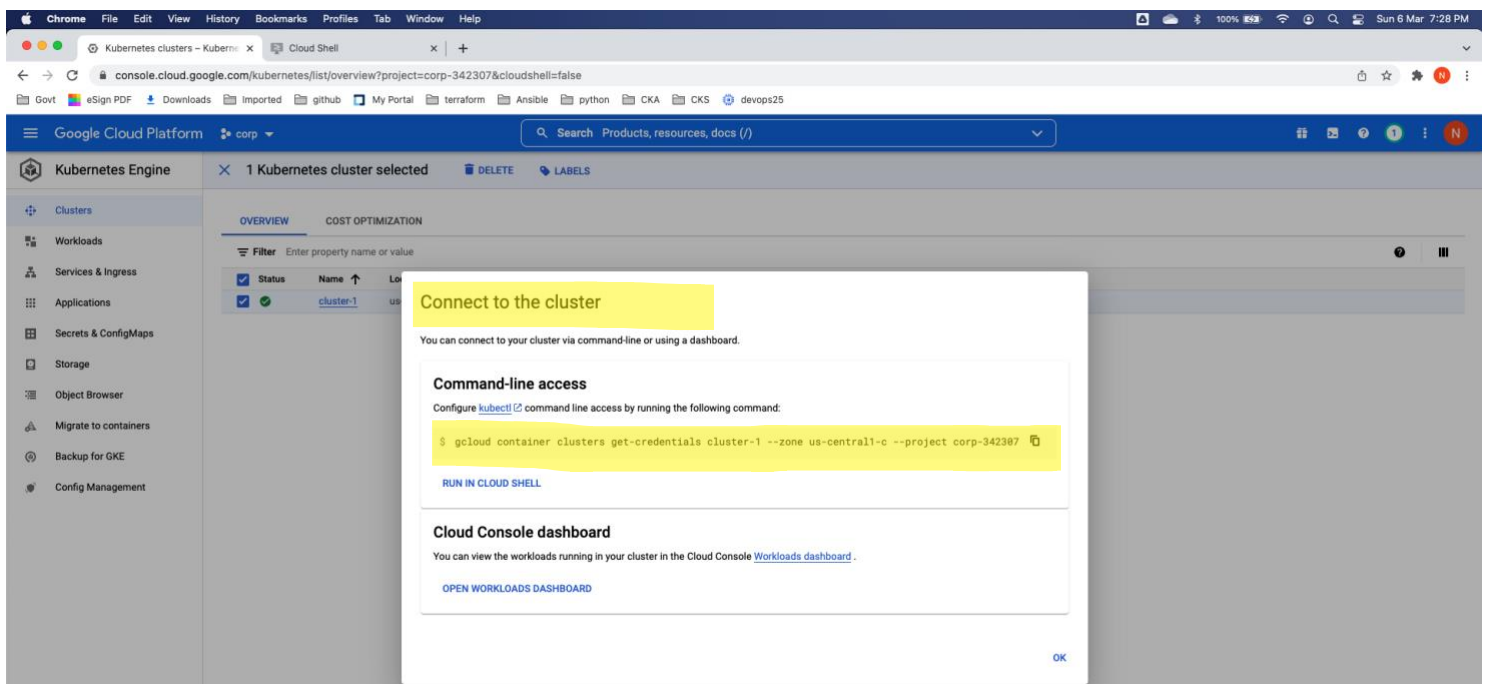
```
Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to corp-342307.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
lerndevops25@cloudshell:~ (corp-342307) $ kubectl version --short
Client Version: v1.23.3
The connection to the server localhost:8080 was refused - did you specify the right host or port?
lerndevops25@cloudshell:~ (corp-342307) $
```

to connect the GKE cluster we created Go to “Kubernetes Clusters Page”

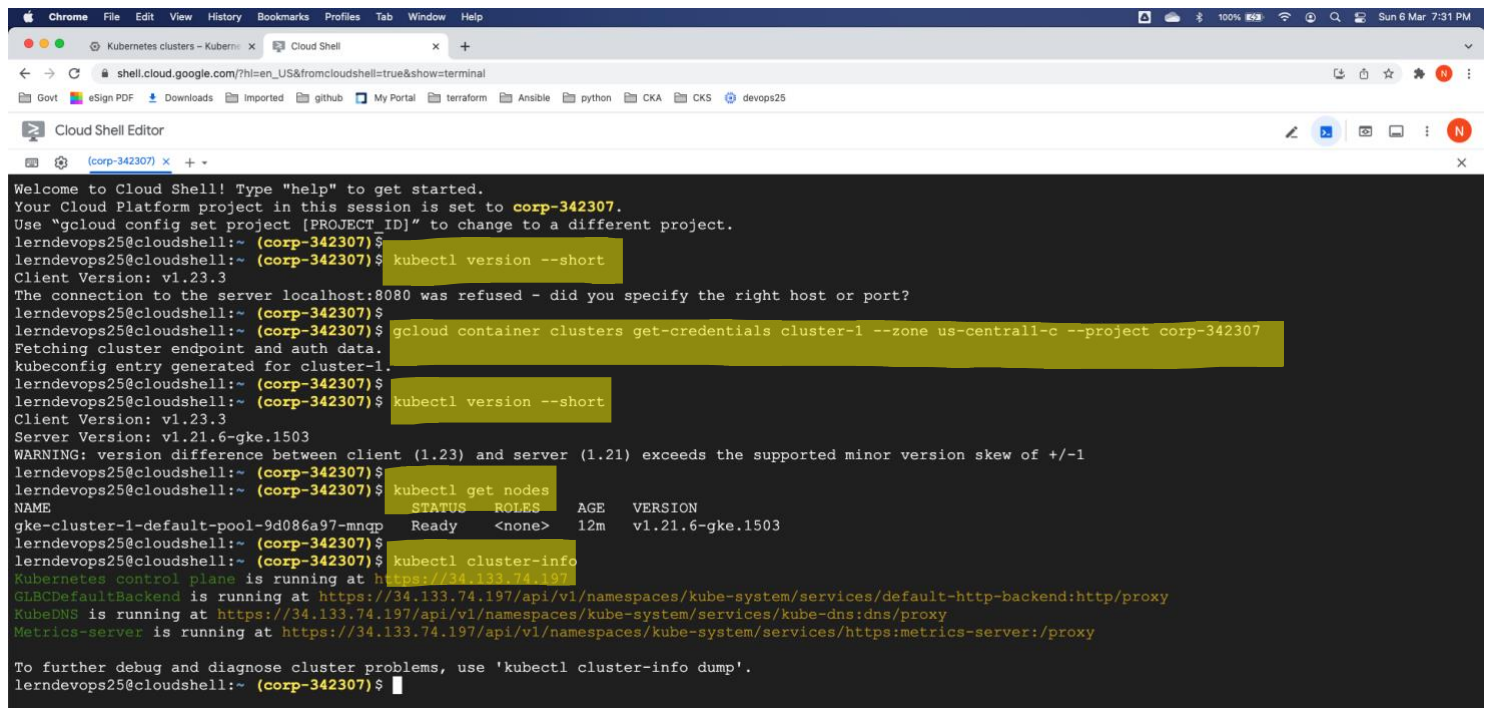
select the cluster you want to connect to & click on “connect” as shown below



copy the “gcloud” command shown on pop up



Switch to the **Cloud Shell Terminal** & run the “**gcloud**” command



```
Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to corp-342307.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
lerndevops25@cloudshell:~ (corp-342307) $ kubectl version --short
Client Version: v1.23.3
The connection to the server localhost:8080 was refused - did you specify the right host or port?
lerndevops25@cloudshell:~ (corp-342307) $ gcloud container clusters get-credentials cluster-1 --zone us-central1-c --project corp-342307
Fetching cluster endpoint and auth data.
kubeconfig entry generated for cluster-1.
lerndevops25@cloudshell:~ (corp-342307) $ kubectl version --short
Client Version: v1.23.3
Server Version: v1.21.6-gke.1503
WARNING: version difference between client (1.23) and server (1.21) exceeds the supported minor version skew of +/-1
lerndevops25@cloudshell:~ (corp-342307) $ kubectl get nodes
NAME                                STATUS    ROLES    AGE    VERSION
gke-cluster-1-default-pool-9d086a97-mnqp Ready    <none>    12m    v1.21.6-gke.1503
lerndevops25@cloudshell:~ (corp-342307) $ kubectl cluster-info
Kubernetes control plane is running at https://34.133.74.197
GLBCDefaultBackend is running at https://34.133.74.197/api/v1/namespaces/kube-system/services/default-http-backend:http/proxy
KubeDNS is running at https://34.133.74.197/api/v1/namespaces/kube-system/services/kube-dns:dns/proxy
Metrics-server is running at https://34.133.74.197/api/v1/namespaces/kube-system/services/https:metrics-server:/proxy

To further debug and diagnose cluster problems, use 'kubectl cluster-info dump'.
lerndevops25@cloudshell:~ (corp-342307) $
```