

Day 1:

- What is Cloud Computing?**
- Importance of cloud computing**
- GCE Service (Google Compute Engine)**
- Gcloud shell**
- Projects in GCP, Billing Account**
- VPC**
- VPC PEERING**

PAAS (PLATFORM AS A SERVICE)

- Container technology (Docker)**
- Kubernetes (COE tool)**

- GKE/GCE(GOOGLE CONTAINER ENGINE) SERVICE**
- Kubectl**
- Load Balancer**
- SQL (Storage Service)**
- IAM (IDENTITY ACCESS MANAGEMENT)**
- APP ENGINE(PAAS)**

<https://console.cloud.google.com/>

Compute units: ram,cpu etc

Home – My First Project – Google Cloud Platform

console.cloud.google.com/home/dashboard?project=groovy-ward-287313

New Tab Search | Inbox (157) - 2019p... | Inbox (1,144) - vish... | Inbox (252) - 2019p... | Gmail | YouTube | Maps | 29th APRIL - Google... | YAMLint - The YAM... | Untitled document... | Incognito

Free trial status: \$21,406.50 credit and 91 days remaining - with a full account, you'll get unlimited access to all of Google Cloud Platform.

DISMISS ACTIVATE

Google Cloud Platform My First Project Search products and resources DASHBOARD ACTIVITY RECOMMENDATIONS Notifications FAVORITES

Home Marketplace Billing APIs & Services Support IAM & Admin Getting started Security Anthos COMPUTE App Engine

Project info API APIs Google Cloud Platform status Monitoring

Project name: My First Project
Project ID: groovy-ward-287313
Project number: 497392490371
ADD PEOPLE TO THIS PROJECT
Go to project settings

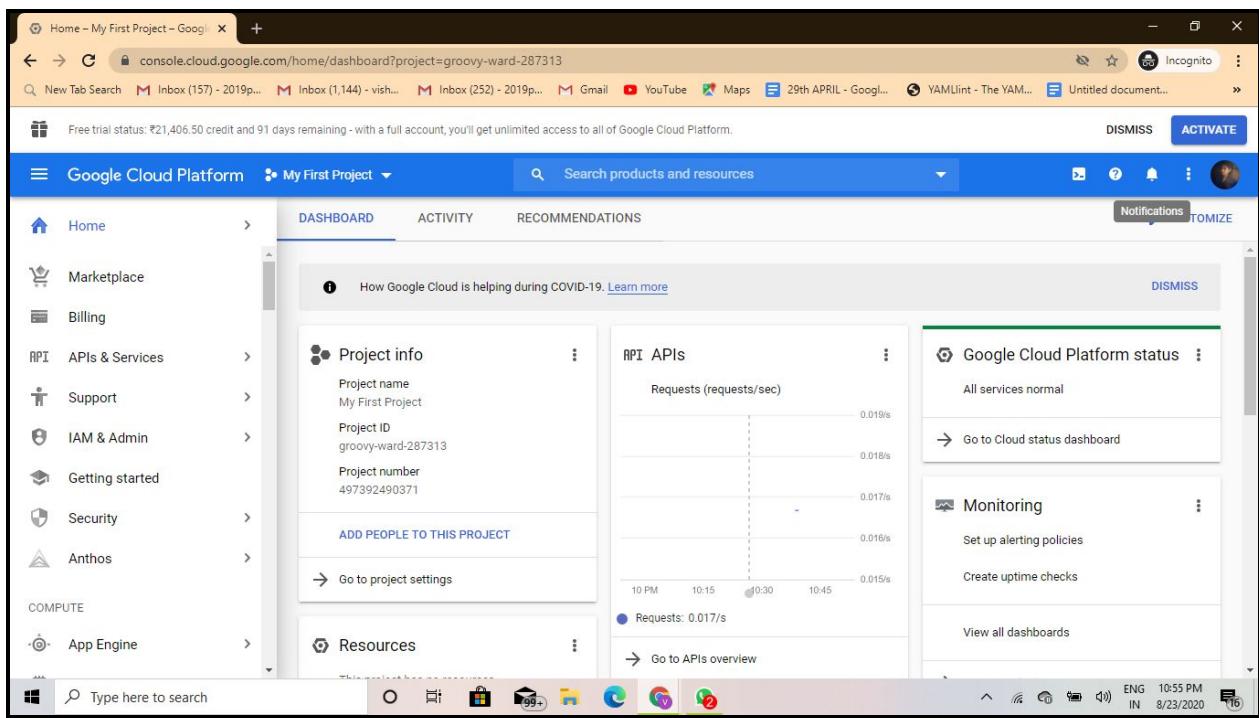
Requests (requests/sec)
0.019/s
0.018/s
0.017/s
0.016/s
0.015/s
10 PM 10:15 10:30 10:45
Requests: 0.017/s
Go to APIs overview

All services normal
Go to Cloud status dashboard

Set up alerting policies
Create uptime checks
View all dashboards

Type here to search

10:55 PM 8/23/2020



Overview – Billing – Google Cloud Platform

console.cloud.google.com/billing/0182F7-E5BF61-5DE78C

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Google Cloud Platform

Billing

Overview

Reports

Cost table

Cost breakdown

Commitments

Budgets & alerts

Billing export

Pricing

Documents

Transactions

Payment settings

Payment method

Overview

BILLING ACCOUNT OVERVIEW

My Billing Account ▾

Search products and resources

View all health checks

Promotional credits ₹21,406.50 Remaining credits Out of ₹21,406.50

Remaining credits ₹21,406.50 Free Trial

Credit details

Actual cost

Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug \$0

View report

Top projects

August 1, 2019 – August 31, 2020

Type here to search

11:02 PM ENG IN 8/23/2020

Home – My First Project – Google Cloud Platform

console.cloud.google.com/home/dashboard?project=groovy-ward-287313&pli=1

New Tab Search | Inbox (157) - 2019p... | Inbox (1,144) - vish... | Inbox (252) - 2019p... | Gmail | YouTube | Maps | 29th APRIL - Googl... | YAMLint - The YAM... | Untitled document...

Google Cloud Platform

Home

Pins appear here

Anthos

COMPUTE

App Engine

Compute Engine

Kubernetes Engine

Cloud Functions

Cloud Run

VMware Engine

VM Instances

Instance groups

Instance templates

Sole-tenant nodes

Machine Images

Disk

Snapshots

Images

TPUs

Migrate for Compute Engine

Committed use discounts

Metadata

Health checks

Zones

Network endpoint groups

Operations

RECOMMENDATIONS

Helping during COVID-19. [Learn more](#)

DISMIS

RPI APIs

Requests (requests/sec)

0.019/s

0.018/s

0.017/s

0.016/s

0.015/s

10:30 11 PM

Requests: 0.017/s

Go to APIs overview

Google Cloud Platform status

All services normal

Go to Cloud status dashboard

Monitoring

Set up alerting policies

Create uptime checks

View all dashboards

Type here to search

11:17 PM ENG IN 8/23/2020

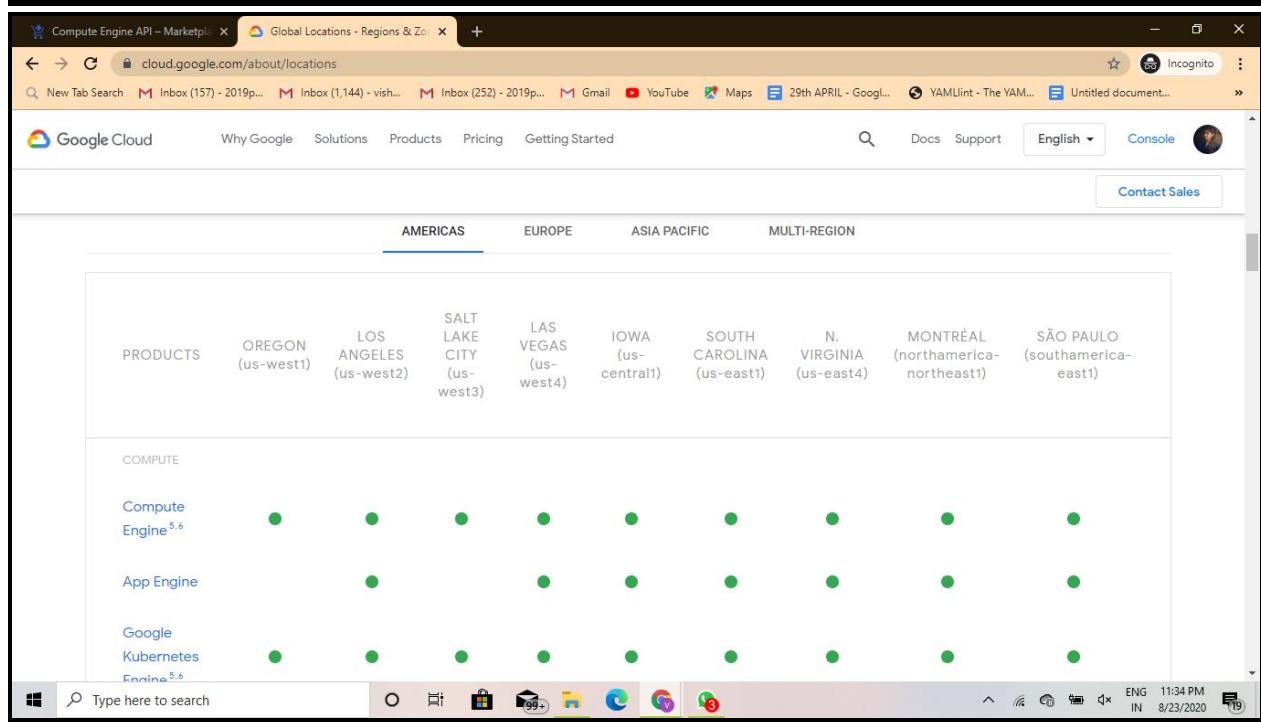
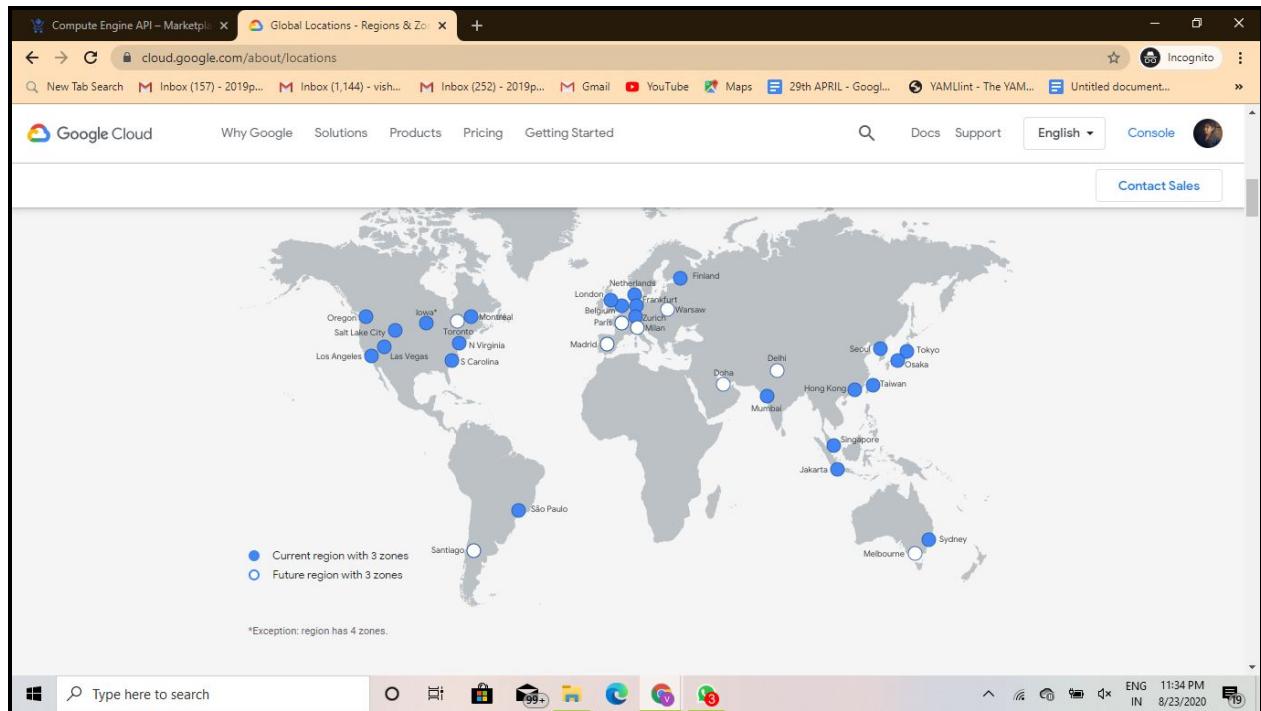
The screenshot shows the Google Cloud Platform Compute Engine API Marketplace page. At the top, there's a search bar and a navigation bar with 'Google Cloud Platform' and 'My First Project'. Below the header, the 'Compute Engine API' by Google is displayed with a blue icon. There are two buttons: 'ENABLE' (in blue) and 'TRY THIS API' (in grey). A link 'Click to try this API in API Explorer' is also present. Below these are tabs for 'OVERVIEW' (which is selected), 'DOCUMENTATION', and 'SUPPORT'. The 'OVERVIEW' section contains an 'Overview' section with a brief description: 'Creates and runs virtual machines on Google Cloud Platform.' To the right, there's an 'Additional details' panel with information: Type: APIs & services, Last updated: 12/10/19, and Category: Compute, Networking. The status bar at the bottom shows the URL as <https://console.cloud.google.com/marketplace/product/google/compute.googleapis.com?returnUrl=%2Fcompute%2Fdisks%3Fproject%3Dgroovy-ward-287313&pr...>.

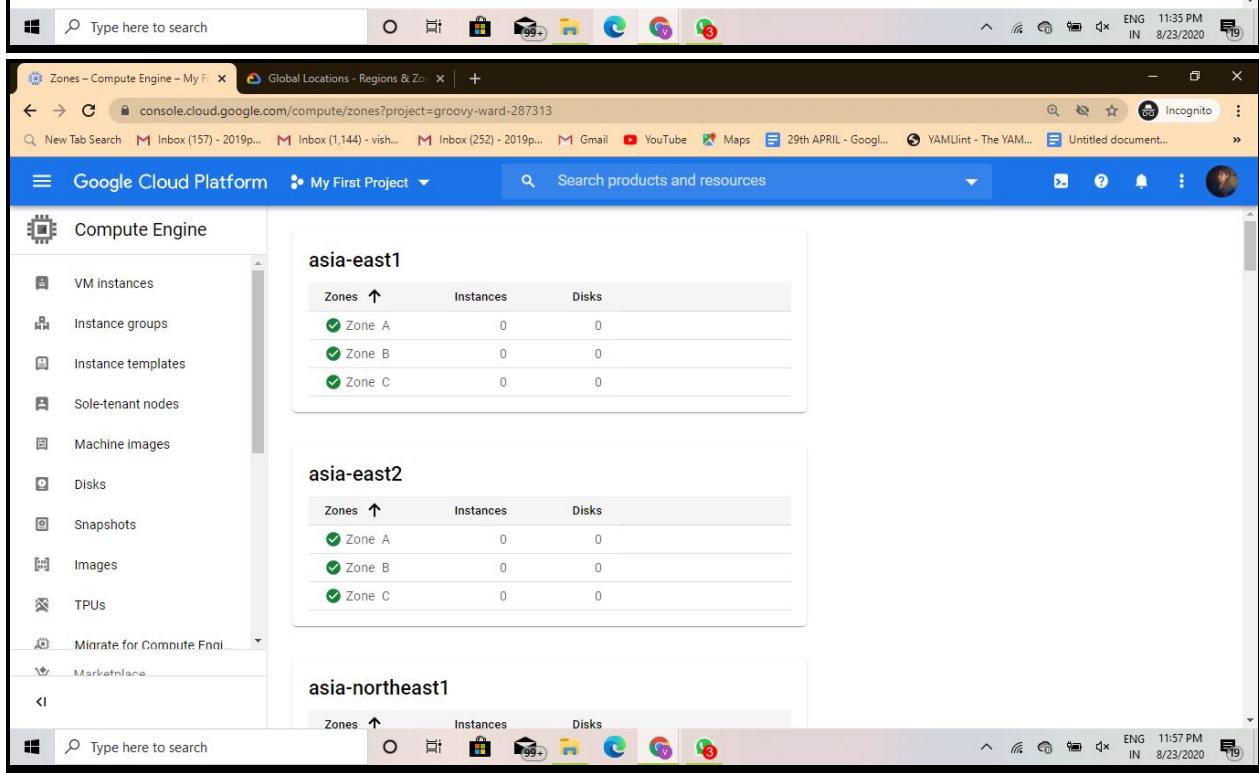
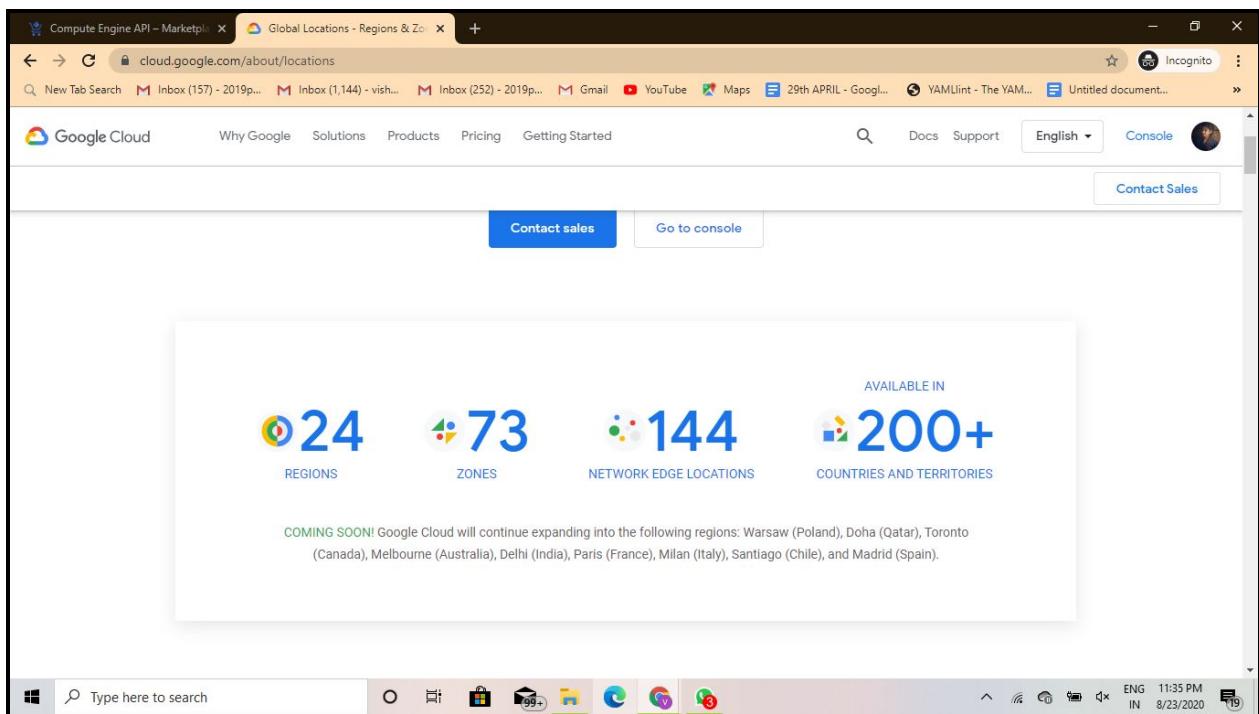
The screenshot shows the Google Cloud Platform dashboard for the project 'My First Project'. The left sidebar has sections for Home, Security, Anthos, COMPUTE (App Engine, Compute Engine, Kubernetes Engine, Cloud Functions, Cloud Run, VMware Engine), and other services like Machine Images, Disks, Snapshots, Images, TPUs, Migrate for Compute Engine, Committed use discounts, Metadata, Health checks, Zones, Network endpoint groups, Operations, Security scans, OS patch management (NEW), and Settings. The main area shows 'RECOMMENDATIONS' for helping during COVID-19. On the right, there's a 'API APIs' section showing requests per second from 11 PM to now, with a total of 0.083/s. Below it is a 'Google Cloud Platform status' section indicating all services are normal, with a link to the status dashboard. Further down is a 'Monitoring' section for setting up alerting policies and creating uptime checks, along with a link to view all dashboards. The status bar at the bottom shows the URL as <https://console.cloud.google.com/home/dashboard?project=groovy-ward-287313&pli=1>.

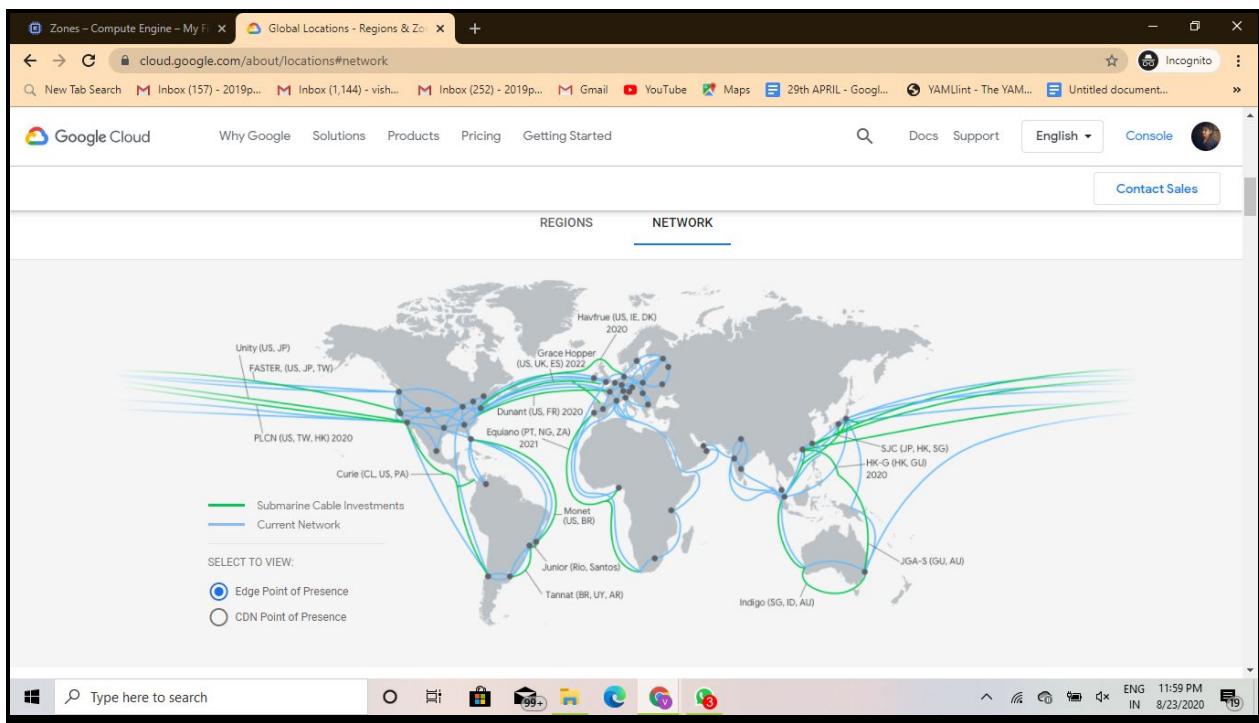
data center/zone

Gcp also has a concept of multi-region

<https://cloud.google.com/infrastructure>







The screenshot shows the Google Cloud Platform dashboard. On the left, the navigation menu is open, specifically under the 'APIs & Services' section. A sub-menu is displayed with options: Dashboard, Library, Credentials, OAuth consent screen, Domain verification, and Page usage agreements. The 'Library' option is highlighted. The main content area shows a chart titled 'APIs' with a line graph showing requests over time. A status bar at the bottom indicates 'Requests: 0.083/s'. To the right, there are sections for 'Google Cloud Platform status' (All services normal) and 'Monitoring' (Set up alerting policies, Create uptime checks). A search bar at the top right says 'Search products and resources'.

The screenshot shows the Google Cloud Platform Compute library page. The navigation bar indicates the user is in the 'Compute' category. The main content area displays several API services: App Engine Admin API (Google), Cloud Run API (Google), Compute Engine API (Google), Compute Engine Instance Group Manager API (Google), Google App Engine Flexible Environment (Google), and Kubernetes Engine API (Google). Each service has a brief description and a link to its documentation. The status bar at the bottom indicates 'Requests: 0.083/s'.

three ways to connect with the api:

WEBUI

CLI

SDK

to activate cloud shell

The screenshot shows two separate Cloud Shell sessions running on the same Google Cloud Platform project. The top session is for the project 'groovy-ward-287313' and lists two recent projects: 'My First Project' (ID: groovy-ward-287313) and 'lunar-campaign-287313'. The bottom session is for the project 'lunar-campaign-287313'.

Cloud Shell Session 1 (Top):

```
g96aayu@cloudshell:~ (groovy-ward-287313)$ ls
README-cloudshell.txt
g96aayu@cloudshell:~ (groovy-ward-287313)$
```

Cloud Shell Session 2 (Bottom):

```
g96aayu@cloudshell:~ (lunar-campaign-287313)$ ls
lunar-campaign-287313$
```

two projects one for developer team and other for the production team

New Project – Google Cloud Platform

Cloud Shell

console.cloud.google.com/projectcreate?previousPage=%2Fcompute%2Finstances%3Fproject%3Dgroovy-ward-287313%26instancesize%3D50&folder=&o... Incognito

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Google Cloud Platform

delete projects. [Learn more](#)

[MANAGE QUOTAS](#)

Project name * DevProject

Project ID * devproject-287318 [C](#)

Project ID can have lowercase letters, digits, or hyphens. It must start with a lowercase letter and end with a letter or number.

Location * No organization [BROWSE](#)

Parent organization or folder

CREATE **CANCEL**

Type here to search

Home – DevProject – Google Cloud Shell

ssh.cloud.google.com/cloudshell/editor?hl=en_US&fromcloudshell=true&shellonly=true#id=10_1598207919719&_gfid=10_1598207919719&parent=https://... Incognito

New Tab Search | Inbox (157) - 2019p... | Inbox (1,144) - vish... | Inbox (252) - 2019p... | Gmail | YouTube | Maps | 29th APRIL - Googl... | YAMLint - The YAM... | Untitled document... »

Cloud Shell

cloudshell

To set your Cloud Platform project in this session use "gcloud config set project [PROJECT_ID]"

```
g96aayu@cloudshell:~$ gcloud
ERROR: (gcloud) Command name argument expected.
g96aayu@cloudshell:~$ gcloud
ERROR: (gcloud) Command name argument expected.
g96aayu@cloudshell:~$ gcloud projects list
PROJECT_ID          NAME        PROJECT_NUMBER
devproject-287318   DevProject  38190864413
groovy-ward-287313  My First Project  497392490371
lunar-campaign-287313  My First Project  212014526950
```

g96aayu@cloudshell:~\$

Type here to search

12:26 AM ENG IN 8/24/2020

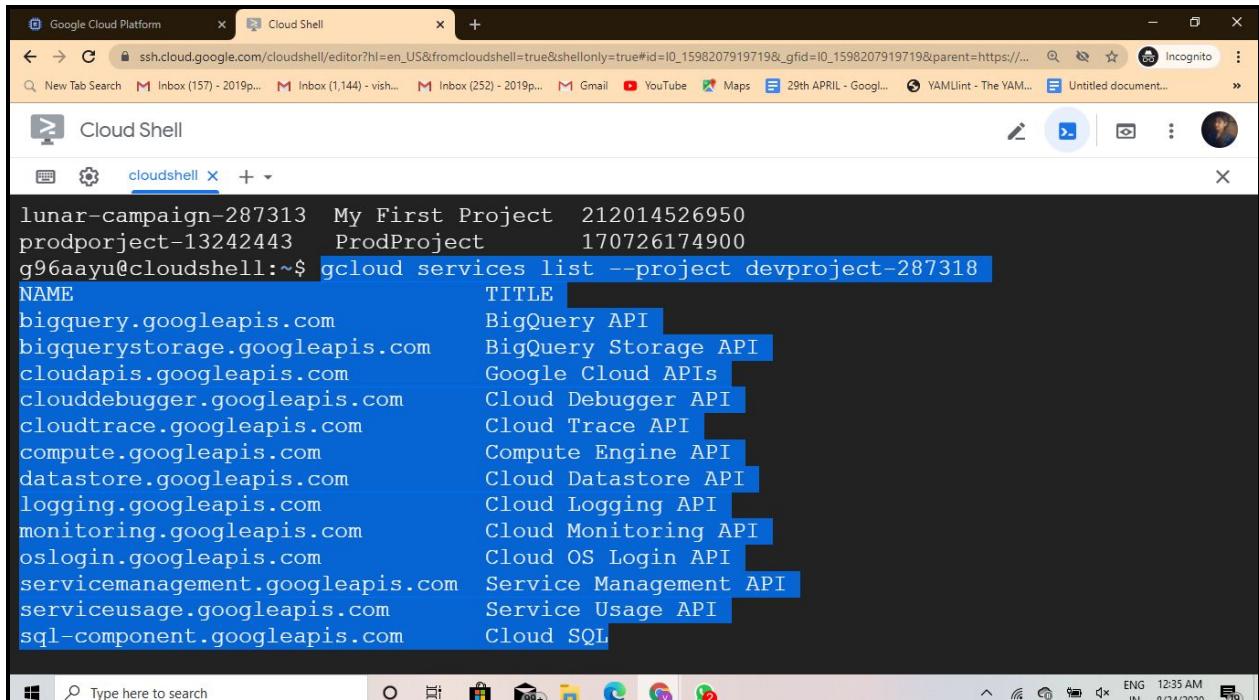
gcloud projects --help

```
g96aayu@cloudshell:~$ gcloud projects create prodporject-13242443 --name=ProdProject
Create in progress for [https://clouddesourcemanager.googleapis.com/v1/projects/prodporject-13242443].
Waiting for [operations/cp.5406887230002961125] to finish...done.
Enabling service [clouddesourcemanager.googleapis.com] on project [prodporject-13242443]...
Operation "operations/acf.c499373b-61e0-49d2-8336-6b7823d78b92" finished successfully.
g96aayu@cloudshell:~$ gcloud projects list
PROJECT_ID          NAME            PROJECT_NUMBER
devproject-287318   DevProject      38190864413
groovy-ward-287313  My First Project 40792490371
lunar-campaign-287313  My First Project 212014526950
prodporject-13242443  ProdProject    170726174900
g96aayu@cloudshell:~$
```

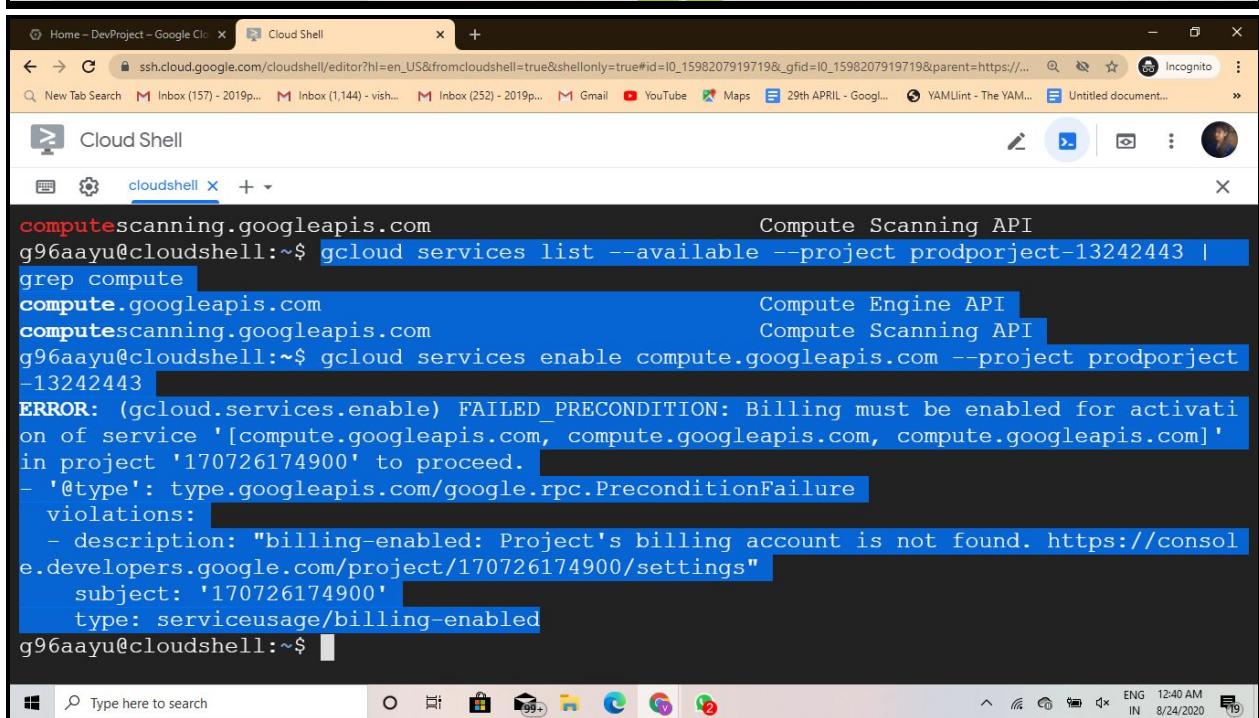
The screenshot shows the Google Cloud Platform dashboard with a modal dialog titled "Select a project". The dialog lists available projects under the "ALL" tab. The "DevProject" project is selected, indicated by a blue highlight.

Name	ID
No organization	0
DevProject	devproject-287318
My First Project	groovy-ward-287313
My First Project	lunar-campaign-287313
ProdProject	prodporject-13242443

At the bottom right of the dialog are "CANCEL" and "OPEN" buttons. The "OPEN" button is highlighted with a green box and the text "click on manage".



```
lunar-campaign-287313  My First Project  212014526950
prodporject-13242443  ProdProject      170726174900
g96aayu@cloudshell:~$ gcloud services list --project devproject-287318
NAME                      TITLE
bigquery.googleapis.com    BigQuery API
bigquerystorage.googleapis.com  BigQuery Storage API
cloudapis.googleapis.com   Google Cloud APIs
clouddebugger.googleapis.com  Cloud Debugger API
cloudtrace.googleapis.com   Cloud Trace API
compute.googleapis.com     Compute Engine API
datastore.googleapis.com   Cloud Datastore API
logging.googleapis.com    Cloud Logging API
monitoring.googleapis.com  Cloud Monitoring API
oslogin.googleapis.com    Cloud OS Login API
servicemanagement.googleapis.com  Service Management API
serviceusage.googleapis.com  Service Usage API
sql-component.googleapis.com  Cloud SQL
```



```
compute.scanning.googleapis.com          Compute Scanning API
g96aayu@cloudshell:~$ gcloud services list --available --project prodporject-13242443 | grep compute
compute.googleapis.com                  Compute Engine API
compute.scanning.googleapis.com        Compute Scanning API
g96aayu@cloudshell:~$ gcloud services enable compute.googleapis.com --project prodporject-13242443
ERROR: (gcloud.services.enable) FAILED_PRECONDITION: Billing must be enabled for activation of service '[compute.googleapis.com, compute.googleapis.com, compute.googleapis.com]' in project '170726174900' to proceed.
- '@type': type.googleapis.com/google.rpc.PreconditionFailure
  violations:
    - description: "billing-enabled: Project's billing account is not found. https://console.developers.google.com/project/170726174900/settings"
      subject: '170726174900'
      type: serviceusage/billing-enabled
g96aayu@cloudshell:~$
```

The screenshot shows the Google Cloud Platform Billing Overview page. The left sidebar is titled "Billing" and contains the following menu items:

- Overview
- Reports
- Cost table
- Cost breakdown
- Commitments
- Budgets & alerts
- Billing export
- Pricing
- Documents

The main content area is titled "Overview" and shows the following information:

- BILLING ACCOUNT CLOUD BILLING**
- My Billing Account**
- MANAGE BILLING ACCOUNTS**
- Current month**: August 1 – 24, 2020
- Month-to-date total cost**: ₹0.00
- End-of-month total cost (forecasted)**: ₹0.00 (Not enough historical data to project cost)

A tooltip message is displayed: "Now viewing project "DevProject" in organization "No organization"".

On the right side, there are three sections:

- Billing account**: Manage My Billing Account, 0182F7-E5BF61-5DE78C
- Organization**: No organization
- Enabled Google service**: Google Cloud Platform

At the bottom right, it says "Billing health checks" and "Check out your account health results to avoid common billing-related issues and".

The status bar at the bottom shows "ENG 12:55 AM IN 8/24/2020".

The screenshot shows the Google Cloud Platform Billing interface. In the center, there is a table listing four projects:

Name	ID	Billing account	Billing account ID	Actions
My First Project	groovy-ward-287313	My Billing Account	0182F7-E5BF61-5DE78C	⋮
My First Project	lunar-campaign-287313	My Billing Account	018476-C54842-9E2CCA	⋮
DevProject	devproject-287318	My Billing Account	0182F7-E5BF61-5DE78C	⋮
ProdProject	prodporject-13242443	Billing is disabled	—	⋮

A context menu is open over the last row (ProdProject), showing two options: "Disable billing" (which is grayed out) and "Change billing".

The screenshot shows a terminal session in the Google Cloud Shell. The user is trying to enable the Compute API for a specific project:

```
g96aayu@cloudshell:~$ gcloud services enable compute.googleapis.com --project prodporject-13242443
ERROR: (gcloud.services.enable) FAILED_PRECONDITION: Billing must be enabled for activation of service '[compute.googleapis.com, compute.googleapis.com, compute.googleapis.com]' in project '170726174900' to proceed.
- '@type': type.googleapis.com/google.rpc.PreconditionFailure
  violations:
  - description: "billing-enabled: Project's billing account is not found. https://console.developers.google.com/project/170726174900/settings"
    subject: '170726174900'
    type: serviceusage/billing-enabled
g96aayu@cloudshell:~$ gcloud services enable compute.googleapis.com --project prodporject-13242443
```

At the bottom of the terminal output, it says:

Operation "operations/acf.80172728-49f6-42f3-a44e-6cd9d08289b4" finished successfully.

g96aayu@cloudshell:~\$
g96aayu@cloudshell:~\$

Google Cloud Platform

Cloud Shell

console.cloud.google.com/compute/instancesAdd?project=prodprojetc-13242443&folder&organizationId

New Tab Search | Gmail | YouTube | Maps | 29th APRIL - Google | YAMLLint - The YAM...

Incognito

Google Cloud Platform ProdProject Search products and resources

Create an instance

New VM instance from machine image

Create a single VM instance from an existing machine image

Marketplace

Deploy a ready-to-go solution onto a VM instance

Custom
Select vCPU cores and memory

Shared core

- f1-micro
1 vCPU, 614 MB memory
- g1-small
1 vCPU, 1.7 GB memory

Standard

- n1-standard-1
1 vCPU, 3.75 GB memory
- n1-standard-2
2 vCPU, 7.5 GB memory
- n1-standard-4
4 vCPU, 15 GB memory
- n1-standard-8
8 vCPU, 30 GB memory

Type here to search

1:03 AM IN 8/24/2020

Google Cloud Platform

Cloud Shell

console.cloud.google.com/compute/instancesAdd?project=prodprojetc-13242443&folder&organizationId

New Tab Search | Gmail | YouTube | Maps | 29th APRIL - Google | YAMLLint - The YAM...

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Google Cloud Platform ProdProject Search products and resources

Create an instance

To create a VM instance, select one of the options:

New VM instance

Create a single VM instance from scratch

New VM instance from template

Create a single VM instance from an existing template

New VM instance from machine image

Create a single VM instance from an existing machine image

Marketplace

Name (Optional)
Name is permanent

Labels (Optional)

+ Add label

You have ₹21,406.50 free trial
\$29.61 monthly estimate
That's about \$0.041 hourly
Pay for what you use: No upfront cost

Region (Optional)
Region is permanent

Zone (Optional)
Zone is permanent

Machine configuration

Machine family
 General-purpose Memory-optimized Compute-optimized

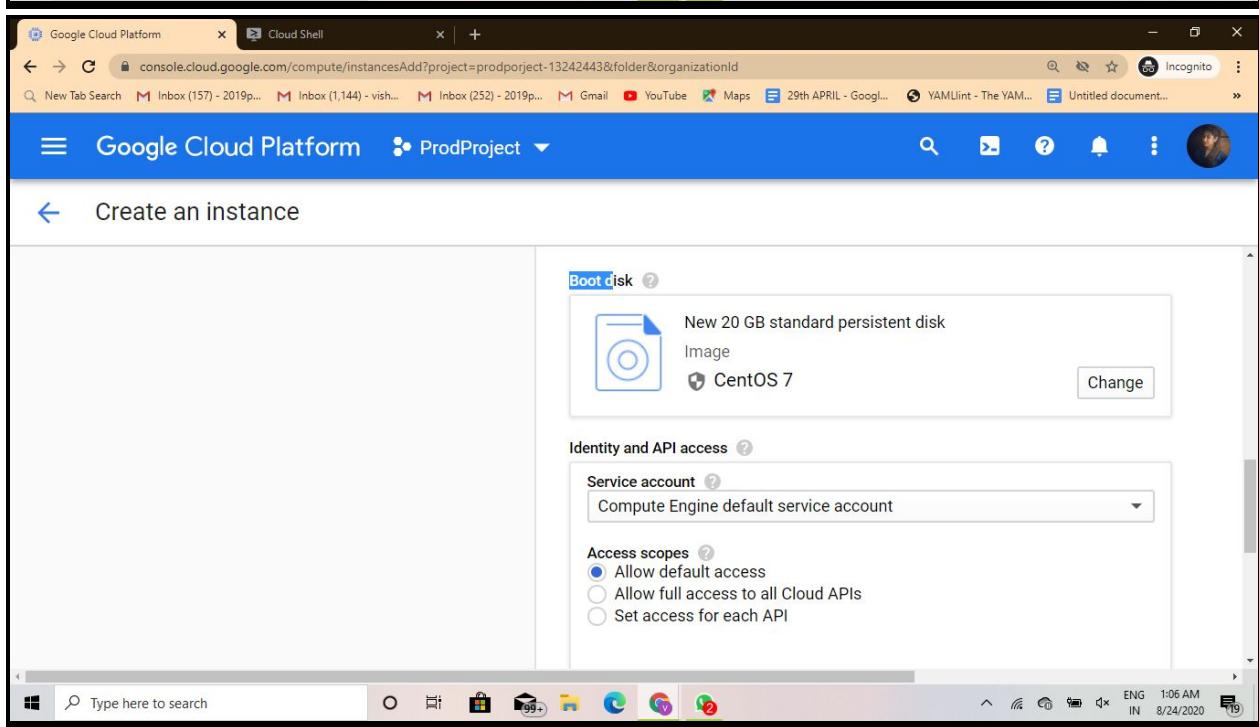
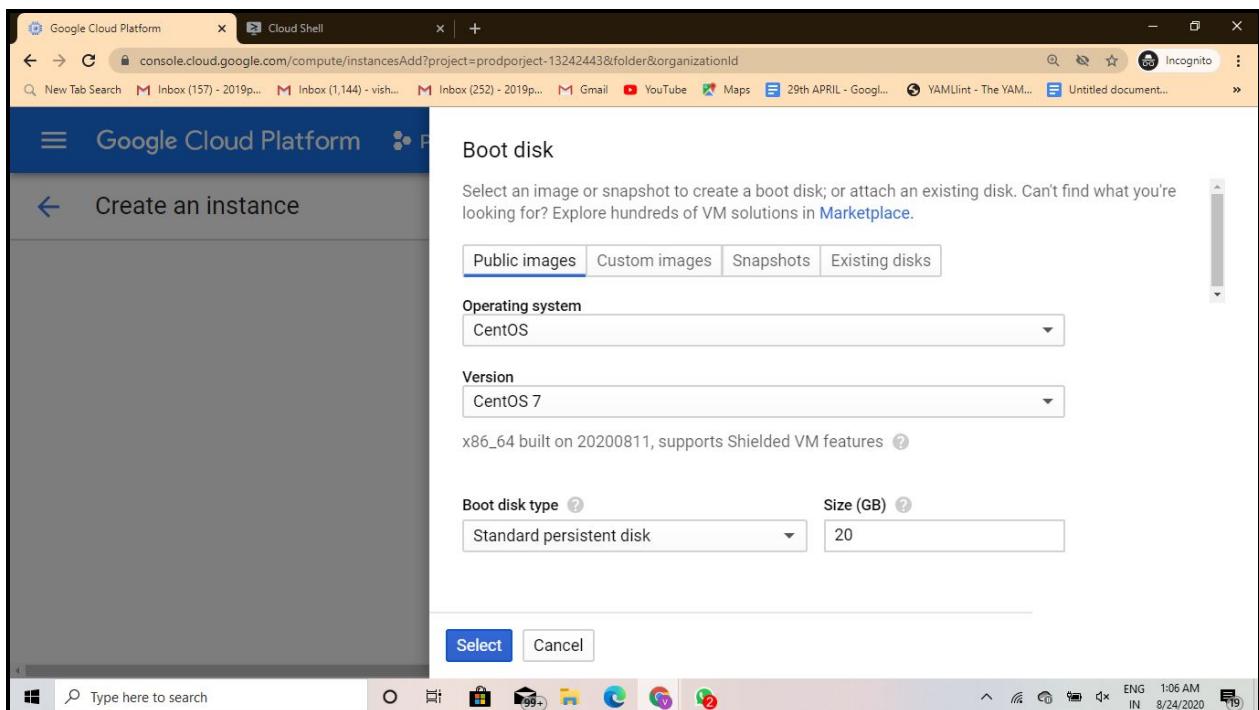
Machine types for common workloads, optimized for cost and flexibility

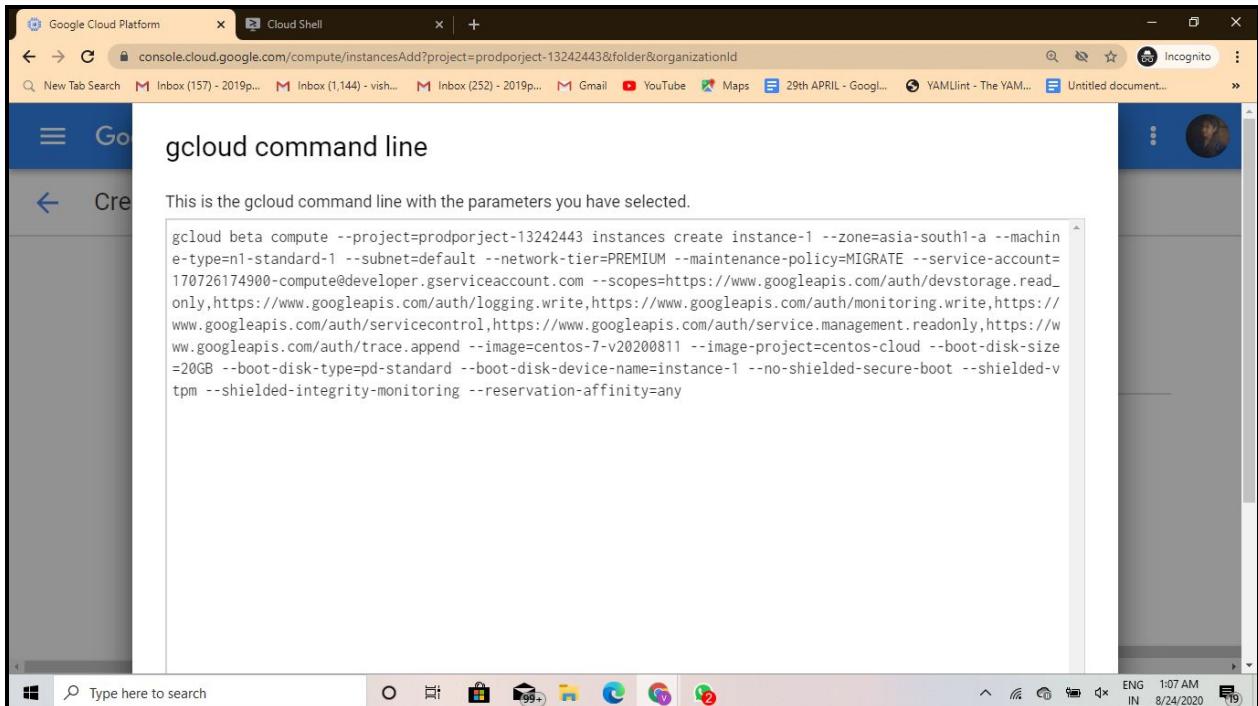
Series

Powered by Intel Skylake CPU platform or one of its predecessors

Type here to search

1:03 AM IN 8/24/2020





The screenshot shows the Google Cloud Platform Cloud Shell interface. The title bar says "Cloud Shell". The URL in the address bar is "console.cloud.google.com/compute/instancesAdd?project=prodporject-13242443&folder&organizationId". The main content area displays the "gcloud command line" with the following text:

```
gcloud beta compute --project=prodporject-13242443 instances create instance-1 --zone=asia-south1-a --machine-type=n1-standard-1 --subnet=default --network-tier=PREMIUM --maintenance-policy=MIGRATE --service-account=170726174900-compute@developer.gserviceaccount.com --scopes=https://www.googleapis.com/auth/devstorage.read_only,https://www.googleapis.com/auth/logging.write,https://www.googleapis.com/auth/monitoring.write,https://www.googleapis.com/auth/servicecontrol,https://www.googleapis.com/auth/service.management.readonly,https://www.googleapis.com/auth/trace.append --image=centos-7-v20200811 --image-project=centos-cloud --boot-disk-size=20GB --boot-disk-type=pd-standard --boot-disk-device-name=instance-1 --no-shielded-secure-boot --shielded-vtpm --shielded-integrity-monitoring --reservation-affinity=any
```

```
gcloud beta compute --project=prodporject-13242443 instances create instance-1
--zone=asia-south1-a --machine-type=n1-standard-1 --subnet=default
--network-tier=PREMIUM --maintenance-policy=MIGRATE
--service-account=170726174900-compute@developer.gserviceaccount.com
--scopes=https://www.googleapis.com/auth/devstorage.read_only,https://www.go
ogleapis.com/auth/logging.write,https://www.googleapis.com/auth/monitoring.wri
te,https://www.googleapis.com/auth/servicecontrol,https://www.googleapis.com/a
uth/service.management.readonly,https://www.googleapis.com/auth/trace.append
--image=centos-7-v20200811 --image-project=centos-cloud --boot-disk-size=20GB
--boot-disk-type=pd-standard --boot-disk-device-name=instance-1
--no-shielded-secure-boot --shielded-vtpm --shielded-integrity-monitoring
--reservation-affinity=any
```

Google Cloud Platform

Cloud Shell

console.cloud.google.com/compute/instances?project=prodprojetc-13242443&folder&organizationId&instanceSize=50

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Incognito

Google Cloud Platform ProdProject

Compute Engine VM instances

VM instances Instance groups Instance templates Sole-tenant nodes Machine images Disks

Recommendation In use

Notifications

CREATE VM INSTANCE "instance-1" AND ITS BOOT DISK "instance-1" Just now ProdProject The zone 'projects/prodprojetc-13242443/zones/asia-south1-a' does not have enough resources available to fulfill the request. Try a different zone, or try again later.

RETRY

INITIALIZING COMPUTE ENGINE FOR PROJECT DevProject 48 minutes ago DevProject

CREATE PROJECT: DevProject 50 minutes ago

Type here to search

Google Cloud Platform

Cloud Shell

console.cloud.google.com/compute/instances?project=prodprojetc-13242443&folder&organizationId&instanceSize=50

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Incognito

Google Cloud Platform ProdProject

VM instances

+ Filter VM instances Columns

Name	Zone	Recommendation	In use by	Internal IP	External IP	Connect
os1	asia-southeast1-b			10.148.0.2 (nic0)	34.87.116.62	SSH

Related Actions Dismis

Type here to search

```
g96aayu@os1:~ - Google Chrome
ssh.cloud.google.com/projects/prodproject-13242443/zones/asia-southeast1-b/instances/os1?useAdminProxy=true&authuser=0&hl=en_US&projectNumber=170726174900
Connected, host fingerprint: ssh-rsa 0 09:04:9C:1F:A9:F9:AD:10:24:82:2F:90:45:5A
:BE:FC:8F:58:76:EB:A2:3D:5B:08:E6:D0:14:2F:31:E8:4F:92
[g96aayu@os1 ~]$ free -m
      total        used        free      shared       bu
ff/cache    available
Mem:        3536          169        3210           8
      157          3169
Swap:          0            0            0
[g96aayu@os1 ~]$ █

Type here to search
O Windows Start
S Task View
E File Explorer
M Microsoft Edge
G OneDrive
C Photos
V Mail
R Microsoft Store
Y Calendar
Z Microsoft Translator
19 ENG 1:13 AM IN 8/24/2020

root@os1:~ - Google Chrome
ssh.cloud.google.com/projects/prodproject-13242443/zones/asia-southeast1-b/instances/os1?useAdminProxy=true&authuser=0&hl=en_US&projectNumber=170726174900
Complete!
[root@os1 ~]# systemctl start httpd
[root@os1 ~]# systemctl enable httpd
Created symlink from /etc/systemd/system/multi-user.target.wants/httpd.service to /usr/lib/systemd/system/httpd.service.
[root@os1 ~]# systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; vendor preset: disabled)
   Active: active (running) since Sun 2020-08-23 19:45:05 UTC; 20s ago
     Docs: man:httpd(8)
           man:apachectl(8)
 Main PID: 1463 (httpd)
   Status: "Total requests: 0; Current requests/sec: 0; Current traffic: 0 B/sec"
   CGroup: /system.slice/httpd.service
           ├─1463 /usr/sbin/httpd -DFOREGROUND
           ├─1464 /usr/sbin/httpd -DFOREGROUND
           ├─1465 /usr/sbin/httpd -DFOREGROUND
           ├─1466 /usr/sbin/httpd -DFOREGROUND
           ├─1467 /usr/sbin/httpd -DFOREGROUND
           └─1468 /usr/sbin/httpd -DFOREGROUND

Aug 23 19:45:05 os1 systemd[1]: Starting The Apache HTTP Server...
Aug 23 19:45:05 os1 systemd[1]: Started The Apache HTTP Server.
[root@os1 ~]# █

Type here to search
O Windows Start
S Task View
E File Explorer
G OneDrive
C Photos
V Mail
R Microsoft Store
Y Microsoft Translator
19 ENG 1:15 AM IN 8/24/2020
```

```
root@os1:/var/www/html - Google Chrome
ssh.cloud.google.com/projects/prodproject-13242443/zones/asia-southeast1-b/instances/os1?useAdminProxy=true&authUser=0&hl=en_US&projectNumber=170726174900
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1460
    inet 10.148.0.2 netmask 255.255.255 broadcast 10.148.0.2
    inet6 fe80::4001:aff:fe94:2 prefixlen 64 scopeid 0x20<link>
        ether 42:01:0a:94:00:02 txqueuelen 1000 (Ethernet)
        RX packets 3791 bytes 22802671 (21.7 MiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 3423 bytes 309675 (302.4 KiB)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
        loop txqueuelen 1000 (Local Loopback)
        RX packets 0 bytes 0 (0.0 B)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 0 bytes 0 (0.0 B)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

[root@os1 html]# cat > index.html
my website vishesh garg
[root@os1 html]# cat index.html
my website vishesh garg
[root@os1 html]# ls
index.html
[root@os1 html]# █
Type here to search  O  Microsoft Edge  File  Home  Downloads  Photos  Pictures  Videos  Google Sheets  Google Sheets  Google Sheets  ENG  1:24 AM
IN  8/24/2020  [19]

[65] C:\Windows\system32\cmd.exe - ping 34.87.116.62
Microsoft Windows [Version 10.0.18362.959]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\user>ping 34.87.116.62

Pinging 34.87.116.62 with 32 bytes of data:
Reply from 34.87.116.62: bytes=32 time=117ms TTL=56
Reply from 34.87.116.62: bytes=32 time=117ms TTL=56
Reply from 34.87.116.62: bytes=32 time=98ms TTL=56

Type here to search  O  Microsoft Edge  File  Home  Downloads  Photos  Pictures  Videos  Google Sheets  Google Sheets  Google Sheets  ENG  1:25 AM
IN  8/24/2020  [19]
```

Firewall - VPC network - ProdProject

Cloud Shell

34.87.116.62

console.cloud.google.com/networking/firewalls/list?project=prodporject-13242443

New Tab Search | Gmail | YouTube | Maps | 29th APRIL - Google | YAMLLint - The YAM...

Incognito (2)

Google Cloud Platform ProdProject

Firewall

+ CREATE FIREWALL RULE C REFRESH E CONFIGURE LOGS D DELETE

Firewall rules control incoming or outgoing traffic to an instance. By default, incoming traffic from outside your network is blocked. [Learn more](#)

Note: App Engine firewalls are managed [here](#).

Filter table

Name	Type	Targets	Filters	Protocols / ports	Action	Priority	N
http-firewall	Egress	Apply to all	IP ranges: 0.0.0.0/0	tcp:80	Allow	1000	down
default-allow-icmp	Ingress	Apply to all	IP ranges: 0.0.0.0/0	icmp	Allow	65534	down

Type here to search

136 AM IN 8/24/2020

Google Cloud Platform

Cloud Shell

34.87.116.62

console.cloud.google.com/compute/instances?project=prodporject-13242443&instancessize=50

New Tab Search | Gmail | YouTube | Maps | 29th APRIL - Google | YAMLLint - The YAM...

Incognito (2)

Google Cloud Platform ProdProject

VM instances

+ D C P I C S SHOW INFO PANEL

Filter VM instances

Name	Zone	Recommendation	In use by	Internal IP	External IP	Connect
os1	asia-southeast1-b			10.148.0.2 (nic0)	34.87.116.62	SSH

Related Actions

https://console.cloud.google.com/networking/networkinterfaces/zones/asia-southeast1-b/instances/os1?networkInterface=nic0&project=prodporject-13242443

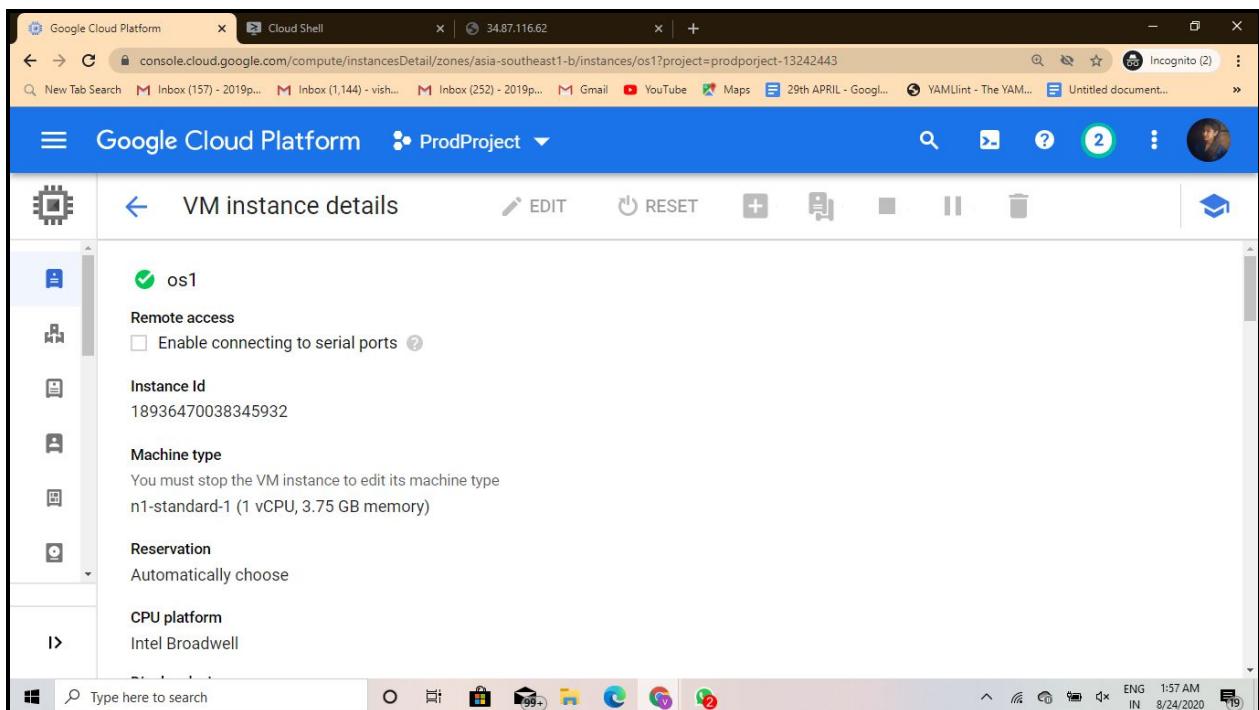
Type here to search

138 AM IN 8/24/2020

The image shows a Windows desktop environment with two windows open. The top window is a web browser (Google Chrome) displaying the text "my website vishesh garg". The bottom window is a terminal window (Windows Command Prompt) showing system logs and command-line activity.

```
inet6 ::1 prefixlen 128 scopeid 0x10<host>
loop txqueuelen 1000 (Local Loopback)
RX packets 0 bytes 0 (0.0 B)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 0 bytes 0 (0.0 B)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

[root@os1 html]# cat > index.html
my website vishesh garg
[root@os1 html]# cat index.html
my website vishesh garg
[root@os1 html]# ls
index.html
[root@os1 html]# yum install docker
Loaded plugins: fastestmirror
Loading mirror speeds from cached hostfile
 * base: mirror.nus.edu.sg
 * epel: d2lzk17pfhq30w.cloudfront.net
 * extras: mirror.newmediaexpress.com
 * updates: mirror.newmediaexpress.com
Resolving Dependencies
--> Running transaction check
--> Package docker.x86_64 2:1.13.1-162.git64e9980.el7.centos will be installed
--> Processing Dependency: docker-common = 2:1.13.1-162.git64e9980.el7.centos for package: 2:docker-1.13.1-162.git64e9980.el7.centos.x86_64
```



Google Cloud Platform

ProdProject

VM instance details

os1

Remote access

Enable connecting to serial ports

Instance Id

18936470038345932

Machine type

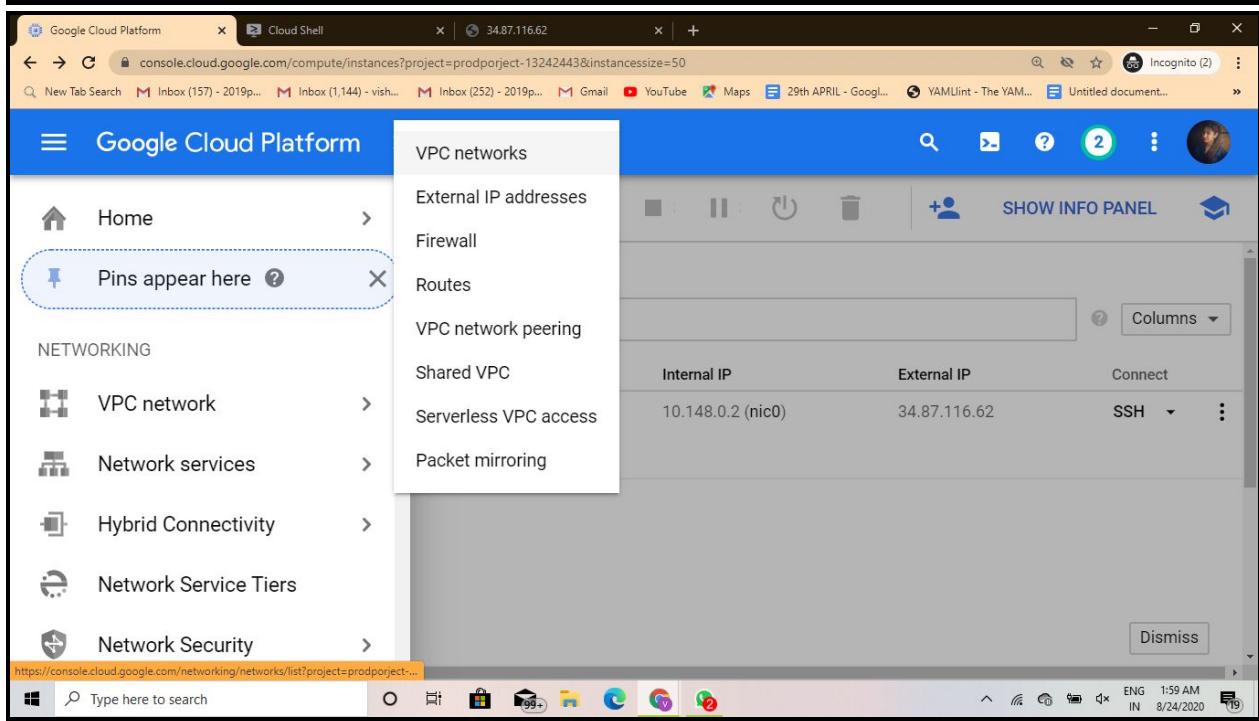
You must stop the VM instance to edit its machine type
n1-standard-1 (1 vCPU, 3.75 GB memory)

Reservation

Automatically choose

CPU platform

Intel Broadwell



Google Cloud Platform

ProdProject

Pins appear here

Home

VPC network

Network services

Hybrid Connectivity

Network Service Tiers

Network Security

VPC networks

External IP addresses

Firewall

Routes

VPC network peering

Shared VPC

Serverless VPC access

Packet mirroring

Internal IP	External IP	Connect
10.148.0.2 (nic0)	34.87.116.62	SSH

The screenshot shows the 'Create a VPC network' page in the Google Cloud Platform. The 'Name' field is filled with 'vpcproduction'. The 'Description' field is empty. A section titled 'Subnets' explains that subnets let you create your own private cloud topology within Google Cloud, with options for 'Automatic' or 'Custom'. A link to 'Learn more' is provided.

The screenshot shows the 'New subnet' configuration page. The 'Name' field is filled with 'lab1'. The 'Region' dropdown is set to 'asia-southeast1'. The 'IP address range' field is empty. A link to 'Create secondary IP range' is visible.

Create a VPC network – VPC net

Cloud Shell

34.87.116.62

console.cloud.google.com/networking/networks/add?project=prodprojetc-13242443

New Tab Search | New Tab | Incognito (2) | ...

Google Cloud Platform | ProdProject | 2 | ...

Add a description

Region * asia-southeast1

IP address range * 10.0.1.0/24

Create secondary IP range

Private Google access ?

On

Off

Flow logs

Turning on VPC flow logs doesn't affect performance, but some systems generate a large number of logs, which can increase costs in

Create a VPC network – VPC net

Cloud Shell

34.87.116.62

console.cloud.google.com/networking/networks/add?project=devprojetc-287318

New Tab Search | New Tab | Incognito (2) | ...

Google Cloud Platform | DevProject | 3 | ...

Add a description

Name * vpcdev

Lowercase letters, numbers, hyphens allowed

Description

Subnets

Subnets let you create your own private cloud topology within Google Cloud. Click Automatic to create a subnet in each region, or click Custom to manually define the subnets. [Learn more](#)

Create a VPC network – VPC net

Cloud Shell

34.87.116.62

console.cloud.google.com/networking/networks/add?project=devproject-287318

New Tab Search | Inbox (157) - 2019p... | Inbox (1,144) - vish... | Inbox (252) - 2019p... | Gmail | YouTube | Maps | 29th APRIL - Googl... | YAMLint - The YAM... | Untitled document...

Google Cloud Platform DevProject

Create a VPC network

Name * lab1

Region * us-east1

IP address range * 10.0.2.0/24

Add a description

Create secondary IP range

Private Google access ?

On

Off

Type here to search

Windows Taskbar: Type here to search, File, Start, Task View, Microsoft Edge, Google Chrome, File Explorer, File History, Task Scheduler, Task Manager, Control Panel, Help & Support, ENG IN 2:02 AM IN 8/24/2020

VPC networks – VPC network

Cloud Shell

34.87.116.62

console.cloud.google.com/networking/networks/list?project=devproject-287318

New Tab Search | Inbox (157) - 2019p... | Inbox (1,144) - vish... | Inbox (252) - 2019p... | Gmail | YouTube | Maps | 29th APRIL - Googl... | YAMLint - The YAM... | Untitled document...

Google Cloud Platform DevProject

VPC networks

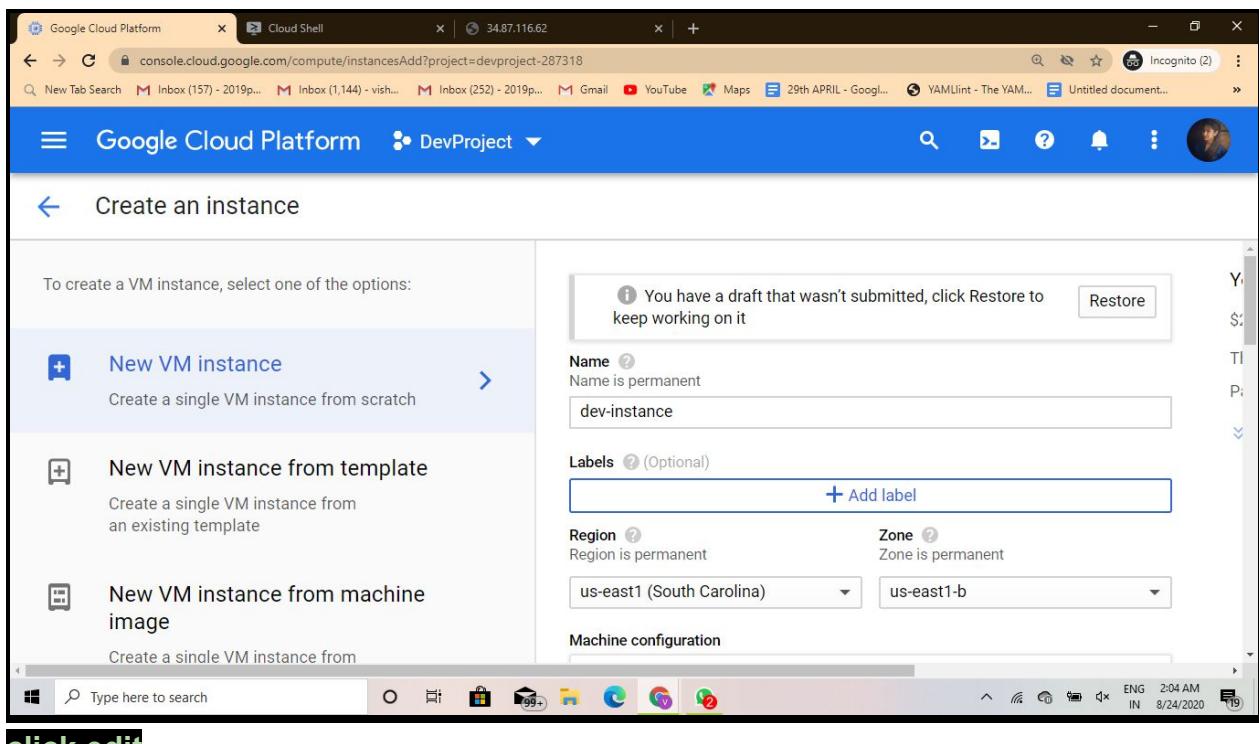
+ CREATE VPC NETWORK

REFRESH

europe-west6	default	10.172.0.0/20	10.172.0.1
asia-northeast2	default	10.174.0.0/20	10.174.0.1
asia-northeast3	default	10.178.0.0/20	10.178.0.1
us-west3	default	10.180.0.0/20	10.180.0.1
us-west4	default	10.182.0.0/20	10.182.0.1
asia-southeast2	default	10.184.0.0/20	10.184.0.1
vpcdev	1	Custom	0 Off
us-east1	lab1	10.0.2.0/24	10.0.2.1

Type here to search

Windows Taskbar: Type here to search, File, Start, Task View, Microsoft Edge, Google Chrome, File Explorer, File History, Task Scheduler, Task Manager, Control Panel, Help & Support, ENG IN 2:03 AM IN 8/24/2020



click edit

Google Cloud Platform - Cloud Shell - 34.87.116.62 - Incognito (2) -

console.cloud.google.com/compute/instances?project=devproject-287318&instanceSize=50

New Tab Search | Gmail | YouTube | Maps | 29th APRIL - Google | YAMLLint - The YAM... | Untitled document...

Google Cloud Platform DevProject

VM instances

Name	Zone	Recommendation	In use by	Internal IP	External IP	Connect
dev-instance	us-east1-b			10.0.2.2 (nic0)	104.196.174.100	SSH

Filter VM instances Columns

Related Actions Dismiss

Type here to search ENG 2:06 AM IN 8/24/2020

Google Cloud Platform - Cloud Shell - 34.87.116.62 - Incognito (2) -

console.cloud.google.com/compute/instancesAdd?project=prodprojetc-13242443

New Tab Search | Gmail | YouTube | Maps | 29th APRIL - Google | YAMLLint - The YAM... | Untitled document...

Google Cloud Platform ProdProject

Create an instance

To create a VM instance, select one of the options:

- New VM instance** Create a single VM instance from scratch
- New VM instance from template** Create a single VM instance from an existing template
- New VM instance from machine image** Create a single VM instance from

You have a draft that wasn't submitted, click Restore to keep working on it **Restore**

Name prod-instance

Labels (Optional) **Add label**

Region asia-southeast1 (Singapore) **Zone** asia-southeast1-b

Machine configuration

Type here to search ENG 2:07 AM IN 8/24/2020

Google Cloud Platform

Cloud Shell

34.87.116.62

console.cloud.google.com/compute/instancesAdd?project=prodporject-13242443

New Tab Search | Inbox (157) - 2019p... | Inbox (1,144) - vish... | Inbox (252) - 2019p... | Gmail | YouTube | Maps | 29th APRIL - Googl... | YAMLint - The YAM... | Untitled document...

Incognito

Boot disk

Select an image or snapshot to create a boot disk; or attach an existing disk. Can't find what you're looking for? Explore hundreds of VM solutions in [Marketplace](#).

Public images | Custom images | Snapshots | Existing disks

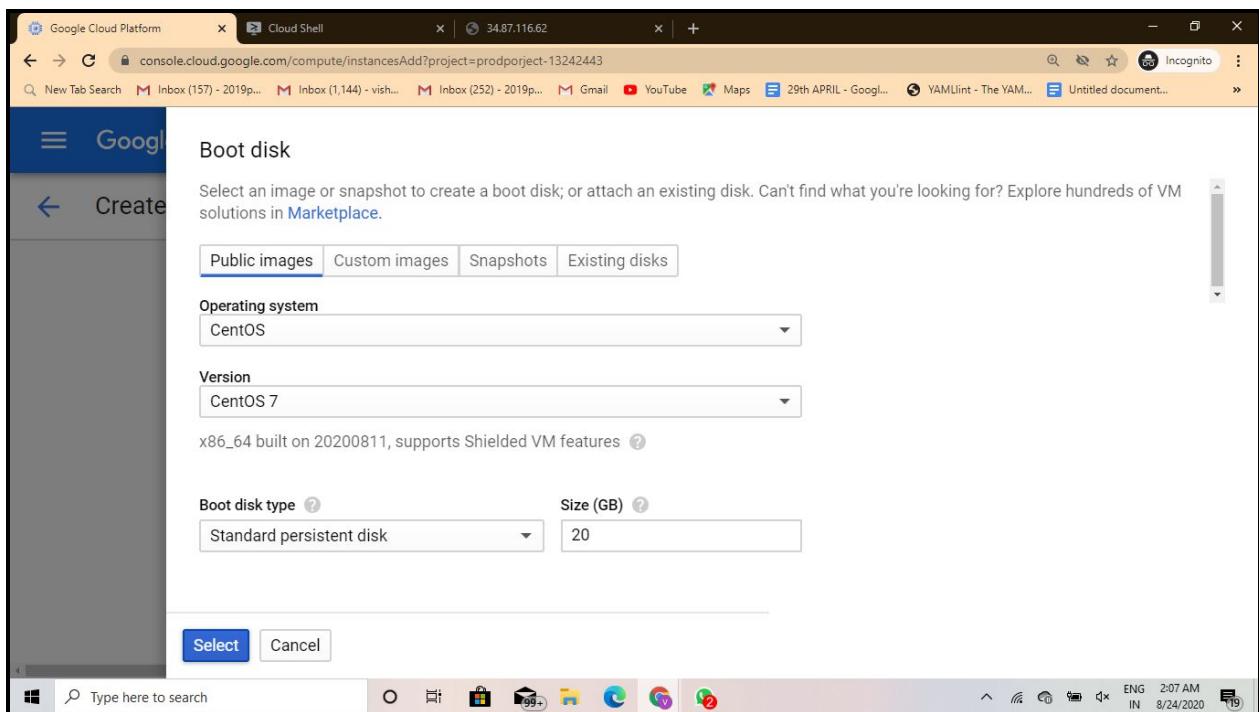
Operating system: CentOS

Version: CentOS 7

x86_64 built on 20200811, supports Shielded VM features

Boot disk type: Standard persistent disk | Size (GB): 20

Select | Cancel



Google Cloud Platform

Cloud Shell

34.87.116.62

console.cloud.google.com/compute/instancesAdd?project=prodporject-13242443

New Tab Search | Inbox (157) - 2019p... | Inbox (1,144) - vish... | Inbox (252) - 2019p... | Gmail | YouTube | Maps | 29th APRIL - Googl... | YAMLint - The YAM... | Untitled document...

ProdProject

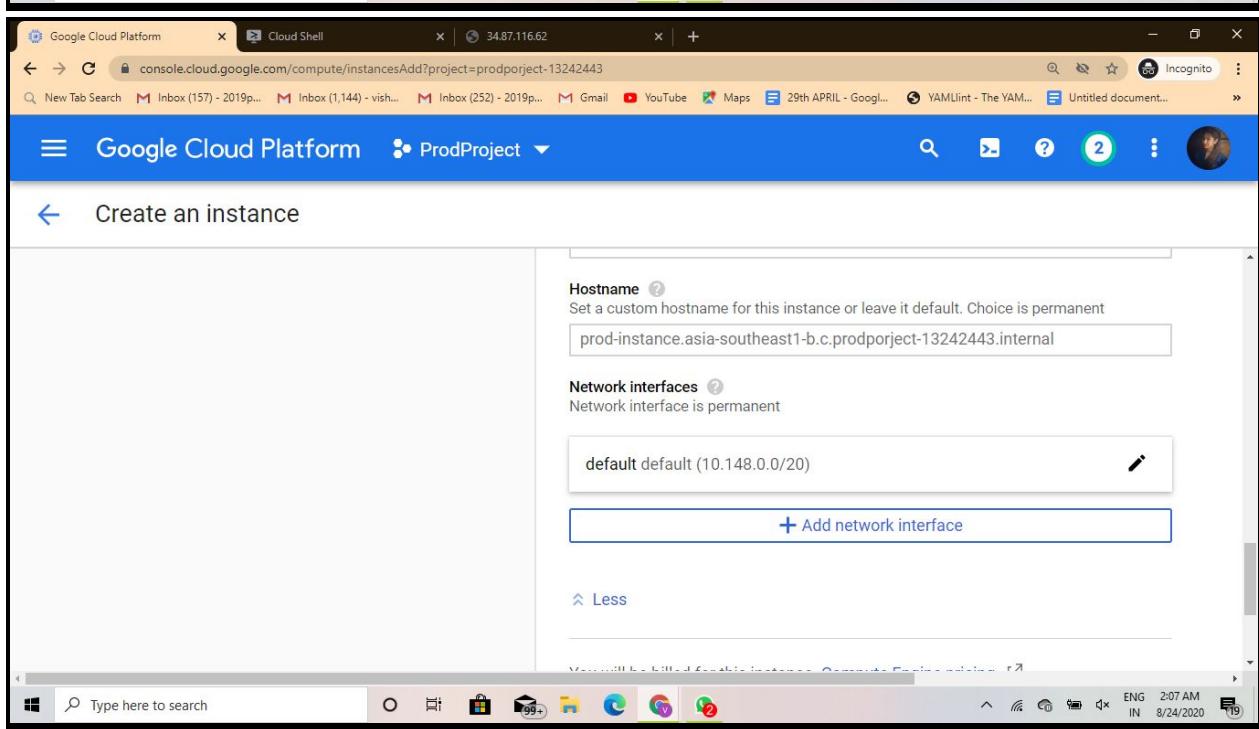
Create an instance

Hostname: prod-instance.asia-southeast1-b.c.prodporject-13242443.internal

Network interfaces: default default (10.148.0.0/20)

+ Add network interface

Less



Google Cloud Platform

Cloud Shell

34.87.116.62

console.cloud.google.com/compute/instancesAdd?project=prodporject-13242443

New Tab Search | Gmail | YouTube | Maps | 29th APRIL - Google | YAMLLint - The YAM...

Incognito

Google Cloud Platform ProdProject

Create an instance

Network interface

Network: vpcproduction

Subnetwork: lab1 (10.0.1.0/24)

Primary internal IP: Ephemeral (Automatic)

Show alias IP ranges

External IP

Type here to search

Google Cloud Platform

Cloud Shell

34.87.116.62

console.cloud.google.com/compute/instances?project=prodporject-13242443&instancessize=50

New Tab Search | Gmail | YouTube | Maps | 29th APRIL - Google | YAMLLint - The YAM...

Incognito

Google Cloud Platform ProdProject

VM instances

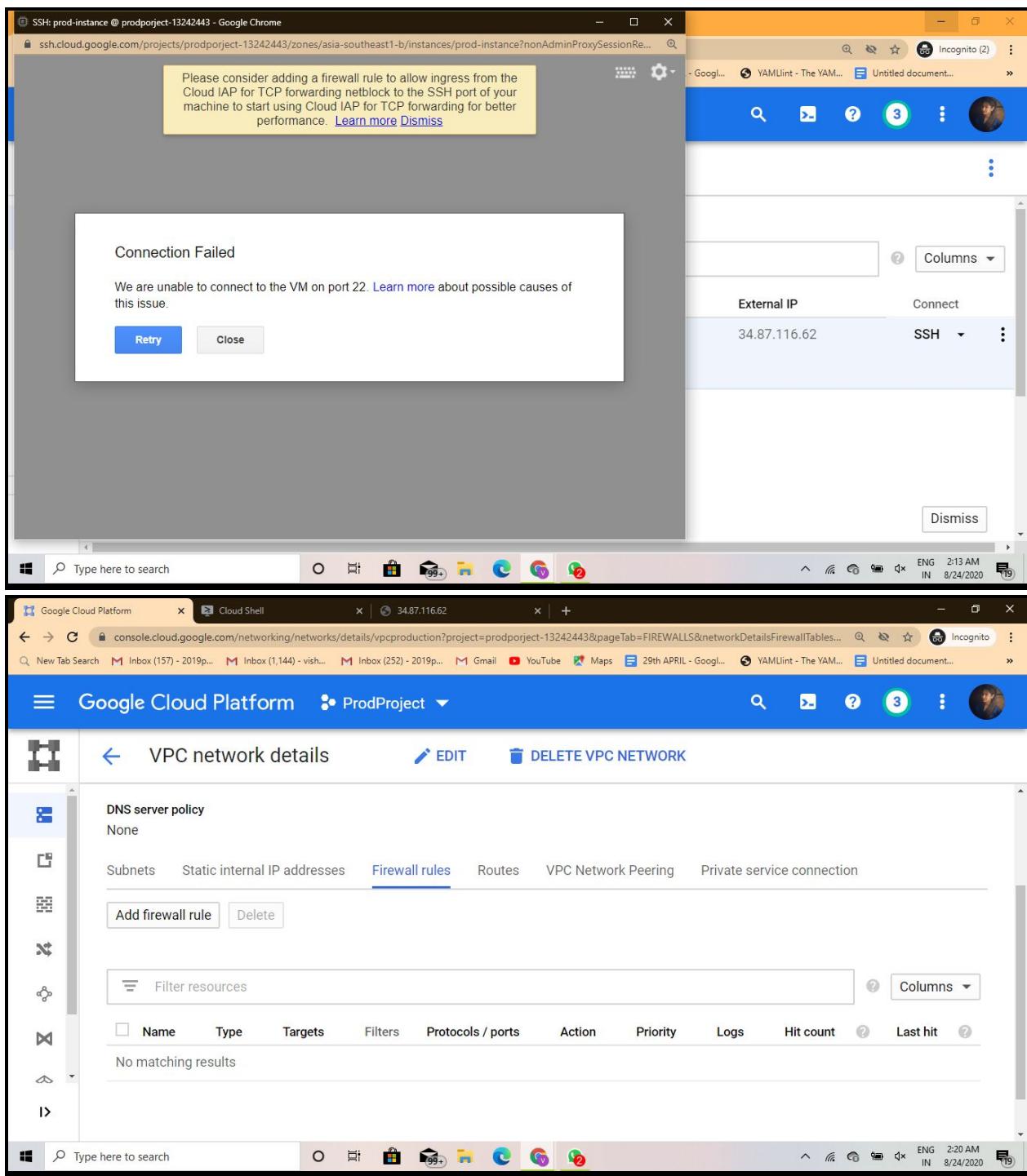
Filter VM instances

Name	Zone	Recommendation	In use by	Internal IP	External IP	Connect
prod-instance	asia-southeast1-b			10.0.1.2 (nic0)	34.87.116.62	SSH

Related Actions

Dismiss

Type here to search



The screenshot shows the 'Create a firewall rule' page in the Google Cloud Platform. The configuration includes:

- Direction of traffic:** Ingress (selected)
- Action on match:** Allow (selected)
- Targets:** All instances in the network
- Source filter:** IP ranges

At the bottom, there is a note: "Priority can be 0 - 65535 [Check priority of other firewall rules](#)".

The screenshot shows the 'Create a firewall rule' page in the Google Cloud Platform with more detailed settings:

- Targets:** All instances in the network
- Source filter:** IP ranges
- Source IP ranges ***: 0.0.0.0/0 (example: 0.0.0.0/0, 192.168.2.0/24)
- Second source filter:** None
- Protocols and ports:** Allow all (selected)

At the bottom, there is a note: "Priority can be 0 - 65535 [Check priority of other firewall rules](#)".

The screenshot shows the 'VPC network details' page in the Google Cloud Platform interface. The 'Firewall rules' tab is selected. A table below shows no matching results.

Name	Type	Targets	Filters	Protocols / ports	Action	Priority	Logs	Hit count	Last hit
No matching results									

Create a firewall rule – VPC network

Targets: All instances in the network

Source filter: IP ranges

Source IP ranges *: 0.0.0.0/0 (for example, 0.0.0.0/0, 192.168.2.0/24)

Second source filter: None

Protocols and ports: Allow all

```
ON C:\Windows\system32\cmd.exe
Microsoft Windows [Version 10.0.18362.959]
(c) 2019 Microsoft Corporation. All rights reserved.

C:\Users\user>ping 104.196.174.100

Pinging 104.196.174.100 with 32 bytes of data:
Reply from 104.196.174.100: bytes=32 time=511ms TTL=47
Reply from 104.196.174.100: bytes=32 time=392ms TTL=47

Ping statistics for 104.196.174.100:
    Packets: Sent = 2, Received = 2, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 392ms, Maximum = 511ms, Average = 451ms
Control-C
^C
C:\Users\user>
```

```
g96aayu@prod-instance:~ - Google Chrome
ssh.cloud.google.com/projects/prodproject-13242443/zones/asia-southeast1-b/instances/prod-instance?useAdminProxy=true&authUser=0&hl=en_US&projectNumber=170726174900
[g96aayu@prod-instance ~]$ ping 104.196.174.100
PING 104.196.174.100 (104.196.174.100) 56(84) bytes of data.
64 bytes from 104.196.174.100: icmp_seq=1 ttl=55 time=220 ms
64 bytes from 104.196.174.100: icmp_seq=2 ttl=55 time=220 ms
64 bytes from 104.196.174.100: icmp_seq=3 ttl=55 time=220 ms
64 bytes from 104.196.174.100: icmp_seq=4 ttl=55 time=220 ms
^C
--- 104.196.174.100 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3001ms
rtt min/avg/max/mdev = 220.430/220.571/220.728/0.585 ms
[g96aayu@prod-instance ~]$
```

```
g96aayu@prod-instance~ - Google Chrome
ssh.cloud.google.com/projects/prodproject-13242443/zones/asia-southeast1-b/instances/prod-instance?useAdminProxy=true&authuser=0&hl=en_US&projectNumber=170726174900
[g96aayu@prod-instance ~]$ ping 104.196.174.100
PING 104.196.174.100 (104.196.174.100) 56(84) bytes of data.
64 bytes from 104.196.174.100: icmp_seq=1 ttl=55 time=220 ms
64 bytes from 104.196.174.100: icmp_seq=2 ttl=55 time=220 ms
64 bytes from 104.196.174.100: icmp_seq=3 ttl=55 time=220 ms
64 bytes from 104.196.174.100: icmp_seq=4 ttl=55 time=220 ms
^C
--- 104.196.174.100 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 3001ms
rtt min/avg/max/mdev = 220.430/220.571/220.728/0.585 ms
[g96aayu@prod-instance ~]$ ping 10.0.2.2
PING 10.0.2.2 (10.0.2.2) 56(84) bytes of data.
```



```
Type here to search
O Windows Start button
S Task View
E File Explorer
M Microsoft Edge
G OneDrive
C Photos
V Mail
R Microsoft Store
P Taskbar icon
A Taskbar icon
ENG IN 2:27 AM
IN 8/24/2020
```



```
g96aayu@prod-instance~ - Google Chrome
ssh.cloud.google.com/projects/prodproject-13242443/zones/asia-southeast1-b/instances/prod-instance?useAdminProxy=true&authuser=0&hl=en_US&projectNumber=170726174900
^C
--- 10.0.2.2 ping statistics ---
18 packets transmitted, 0 received, 100% packet loss, time 16999ms

[g96aayu@prod-instance ~]$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1460
    inet 10.0.1.2 netmask 255.255.255.255 broadcast 10.0.1.2
        inet6 fe80::4001:aff:fe00:102 prefixlen 64 scopeid 0x20<link>
            ether 42:01:0a:00:01:02 txqueuelen 1000 (Ethernet)
            RX packets 1003 bytes 195051 (190.4 KiB)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 837 bytes 93201 (91.0 KiB)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
        inet6 ::1 prefixlen 128 scopeid 0x10<host>
            loop txqueuelen 1000 (Local Loopback)
            RX packets 0 bytes 0 (0.0 B)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 0 bytes 0 (0.0 B)
            TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```



```
Type here to search
O Windows Start button
S Task View
E File Explorer
G OneDrive
C Photos
V Mail
R Microsoft Store
A Taskbar icon
ENG IN 2:28 AM
IN 8/24/2020
```

```
g96aayu@prod-instance~ - Google Chrome
ssh.cloud.google.com/projects/prodproject-13242443/zones/asia-southeast1-b/instances/prod-instance?useAdminProxy=true&authUser=0&hl=en_US&projectNumber=170726174900
loop txqueuelen 1000  (Local Loopback)
RX packets 0 bytes 0 (0.0 B)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 0 bytes 0 (0.0 B)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

[g96aayu@prod-instance ~]$ ping 10.0.1.2
PING 10.0.1.2 (10.0.1.2) 56(84) bytes of data.
64 bytes from 10.0.1.2: icmp_seq=1 ttl=64 time=0.035 ms
64 bytes from 10.0.1.2: icmp_seq=2 ttl=64 time=0.051 ms
64 bytes from 10.0.1.2: icmp_seq=3 ttl=64 time=0.055 ms
64 bytes from 10.0.1.2: icmp_seq=4 ttl=64 time=0.092 ms
^C
--- 10.0.1.2 ping statistics ---
4 packets transmitted, 4 received, 0% packet loss, time 2999ms
rtt min/avg/max/mdev = 0.035/0.058/0.092/0.021 ms
[g96aayu@prod-instance ~]$ ping 10.0.2.2
PING 10.0.2.2 (10.0.2.2) 56(84) bytes of data.
^C
--- 10.0.2.2 ping statistics ---
15 packets transmitted, 0 received, 100% packet loss, time 13999ms

[g96aayu@prod-instance ~]$
```

The screenshot shows a Windows desktop environment. At the top, there is a taskbar with various icons. Below the taskbar, a terminal window is open, displaying command-line output related to network interfaces and ping tests between two instances. Below the terminal, a browser window is open to the Google Cloud Platform 'VPC network details' page for a specific project and network. The browser's address bar shows the URL for the VPC network configuration. The main content area of the browser displays the network's subnet configuration, showing one subnet named 'lab1' with its details: Region (us-east1), IP address ranges (10.0.2.0/24), Gateway (10.0.2.1), and Private Google access (Off). There is also a section for reserved subnets for internal HTTP(S) load balancers.

This screenshot shows the Google Cloud Platform interface for managing VPC network peering. The left sidebar has a 'VPC network' section with options like External IP addresses, Firewall, Routes, VPC network peering (which is selected), Shared VPC, Serverless VPC access, and Packet mirroring. The main content area is titled 'VPC network peering' and includes tabs for Addresses, Firewall rules, Routes, and VPC Network Peering (which is active). Below these tabs is a table with columns: Peered VPC network, Peered project ID, Status, and Exchange custom routes. There are no rows in the table.

This screenshot shows the Google Cloud Platform interface for creating a new VPC network peering connection. The left sidebar has the same set of options as the previous screenshot. The main content area is titled 'VPC network peering' and contains a descriptive paragraph about the service: 'Cloud VPC Network Peering lets you privately connect two VPC networks, which can reduce latency, cost, and increase security. To get started click "Create connection". [Learn more](#)'. At the bottom of this panel are two buttons: 'CREATE CONNECTION' and 'LEARN MORE'. The status bar at the bottom indicates the URL as https://console.cloud.google.com/networking/peering/list?project=devproject-287318.

The screenshot shows the initial step of creating a VPC peering connection. The page title is "Create peering connection". It lists requirements: "You will need the following info. [Learn more](#)". Requirements are numbered: 1. The project ID (if you are connecting to a VPC network in another project) and 2. The name of the VPC network you want to peer with. A note states: "Note: The subnet IP ranges in peered VPC networks cannot overlap." At the bottom are "CONTINUE" and "CANCEL" buttons.

The screenshot shows the second step of the wizard. The "Name" field is populated with "dev-peering". The "Your VPC network" dropdown is set to "vpcdev". Under "Peered VPC network", the "In another project" radio button is selected. The "Project ID" field contains "prodprojrct-13242443". The "CONTINUE" and "CANCEL" buttons are at the bottom.

Create peering connection – VPC

Cloud Shell

34.87.116.62

VPC networks – VPC network – P

Incognito (2)

New Tab Search | Inbox (157) - 2019p... | Inbox (1,144) - vish... | Inbox (252) - 2019p... | Gmail | YouTube | Maps | 29th APRIL - Googl... | YAMLint - The YAM... | Untitled document...

Google Cloud Platform DevProject

Create peering connection

Peered VPC network

In project devproject-287318

In another project

Project ID
prodporject-13242443

VPC network name
vpcproduction

EXCHANGE CUSTOM ROUTES

CREATE CANCEL

VPC network peering – VPC net

Cloud Shell

34.87.116.62

VPC networks – VPC network – P

Incognito (2)

New Tab Search | Inbox (157) - 2019p... | Inbox (1,144) - vish... | Inbox (252) - 2019p... | Gmail | YouTube | Maps | 29th APRIL - Googl... | YAMLint - The YAM... | Untitled document...

Google Cloud Platform DevProject

VPC network peering

+ CREATE PEERING CONNECTION

REFRESH

DELETE

Filter table

Name	Your VPC network	Peered VPC network	Peered project ID	Status	Exchange custom rou
dev-peering	vpcdev	vpcproduction	prodporject-13242443	Inactive	None

Google Cloud Platform

ProdProject

VPC network peering

CREATE PEERING CONNECTION

REFRESH

DELETE

Filter table

Name	Your VPC network	Peered VPC network	Peered project ID	Status	Exchange custom routes
prodpeering	vpcproduction	vpcdev	devproject-287318	Active	None

Type here to search

This screenshot shows the Google Cloud Platform VPC network peering interface. The main title bar says "VPC network peering - VPC network". Below it, the navigation bar includes "Cloud Shell" and "34.87.116.62". The main content area is titled "VPC network peering" and shows a table of existing peering connections. A sidebar on the left contains various icons for networking, storage, and monitoring. The table has columns for Name, Your VPC network, Peered VPC network, Peered project ID, Status, and Exchange custom routes. One connection is listed: "prodpeering" peering between "vpcproduction" and "vpcdev" with project ID "devproject-287318", marked as "Active" with no custom routes exchanged. The status bar at the bottom shows the date and time as "8/24/2020 2:35 AM".

```
[g96aayu@prod-instance~ - Google Chrome
ssh.cloud.google.com/projects/prodproject-13242443/zones/asia-southeast1-b/instances/prod-instance?useAdminProxy=true&authuser=0&hl=en_US&projectNumber=170726174900
[ g96aayu@prod-instance ~]$ ping 10.0.2.2
PING 10.0.2.2 (10.0.2.2) 56(84) bytes of data.
^C
--- 10.0.2.2 ping statistics ---
15 packets transmitted, 0 received, 100% packet loss, time 13999ms

[g96aayu@prod-instance ~]$ ping 10.0.2.2
PING 10.0.2.2 (10.0.2.2) 56(84) bytes of data.
64 bytes from 10.0.2.2: icmp_seq=1 ttl=64 time=222 ms
64 bytes from 10.0.2.2: icmp_seq=2 ttl=64 time=221 ms
64 bytes from 10.0.2.2: icmp_seq=3 ttl=64 time=221 ms
64 bytes from 10.0.2.2: icmp_seq=4 ttl=64 time=221 ms
64 bytes from 10.0.2.2: icmp_seq=5 ttl=64 time=221 ms
64 bytes from 10.0.2.2: icmp_seq=6 ttl=64 time=221 ms
64 bytes from 10.0.2.2: icmp_seq=7 ttl=64 time=221 ms
64 bytes from 10.0.2.2: icmp_seq=8 ttl=64 time=221 ms
64 bytes from 10.0.2.2: icmp_seq=9 ttl=64 time=221 ms
64 bytes from 10.0.2.2: icmp_seq=10 ttl=64 time=221 ms
64 bytes from 10.0.2.2: icmp_seq=11 ttl=64 time=221 ms
64 bytes from 10.0.2.2: icmp_seq=12 ttl=64 time=221 ms
64 bytes from 10.0.2.2: icmp_seq=13 ttl=64 time=221 ms
64 bytes from 10.0.2.2: icmp_seq=14 ttl=64 time=221 ms
```

VPC network peering - VPC net... | Cloud Shell | 34.87.116.62 | VPC network peering - VPC net... | + | ENG 2:35 AM IN 8/24/2020 [19]

Type here to search

Google Cloud Platform DevProject

VPC network peering

+ CREATE PEERING CONNECTION

REFRESH

DELETE

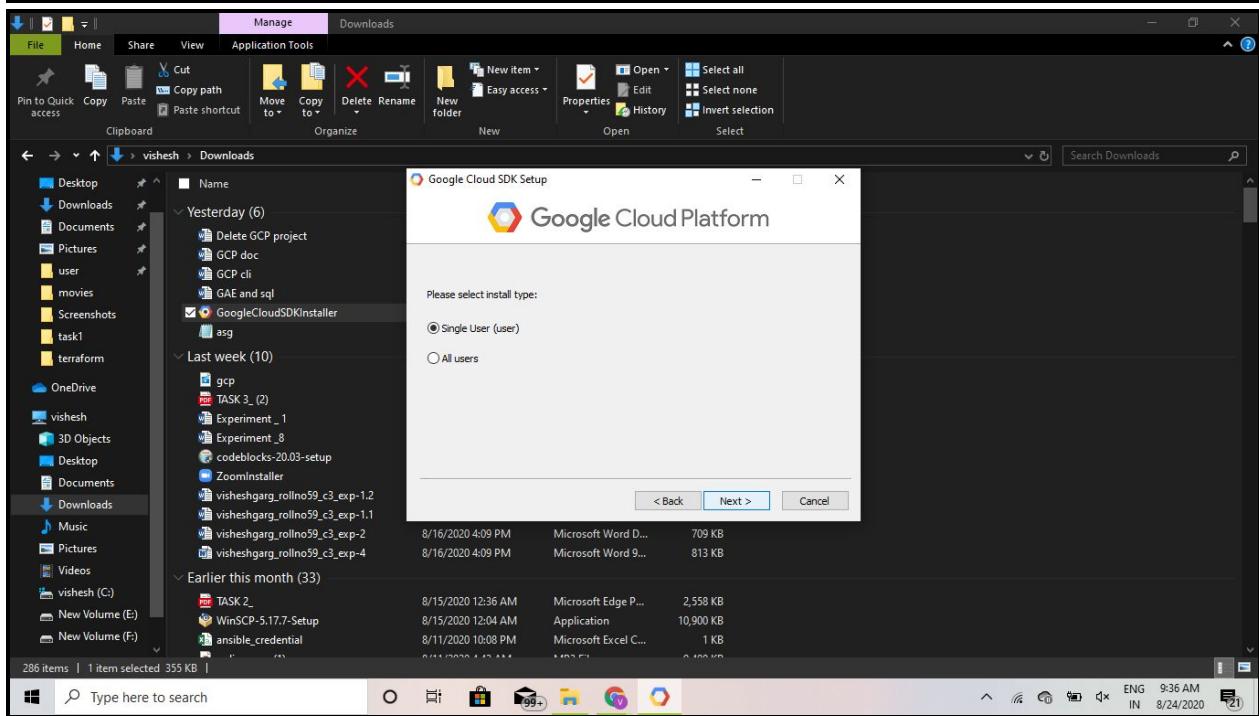
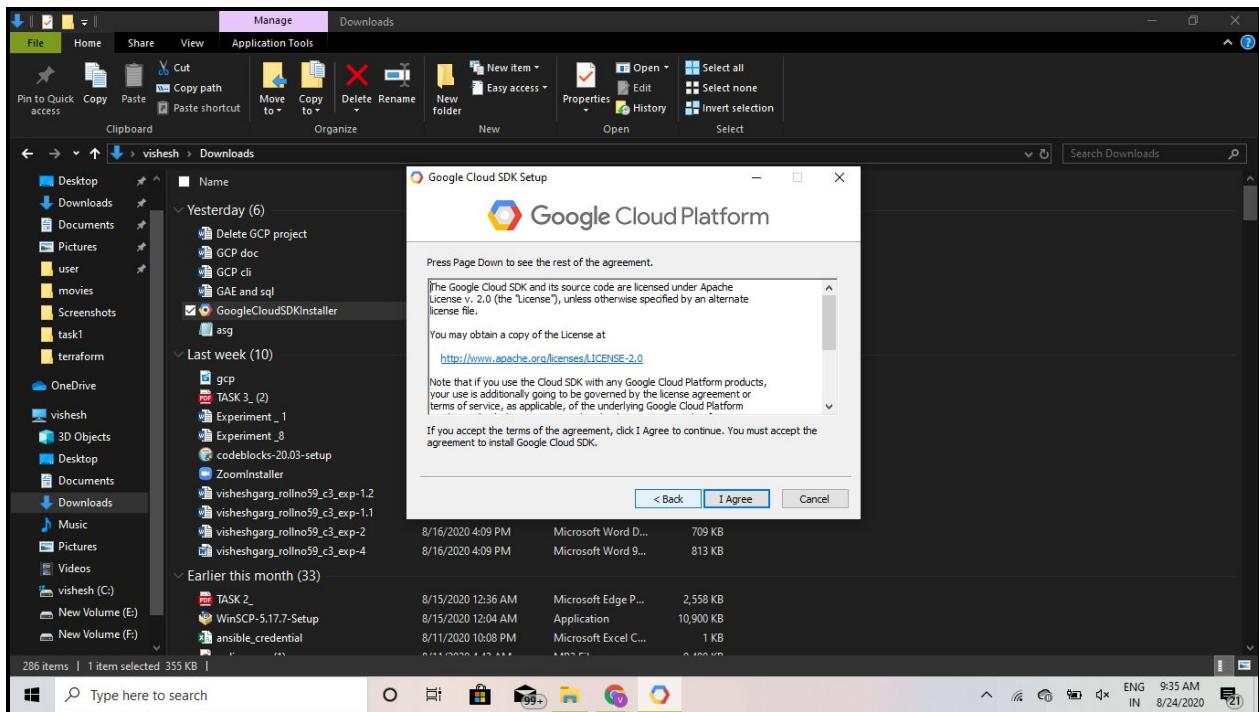
Filter table

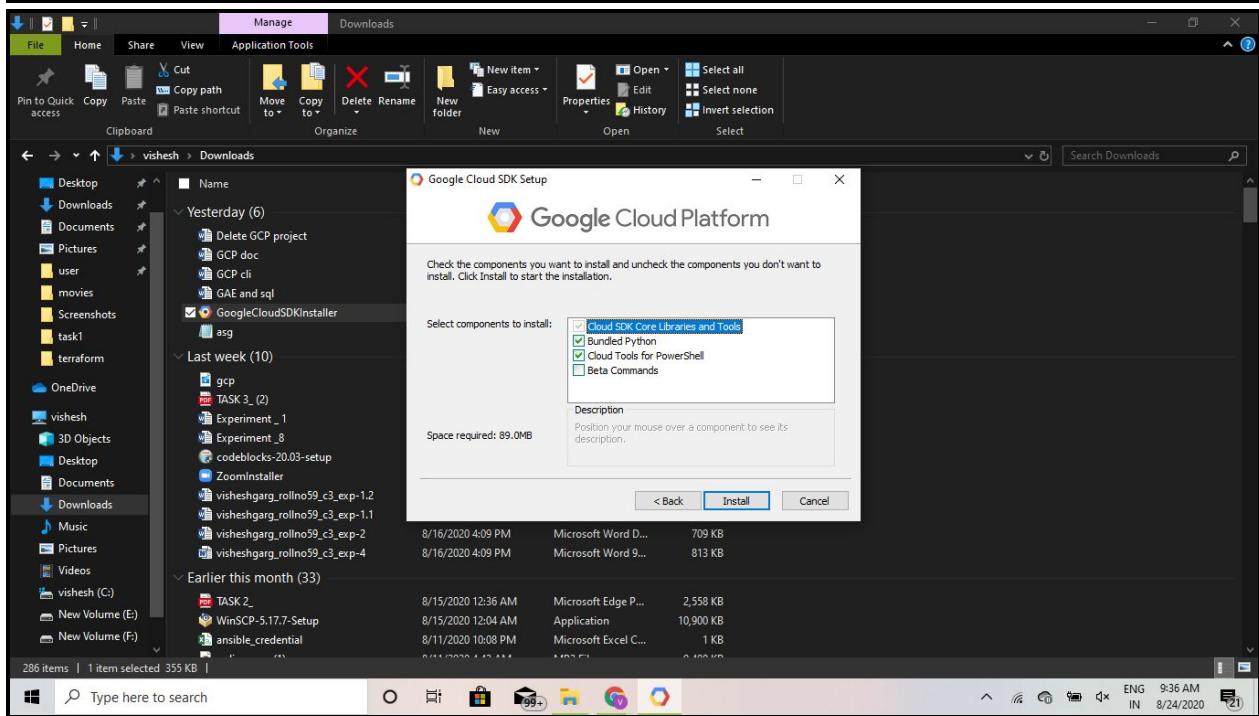
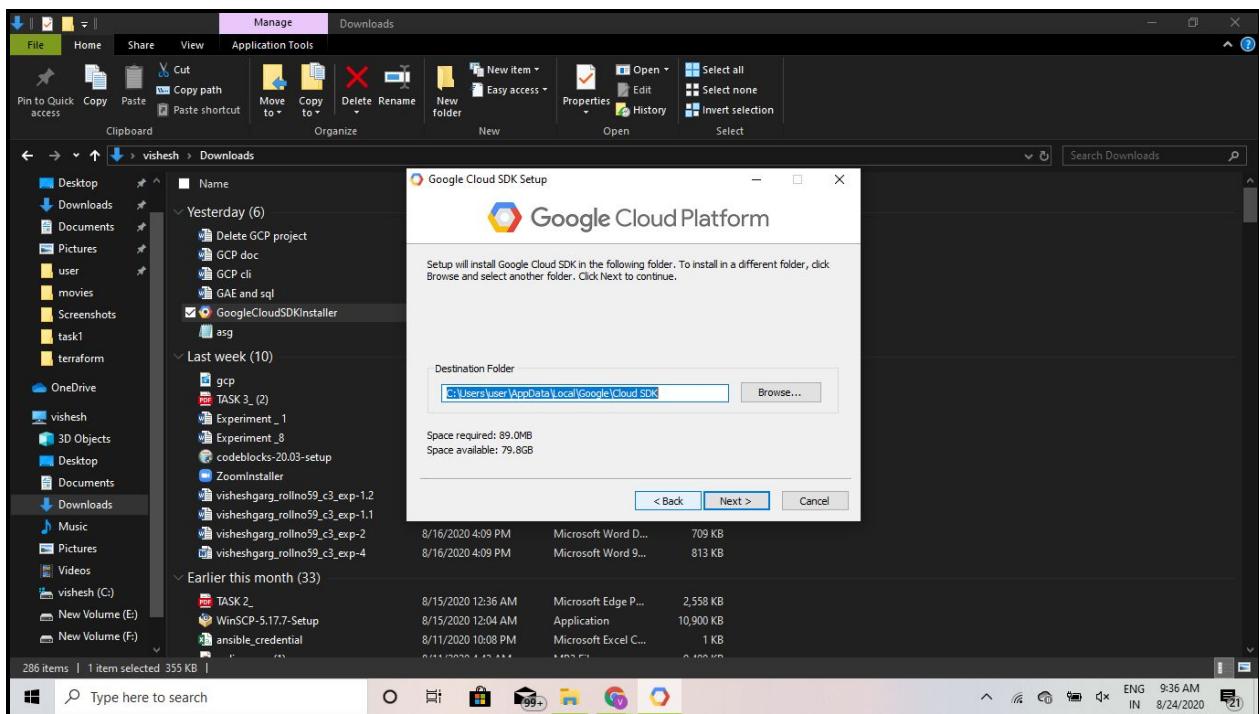
Name	Your VPC network	Peered VPC network	Peered project ID	Status	Exchange custom routes
dev-peering	vpcdev	vpcproduction	prodproject-13242443	Active	None

Type here to search

Day 2:

Google kubernetes engine





```
cmd C:\Windows\SYSTEM32\cmd.exe - gcloud init
Network diagnostic passed (1/1 checks passed).

You must log in to continue. Would you like to log in (Y/n)? Y
Your browser has been opened to visit:

https://accounts.google.com/o/oauth2/auth?client_id=32555940559.apps.googleusercontent.com&redirect_uri=http%3A%2F%2Flocalhost%3A8085%2F&scope=openid+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fuserinfo_email+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fcloud-platform+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fappengine.admin+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fcompute+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Faccounts.reauth&code_challenge=N7Te_wlaFED71QUvBSi8BsrwJyWoyI973u1S6yX2i8&code_challenge_method=S256&access_type=offline&response_type=code&prompt=select_account

You are logged in as: [96aayu@gmail.com].
Pick cloud project to use:
[1] devproject-287318
[2] groovy-ward-287313
[3] lunar-campaign-287313
[4] prodporject-13242443
[5] Create a new project
Please enter numeric choice or text value (must exactly match list item):
```

```
Select C:\Windows\system32\cmd.exe
rules.
services          List, enable and disable APIs and services.

Anthos CLI
anthos           Anthos command Group.

CI/CD
scheduler        Manage Cloud Scheduler jobs and schedules.
tasks            Manage Cloud Tasks queues and tasks.

Compute
app              Manage your App Engine deployments.

C:\Users\user>gcloud projects list
PROJECT_ID        NAME          PROJECT_NUMBER
devproject-287318 DevProject   381790864413
groovy-ward-287313 My First Project 497392490371
lunar-campaign-287313 My First Project 212014526950
prodporject-13242443 ProdProject 170726174900

C:\Users\user>
```

```
C:\Users\user>gcloud projects list
PROJECT_ID           NAME          PROJECT_NUMBER
groovy-ward-287313  My First Project  497392490371
lunar-campaign-287313  My First Project  212014526950

C:\Users\user>gcloud compute instances list
ERROR: (gcloud.compute.instances.list) The required property [project] is not currently set.
You may set it for your current workspace by running:

$ gcloud config set project VALUE

or it can be set temporarily by the environment variable [CLOUDSDK_CORE_PROJECT]

C:\Users\user>
C:\Users\user>gcloud compute instances create
ERROR: (gcloud.compute.instances.create) argument INSTANCE_NAMES [INSTANCE_NAMES ...]: Must be specified.
Usage: gcloud compute instances create INSTANCE_NAMES [INSTANCE_NAMES ...] [optional flags]
      optional flags may be --accelerator | --address | --no-address | --async |
                           --boot-disk-auto-delete | --boot-disk-device-name |
                           --boot-disk-kms-key | --boot-disk-kms-keyring |
                           --boot-disk-kms-location | --boot-disk-kms-project |
                           --boot-disk-size | --boot-disk-type |
```

```
Type here to search  O  🌐  📁  🎥  🖼  🎨  🎵  🎮  🎧  ENG  10:05 AM
Select C:\Windows\SYSTEM32\cmd.exe  IN  8/24/2020  (21)

Your browser has been opened to visit:

https://accounts.google.com/o/oauth2/auth?client_id=32555940559.apps.googleusercontent.com&redirect_uri=http%3A%2F%2Flocalhost%3A8085%2F&scope=openid+https%3A%2Fwww.googleapis.com%2Fauth%2Fuserinfo.email+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fcloud-platform+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fappengine.admin+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fcompute+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Faccounts.reauth&code_challenge=N7T_e_wlaFED71QUvBSi8BsrwJyWoyI973ulS6yX2i8&code_challenge_method=S256&access_type=offline&response_type=code&prompt=select_account

You are logged in as: [96aayu@gmail.com].

Pick cloud project to use:
[1] devproject-287318
[2] groovy-ward-287313
[3] lunar-campaign-287313
[4] prodporject-13242443
[5] Create a new project
Please enter numeric choice or text value (must exactly match list item):  3

Your current project has been set to: [lunar-campaign-287313]. 

Not setting default zone/region (this feature makes it easier to use

Type here to search  O  🌐  📁  🎥  🖼  🎨  🎵  🎮  🎧  ENG  10:14 AM
Select C:\Windows\SYSTEM32\cmd.exe  IN  8/24/2020  (21)
```

```
[37] europe-west3-a
[38] europe-west3-b
[39] europe-west3-c
[40] europe-west4-a
[41] europe-west4-b
[42] europe-west4-c
[43] europe-west6-a
[44] europe-west6-b
[45] europe-west6-c
[46] northamerica-northeast1-a
[47] northamerica-northeast1-b
[48] northamerica-northeast1-c
[49] southamerica-east1-a
[50] southamerica-east1-b
Did not print [23] options.
Too many options [73]. Enter "list" at prompt to print choices fully.
Please enter your numeric choice: 19

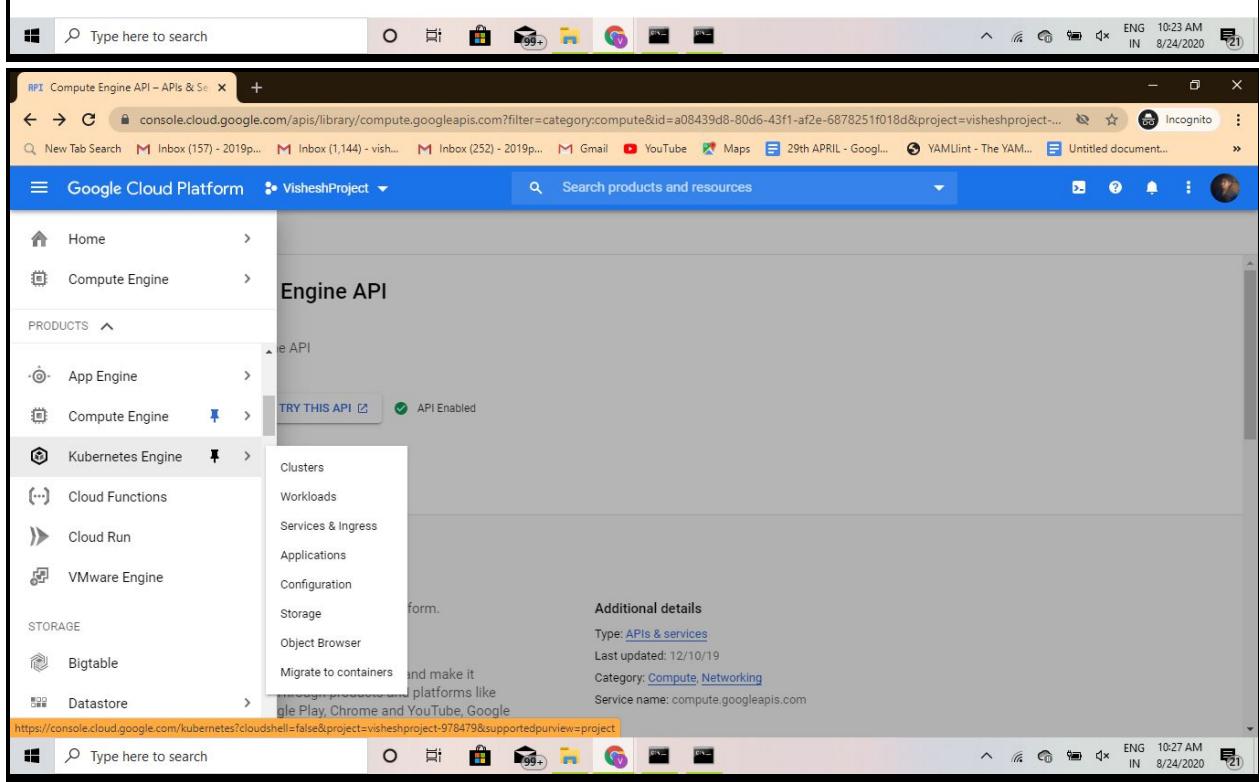
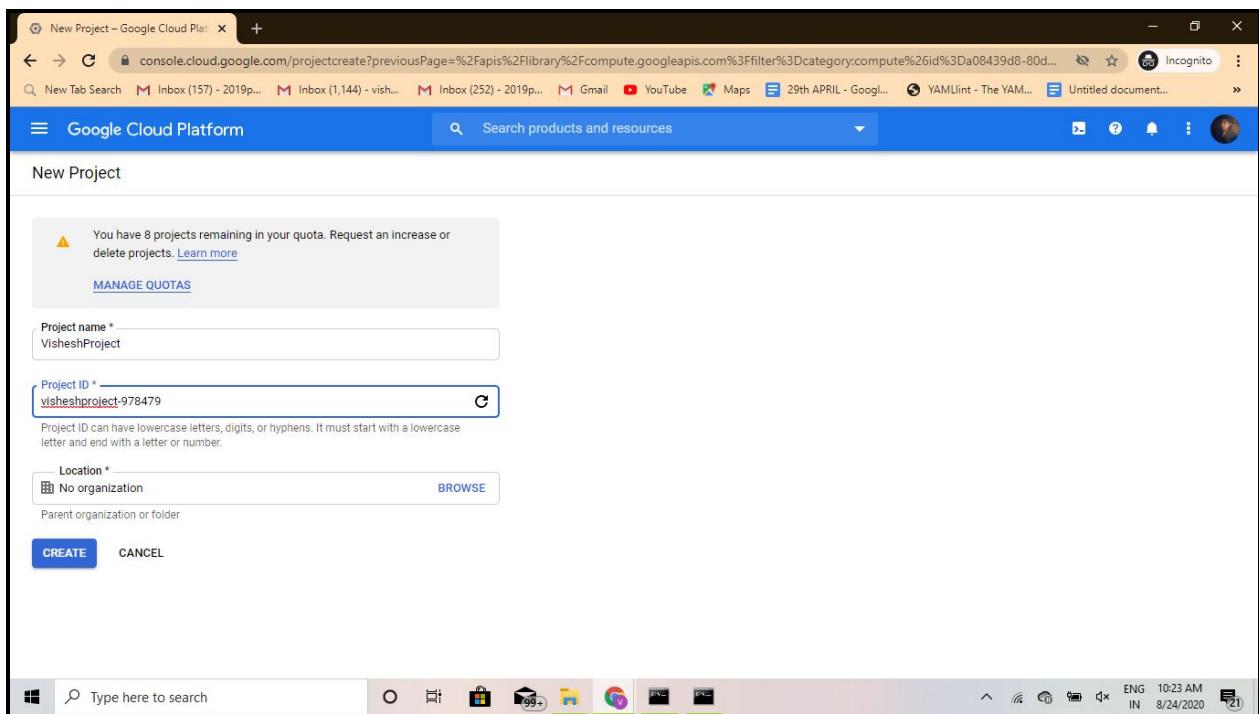
Created [https://www.googleapis.com/compute/v1/projects/lunar-campaign-287313/zones/asia-southeast1-a/instances/os1].
NAME ZONE MACHINE_TYPE PREEMPTIBLE INTERNAL_IP EXTERNAL_IP STATUS
os1 asia-southeast1-a n1-standard-1 10.148.0.2 34.87.189.157 RUNNING

C:\Users\user>
```

```
Type here to search 10:16 AM
Select C:\Windows\system32\cmd.exe - gcloud compute ssh os1
os1 asia-southeast1-a n1-standard-1 10.148.0.2 34.87.189.157 RUNNING

C:\Users\user>gcloud compute ssh os1
WARNING: The private SSH key file for gcloud does not exist.
WARNING: The public SSH key file for gcloud does not exist.
WARNING: The PuTTY PPK SSH key file for gcloud does not exist.
WARNING: You do not have an SSH key for gcloud.
WARNING: SSH keygen will be executed to generate a key.
No zone specified. Using zone [asia-southeast1-a] for instance: [os1].
Updating project ssh metadata...\\Updated [https://www.googleapis.com/compute/v1/projects/lunar-campaign-287313].
Updating project ssh metadata...done.
Waiting for SSH key to propagate.
The server's host key is not cached in the registry. You
have no guarantee that the server is the computer you
think it is.
The server's ssh-ed25519 key fingerprint is:
ssh-ed25519 255 e2:1a:d8:c0:a5:e5:31:49:74:36:b4:95:75:7b:2d:e6
If you trust this host, enter "y" to add the key to
PUTTY's cache and carry on connecting.
If you want to carry on connecting just once, without
adding the key to the cache, enter "n".
If you do not trust this host, press Return to abandon the
connection.
Store key in cache? (y/n) ■

Type here to search 10:17 AM
Select C:\Windows\system32\cmd.exe - gcloud compute ssh os1
os1 asia-southeast1-a n1-standard-1 10.148.0.2 34.87.189.157 RUNNING
```



Create a Kubernetes cluster - Ku

console.cloud.google.com/kubernetes/add?project=visheshproject-978479&cloudshell=false&supportedpurview=project

New Tab Search Gmail YouTube Maps 29th APRIL - Google Sheets YAMLLint - The YAM...

Incognito

Google Cloud Platform VisheshProject Search products and resources

Create a Kubernetes cluster ADD NODE POOL REMOVE NODE POOL

Cluster basics

NODE POOLS default-pool

CLUSTER Automation Networking Security Metadata Features

To experiment with an affordable cluster, try My first cluster in the Cluster set-up guides

Name cluster-1

Location type Zonal

Zone us-central1-c

Specify default node locations Current default: us-central1-c

CREATE CANCEL Equivalent REST or command line

Type here to search

Create a Kubernetes cluster - Ku

console.cloud.google.com/kubernetes/add?project=visheshproject-978479&cloudshell=false&supportedpurview=project

New Tab Search Gmail YouTube Maps 29th APRIL - Google Sheets YAMLLint - The YAM...

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Create a Kubernetes cluster ADD NODE POOL REMOVE NODE POOL

Cluster basics

NODE POOLS default-pool

Nodes Security Metadata

CLUSTER Automation Networking

groups of nodes created in this cluster. More node pools can be added and removed after cluster creation.

Name default-pool

Node version 1.15.12-gke.2 (master version)

Size Number of nodes * 1

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

Enable autoscaling

CREATE CANCEL Equivalent REST or command line

Type here to search

Create a Kubernetes cluster - Ku

console.cloud.google.com/kubernetes/add?project=visheshproject-978479&cloudshell=false&supportedpurview=project

Google Cloud Platform VisheshProject Search products and resources

Create a Kubernetes cluster ADD NODE POOL REMOVE NODE POOL

Cluster basics

NODE POOLS

- default-pool
 - Nodes
 - Security
 - Metadata

CLUSTER

- Automation
- Networking

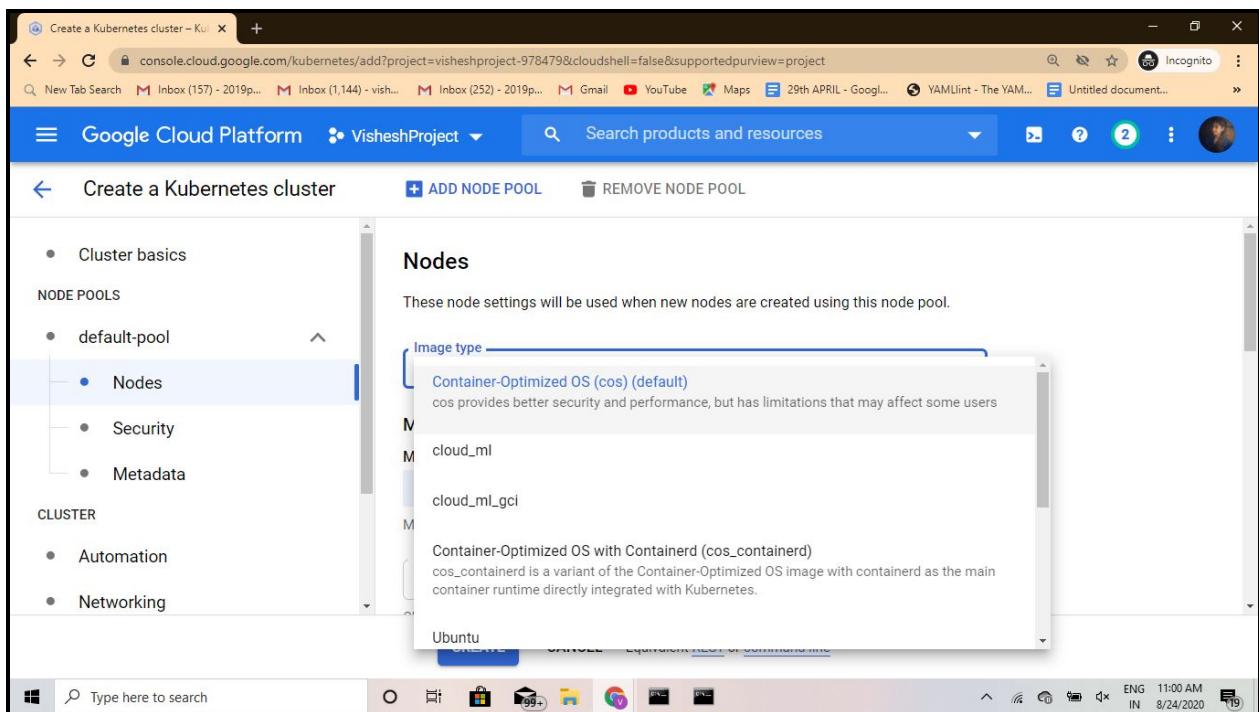
Nodes

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

Image type

- Container-Optimized OS (cos) (default)
cos provides better security and performance, but has limitations that may affect some users
- cloud_ml
- cloud_ml_gcl
- Container-Optimized OS with Containerd (cos_containerd)
cos_containerd is a variant of the Container-Optimized OS image with containerd as the main container runtime directly integrated with Kubernetes.
- Ubuntu

Type here to search ENG 11:00 AM IN 8/24/2020



Create a Kubernetes cluster - Ku

console.cloud.google.com/kubernetes/add?project=visheshproject-978479&cloudshell=false&supportedpurview=project

Google Cloud Platform VisheshProject Search products and resources

Create a Kubernetes cluster ADD NODE POOL REMOVE NODE POOL

Cluster basics

NODE POOLS

- default-pool
 - Nodes
 - Security
 - Metadata

CLUSTER

- Automation
- Networking

Machine types for common workloads, optimized for cost and flexibility

Series N1

Powered by Intel Skylake CPU platform or one of its predecessors

Machine type n1-standard-1 (1 vCPU, 3.75 GB memory)

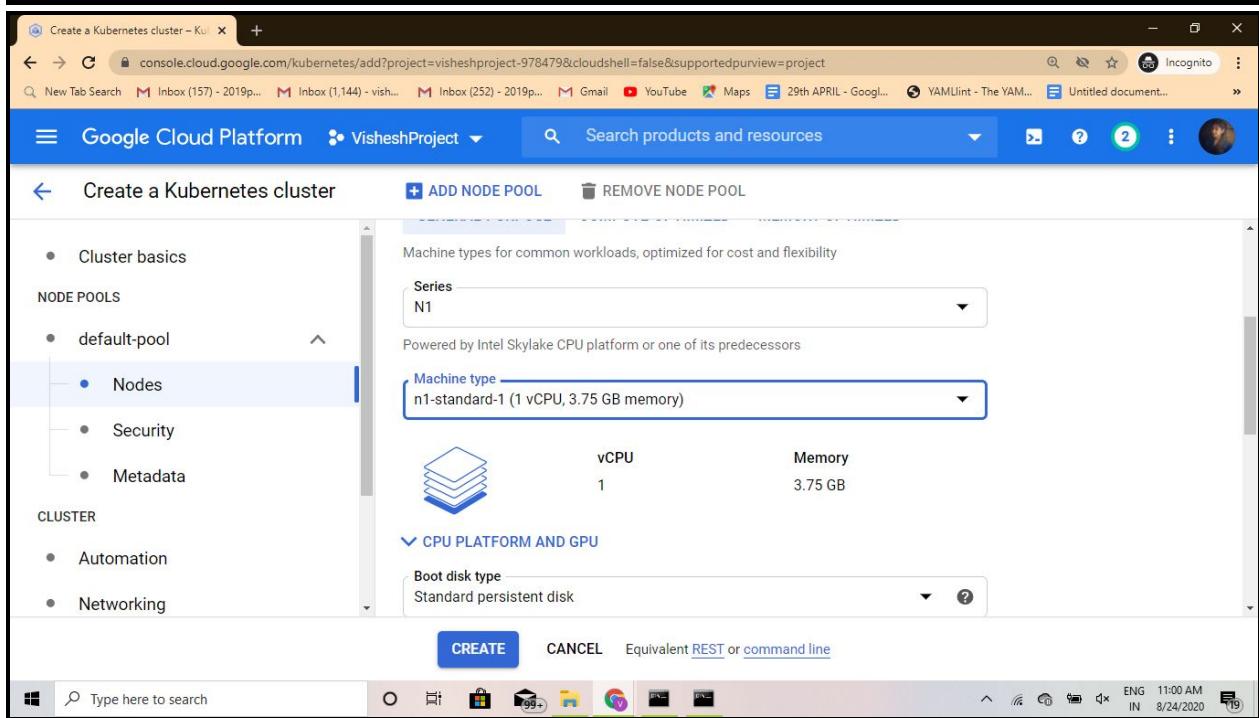
	vCPU	Memory
	1	3.75 GB

CPU PLATFORM AND GPU

Boot disk type Standard persistent disk

CREATE CANCEL Equivalent REST or command line

Type here to search ENG 11:00 AM IN 8/24/2020



The screenshot shows the 'Create a Kubernetes cluster' page in the Google Cloud Platform. On the left, a sidebar lists 'Cluster basics', 'NODE POOLS' (with 'default-pool' expanded to show 'Nodes', 'Security', and 'Metadata'), and 'CLUSTER' (with 'Automation' and 'Networking'). The main panel is titled 'CPU PLATFORM AND GPU' and contains fields for 'Boot disk type' (set to 'Standard persistent disk'), 'Boot disk size (GB)' (set to 100), and checkboxes for 'Enable customer-managed encryption for boot disk' and 'Enable preemptible nodes'. Below these are sections for 'Local SSD disks' and 'Networking'. At the bottom are 'CREATE' and 'CANCEL' buttons, and a note about equivalent REST or command line.

Zone: like in mumbai(region) we have 3 zones

All slave will launch in one zone that is zonal

Region: all slave will be spread equal in region

The screenshot shows the same 'Create a Kubernetes cluster' page. In the 'NODE POOLS' section, under 'default-pool', three zones are selected: 'asia-southeast1-a', 'asia-southeast1-b', and 'asia-southeast1-c'. A circled checkmark highlights the selection of 'asia-southeast1-c'. The 'Master version' section includes options for 'Release channel' (radio button) and 'Static version' (radio button, selected), with a dropdown set to '1.15.12-gke.2 (default)'. The bottom of the screen shows a taskbar with various icons and system status.

they will launch 3 nodes for us in 3 different zones

```

gcloud beta container --project "visheshproject-978479" clusters create
"cluster-1" --region "asia-southeast1" --no-enable-basic-auth --cluster-version
"1.15.12-gke.2" --machine-type "n1-standard-1" --image-type "COS" --disk-type
"pd-standard" --disk-size "100" --metadata disable-legacy-endpoints=true
--scopes
"https://www.googleapis.com/auth/devstorage.read_only","https://www.googleapis.com/auth/logging.write","https://www.googleapis.com/auth/monitoring","https://www.googleapis.com/auth/servicecontrol","https://www.googleapis.com/auth/service.management.readonly","https://www.googleapis.com/auth/trace.append"
--num-nodes "1" --enable-stackdriver-kubernetes --enable-ip-alias --network
"projects/visheshproject-978479/global/networks/default" --subnetwork
"projects/visheshproject-978479/regions/asia-southeast1/subnetworks/default"
--default-max-pods-per-node "110" --no-enable-master-authorized-networks
--addons HorizontalPodAutoscaling,HttpLoadBalancing --enable-autoupgrade
--enable-autorepair --max-surge-upgrade 1 --max-unavailable-upgrade 0
--node-locations "asia-southeast1-a","asia-southeast1-b","asia-southeast1-c"

```

The screenshot shows the Google Cloud Platform interface for managing Kubernetes clusters. The URL in the browser is `console.cloud.google.com/kubernetes/list?project=visheshproject-978479&cloudshell=false&supportedpurview=project`. The page title is "Google Cloud Platform" and the project is "VisheshProject". The main content area is titled "Kubernetes clusters" and includes a "CREATE CLUSTER" button. A table lists the existing cluster "cluster-1" with details: Location "asia-southeast1", Cluster size "3", Total cores "3 vCPUs", and Total memory "11.25 GB". There are "Connect", "Edit", and "Delete" actions for this cluster. On the left, there is a sidebar with various icons for other services like Compute Engine, Storage, and Container Registry.

Name	Location	Cluster size	Total cores	Total memory	Notifications	Labels
cluster-1	asia-southeast1	3	3 vCPUs	11.25 GB		

```

curl -LO
https://storage.googleapis.com/kubernetes-release/release/v1.18.0/bin/windows/amd64/kubectl.exe

```

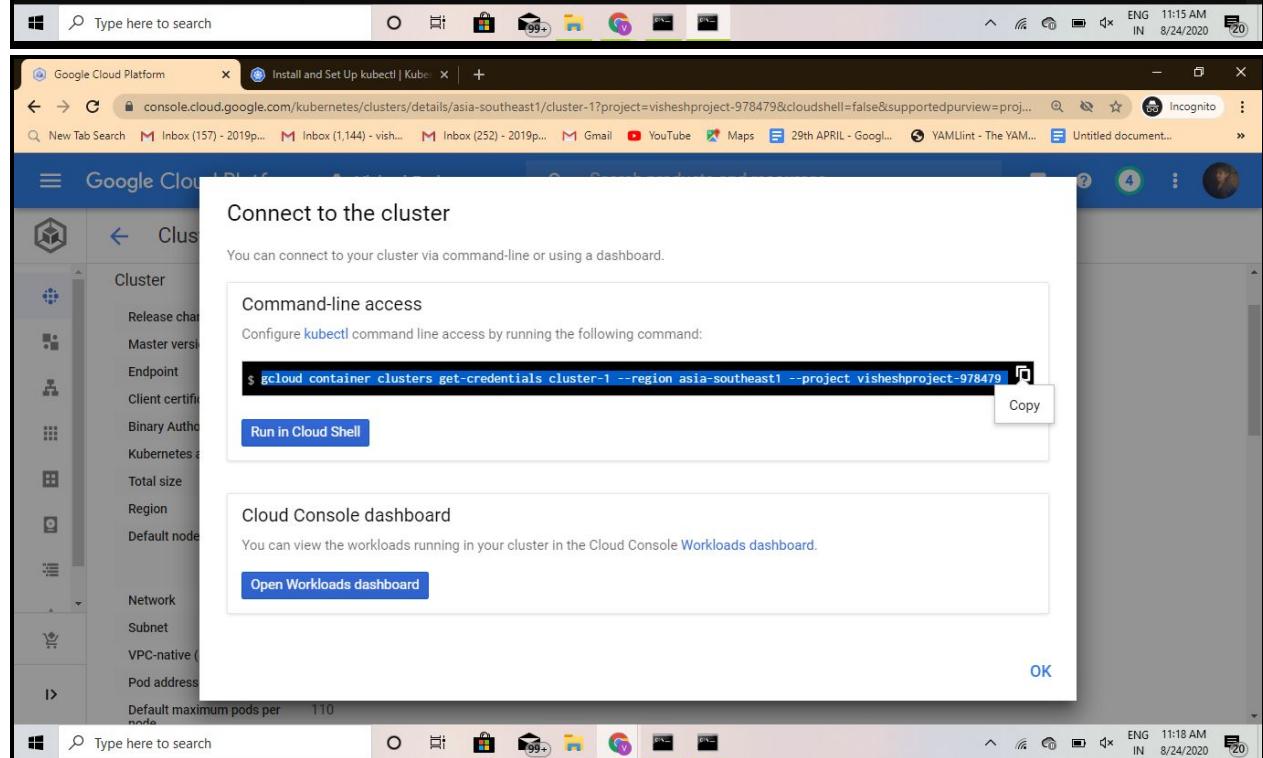
<https://kubernetes.io/docs/tasks/tools/install-kubectl/>

```
Select C:\Windows\system32\cmd.exe
have no guarantee that the server is the computer you
think it is.
The server's ssh-ed25519 key fingerprint is:
ssh-ed25519 255 e2:1a:d8:c0:a5:e5:31:49:74:36:b4:95:75:7b:2d:e6
If you trust this host, enter "y" to add the key to
PUTTY's cache and carry on connecting.
If you want to carry on connecting just once, without
adding the key to the cache, enter "n".
If you do not trust this host, press Return to abandon the
connection.
Store key in cache? (y/n)
C:\Users\user>
C:\Users\user>curl -LO https://storage.googleapis.com/kubernetes-release/release/v1.18.0/bin/windows/amd64/kubectl.exe
  % Total    % Received % Xferd  Average Speed   Time     Time      Time  Current
          Dload  Upload Total   Spent   Left  Speed
100 42.4M  100 42.4M    0     0  606k      0  0:01:11  0:01:11  --:--:-- 1833k

C:\Users\user>
C:\Users\user>kubectl.exe
kubectl controls the Kubernetes cluster manager.

Find more information at: https://kubernetes.io/docs/reference/kubectl/overview/
```

Basic Commands (Beginner):



```
gcloud container clusters get-credentials cluster-1 --region asia-southeast1 --project visheshproject-978479
```

```
cmd Select C:\Windows\system32\cmd.exe
Use "kubectl <command> --help" for more information about a given command.
Use "kubectl options" for a list of global command-line options (applies to all commands).

C:\Users\user>gcloud container clusters get-credentials cluster-1 --region asia-southeast1 --project vi
sheshproject-978479
Fetching cluster endpoint and auth data.
kubeconfig entry generated for cluster-1.

C:\Users\user>kubectl.exe get pods
No resources found in default namespace.

C:\Users\user>kubectl.exe get nodes
NAME STATUS ROLES AGE VERSION
gke-cluster-1-default-pool-38e4e287-bc2w Ready <none> 9m55s v1.15.12-gke.2
gke-cluster-1-default-pool-8c0f48ee-9v4z Ready <none> 9m55s v1.15.12-gke.2
gke-cluster-1-default-pool-ed529462-vpzs Ready <none> 9m55s v1.15.12-gke.2

C:\Users\user>kubectl.exe run myos1 --image=vimal13/apache-webserver-php
pod/myos1 created

C:\Users\user>kubectl.exe get pods
NAME READY STATUS RESTARTS AGE
myos1 0/1 ContainerCreating 0 5s

C:\Users\user>
cmd Select C:\Windows\system32\cmd.exe
C:\Users\user>kubectl.exe delete pods \
Error from server (NotFound): pods "\\" not found

C:\Users\user>kubectl.exe delete pod myos1
pod "myos1" deleted

C:\Users\user>kubectl.exe get pods
No resources found in default namespace.

C:\Users\user>kubectl create deployment myweb --image=vimal13/apache-webserver-php
deployment.apps/myweb created

C:\Users\user>kubectl get all
NAME READY STATUS RESTARTS AGE
pod/myweb-5c58879c65-hvrlg 0/1 ContainerCreating 0 4s

NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE
service/kubernetes ClusterIP 10.91.0.1 <none> 443/TCP 19m

NAME READY UP-TO-DATE AVAILABLE AGE
deployment.apps/myweb 0/1 1 0 4s

NAME DESIRED CURRENT READY AGE
replicaset.apps/myweb-5c58879c65 1 1 0 5s

cmd Select C:\Windows\system32\cmd.exe
Type here to search O ENG 11:28 AM IN 8/24/2020
```

```
C:\Users\user>kubectl.exe get deployments
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
myweb     1/1       1           1           3m14s

C:\Users\user>kubectl.exe get pods
NAME                  READY   STATUS    RESTARTS   AGE
myweb-5c58879c65-7c2bb   1/1     Running   0          2m20s

C:\Users\user>
C:\Users\user>kubectl.exe scale deployment myweb --replicas=5
deployment.extensions/myweb scaled

C:\Users\user>kubectl.exe get pods
NAME                  READY   STATUS    RESTARTS   AGE
myweb-5c58879c65-7c2bb   1/1     Running   0          2m45s
myweb-5c58879c65-m9rf1   0/1     ContainerCreating   0          2s
myweb-5c58879c65-mknnx   0/1     ContainerCreating   0          2s
myweb-5c58879c65-sfzg4   0/1     ContainerCreating   0          2s
myweb-5c58879c65-wb8pm   0/1     ContainerCreating   0          2s

C:\Users\user>kubectl.exe get deployments
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
myweb     2/5       5           2           3m49s
```

```
C:\Users\user>kubectl.exe get deployments
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
myweb     2/5       5           2           3m49s

C:\Users\user>kubectl.exe get pods -o wide
NAME                  READY   STATUS    RESTARTS   AGE   IP           NODE
                   NOMINATED NODE   READINESS GATES
myweb-5c58879c65-7c2bb   1/1     Running   0          3m16s   10.24.0.9   gke-cluster-1-default-pool-8
c0f48ee-9v4z   <none>    <none>
myweb-5c58879c65-m9rf1   1/1     Running   0          33s    10.24.1.6   gke-cluster-1-default-pool-3
8e4e287-bc2w   <none>    <none>
myweb-5c58879c65-mknnx   1/1     Running   0          33s    10.24.1.7   gke-cluster-1-default-pool-3
8e4e287-bc2w   <none>    <none>
myweb-5c58879c65-sfzg4   1/1     Running   0          33s    10.24.2.5   gke-cluster-1-default-pool-e
d529462-vpzs   <none>    <none>
myweb-5c58879c65-wb8pm   1/1     Running   0          33s    10.24.0.10  gke-cluster-1-default-pool-8
c0f48ee-9v4z   <none>    <none>

C:\Users\user>kubectl.exe get nodes
NAME                  STATUS   ROLES   AGE   VERSION
gke-cluster-1-default-pool-38e4e287-bc2w Ready   <none>   23m  v1.15.12-gke.2
gke-cluster-1-default-pool-8c0f48ee-9v4z Ready   <none>   23m  v1.15.12-gke.2
gke-cluster-1-default-pool-ed529462-vpzs Ready   <none>   23m  v1.15.12-gke.2

C:\Users\user>
```

Google Cloud Platform | Install and Set Up kubectl | Kube... | +

console.cloud.google.com/kubernetes/clusters/details/asia-southeast1/cluster-1?project=visheshproject-978479&cloudshell=false&supportedpurview=proj...

New Tab Search | Inbox (157) - 2019p... | Inbox (1,144) - vish... | Inbox (252) - 2019p... | Gmail | YouTube | Maps | 29th APRIL - Googl... | YAMLint - The YAM...

Google Cloud Platform | VisheshProject | Search products and resources | EDIT | DELETE | ADD NODE POOL | DEPLOY | CONNECT | DUPLICATE

Home | Compute Engine | PRODUCTS ▾ | NETWORKING | VPC network | Network services | Hybrid Connectivity | Network Service Tiers | Network Security | Network Intelligence

Load balancing | Cloud DNS | Cloud CDN | Cloud NAT | Traffic Director | Service Directory

Edit release channel | Upgrade available | Renew cluster certificate

outheast1 | outheast1-a | outheast1-b | outheast1-c

out | out | out | out

0.0/14

<https://console.cloud.google.com/net-services/loadbalancing/list?cloudshell=false>

Type here to search

Select C:\Windows\system32\cmd.exe

```
C:\Users\user>kubectl get services
NAME           TYPE      CLUSTER-IP   EXTERNAL-IP   PORT(S)    AGE
kubernetes     ClusterIP  10.91.0.1   <none>        443/TCP   29m

C:\Users\user>kubectl.exe expose deployment myweb --type=LoadBalancer --port=80
service/myweb exposed

C:\Users\user>kubectl.exe get all
NAME                           READY   STATUS    RESTARTS   AGE
pod/myweb-5c58879c65-7c2bb   1/1     Running   0          11m
pod/myweb-5c58879c65-m9rfl   1/1     Running   0          8m17s
pod/myweb-5c58879c65-mknxn   1/1     Running   0          8m17s
pod/myweb-5c58879c65-sfzg4   1/1     Running   0          8m17s
pod/myweb-5c58879c65-wb8pm   1/1     Running   0          8m17s

NAME           TYPE      CLUSTER-IP   EXTERNAL-IP   PORT(S)    AGE
service/kubernetes   ClusterIP  10.91.0.1   <none>        443/TCP   31m
service/myweb     LoadBalancer  10.91.3.218  <pending>     80:30301/TCP  10s

NAME           READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/myweb  5/5      5           5           11m

NAME           DESIRED   CURRENT   READY   AGE
replicaset.apps/myweb-5c58879c65  5         5         5       11m
```

Type here to search

The screenshot shows the Google Cloud Platform Load Balancing interface. The main header includes the project name "VisheshProject". The left sidebar has a "Load balancing" section selected. The main content area displays a table with one row:

Name	Protocol	Region	Backends
a8ef60dfb15d549a4bdf11f74cadc512	TCP	asia-southeast1	1 target pool (3 instances)

Below the table, there is a note: "To edit load balancing resources like forwarding rules and target proxies, go to the [advanced menu](#)."

The screenshot shows a browser window with the URL "35.240.166.42". The page content is a terminal session displaying system log output:

```
Welcome to vimal web server for testingeth0: flags=4163 mtu 1460
    inet 10.24.1.7 netmask 255.255.255.0 broadcast 10.24.1.255
        ether 0e:8b:e9:67:d8:b0 txqueuelen 0 (Ethernet)
        RX packets 14 bytes 1643 (1.6 KiB)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 4 bytes 204 (204.0 B)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73 mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
        loop txqueuelen 1000 (Local Loopback)
        RX packets 0 bytes 0 (0.0 B)
        RX errors 0 dropped 0 overruns 0 frame 0
        TX packets 0 bytes 0 (0.0 B)
        TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

Services & Ingress – Kubernetes | Install and Set Up kubectl | Kubernetes | 35.240.166.42

console.cloud.google.com/kubernetes/discovery?cloudshell=false&project=visheshproject-978479&supportedpurview=project&pageState={"savedViews":[]}

Google Cloud Platform VisheshProject Search products and resources

REFRESH CREATE INGRESS DELETE BETA

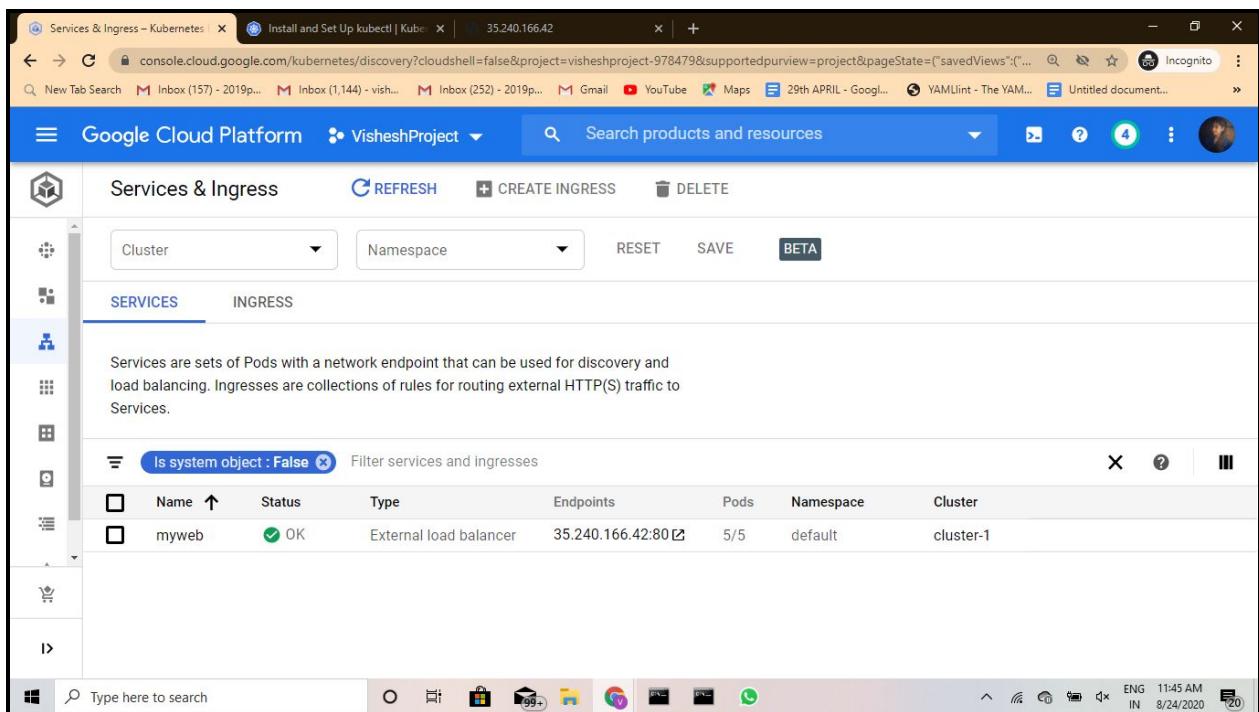
Cluster Namespace RESET SAVE SERVICES INGRESS

Services are sets of Pods with a network endpoint that can be used for discovery and load balancing. Ingresses are collections of rules for routing external HTTP(S) traffic to Services.

Is system object : False Filter services and ingresses

Name	Status	Type	Endpoints	Pods	Namespace	Cluster
myweb	OK	External load balancer	35.240.166.42:80	5/5	default	cluster-1

Type here to search



Service details – Kubernetes Eng | Install and Set Up kubectl | Kubernetes | 35.240.166.42

console.cloud.google.com/kubernetes/service/asia-southeast1/cluster-1/default/myweb/overview?cloudshell=false&project=visheshproject-978479&supportedpurview=project&pageState={"savedViews":[]}

Google Cloud Platform VisheshProject Search products and resources

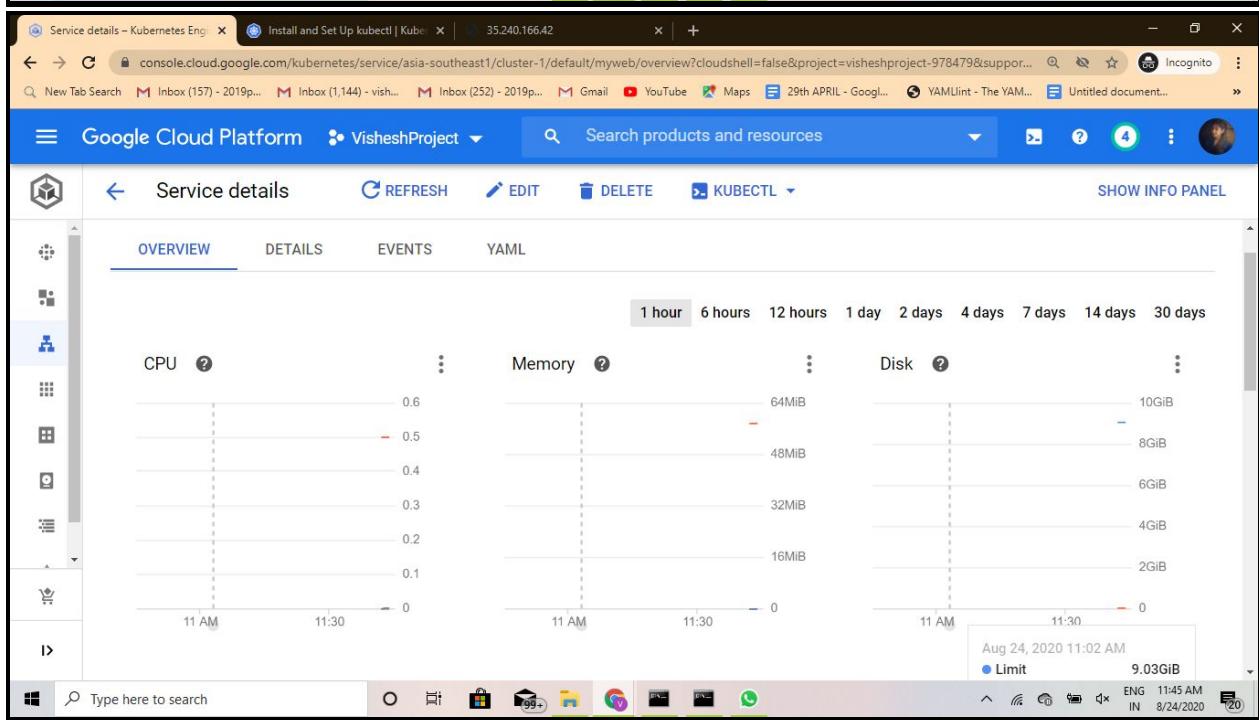
REFRESH EDIT DELETE KUBECTL SHOW INFO PANEL

OVERVIEW DETAILS EVENTS YAML

1 hour 6 hours 12 hours 1 day 2 days 4 days 7 days 14 days 30 days

CPU Memory Disk

Aug 24, 2020 11:02 AM Limit 9.03GB



Service details – Kubernetes Eng | Install and Set Up kubectl | Kube... | 35.240.166.42 | +

console.cloud.google.com/kubernetes/service/asia-southeast1/cluster-1/default/myweb/overview?cloudshell=false&project=visheshproject-978479&supportedpurview=project

Incognito

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Google Cloud Platform | VisheshProject | Search products and resources

REFRESH EDIT DELETE KUBECTL SHOW INFO PANEL

Home | Compute Engine | PRODUCTS ▾ | Filestore | Storage | SQL | Spanner | Memorystore | Data Transfer | SHOW INFO PANEL

EVENTS | YAML | 1 hour | 6 hours | 12 hours | 1 day | 2 days | 4 days | 7 days | 14 days | 30 days

Memory Disk

Memory	Disk
64MB	10GiB
48MB	8GiB
32MB	6GiB
16MB	4GiB
8MB	2GiB

DATABASES

https://console.cloud.google.com/sql?cloudshell=false&project=visheshproject-978479&supportedpurview=project

Type here to search

ENG 12:04 PM IN 8/24/2020

This screenshot shows the Google Cloud Platform interface for managing Cloud SQL instances. On the left, there's a sidebar with various services like Home, Compute Engine, and Storage. The main area is titled 'SQL' and shows a chart comparing Memory and Disk usage. The chart has two rows: one for Memory (ranging from 0.1 to 0.6) and one for Disk (ranging from 2GiB to 10GiB). The memory usage is shown as a red bar, and the disk usage is shown as a blue bar. Below the chart, there are sections for choosing a database engine (MySQL, PostgreSQL, or SQL Server) and creating a new instance.

Create an instance – SQL – VisheshProject | Install and Set Up kubectl | Kube... | 35.240.166.42 | +

console.cloud.google.com/sql/choose-instance-engine?cloudshell=false&project=visheshproject-978479&supportedpurview=project

Incognito

New Tab Search | Inbox (157) - 2019p... | Inbox (1,144) - vish... | Inbox (252) - 2019p... | Gmail | YouTube | Maps | 29th APRIL - Googl... | YAMLint - The YAM... | Untitled document...

Google Cloud Platform | VisheshProject | Search products and resources

SQL | Create an instance

Choose your database engine

MySQL Versions: 5.6, 5.7 → Choose MySQL

PostgreSQL Versions: 9.6, 10, 11, 12 → Choose PostgreSQL

SQL Server Versions: 2017 → Choose SQL Server

Want more context on the Cloud SQL database engines? [Learn more](#)

https://console.cloud.google.com/sql/create-instance-mysql?cloudshell=false&project=visheshproject-978479&supportedpurview=project

Type here to search

ENG 12:12 PM IN 8/24/2020

This screenshot shows the 'Create an instance' page for Cloud SQL. It lists three database engines: MySQL, PostgreSQL, and SQL Server, each with its supported versions. MySQL supports 5.6 and 5.7, PostgreSQL supports 9.6, 10, 11, and 12, and SQL Server supports 2017. Each engine has a 'Choose [Engine]' button next to its version list. Below the engines, there's a link to learn more about the Cloud SQL database engines.

The screenshot shows the 'Create a MySQL instance' page in the Google Cloud Platform. The 'Instance info' section is visible, with the 'Instance ID' field containing 'mydbos'. The 'Root password' section shows a password 'redhat' entered in the input field. The 'Location' section shows the 'Region' set to 'asia-southeast1 (Singapore)' and the 'Zone' dropdown set to 'Any'. The browser's address bar shows the URL: `console.cloud.google.com/sql/create-instance-mysql?cloudshell=false&project=visheshproject-978479&supportedpurview=project`.

This screenshot shows the same 'Create a MySQL instance' page, but with more configuration options filled in. In addition to the previous fields, it includes a 'Database version' dropdown set to 'MySQL 5.7' and a 'Show configuration options' link. The 'Create' button is visible at the bottom left. The browser's address bar shows the same URL as the first screenshot.

This screenshot shows the Google Cloud Platform SQL Overview page for a database instance named 'mydbos'. The instance is part of the 'VisheshProject' project. The instance was created on Aug 24, 2020, at 12:13:54 PM. It is currently being created. The configuration includes 1 vCPU, 3.75 GB of memory, and 10 GB of SSD storage. The database version is MySQL 5.7, and auto storage increase is enabled. Automated backups are also enabled.

Overview

Connect to this instance
Connection name: visheshproject-978479:asia-southeast1:mydbos

Suggested actions

Operations and logs
Creation Time: Aug 24, 2020, 12:13:54 PM | Type: Create | Status: Instance is being created

Configuration

vCPUs	Memory	SSD storage
1	3.75 GB	10 GB

Database version is MySQL 5.7
Auto storage increase is enabled
Automated backups are enabled
Point-in-time recovery is enabled
Located in asia-southeast1-a

This screenshot shows the Google Cloud Platform SQL Overview page for the same database instance 'mydbos'. The instance now has a public IP address of 35.240.136.141. The configuration remains the same: 1 vCPU, 3.75 GB of memory, and 10 GB of SSD storage. The database version is MySQL 5.7, and auto storage increase is enabled. Automated backups are also enabled.

Overview

Connect to this instance
Public IP address: 35.240.136.141
Connection name: visheshproject-978479:asia-southeast1:mydbos

Configuration

vCPUs	Memory	SSD storage
1	3.75 GB	10 GB

Database version is MySQL 5.7
Auto storage increase is enabled
Automated backups are enabled

Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to **visheshproject-978479**.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
g96aayu@cloudshell:~ (visheshproject-978479)\$ mysql -h 35.240.136.141 -u root -p
Enter password:
^C
g96aayu@cloudshell:~ (visheshproject-978479)\$ mysql -h 35.240.136.141 -u root -p
Enter password:
ERROR 2003 (HY000): Can't connect to MySQL server on '35.240.136.141' (110)
g96aayu@cloudshell:~ (visheshproject-978479)\$

mydbos Edit instance - Vishes... Cloud Shell x Install and Set Up kubectl | Kube... 35.240.166.42 x +

Type here to search

mydbos Edit instance - Vishes... Cloud Shell x Install and Set Up kubectl | Kube... 35.240.166.42 x +

console.cloud.google.com/sql/instances/mydbos/edit-performance-class?cloudshell=false&project=visheshproject-978479&supportedpurview=project

New Tab Search | Inbox (157) - 2019p... | Inbox (1,144) - vish... | Inbox (252) - 2019p... | Gmail | YouTube | Maps | 29th APRIL - Googl... | YAMLint - The YAM... | Untitled document...

12:18 PM IN 8/24/2020

Google Cloud Platform VishesProject Search products and resources

Edit instance

any IPv4 client to pass the network firewall and make login attempts to your instance, including clients you did not intend to allow. Clients still need valid credentials to successfully log in to your instance.

Authorized networks

Authorize a network or use a Proxy to connect to your instance. Networks will only be authorized via these addresses. [Learn more](#)

New network

Name (Optional)

allowall

Network

Use CIDR notation. [Learn more](#)

0.0.0.0/0

Done Cancel

+ Add network

Type here to search

12:20 PM IN 8/24/2020

Overview - SQL - VisheshProject | Cloud Shell | Install and Set Up kubectl | Kube... | 35.240.166.42 | - | +

console.cloud.google.com/sql/instances/mydbos/overview?project=visheshproject-978479&cloudshell=false&supportedpurview=project

New Tab Search | Gmail | YouTube | Maps | 29th APRIL - Google Calendar | YAMLLint - The YAM...

Incognito

Google Cloud Platform | VisheshProject | Search products and resources

SQL

MASTER INSTANCE

Logs

Overview

Connections

Users

Databases

Backups

Replicas

Operations

Type Status

2:20:36 Update Instance is being updated

2:18:36 Backup Backup finished

2:13:54 Create Create finished

Order of update ?

Cloud SQL chooses the maintenance timing.

Notifications Off

Upcoming No maintenance scheduled right now.

Edit maintenance preferences

Edit notification preferences

https://console.cloud.google.com/sql/instances/mydbos/databases?cloudshell=false

Databases - SQL - VisheshProject | Cloud Shell | Install and Set Up kubectl | Kube... | 35.240.166.42 | - | +

console.cloud.google.com/sql/instances/mydbos/databases?cloudshell=false&project=visheshproject-978479&supportedpurview=project

New Tab Search | Gmail | YouTube | Maps | 29th APRIL - Google Calendar | YAMLLint - The YAM...

Incognito

Google Cloud Platform | VisheshProject | Search products and resources

Databases

All instances > mydbos

mydbos

MySQL 5.7

+ CREATE DATABASE

Name	Collation	Character set	Type
information_schema	utf8_general_ci	utf8	System
mysql	utf8_general_ci	utf8	System
performance_schema	utf8_general_ci	utf8	System
sys	utf8_general_ci	utf8	User
visheshdb	utf8_general_ci	utf8	User

https://console.cloud.google.com/sql/instances/mydbos/databases

The screenshot shows the Google Cloud Platform SQL interface for the 'mydbos' database instance. The left sidebar has 'SQL' selected under 'MASTER INSTANCE'. The 'Users' section is currently active, showing a table of existing users:

	Collation	Character set	Type
utf8_general_ci	utf8	System	⋮
utf8_general_ci	utf8	System	⋮
utf8_general_ci	utf8	System	⋮
utf8_general_ci	utf8	User	⋮
utf8_general_ci	utf8	User	⋮

The URL in the browser bar is <https://console.cloud.google.com/sql/instances/mydbos/users?cloudshell=false&project=visheshproject-978479&supportedpurview=project>.

The screenshot shows the Google Cloud Platform SQL interface for the 'mydbos' database instance. The left sidebar has 'Users' selected under 'All instances > mydbos'. The 'User accounts enable users and applications to connect to your Cloud SQL instance.' message is visible. A blue button labeled '+ ADD USER ACCOUNT' is present. The table of users is identical to the one in the previous screenshot:

User name	Host name	
mysql.sys	localhost	⋮
root	% (any host)	⋮

The URL in the browser bar is <https://console.cloud.google.com/sql/instances/mydbos/users?cloudshell=false&project=visheshproject-978479&supportedpurview=project>.

Google cloud play | Day 2! - Google | You are now auth... | Explore - Docker | Google GCP - Go... | 23rdAug2020 GCP | Coronavirus India | +

hub.docker.com/search?q=wordpress&type=image

Apps New Tab Search Inbox (157) - 2019p... Inbox (1,144) - vish... Inbox (252) - 2019p... Gmail YouTube Maps 29th APRIL - Googl... YAMLint - The YAM...

Docker Containers Plugins

Filters 1 - 25 of 7,893 results for **wordpress**. [Clear search](#)

Most Popular

Docker Certified

Docker Certified

Images

Verified Publisher Docker Certified And Verified Publisher Content

Official Images Official Images Published By Docker

wordpress Updated 7 hours ago OFFICIAL IMAGE 10M+ 3.7K Downloads Stars

The WordPress rich content management system can utilize plugins, widgets, ...

Container Linux PowerPC 64 LE ARM 64 ARM x86-64 mips64le 386 IBM Z Application Services

https://hub.docker.com/_/wordpress

wordpresdevelop/php 100K+ 5 ENG 12:27 PM IN 8/24/2020

```
C:\Users\user>kubectl.exe scale deployment myweb --replicas=2
deployment.extensions/myweb scaled

C:\Users\user>kubectl.exe create deployment mywp --image=wordpress
deployment.apps/mywp created

C:\Users\user>kubectl.exe get deployment
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
myweb    2/2     2           2           59m
mywp     0/1     1           0           8s

C:\Users\user>kubectl get pods -o wide
NAME                  READY   STATUS             RESTARTS   AGE   IP          NODE
myweb-5c58879c65-7c2bb 1/1    Running           0          58m  10.24.0.9  gke-cluster-1-default
t-pool-8c0f48ee-9v4z   <none> <none>           <none>    55m  10.24.0.10 gke-cluster-1-default
myweb-5c58879c65-wb8pm 1/1    Running           0          55m  10.24.0.10 gke-cluster-1-default
t-pool-8c0f48ee-9v4z   <none> <none>           <none>    19s  <none>       gke-cluster-1-default
mywp-56fd8dfcd6-sgxqc 0/1    ContainerCreating 0          19s  <none>       gke-cluster-1-default
t-pool-8c0f48ee-9v4z   <none> <none>           <none>
```

C:\Users\user>

```
  Select C:\Windows\SYSTEM32\cmd.exe
4526950' to proceed.
- '@type': type.googleapis.com/google.rpc.PreconditionFailure
  violations:
    - description: "billing-enabled: Project's billing account is not open. https://console.developers.google.com/project/212014526950/settings"
      subject: '212014526950'
      type: serviceusage/billing-enabled

C:\Users\user\AppData\Local\Google\Cloud SDK>kubectl expose deployment mywp --type=LoadBalancer --port=80
service/mywp exposed

C:\Users\user\AppData\Local\Google\Cloud SDK>

  Select C:\Windows\system32\cmd.exe
C:\Users\user>kubectl.exe create deployment mywp --image=wordpress
deployment.apps/mywp created

C:\Users\user>kubectl.exe get deployment
NAME      READY   UP-TO-DATE   AVAILABLE   AGE
myweb     2/2     2           2           59m
mywp      0/1     1           0           8s

C:\Users\user>kubectl get pods -o wide
NAME                               READY   STATUS             RESTARTS   AGE   IP          NODE
myweb-5c58879c65-7c2bb            1/1    Running           0          58m   10.24.0.9   gke-cluster-1-default
t-pool-8c0f48ee-9v4z              <none> <none>           <none>    55m   10.24.0.10  gke-cluster-1-default
myweb-5c58879c65-wb8pm            1/1    Running           0          55m   10.24.0.10  gke-cluster-1-default
t-pool-8c0f48ee-9v4z              <none> <none>           <none>    19s   <none>       gke-cluster-1-default
mywp-56fd8dfcd6-sgxqc            0/1    ContainerCreating 0          17s   <none>       gke-cluster-1-default
t-pool-8c0f48ee-9v4z              <none> <none>           <none>

C:\Users\user>kubectl get services
NAME      TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)   AGE
kubernetes  ClusterIP  10.91.0.1   <none>        443/TCP   81m
myweb      LoadBalancer  10.91.3.218  35.240.166.42  80:30301/TCP  49m
mywp      LoadBalancer  10.91.13.29   <pending>    80:31810/TCP  17s

C:\Users\user>
```

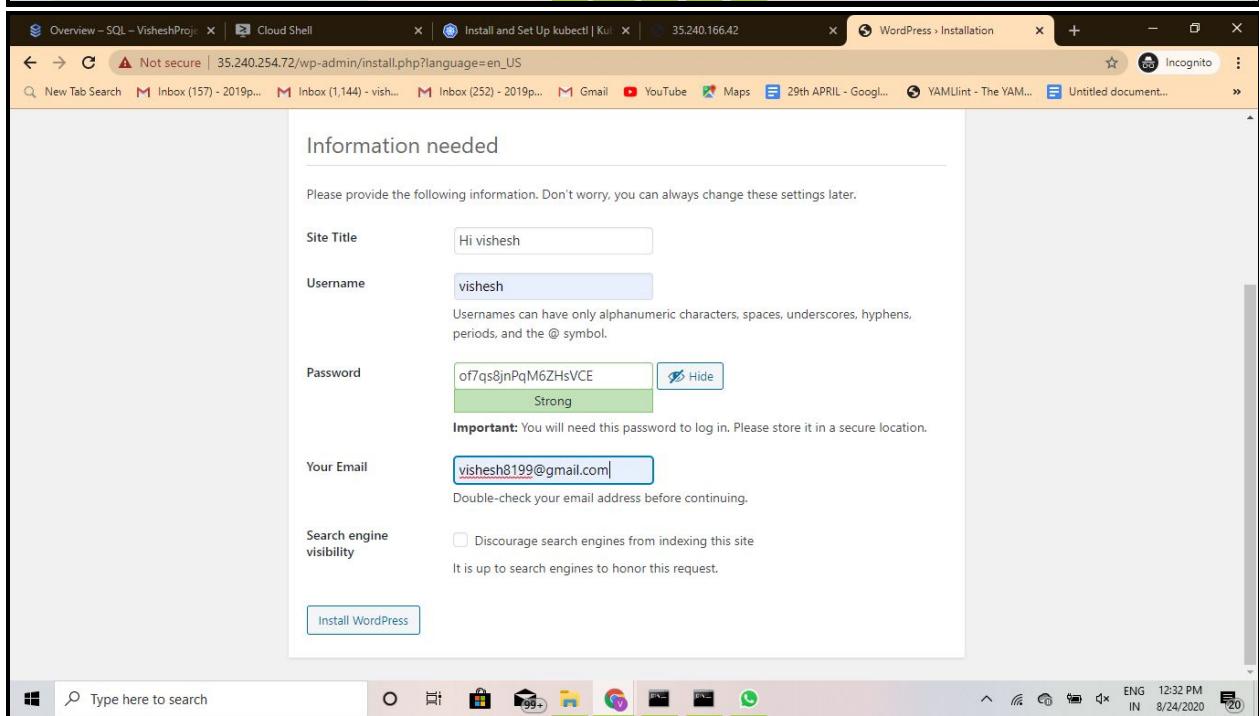
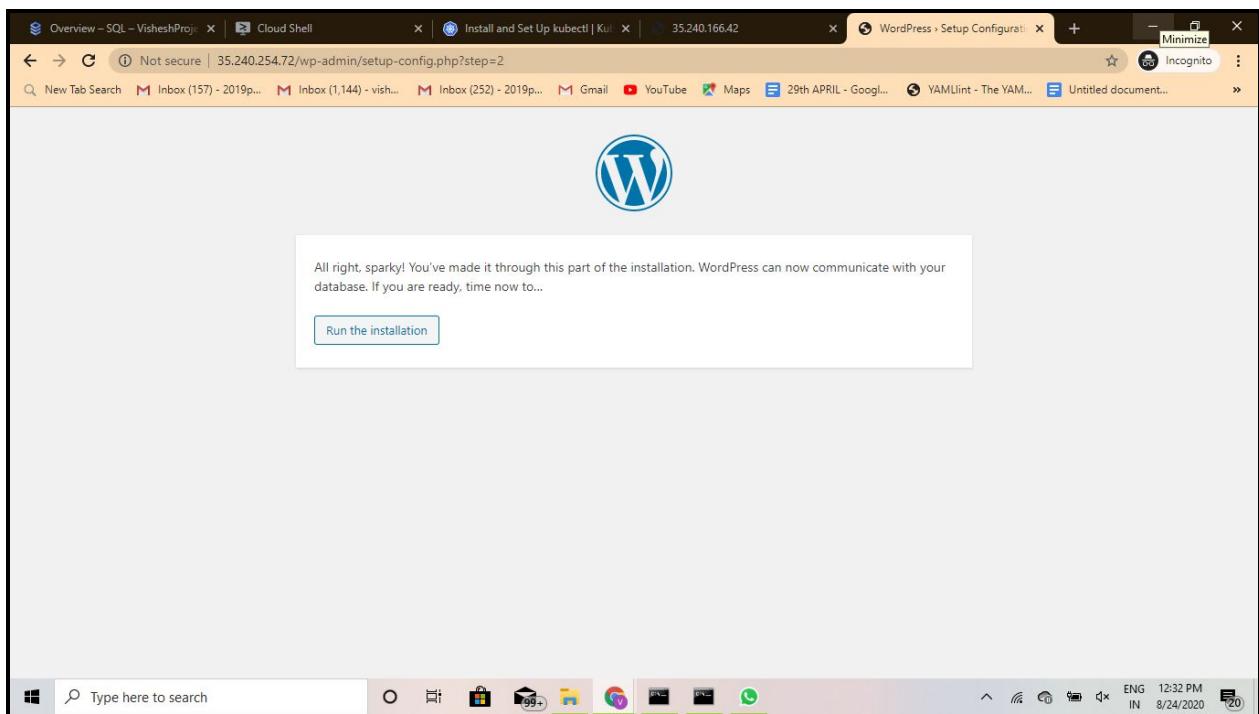
The screenshot shows the Google Cloud Platform SQL Instances page. A MySQL instance named "mydbos" is listed, showing its Public IP address as 35.240.136.141. The instance is of type MySQL 5.7.

Instance ID	Type	Public IP address	Private IP address	Instance connection name	High availability	Location
mydbos	MySQL 5.7	35.240.136.141		visheshproject-9784...	ADD	asia-southea...

The screenshot shows the WordPress setup configuration page. It displays the following database connection details:

- Database Name: visheshdb
- Username: root
- Password: redhat
- Database Host: 35.240.136.141
- Table Prefix: wp_

A "Submit" button is visible at the bottom of the form.



The screenshot displays a Windows desktop environment with two open browser windows.

Top Browser Window:

- Title: Log In < Hi vishesh — WordPress
- URL: 35.240.254.72/wp-login.php
- Content: WordPress login form. Username or Email Address: vishesh, Password: [REDACTED], Remember Me: Log In
- Links: Lost your password?, Back to Hi vishesh

Bottom Browser Window:

- Title: Dashboard < Hi vishesh — WordPress
- URL: 35.240.254.72/wp-admin/
- Content: Dashboard page. Welcome to WordPress! (Welcome message), Get Started (Customize Your Site button), Next Steps (Write your first blog post, Add an About page, Set up your homepage, View your site), More Actions (Manage widgets, Manage menus, Turn comments on or off, Learn more about getting started). Site Health Status: No information yet... At a Glance: 1 Post, 1 Page.
- Links: Home, Updates, Posts, Media, Pages, Comments, Appearance, Plugins, Users, Tools, Settings, Collapse menu.

Both browser windows show a toolbar with various icons and a system tray at the bottom indicating ENG IN 12:33 PM 8/24/2020.

Overview – SQL – VisheshProject

Cloud Shell

Install and Set Up kubectl | Kul

35.240.166.42

Dashboard < Hi vishesh — WordPress

console.cloud.google.com/sql/instances/mydbos/overview?cloudshell=false&project=visheshproject-978479&supportedpurview=project

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Inbox (157) - 2019p...
Inbox (1,144) - vish...
Inbox (252) - 2019p...
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Google Cloud Platform

VisheshProject

Search products and resources

IMPORT EXPORT RESTART STOP DELETE CLONE

Home

Compute Engine

PRODUCTS ▾

Digital

Datastore

Firebase

Filestore

Storage

SQL

Spanner

Type Status

Create Database

Browser

Monitoring

Transfer

Transfer for on-premises

Transfer Appliance

Settings

Notifications Off

Upcoming No maintenance scheduled right now.

Edit maintenance preferences

Edit notification preferences

https://console.cloud.google.com/storage/browser?cloudshell=false&project=visheshproject-978479&supportedpurview=project

Type here to search

12:36 PM
ENG IN 8/24/2020

Storage browser – Storage

Cloud Shell

Install and Set Up kubectl | Kul

35.240.166.42

Dashboard < Hi vishesh — WordPress

console.cloud.google.com/storage/browser?cloudshell=false&project=visheshproject-978479&supportedpurview=project&prefix=

New Tab Search

Inbox (157) - 2019p...
Inbox (1,144) - vish...
Inbox (252) - 2019p...
Gmail

YouTube

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VisheshProject

Search products and resources

DELETE REFRESH SHOW INFO PANEL LEARN

IAM

Identity & Organization

Policy Troubleshooter

Organization Policies

Quotas

Service Accounts

Labels

Settings

Privacy & Security

Identity-Aware Proxy

Roles

Audit Logs

Manage Resources

Now you can filter your buckets by any value and sort by any column.

DISMISS

Location Default storage class Updated Public access Acc

https://console.cloud.google.com/iam-admin/quotas?cloudshell=false&project=visheshproject-978479&supportedpurview=project

Type here to search

12:41 PM
ENG IN 8/24/2020

IAM – IAM & Admin – VisheshProject

Cloud Shell

Install and Set Up kubectl | Kube

35.240.166.42

Dashboard < Hi vishesh — Work

New Tab Search

Inbox (157) - 2019p...
Inbox (1,144) - vish...
Inbox (252) - 2019p...
Gmail

YouTube

Maps

29th APRIL - Google...

YAMLInt - The YAM...

Untitled document...

Incognito

Add members to "VisheshProject"

Add members, roles to "VisheshProject" project

Enter one or more members below. Then select a role for these members to grant them access to your resources. Multiple roles allowed. [Learn more](#)

New members

Select a role

Condition [Add condition](#)

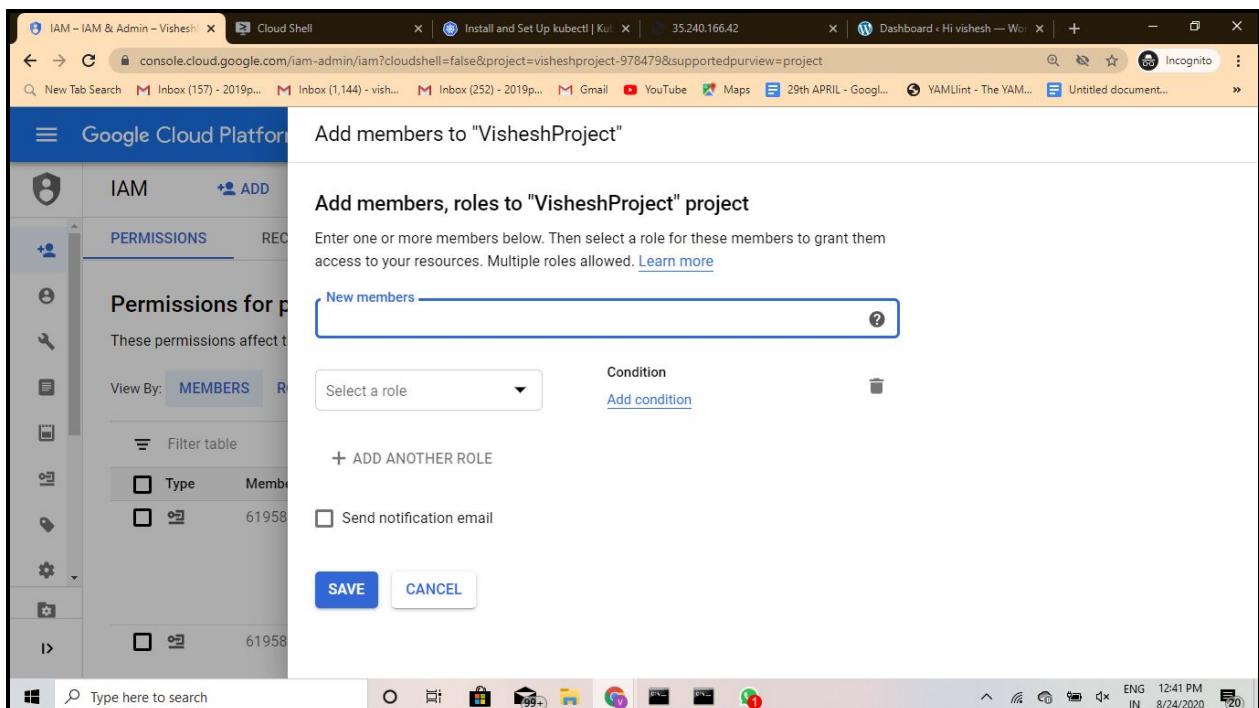
+ ADD ANOTHER ROLE

Send notification email

SAVE **CANCEL**

Type here to search

12:41 PM
ENG IN 8/24/2020



IAM – IAM & Admin – VisheshProject

Cloud Shell

Install and Set Up kubectl | Kube

35.240.166.42

Dashboard < Hi vishesh — Work

New Tab Search

Inbox (157) - 2019p...
Inbox (1,144) - vish...
Inbox (252) - 2019p...
Gmail

YouTube

Maps

29th APRIL - Google...

YAMLInt - The YAM...

Untitled document...

Incognito

Add members to "VisheshProject"

Add members, roles to "VisheshProject" project

Enter one or more members below. Then select a role for these members to grant them access to your resources. Multiple roles allowed. [Learn more](#)

New members

Role

Condition [Add condition](#)

Read-only access to Notebooks all resources through compute API.

+ ADD ANOTHER ROLE

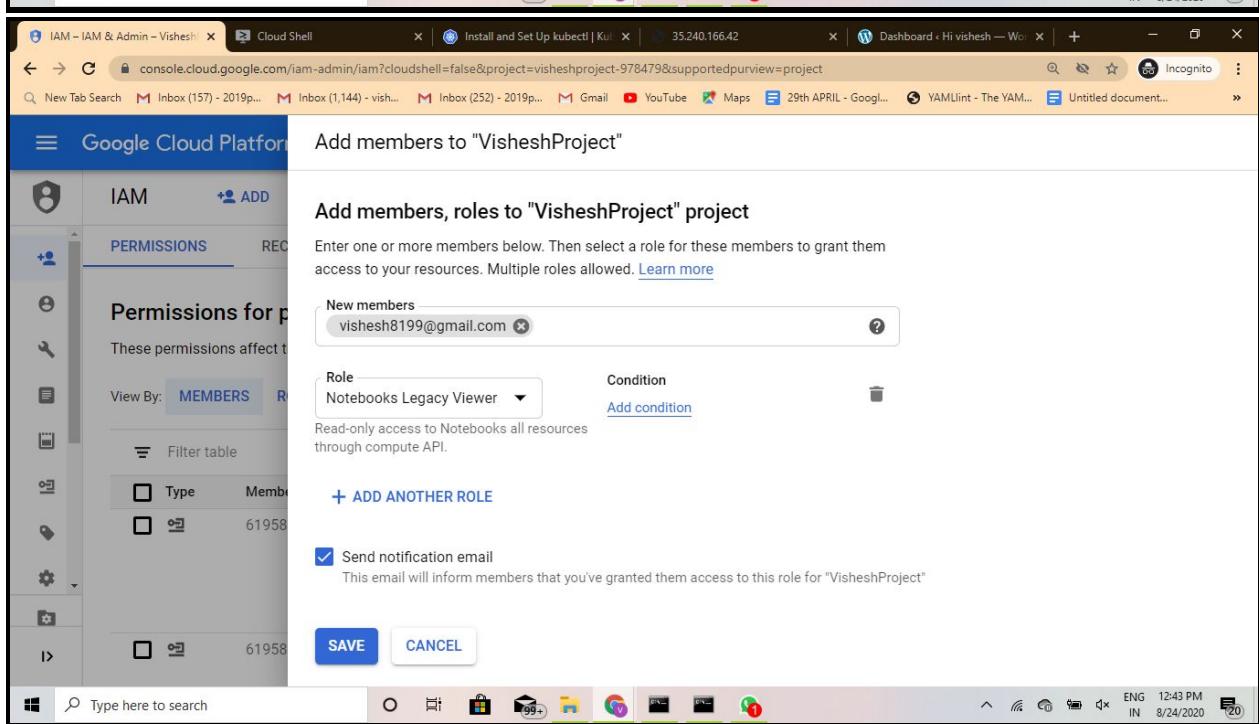
Send notification email

This email will inform members that you've granted them access to this role for "VisheshProject"

SAVE **CANCEL**

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12:43 PM
ENG IN 8/24/2020



Google Cloud Platform

Install and Set Up kubectl | Kube

console.cloud.google.com/compute/instances?cloudshell=false&project=visheshproject-978479&supportedpurview=project&instancessize=50

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MANAGE ACCESS SHOW INFO PANEL LEARN

Recommendation	In use by	Internal IP	External IP	Connect
		10.148.0.3 (nic0)	35.198.242.59	SSH
		10.148.0.2 (nic0)	35.240.236.102	SSH
		10.148.0.4 (nic0)	35.240.246.77	SSH

Dismiss

https://console.cloud.google.com/appengine?cloudshell=false&project=visheshpr...

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Google Cloud Platform VisheshProject

App Engine

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Build scalable apps in any language on Google's infrastructure

Create Application

Home Recommended for you

App Engine Quickstart Deploy a sample application to App Engine using the gcloud command.

App Engine overview Overview of the components of an application: services, versions, instances, application requests, and limits.

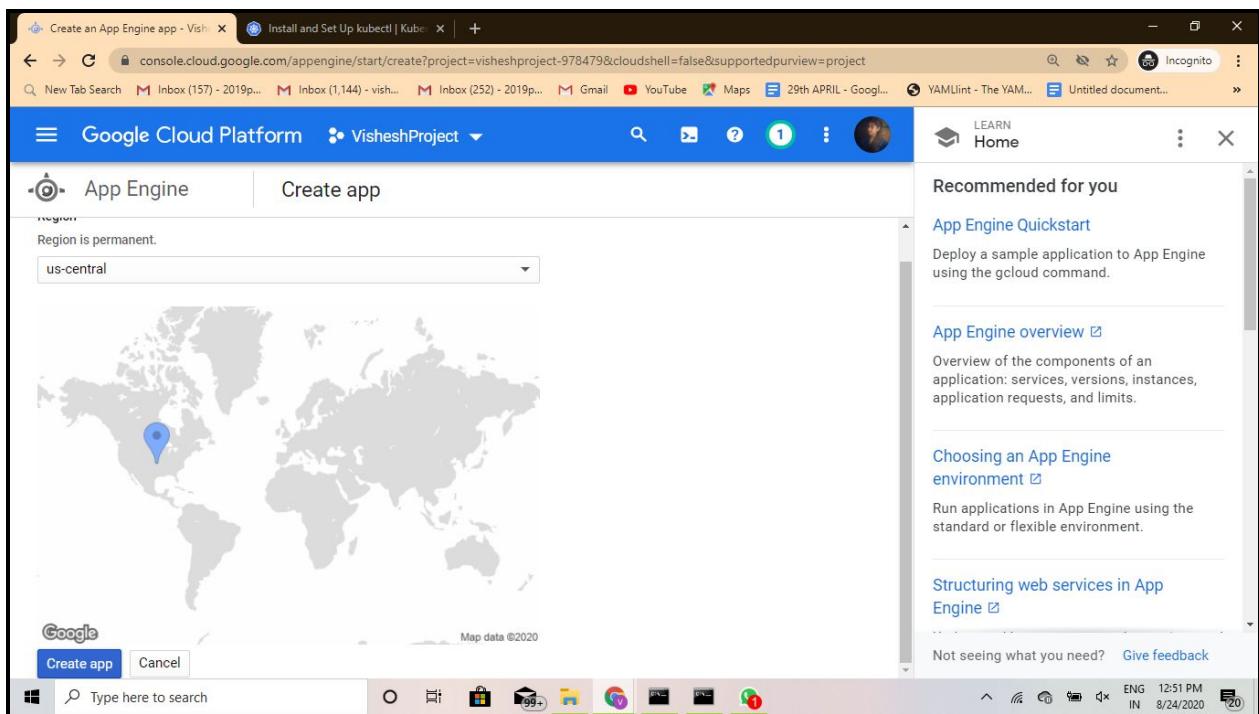
Choosing an App Engine environment Run applications in App Engine using the standard or flexible environment.

Structuring web services in App Engine

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The screenshot shows the 'Get started' page for Google Cloud Platform's App Engine. The URL in the address bar is `console.cloud.google.com/appengine/start/reception?project=visheshproject-978479&cloudshell=false&supportedpurview=project`. The page has a blue header with the Google Cloud logo and 'VisheshProject'. Below the header, there are tabs for 'App Engine' and 'Get started'. A sidebar on the left lists various languages: Python, Node.js, Java, Go, PHP, .NET, Ruby, and Other, with 'PHP' currently selected. A message box at the top says: 'This step is optional. Its purpose is to guide you to the relevant SDK, code samples and, if necessary, enable billing.' The main content area is currently empty.

The screenshot shows the 'Next steps' page for Google Cloud Platform's App Engine. The URL in the address bar is `console.cloud.google.com/appengine/start/deploy?language=python&environment=standard&project=visheshproject-978479&cloudshell=false&supportedpurview=project`. The page has a blue header with the Google Cloud logo and 'VisheshProject'. Below the header, there are tabs for 'App Engine' and 'Next steps'. A message box at the top says: 'Your app is being created.' On the left, under 'Resources', there is documentation for Python in App Engine and a link to visit GitHub for code samples. On the right, under 'Deploy with Google Cloud SDK', there is a 'Download the Cloud SDK' button, instructions to initialize the SDK with `$ gcloud init`, and instructions to deploy to App Engine with `$ gcloud app deploy`.