SIES College of Arts, Science & Commerce

RISE WITH EDUCATION

NAAC REACCREDITED - 'A' GRADE

ISO 9001 : 2008

S.I.E.S College of Arts, Science and Commerce(Autonomous)
Sion(W), Mumbai – 400 022.

CERTIFICATE

This is to certify that Miss. Kimaya Naik Roll No. **TCS2324048** has successfully completed the necessary course of experiments in the subject of **Cloud Computing** during the academic year **2023 – 2024** complying with the requirements of **University of Mumbai**, for the course of **T.Y.BSc Computer Science [Semester-VI].**

Prof. In-Charge
MAYA NAIR

Examination date:

Examiner's Signature & Date:

Head of the Department
Prof. Manoj Singh

College Seal

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Practical 1

Aim : Study of Cloud Computing & Architecture(Theory)

Cloud Computing Fundamentals

Introduction :

Get a foundational understanding of what cloud computing is, how it works, and its core principles. This includes exploring the concept of "everything as a service" (EaaS) and the benefits it offers businesses and organizations.

Service Models :

Deep dive into the different cloud service models: Infrastructure as a Service (IaaS), Platform as a Service (PaaS), and Software as a Service (SaaS). Understand the key characteristics, functionalities, and use cases of each model to determine which best suits different needs.

Deployment Models: Learn about the various cloud deployment models - Public, Private, and Hybrid clouds. Understand the advantages and considerations for each model to choose the most appropriate deployment strategy.

Cloud Architecture

Components :

Explore the building blocks of a cloud architecture. This includes the front-end (client side), back-end infrastructure (servers, storage), cloud services, runtime platforms, and the network that connects everything. Analyze how these components interact to deliver cloud services.

Virtualization :

Virtualization is a fundamental technology in cloud computing. Grasp the concept of virtualization and its role in creating a scalable and efficient cloud infrastructure.

Security :

Cloud security is paramount. Understand the security considerations and best practices for securing data, applications, and access in the cloud environment.

Additional Topics

Management :

Cloud management encompasses tools and techniques for provisioning, monitoring, and optimizing cloud resources. Explore different cloud management solutions.

Benefits and Challenges :

Cloud computing offers numerous benefits like scalability, cost-efficiency, and agility. However, it also comes with challenges such as security concerns and vendor lock-in. Weigh the pros and cons to make informed decisions.

Case Studies :

Learning from real-world implementations is valuable. Explore case studies of successful cloud adoption across various industries to understand how organizations are leveraging cloud computing for their advantage.

Practical 2

Aim : Study and implementation of Infrastructure as a Service(FOSS Cloud)

FOSS-Cloud (FOSS-Cloud software and hardware) is an integrated and redundant server infrastructure to provide virtualization- and cloud-services, Windows or Linux based SaaS-, Terminal Server-, Virtual Desktop Infrastructure (VDI) or virtual server environments.

FOSS-Cloud covers all aspects of an virtualized IT environment. FOSS-Cloud is a pure Open Source solution, is licensed under EUPL and is available on the sourceforge.net. FOSS-Cloud is the most advanced Open Source Cloud. FOSS-Cloud is a cost-effective alternative to Citrix and VMware.

Functionality

- VDI (Virtual Desktop Infrastructure)
- VSI (Virtual Server Infrastructure)
  - Infrastructure as a Service (IaaS)
  - Platform as a Service (PaaS)
  - Software as a Service (SaaS)
- Storage Cloud

Features

- Full integration into existing Windows and Linux environments
- Cloud for server- and desktop virtualization
- Powerful virtualization for Windows and Linux 32/64bit
- Published Desktop
- Persistent virtual machines including session transfer to other devices
- Dynamic desktop with Golden Image to serve user groups
- Application streaming
- Published application support with RDS
- Video streaming (M-Jpeg)
- High resolution display
- Pools of network- and hardware-resources or virtual machines
- VDI access through Windows and Linux, PXE boot and handhelds
- Bi-directional audio and video
- Smartcard authentication (including pass through)
- USB redirection

Minimal Requirements

- Dedicated hardware
- 64-Bit Intel with VT-Technology
- 4 Gigabyte memory
- 320 Gigabyte disk space
- Network interface

The Demo System is really just a playing environment and not for professional use. It is very easy to install. The Demo System is made to get a feeling of the possibilities of the FOSS-Cloud.

Limitation of Demo System

There is no access to the VMs from outside of FOSS-Cloud. That means, for example, pinging a VM is not possible.

Steps to implement FOSS Cloud

Windows

Open FOSS CLOUD on the LOCAL Server and LOGIN using admin username & Password

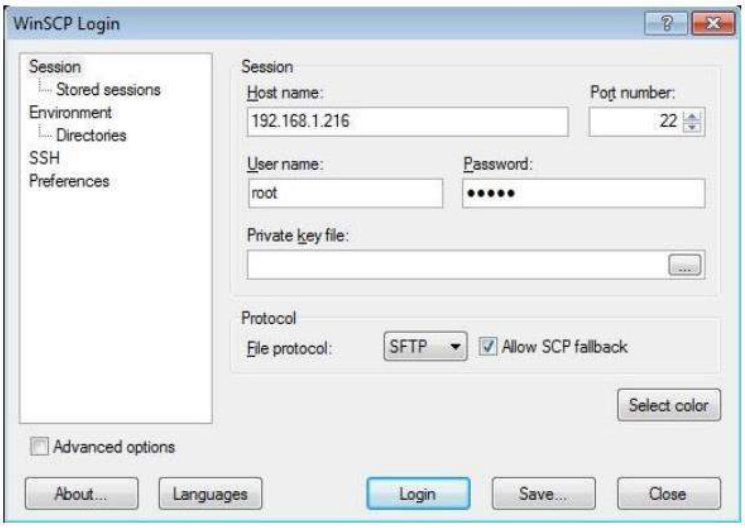
Local Windows computer with WinSCP installed (Download WinSCP)

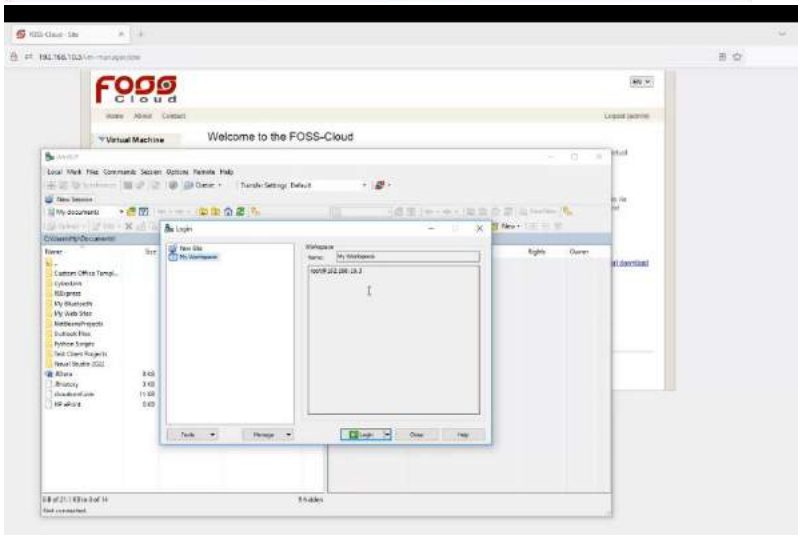
1. You've downloaded ISO-File to your computer. This example is done with: ubuntu-11.04-desktop-i386.iso

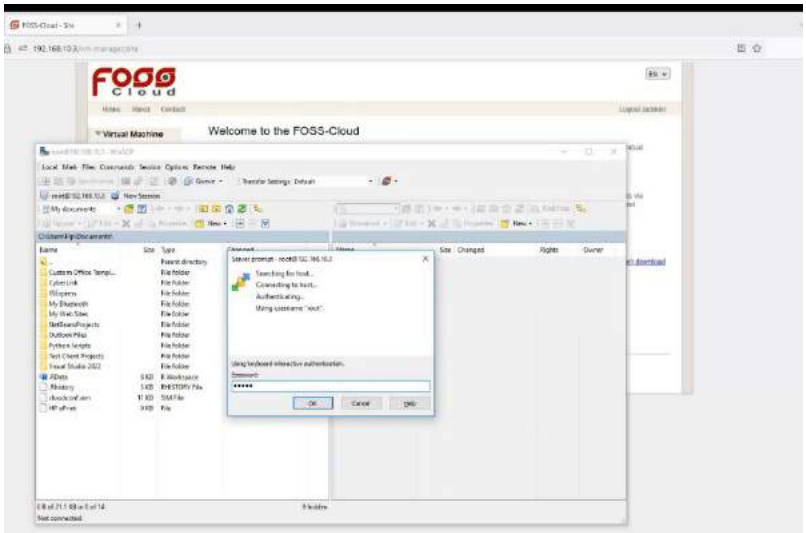
2. The IP-address of the FOSS-Cloud Node. This example is done with: 2.168.1.216

Run WinSCP and establish a connection to the FOSS-Cloud Node:
username: root password: admin

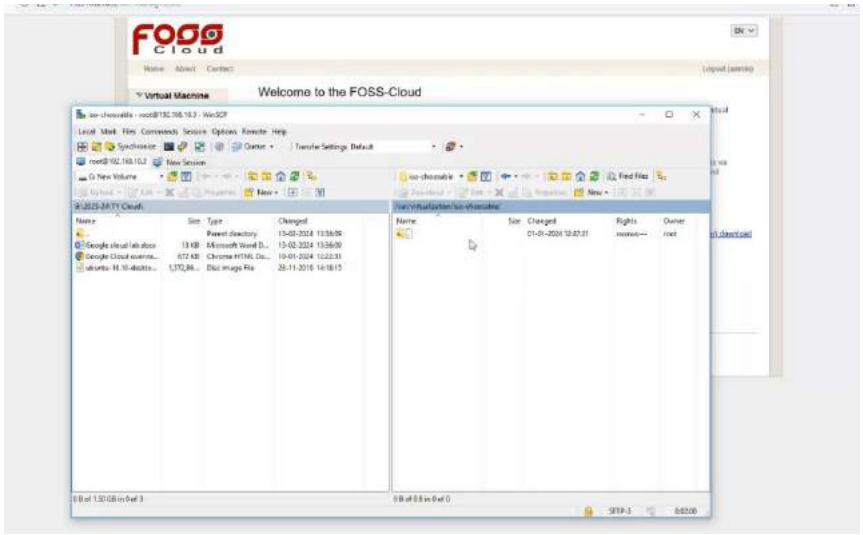
Connect to FOSS CLOUD Node

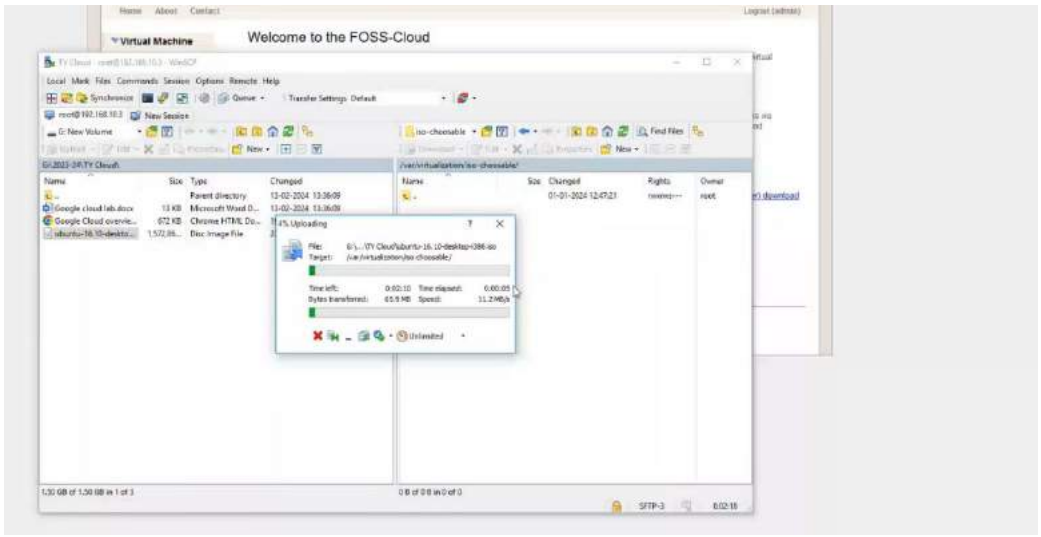




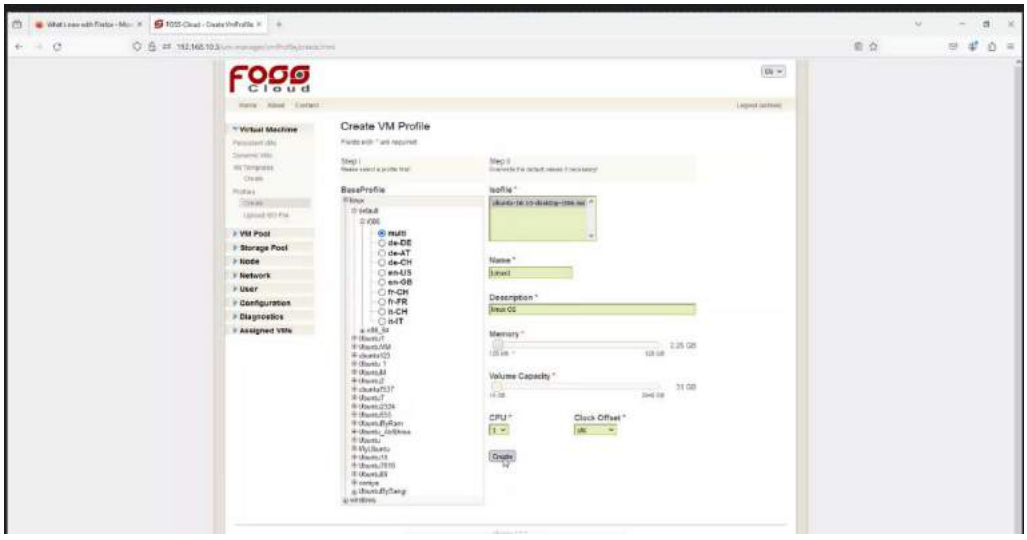


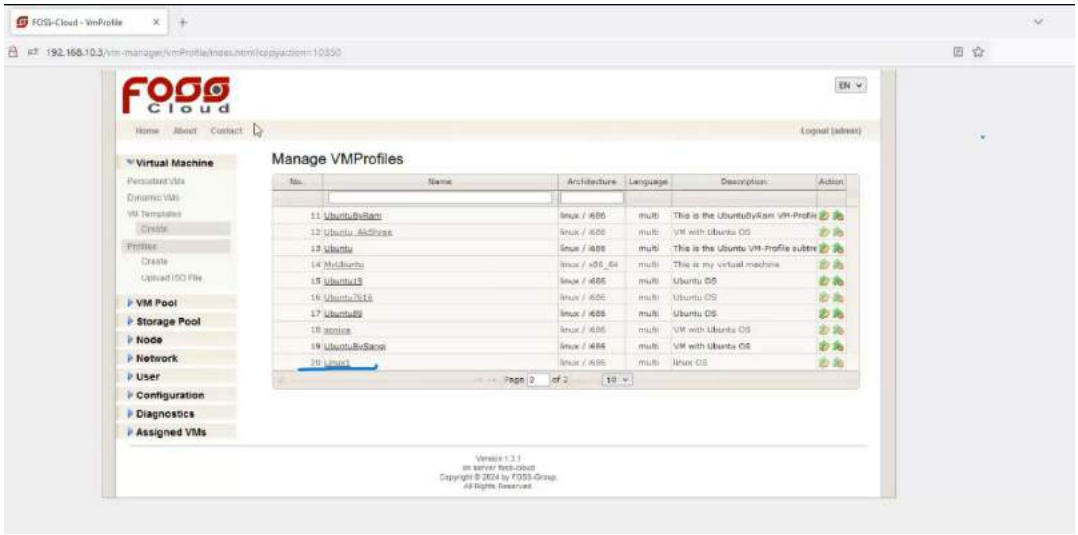
On the guest machine change to the '/var/virtualization/iso-choosable' direcotry. On the host, change to the directory the ISO-file is located:



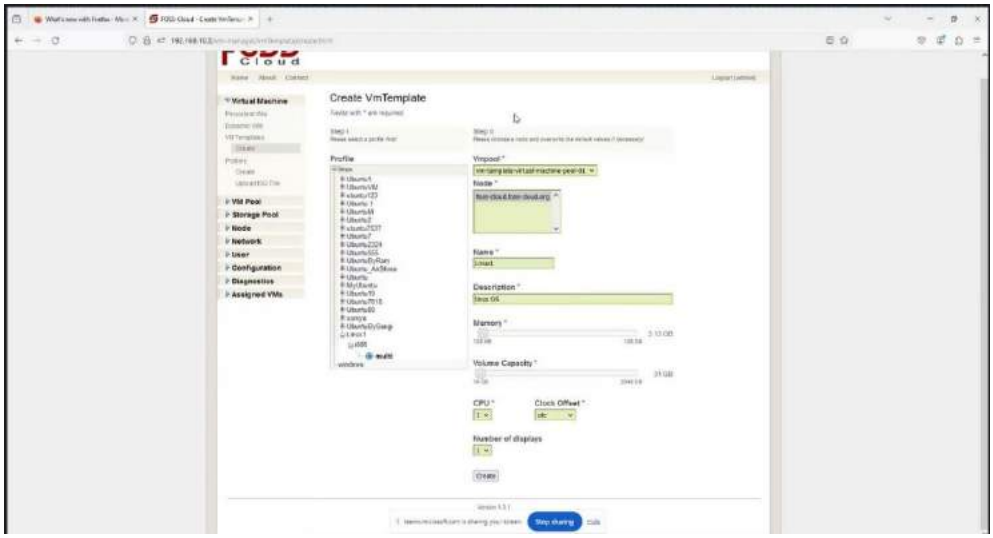


Back to FOSS CLOUD
Create a Profile

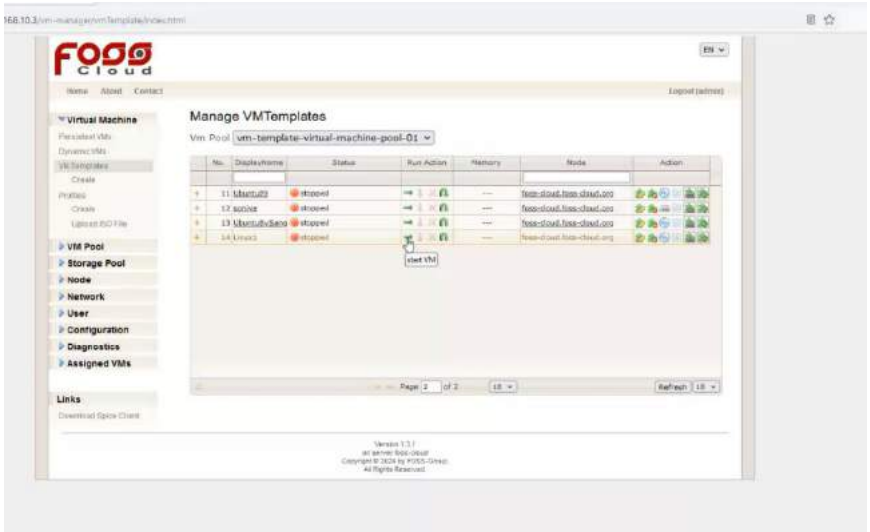


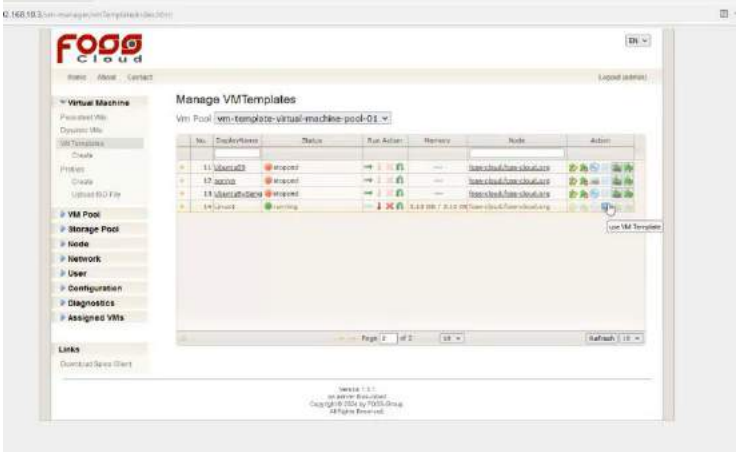


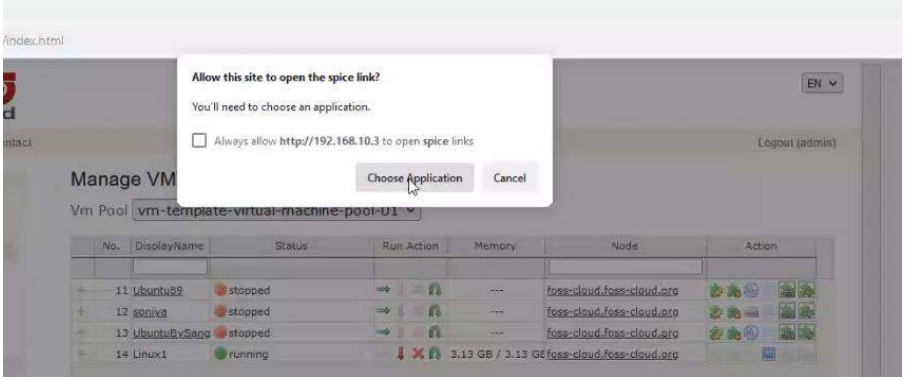
Create VM Template

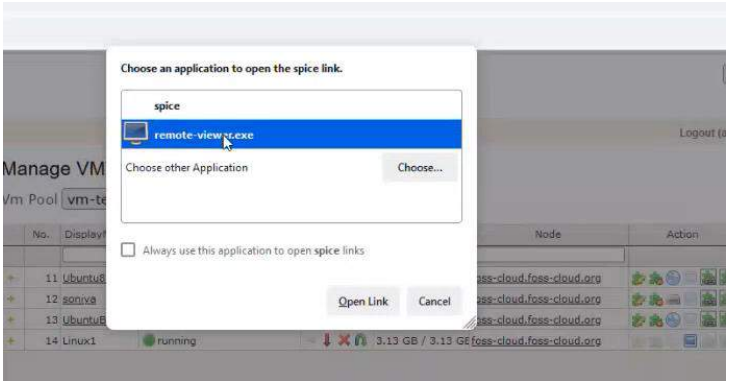


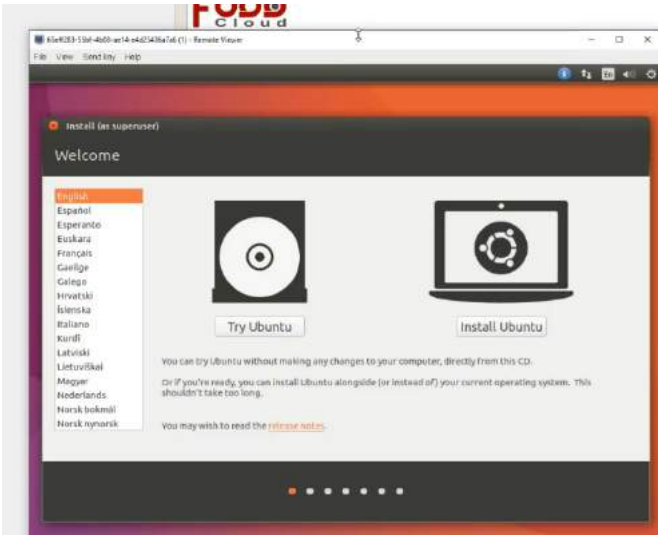
Manage VM Templates and Start the VM




Manage VMTemplates
Vm Pool vm-template-virtual-machine-pool-01


Allow this site to open the spice link?
You'll need to choose an application.
Always allow http://192.168.10.3 to open spice links
Choose Application
Cancel
Manage VM
Vm Pool vm-template-virtual-machine-pool-01
No. DisplayName Status Run Action Memory Node Action
11 Ubuntu89 stopped foss-cloud.foss-cloud.org
12 soniya stopped foss-cloud.foss-cloud.org
13 UbuntuBySang stopped foss-cloud.foss-cloud.org
14 Linux1 running 3.13 GB / 3.13 GB foss-cloud.foss-cloud.org

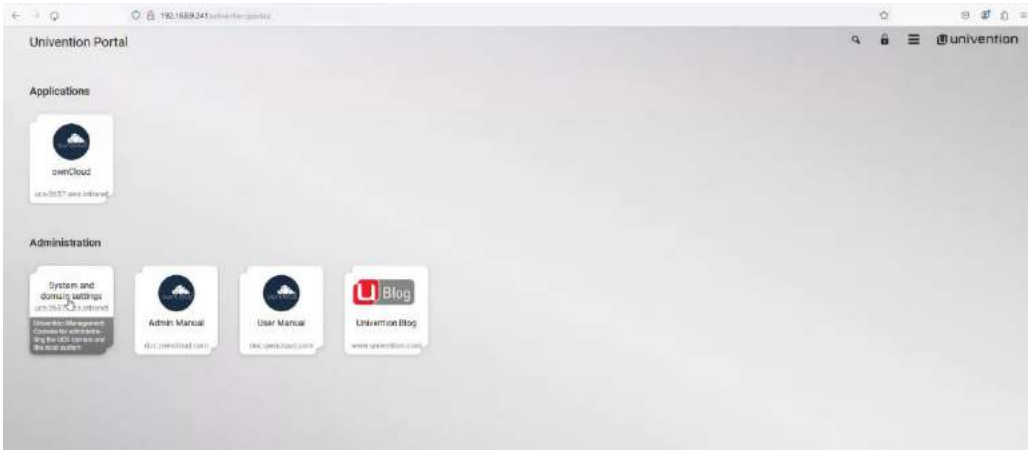

Choose an application to open the spice link.
spice
remote-viewer.exe
Choose other Application
Choose...
Always use this application to open spice links
Open Link
Cancel


Install (as superuser)
Welcome
English
Español
Esperanto
Euskara
Français
Gaeilge
Galego
Hrvatski
Íslenska
Italiano
Kurdî
Latviski
Lietuviškai
Magyar
Nederlands
Norsk bokmål
Norsk nynorsk
Try Ubuntu
Install Ubuntu
You can try Ubuntu without making any changes to your computer, directly from this CD.
You may wish to read the release notes.

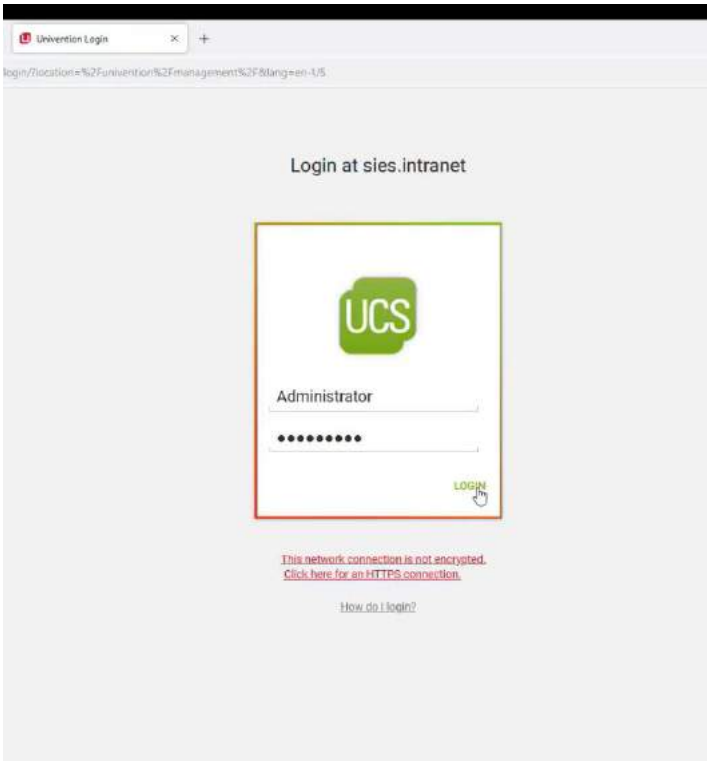
Practical 3

Aim : Study and implementation of Storage as a Service (Own Cloud)

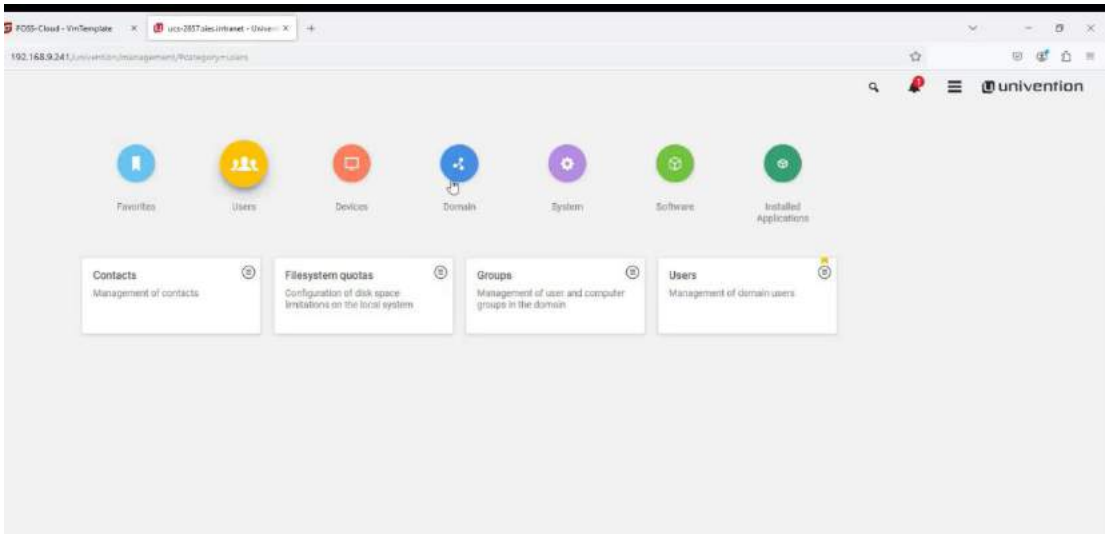
Go to the OwnCloud IP address
Click on System and Domain Settings

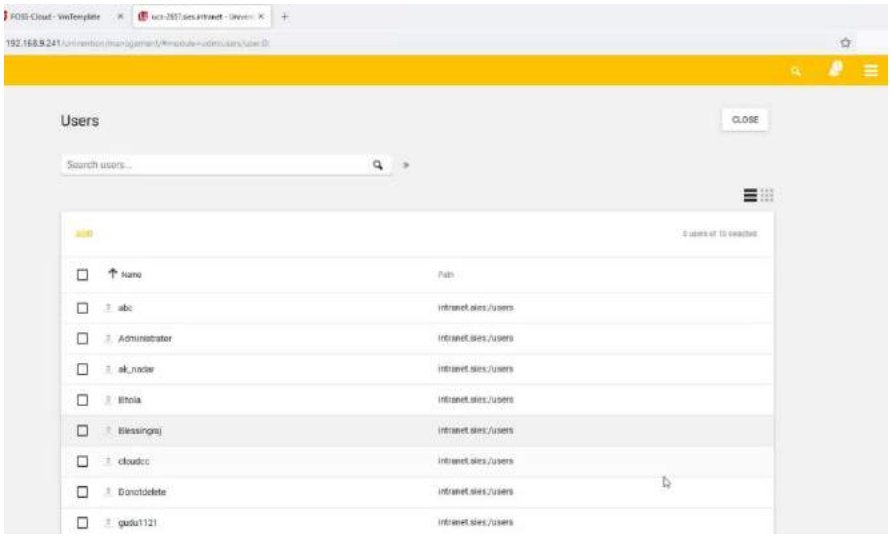


Login using Administrator & admin@123 as username & password

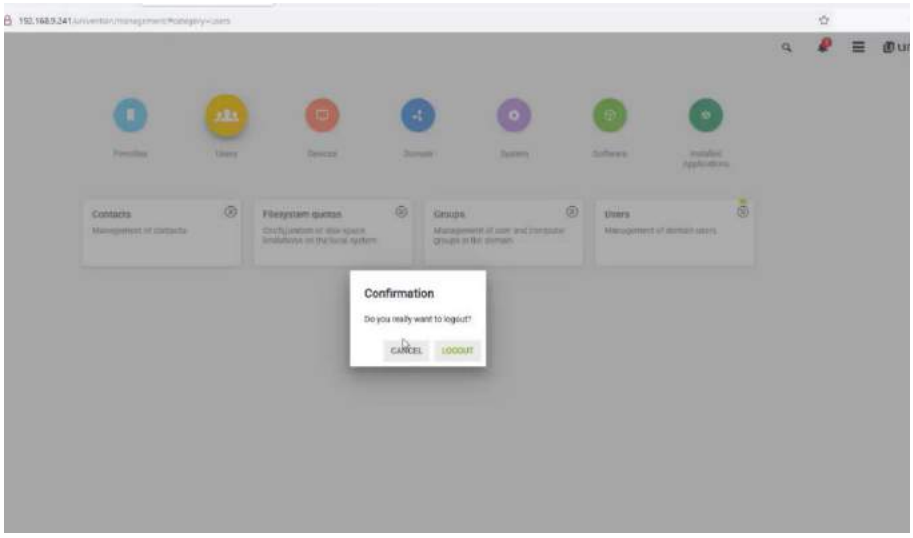


Click on Create New Users & Add new Users

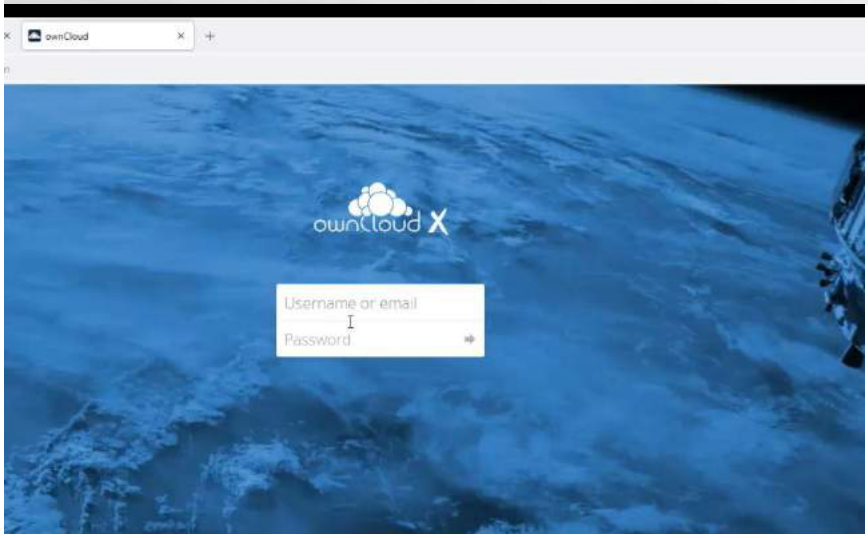

univention
Favorites
Users
Devices
Domain
System
Software
Installed Applications
Contacts
Management of contacts
Filesystem quotas
Configuration of disk space limitations on the local system
Groups
Management of user and computer groups in the domain
Users
Management of domain users


Users
CLOSE
Search users...
Name
Path
abc
intranet.sies./users
Administrator
intranet.sies./users
ak_nadar
intranet.sies./users
Bhola
intranet.sies./users
Blessingraj
intranet.sies./users
cloudcc
intranet.sies./users
Donotdelete
intranet.sies./users
gudu1121
intranet.sies./users

Then Logout


Confirmation
Do you really want to logout?
CANCEL
LOGOUT

Click on OwnCloud application
And Login using the Created User Credentials



Practical 4

Aim : Google cloud Linux VM creation

a. On the Compute Engine page, click VM instances → Create Instance

b. In Boot disk, click Change, and then:

   a. In the Operating system list, select Debian.

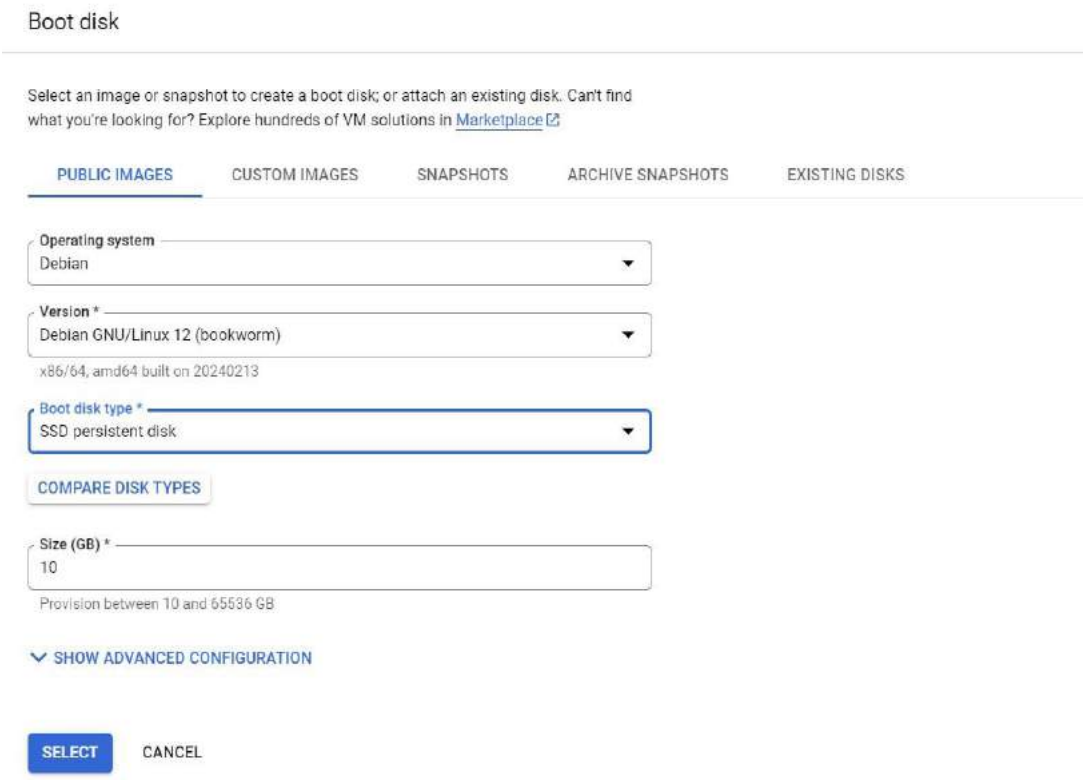
   b. In the Version list, keep the default value.

   c. In the Boot disk type list, select SSD persistent disk.

   d. Click Select.

In the Firewall section, select Allow HTTP traffic.

Click Create.



Firewall

Add tags and firewall rules to allow specific network traffic from the In

- [x] Allow HTTP traffic
- [ ] Allow HTTPS traffic
- [ ] Allow Load Balancer Health Checks

Observability - Ops Agent

Monitor your system through collection of logs and key metrics.

- [ ] Install Ops Agent for Monitoring and Logging

Advanced options

Networking, disks, security, management, sole-tenancy

CREATE CANCEL EQUIVALENT CODE

Status	Name	Zone	Recommendations	In use by	Internal IP	External IP	Connect
✓	assignment77	us-central1-a			10.128.0.3 (nic0)	34.42.119.163 (nic0)	SSH
✓	iis-web-server	asia-south1-c			10.160.0.2 (nic0)	35.200.154.74 (nic0)	RDP
✓	linux-web-server	us-central1-a			10.128.0.2 (nic0)	34.134.218.144 (nic0)	SSH

Practical 5

Aim : Google cloud Windows VM creation

c. Create new Project

d. Enable Compute Engine APIs

e. On the Compute Engine page, click VM instances.

f. On the VM instances page, click Create instance.

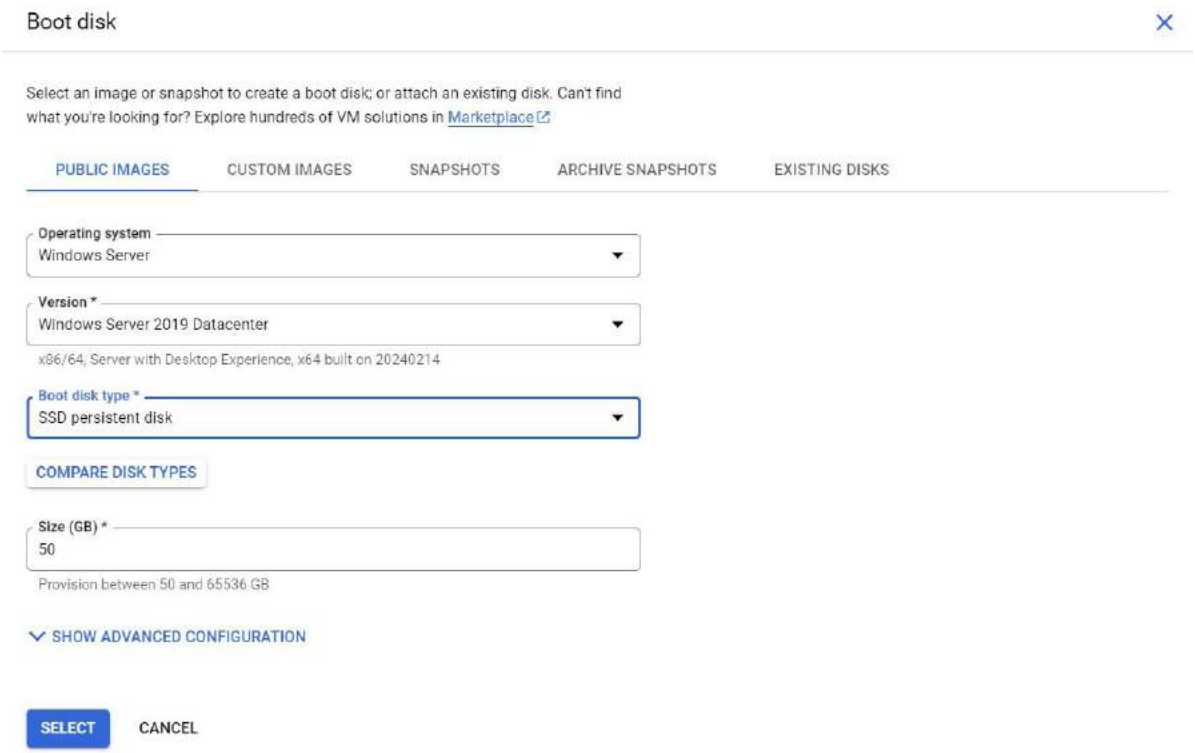
g. In Boot disk, click Change, and then:

In the Operating system list, select Windows Server.

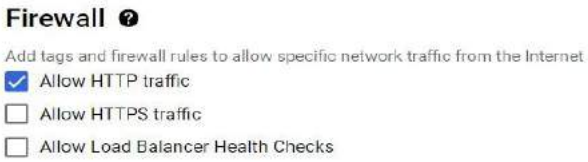
In the Version list, select Windows Server 2019 Datacenter.

In the Boot disk type list, select SSD persistent disk.

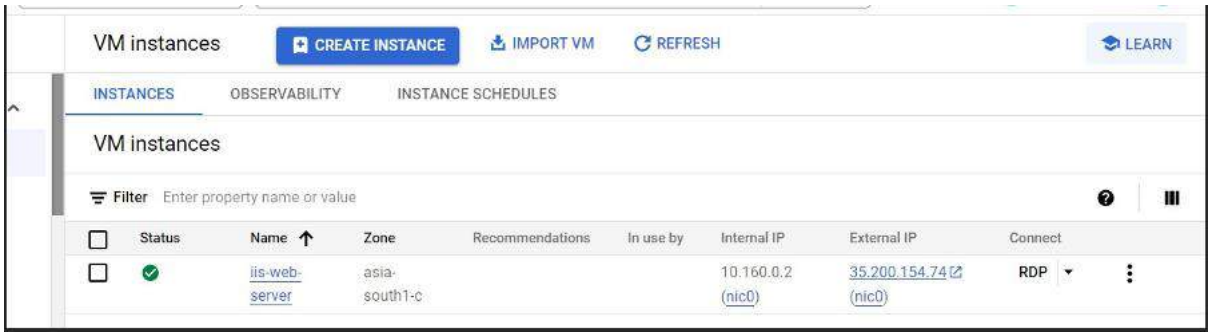
Click Select.



h. In the Firewall section, select Allow HTTP traffic.



i. Click Create.



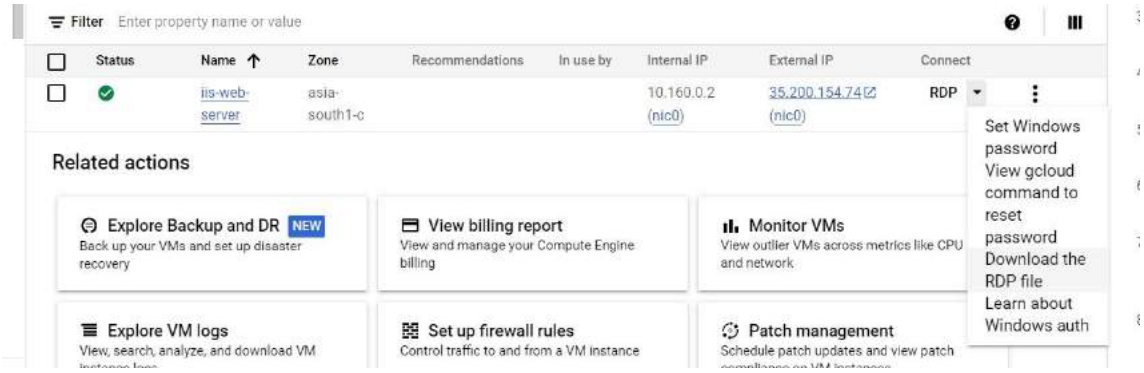
j. Connect to the VM:

k. Click the arrow next to RDP and click Set Windows password.

Verify username is correct, then click Set.

l. Copy the password that is shown. Save this password for reference.

m. Click the arrow next to the RDP button, and then select Download the RDP file.

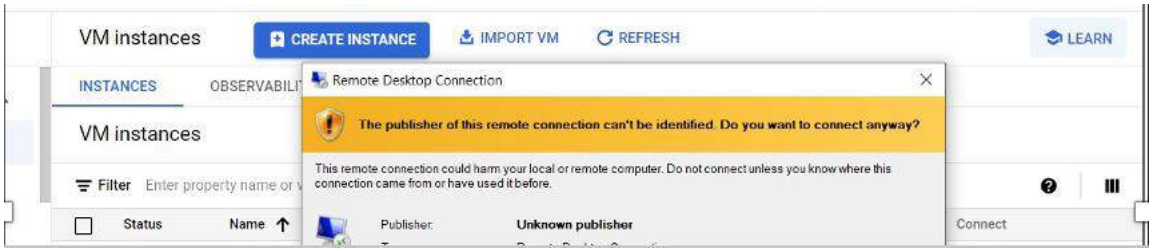


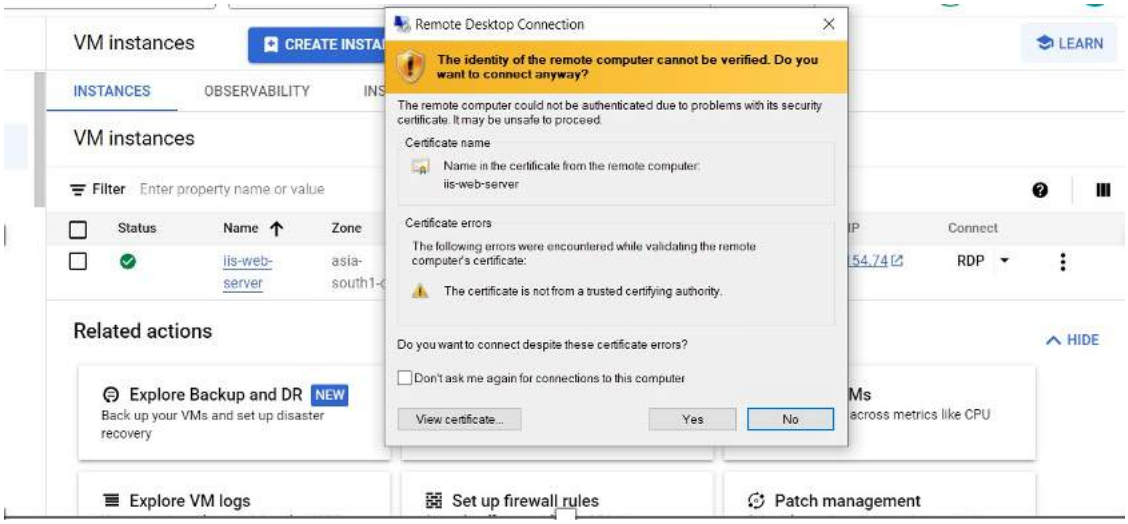
n. Open the RDP file by using the RDP client you downloaded.

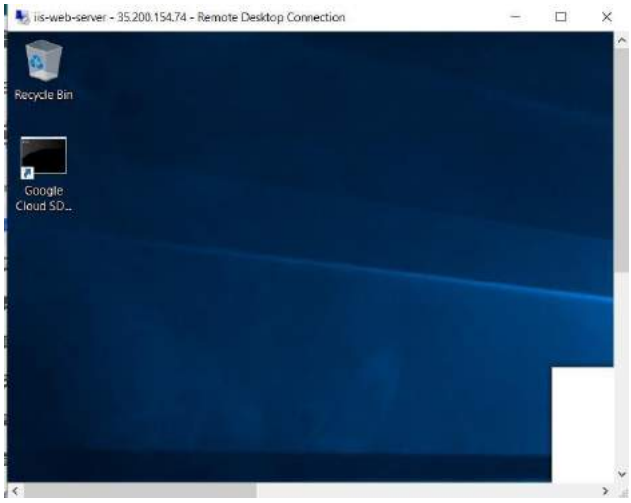
o. When your RDP client prompts for a password, enter the password that you generated earlier.

p. When you're prompted whether you want your computer discoverable by other PCs and devices on the network, click No.

q.


VM instances
CREATE INSTANCE
IMPORT VM
REFRESH
LEARN
INSTANCES
OBSERVABILI
VM instances
Filter
Enter property name or
Status
Name
Remote Desktop Connection
The publisher of this remote connection can't be identified. Do you want to connect anyway?
This remote connection could harm your local or remote computer. Do not connect unless you know where this connection came from or have used it before.
Publisher:
Unknown publisher
Connect

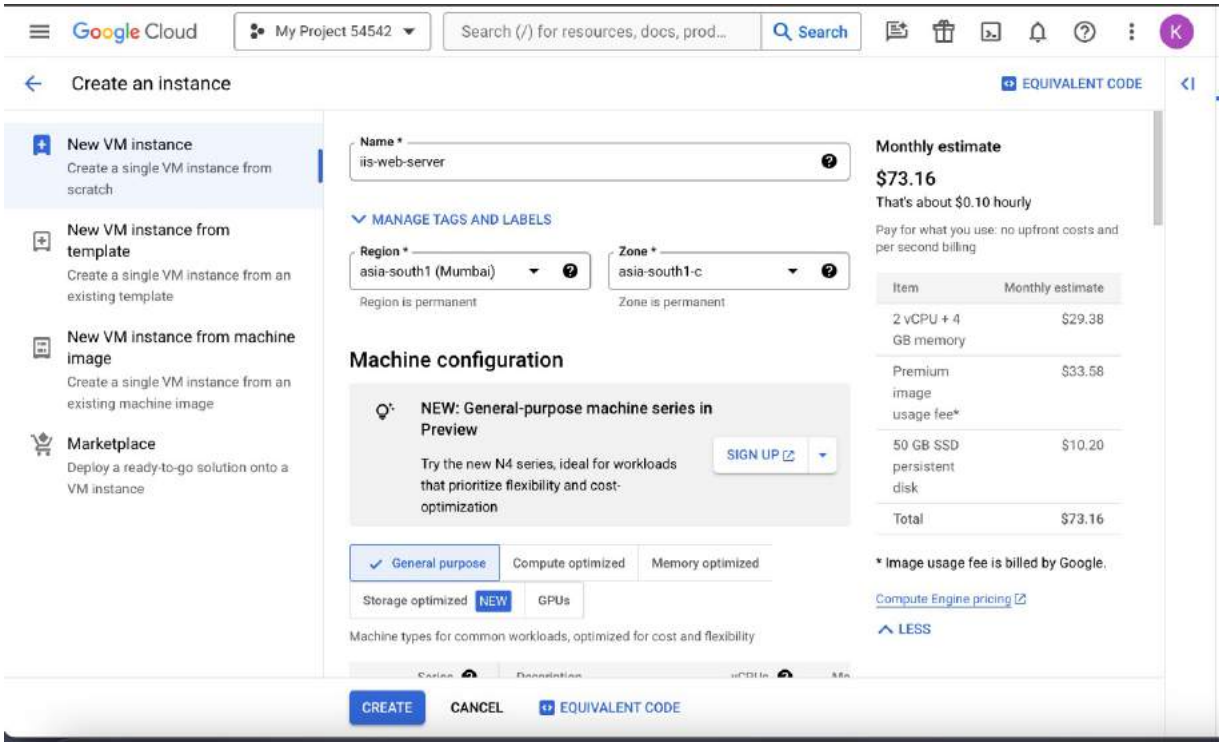

VM instances
LEARN
INSTANCES
OBSERVABILITY
VM instances
Filter
Enter property name or value
Status
Name
Zone
Connect
iis-web-server
asia-south1-
RDP
Related actions
HIDE
Explore Backup and DR
NEW
Back up your VMs and set up disaster recovery
Explore VM logs
Set up firewall rules
Patch management
Remote Desktop Connection
The identity of the remote computer cannot be verified. Do you want to connect anyway?
The remote computer could not be authenticated due to problems with its security certificate. It may be unsafe to proceed.
Certificate name
Name in the certificate from the remote computer:
iis-web-server
Certificate errors
The following errors were encountered while validating the remote computer's certificate:
The certificate is not from a trusted certifying authority.
Do you want to connect despite these certificate errors?
Don't ask me again for connections to this computer
View certificate...
Yes
No


iis-web-server - 35.200.154.74 - Remote Desktop Connection
Recycle Bin
Google Cloud SD...

Practical 6

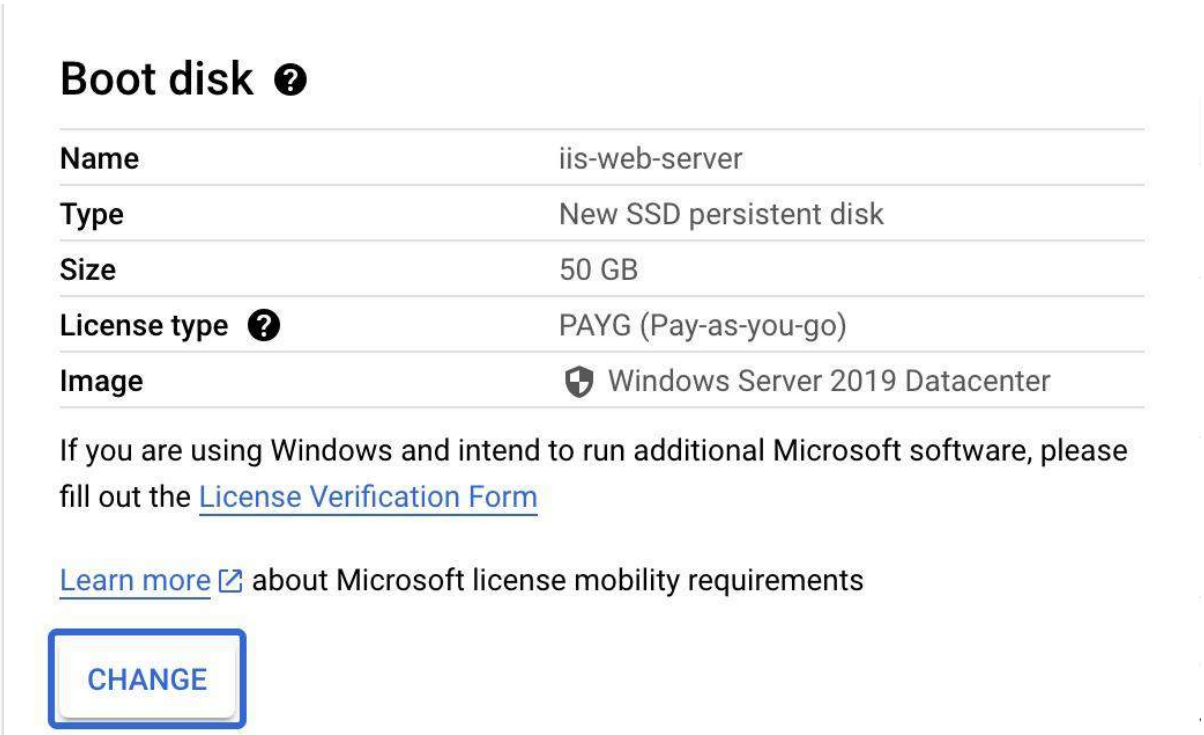
1. A “Hello world “ website on IIS-Create an IIS web server VM using Compute Engine in

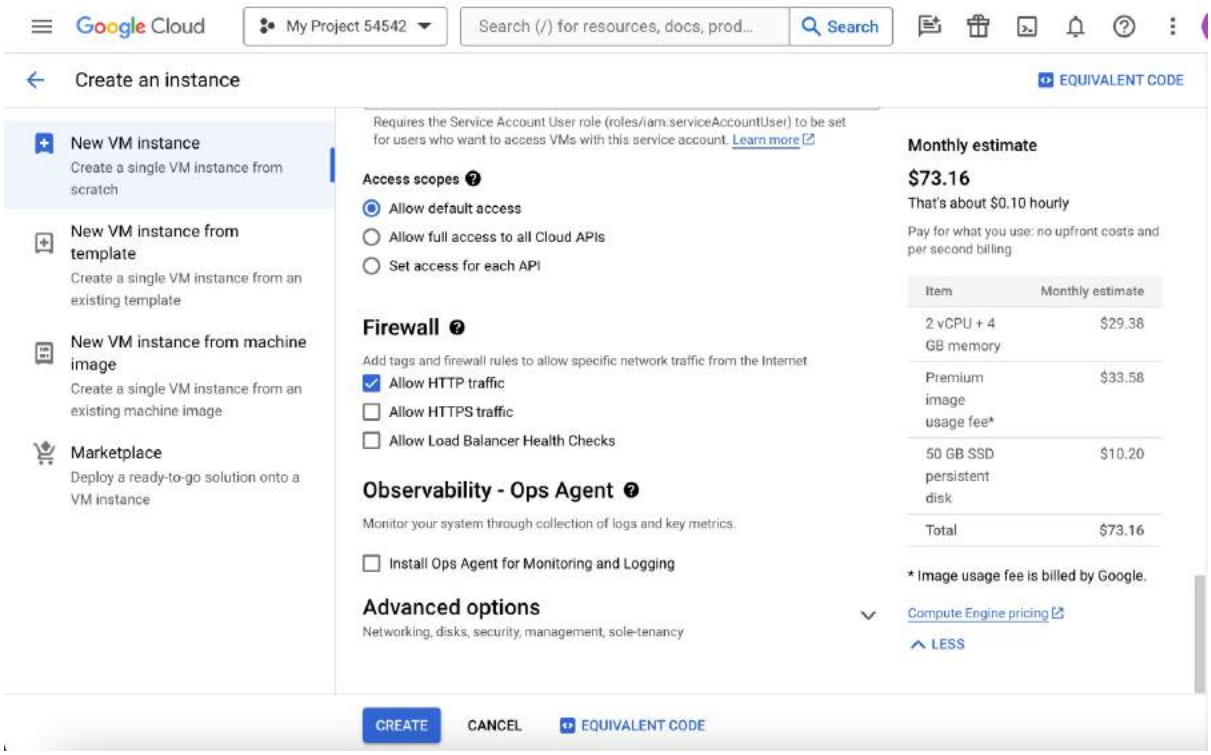
1. Create new Project
2. Enable Compute Engine APIs
3. On the Compute Engine page, click VM instances.
4. On the VM instances page, click Create instance.



5. In Boot disk, click Change, and then:
   a. In the Operating system list, select Windows Server.
   b. In the Version list, select Windows Server 2019 Datacenter.
   c. In the Boot disk type list, select SSD persistent disk.

d. Click Select.



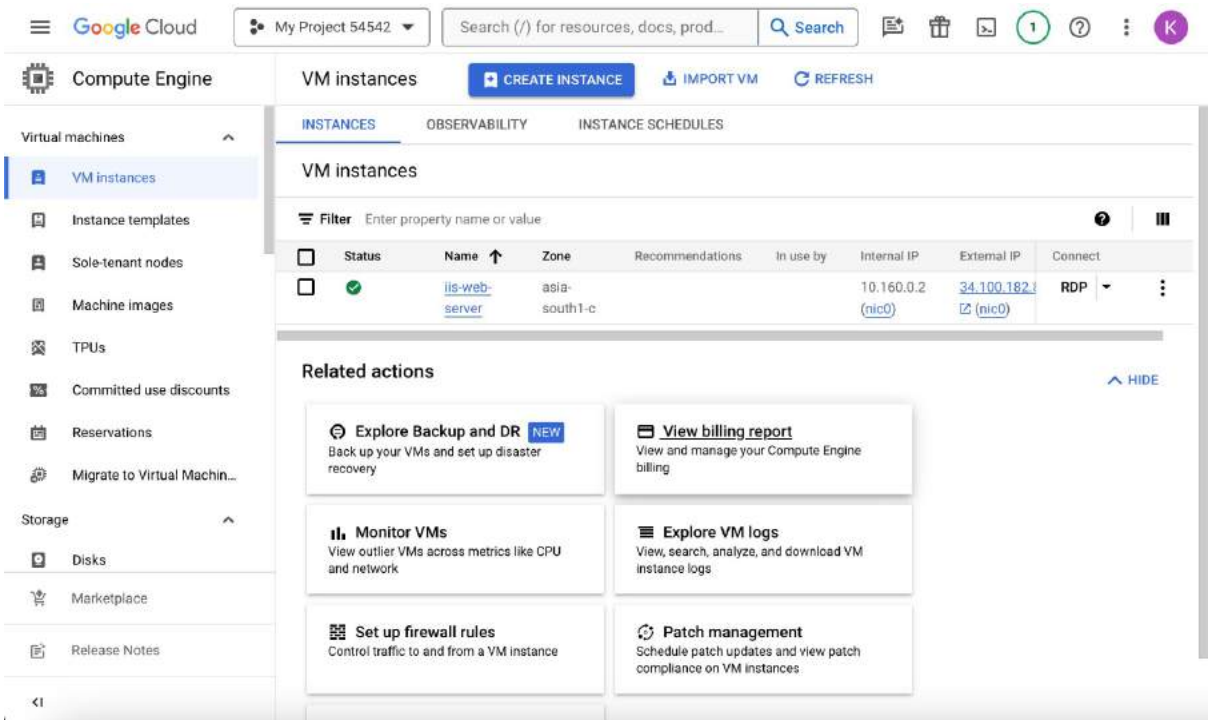


6. In the Firewall section, select Allow HTTP traffic.

7. Click Create.

8. Connect to the VM:

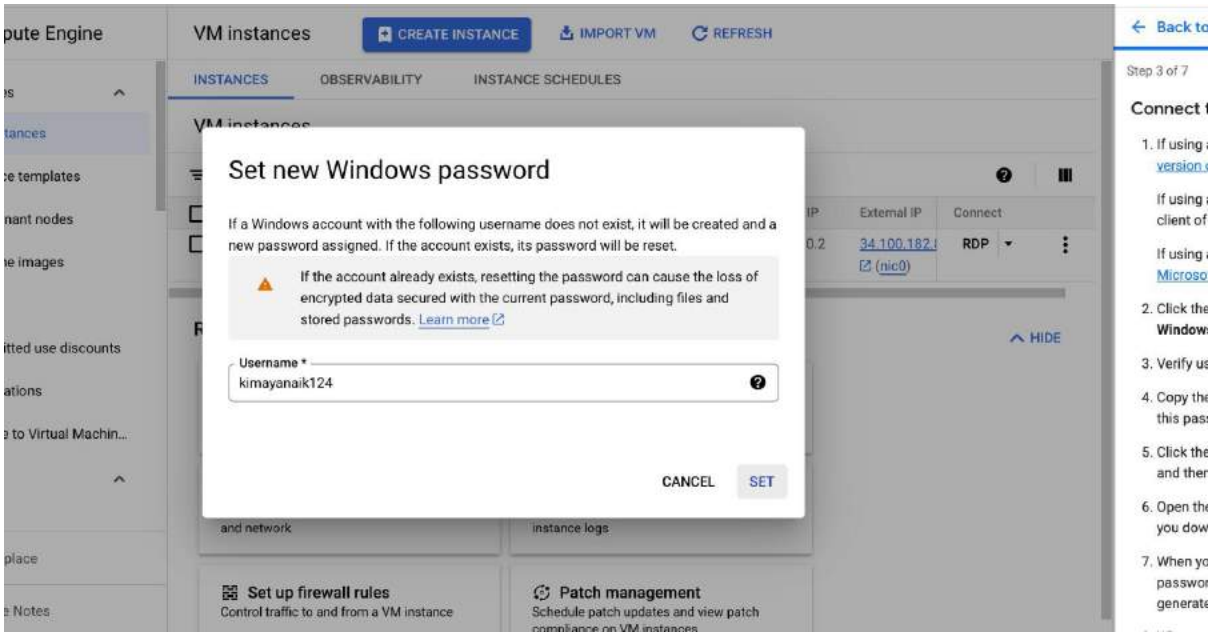
If using an Apple computer, get Mac version of Microsoft RDP.



1. Click the arrow next to RDP and click Set Windows password.

2. Click the arrow next to RDP and click Set Windows password.

3. Verify username is correct, then click Set.



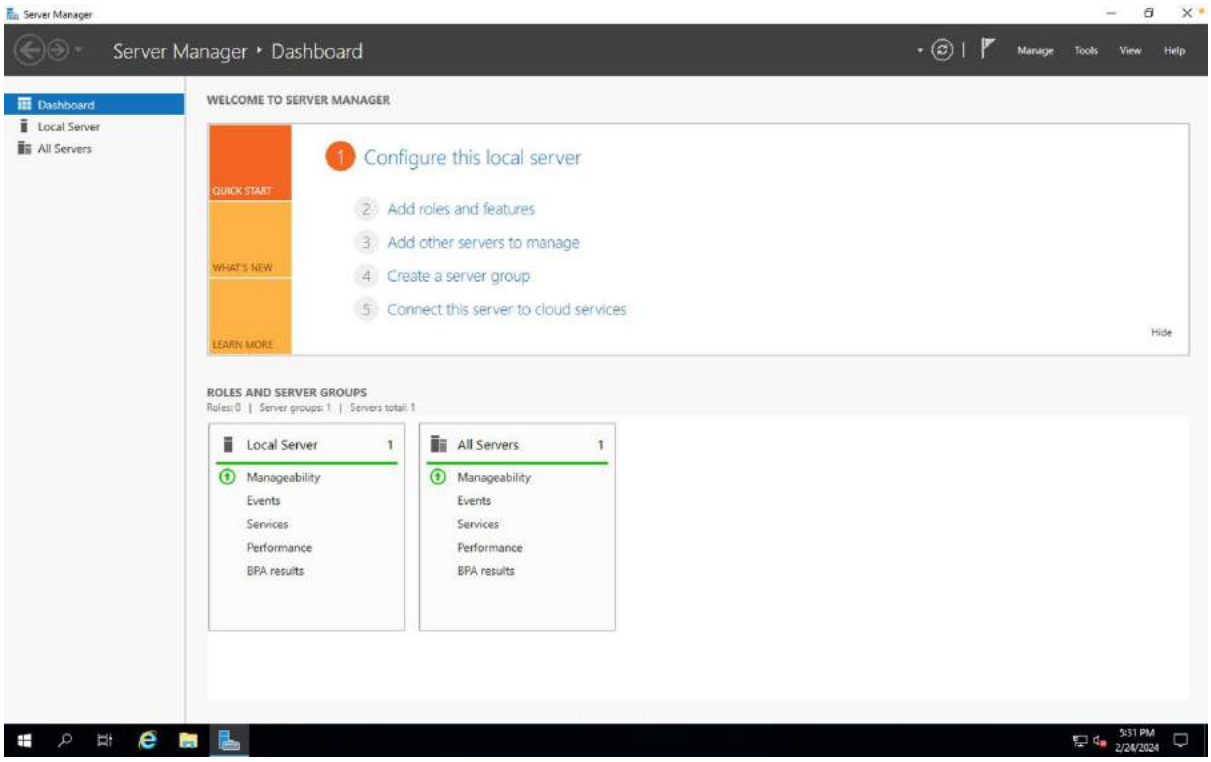
4. Copy the password that is shown. Save this password for reference.

5. Click the arrow next to the RDP button, and then select Download the RDP file.

6. Open the RDP file by using the RDP client you downloaded.

7. When your RDP client prompts for a password, enter the password that you generated earlier.

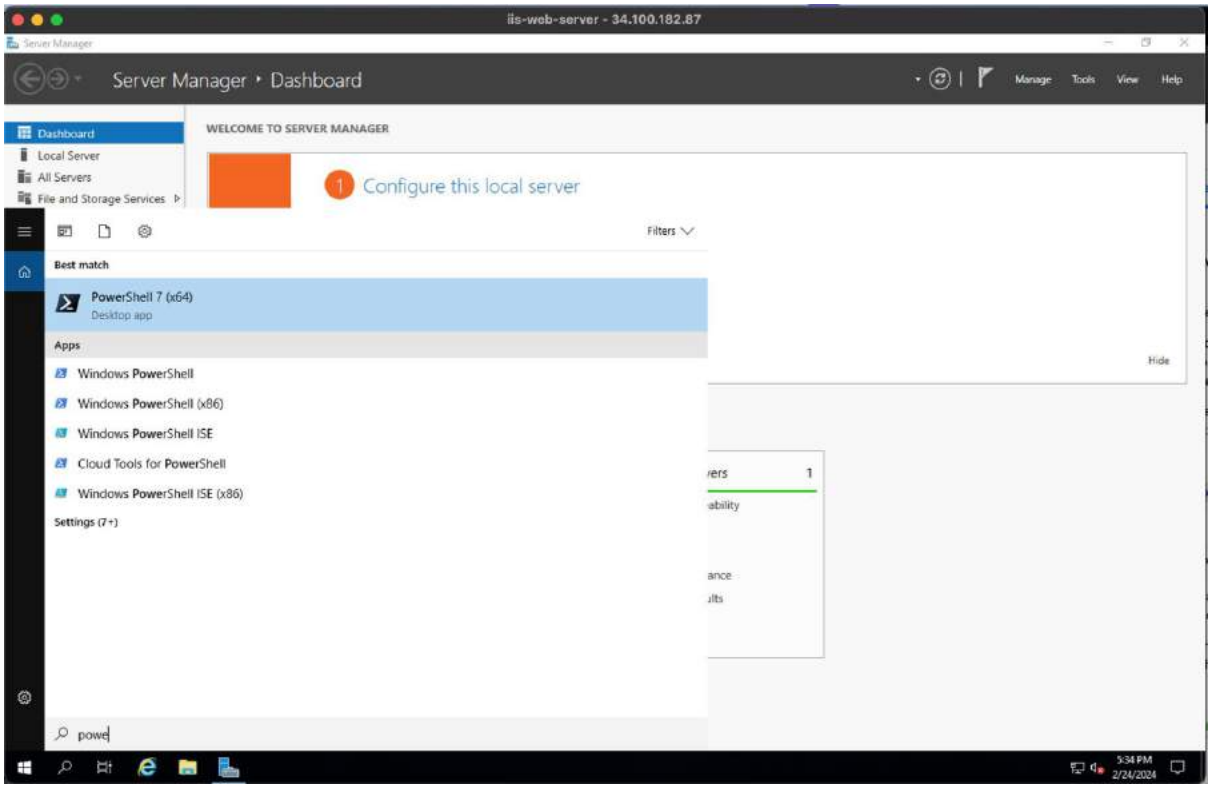
8. When you're prompted whether you want your computer discoverable by other PCsand devices on the network, click No.



9. Create and view the website

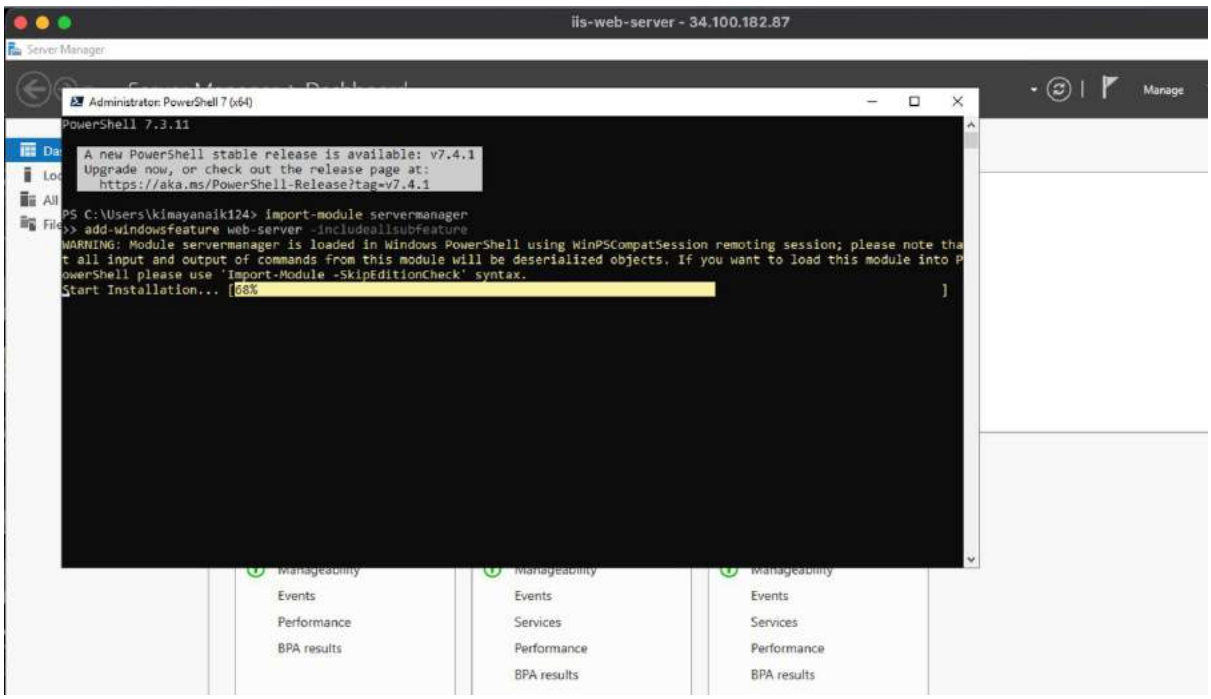
1. In your VM, in the Search field in the Windows Server toolbar, type PowerShell.

2. Right-click on the PowerShell application icon to invoke the sub-menu, and then select Run as administrator.



3. Install IIS services with the following commands:

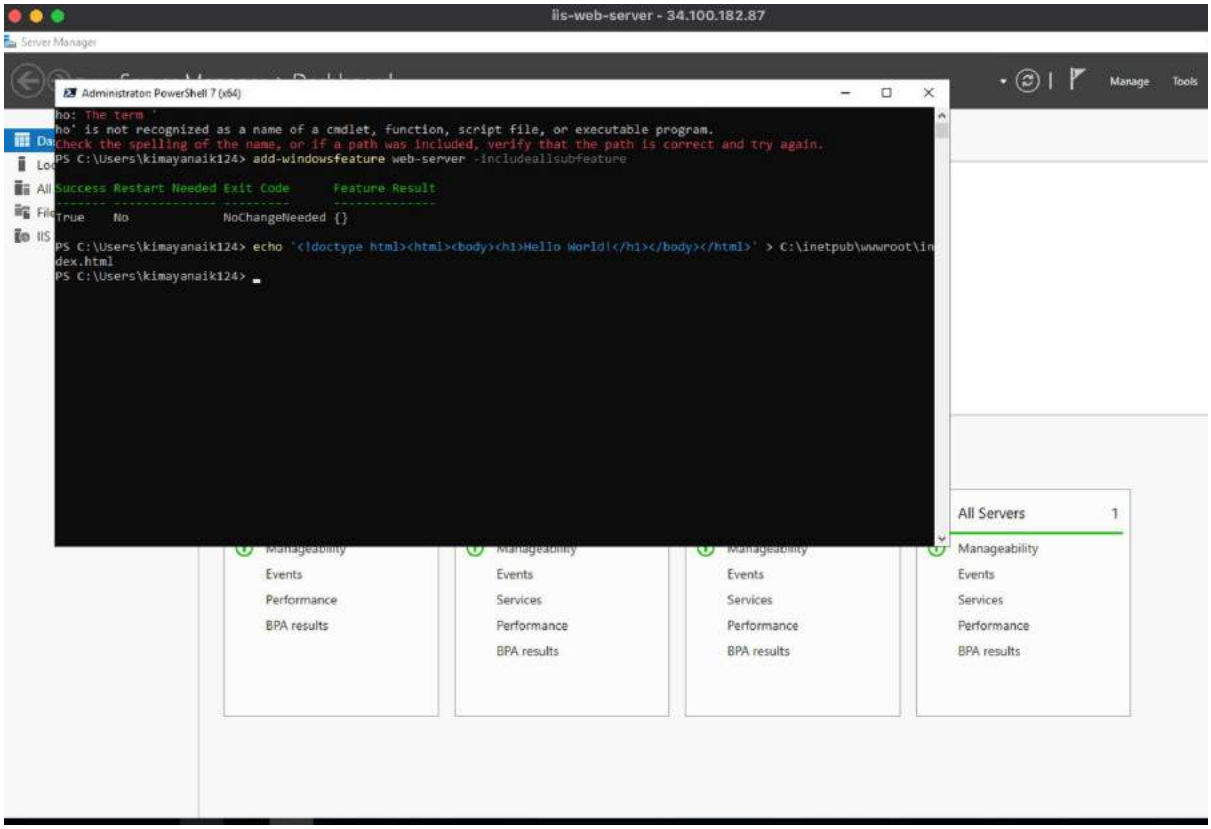
```
import-module servermanager
```



```
add-windowsfeature web-server -includeallsubfeature
```

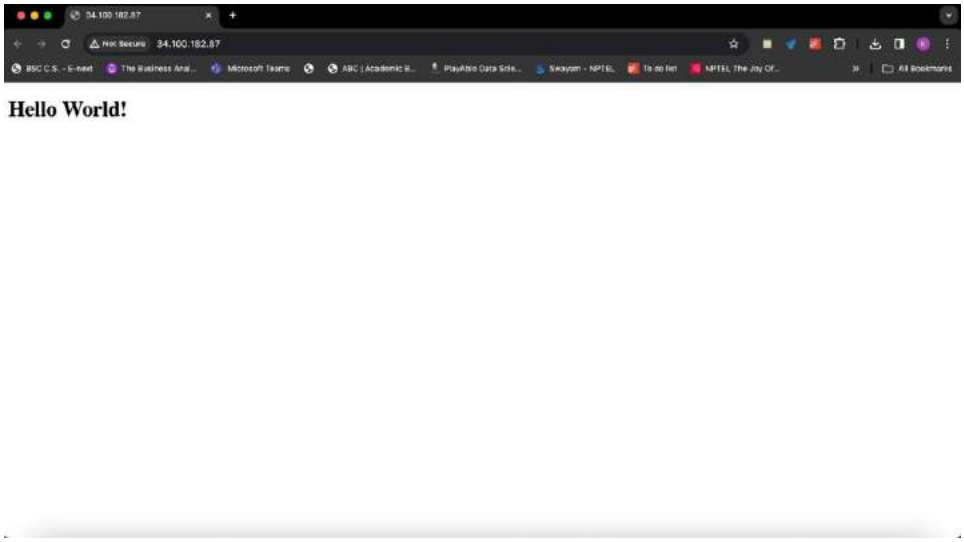
Overwrite the IIS web server default web page with the following command:

```
echo '<!doctype html><html><body><h1>Hello World!</h1></body></html>' > C:\inetpub\wwwroot\index.html
```



Copy the VM's IP address from the External IP column.

Paste the IP address in a new browser tab.



2. A “Hello World” website on Apache. Create an Apache web server on a Linux VM

a. On the Compute Engine page, click VM instances → Create Instance

b. In Boot disk, click Change, and then:

   a. In the Operating system list, select Debian

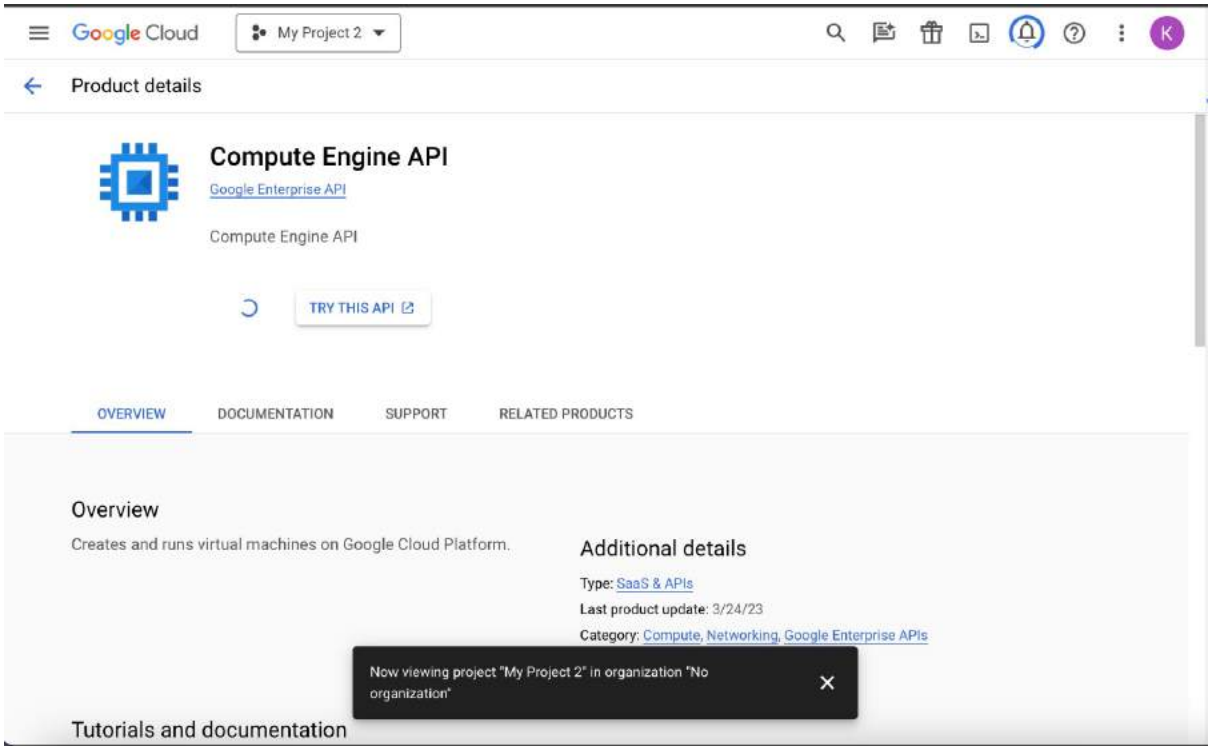
   b. In the Version list, keep the default value.

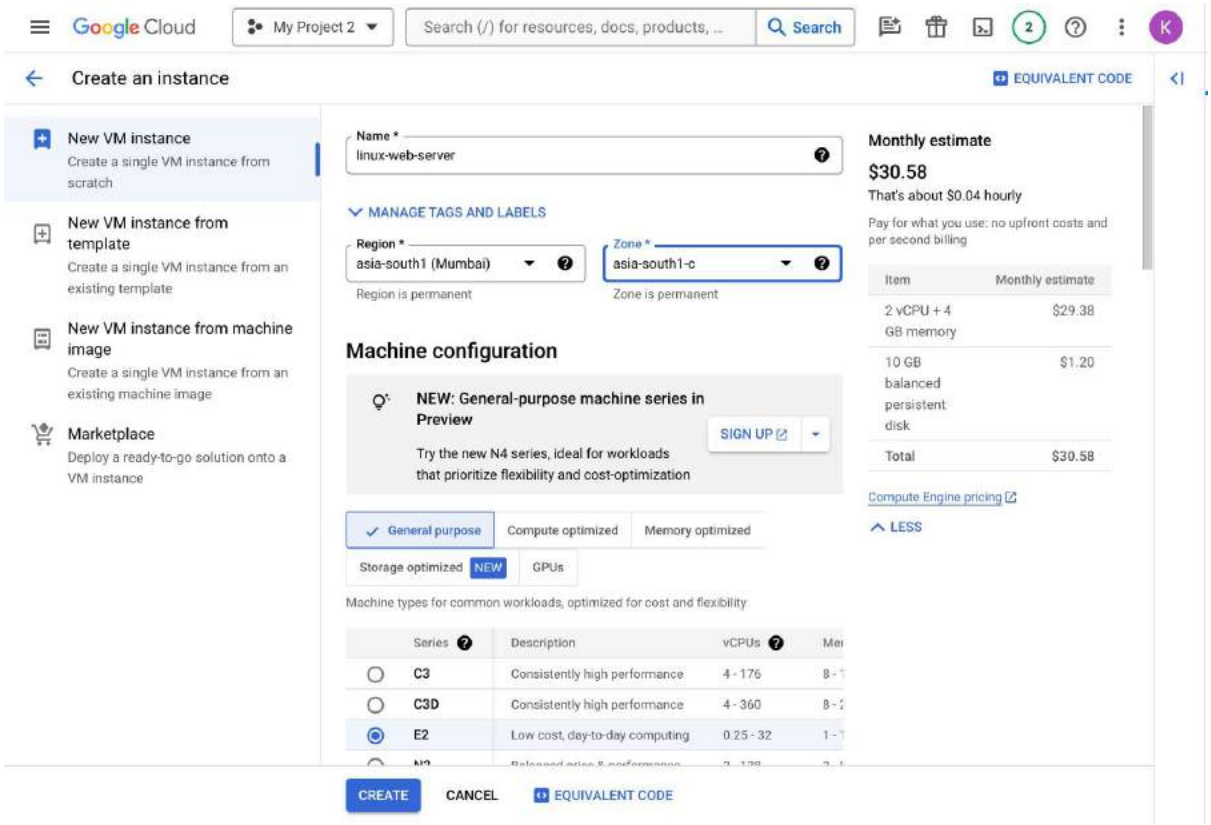
   c. In the Boot disk type list, select SSD persistent disk

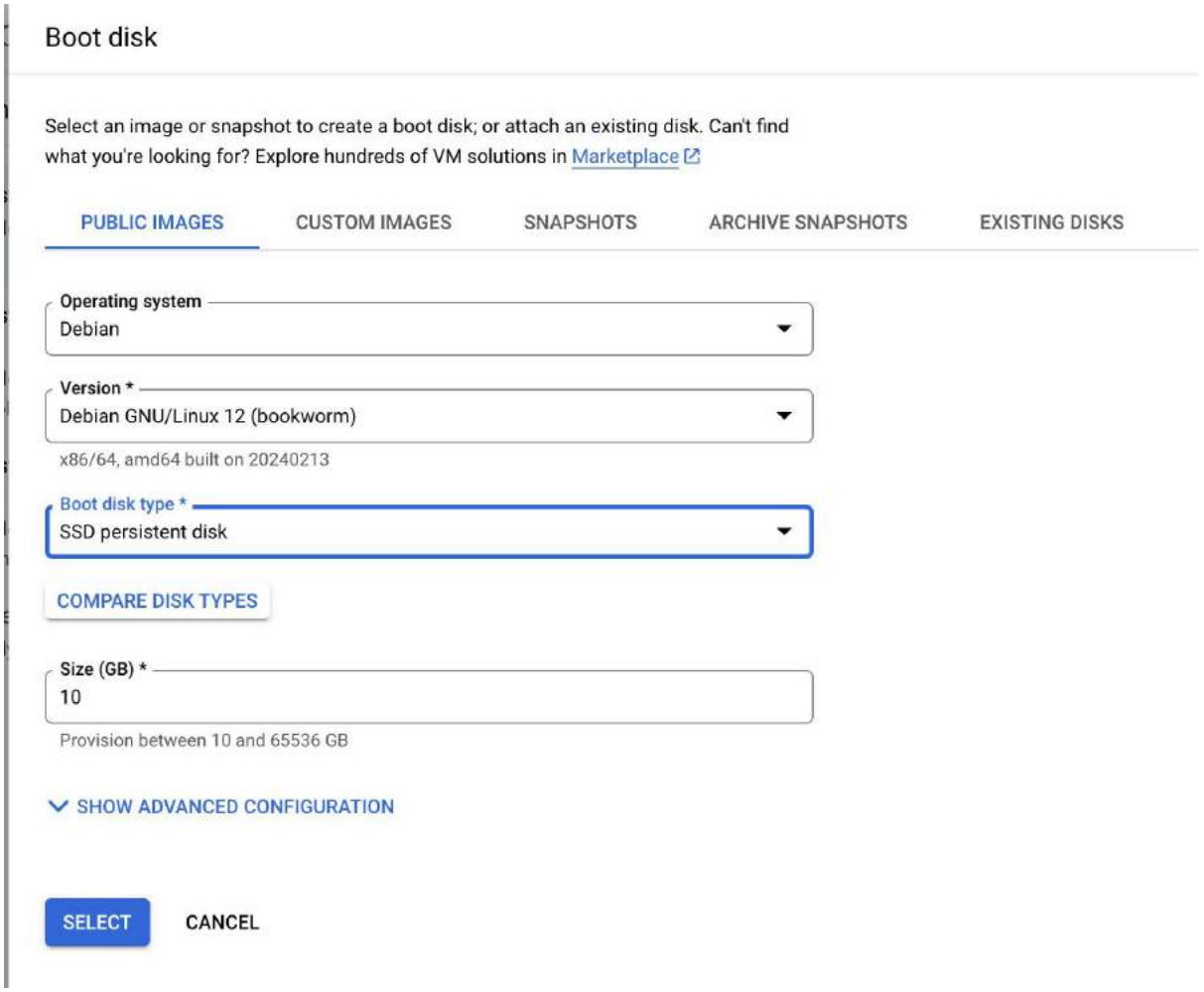
   d. Click Select.

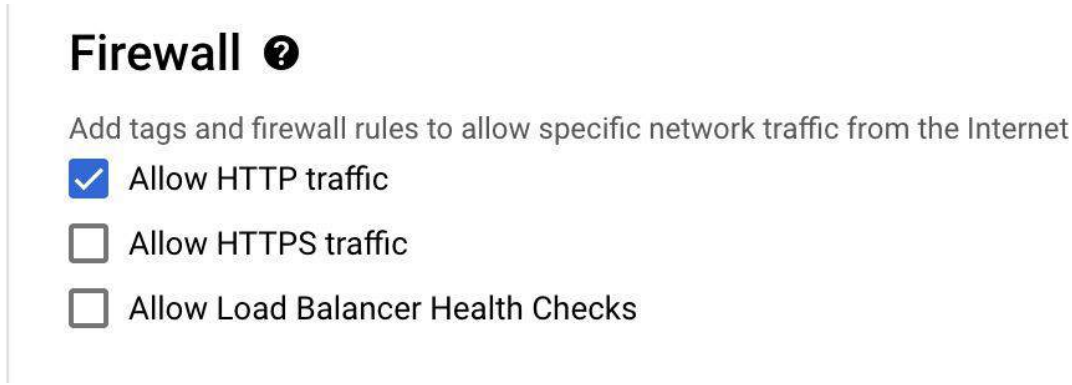
In the Firewall section, select Allow HTTP traffic.

Click Create.


Google Cloud
My Project 2
Product details
Compute Engine API
Google Enterprise API
Compute Engine API
TRY THIS API
OVERVIEW
DOCUMENTATION
SUPPORT
RELATED PRODUCTS
Overview
Creates and runs virtual machines on Google Cloud Platform.
Additional details
Type: SaaS & APIs
Last product update: 3/24/23
Category: Compute, Networking, Google Enterprise APIs
Now viewing project "My Project 2" in organization "No organization"
Tutorials and documentation


Google Cloud
My Project 2
Search (/) for resources, docs, products, ...
Search
Create an instance
EQUIVALENT CODE
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
Deploy a ready-to-go solution onto a VM instance
Name *
linux-web-server
MANAGE TAGS AND LABELS
Region *
asia-south1 (Mumbai)
Region is permanent
Zone *
asia-south1-c
Zone is permanent
Machine configuration
NEW: General-purpose machine series in Preview
Try the new N4 series, ideal for workloads that prioritize flexibility and cost-optimization
SIGN UP
General purpose
Compute optimized
Memory optimized
Storage optimized
NEW
GPUs
Machine types for common workloads, optimized for cost and flexibility
Series
Description
vCPUs
C3
Consistently high performance
4 - 176
C3D
Consistently high performance
4 - 360
E2
Low cost, day-to-day computing
0.25 - 32
CREATE
CANCEL
EQUIVALENT CODE
Monthly estimate
$30.58
That's about $0.04 hourly
Pay for what you use: no upfront costs and per second billing
Item
Monthly estimate
2 vCPU + 4 GB memory
$29.38
10 GB balanced persistent disk
$1.20
Total
$30.58
Compute Engine pricing
LESS





c. Install an Apache server

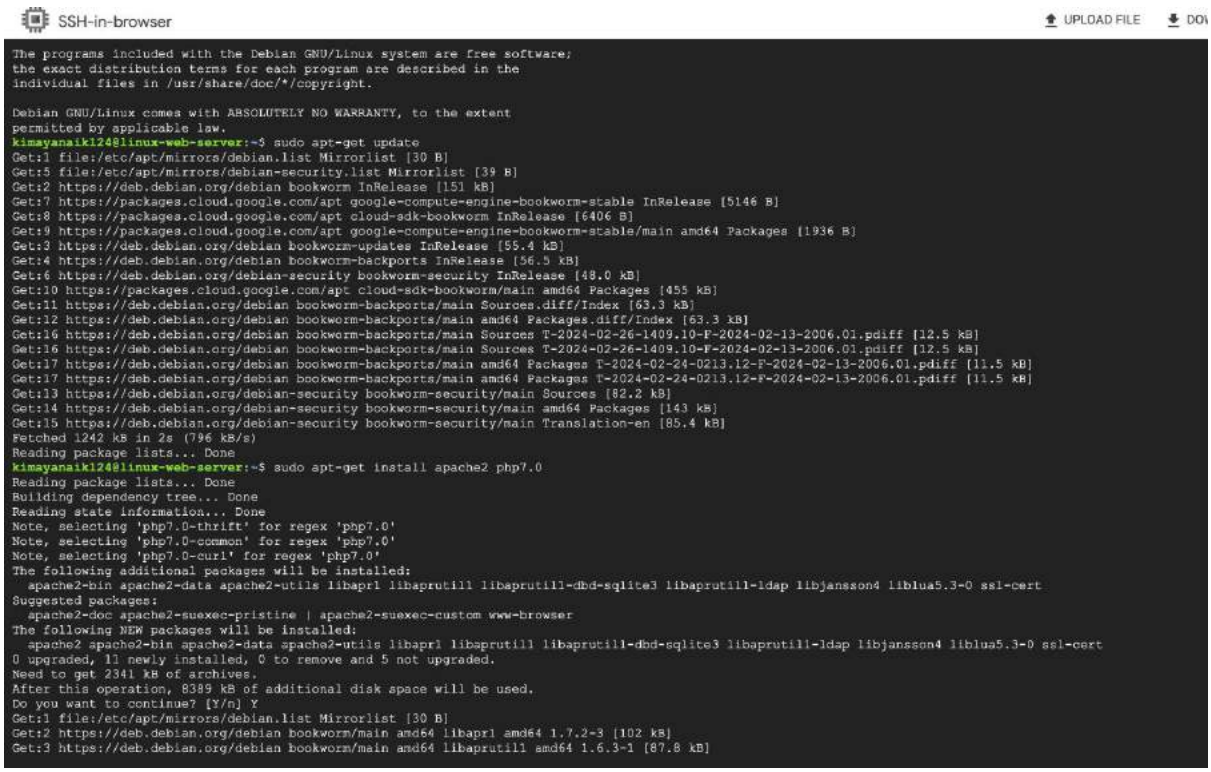
To open a terminal to your instance, in the **Connect** column, click **SSH**.

Update the package lists on your instance:

```
sudo apt-get update
```

Install the Apache2 HTTP Server:

```
sudo apt-get install apache2 php7.0
```



Overwrite the Apache web server default web page with the following command:

```
echo '<!doctype html><html><body><h1>Hello World!</h1></body></html>' | sudo tee /var/www/html/index.html
```

d. Test your server

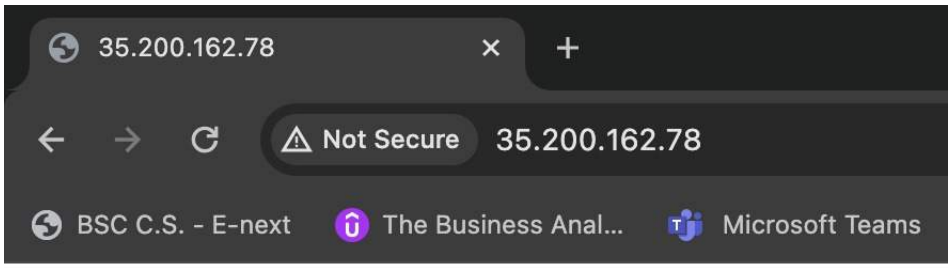
In the Google Cloud Console, go to the VM instances.

You can see where it is by clicking the following button: Compute

Engine chevron_right VM instances

Copy the VM's IP address from the External IP column.

Paste the IP address in a new browser tab.

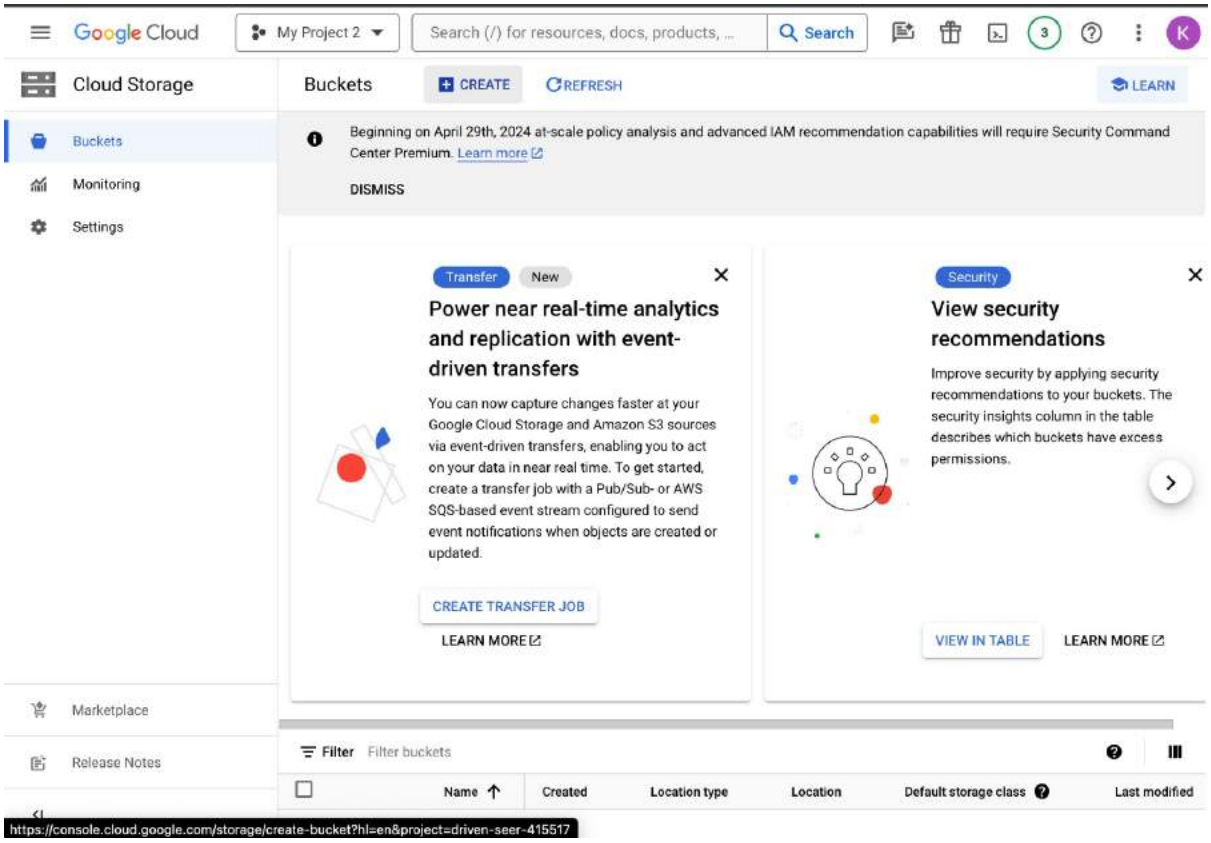


Hello World!

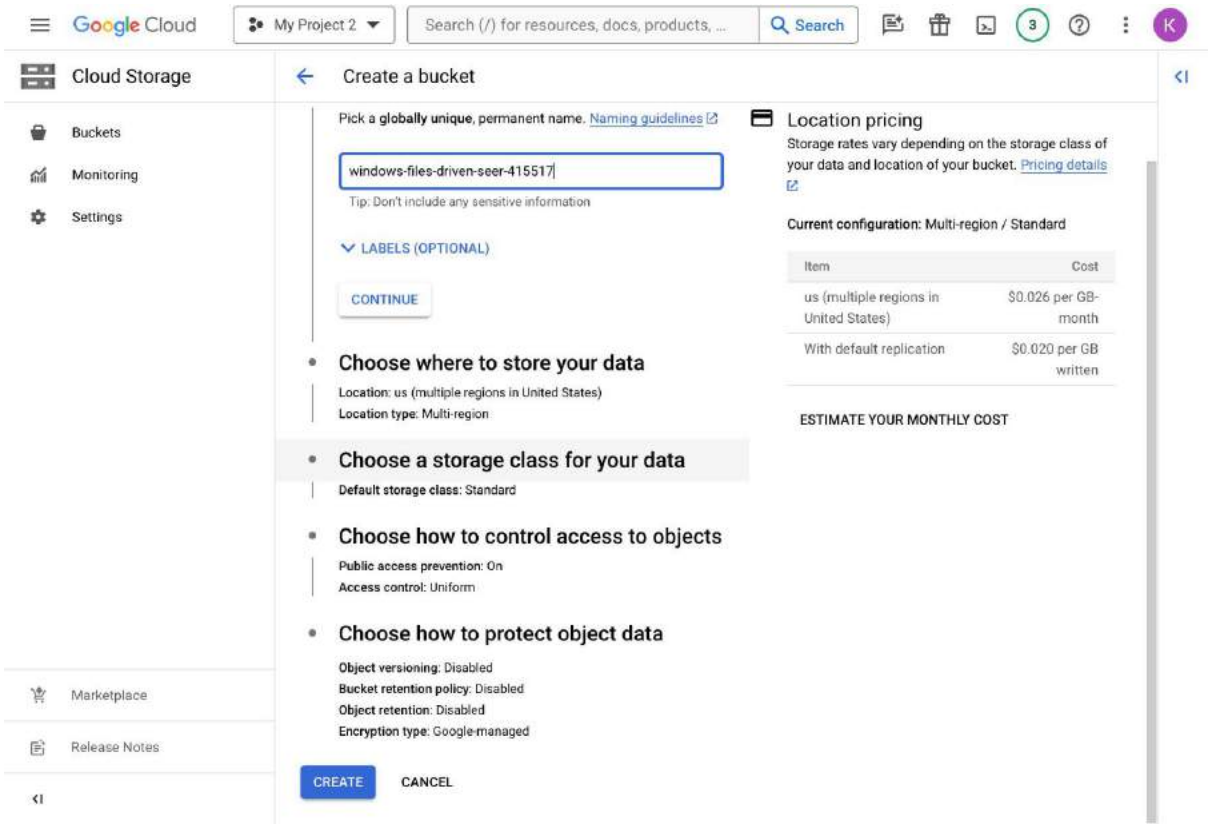
3. Transfer files to Windows VMs

1. In the Google Cloud console navigation menu, click **Cloud Storage**, and then select **Buckets**.

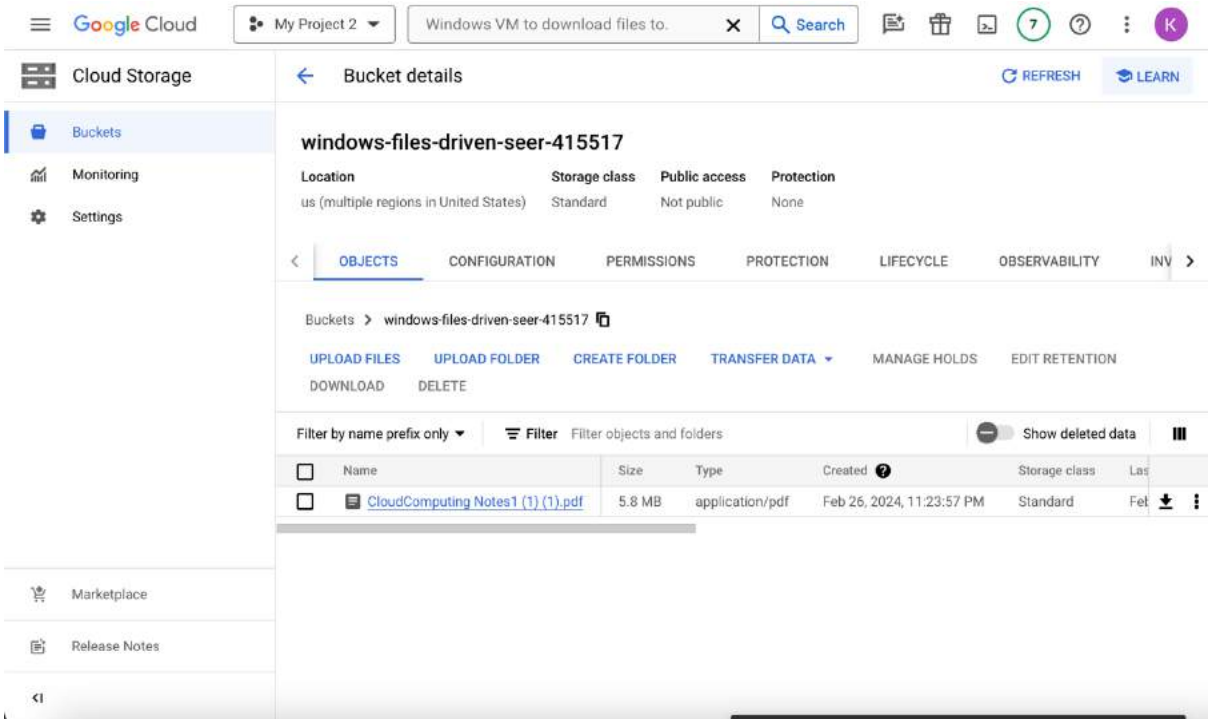
   Go to Buckets



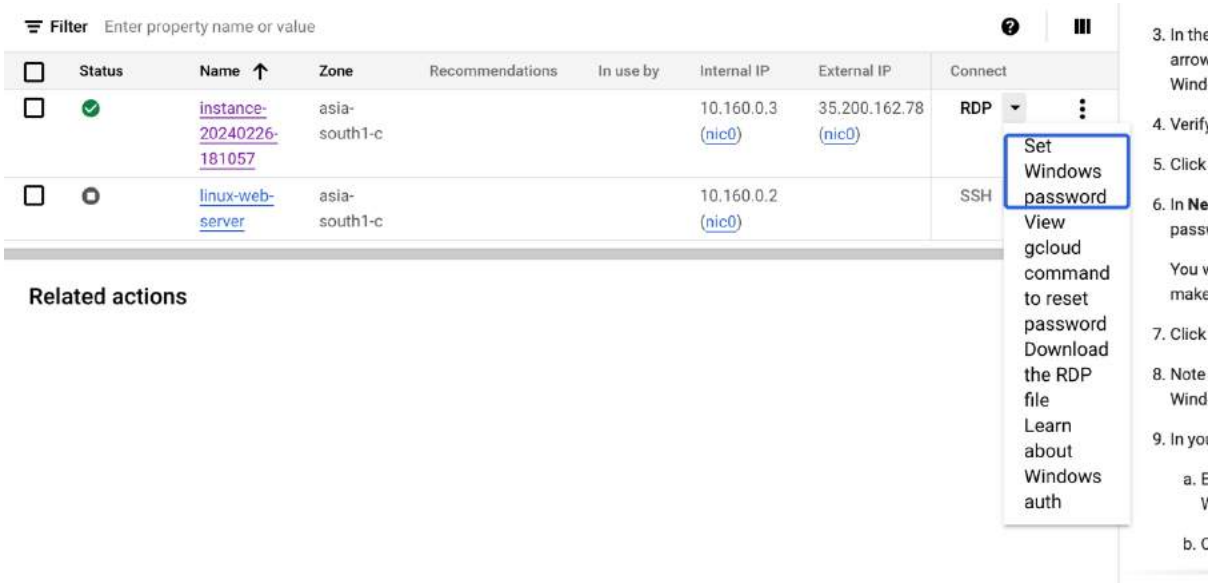
Click **Create** to finish creating the bucket.



On the **Buckets** page, click the name of the bucket to upload files to.

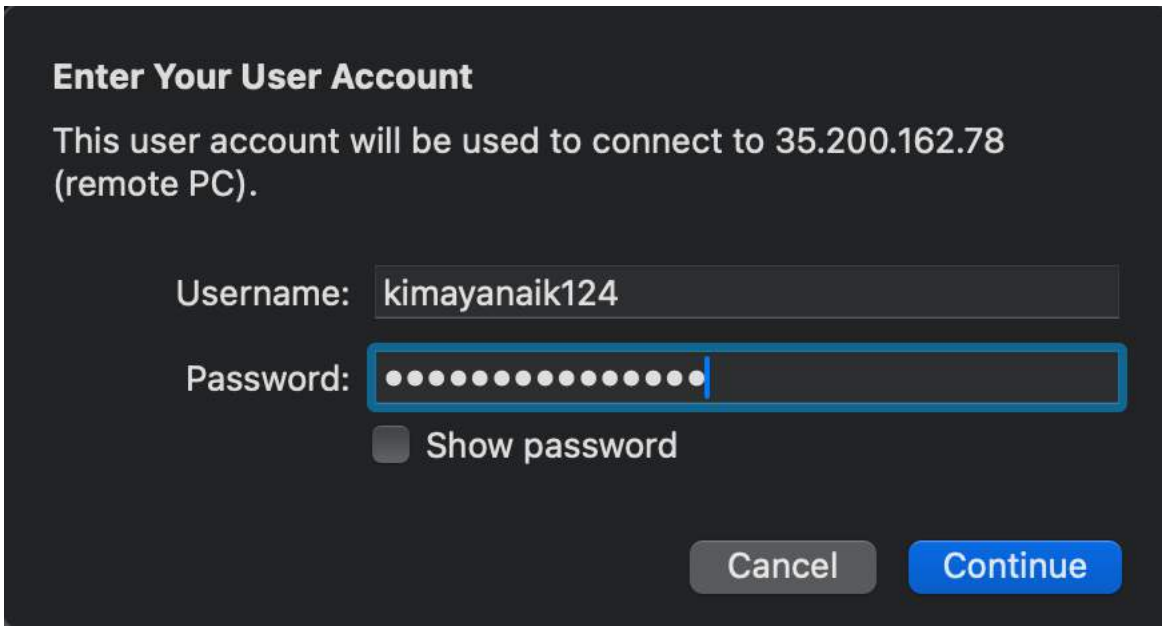


In the **Connect** column, click the down arrow to set the password for the Windows VM.

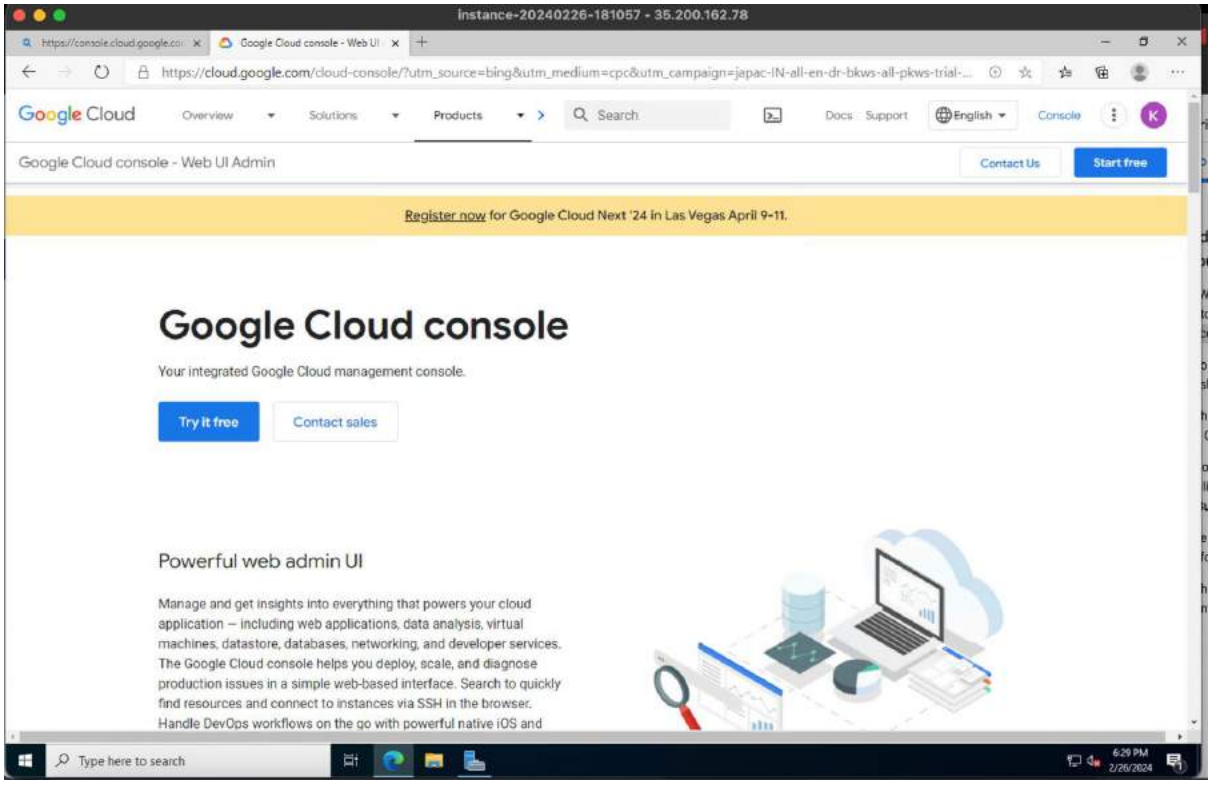


In your remote desktop application:

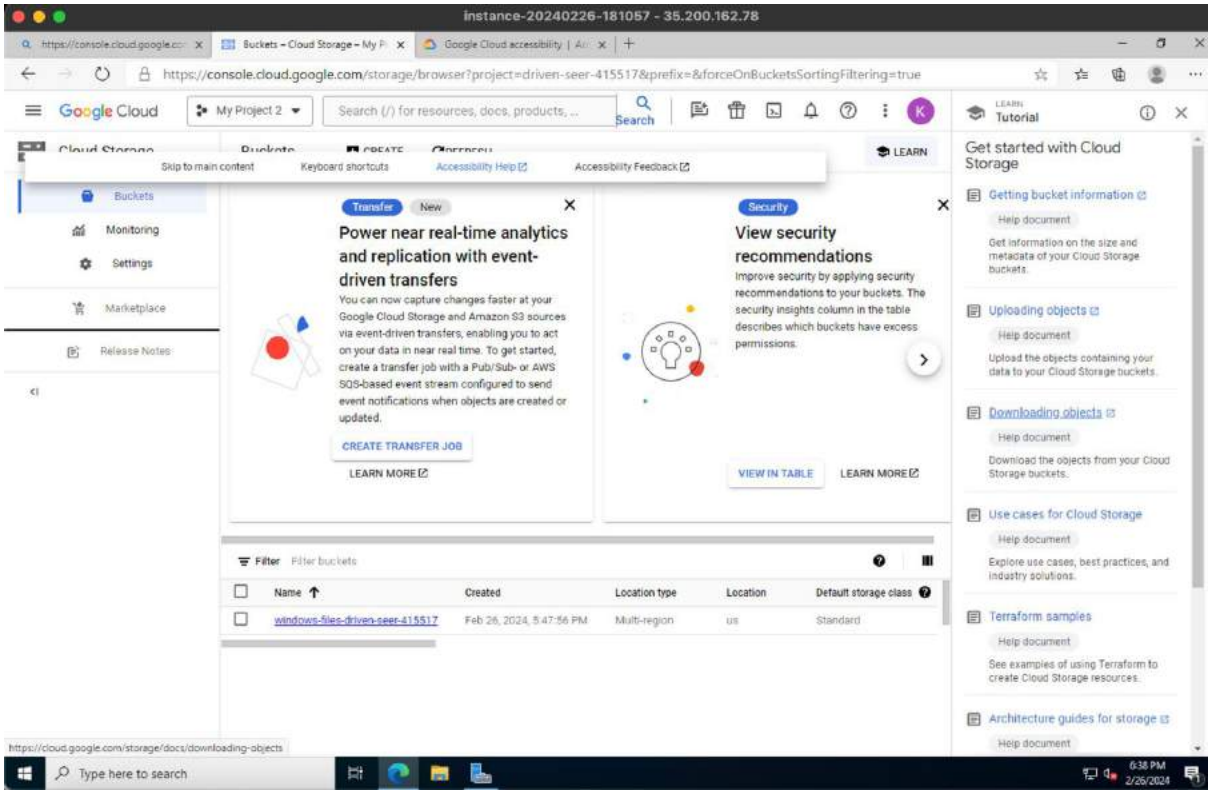
a. Enter the external IP address of the Windows VM
b. Connect to the Windows VM
c. Enter the username and password



On the Windows VM, open a web browser and go to https://console.cloud.google.com/.

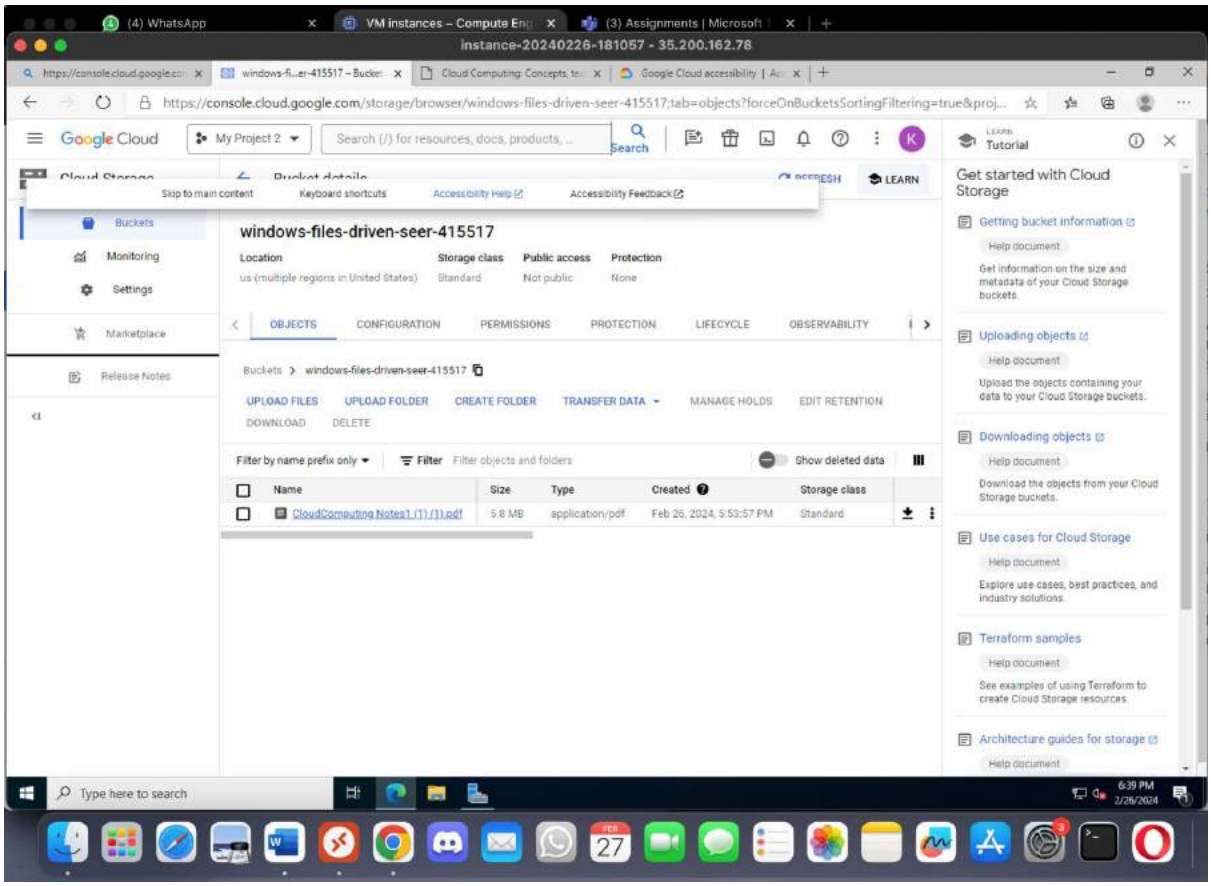


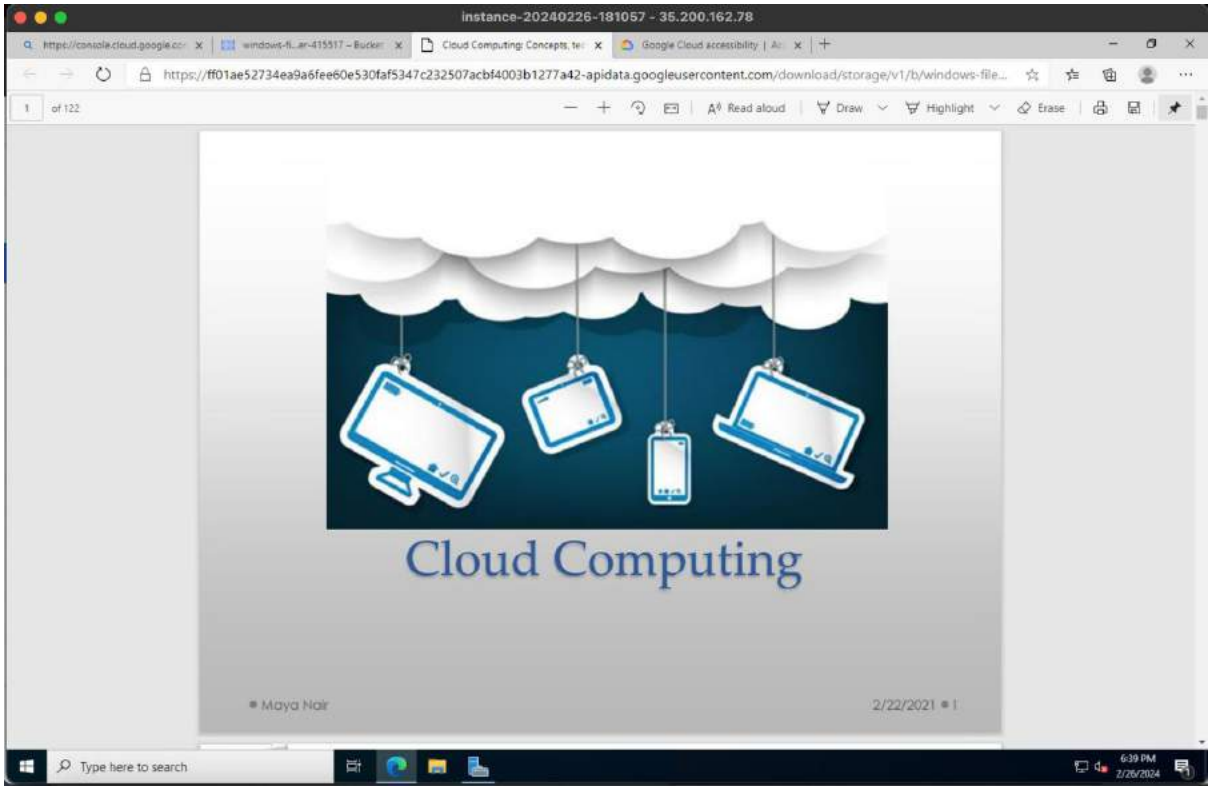
Select the project that has the previously created Cloud Storage bucket.



Click the name of the bucket that has the files or folders you previously uploaded.

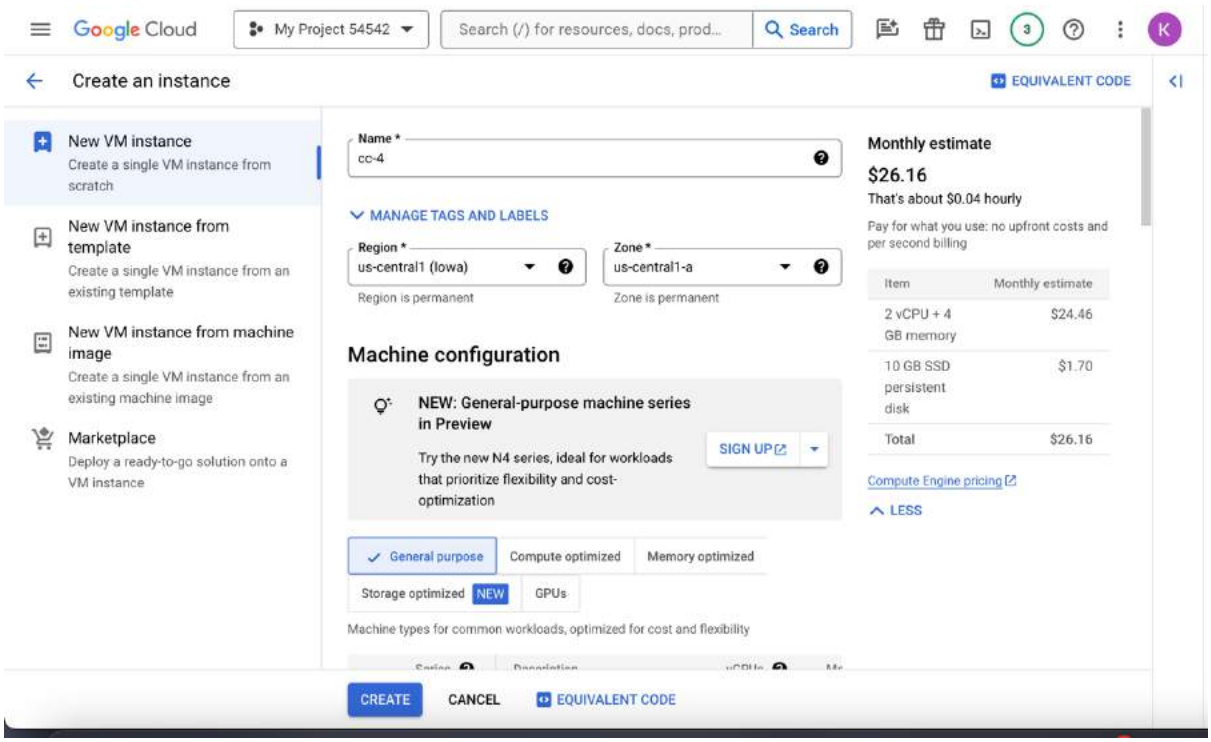
Select the files or folders to download, and then click **Download**.



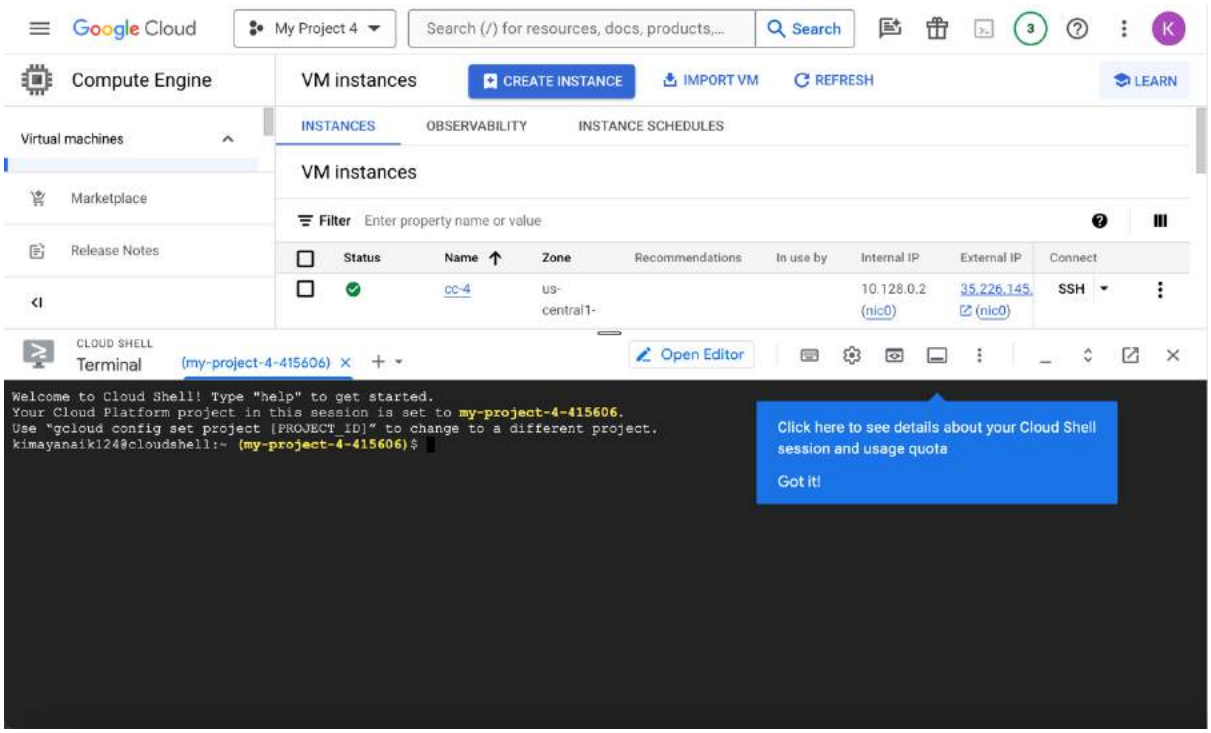


4. Transfer files to Linux VMs

- Create a VM instance

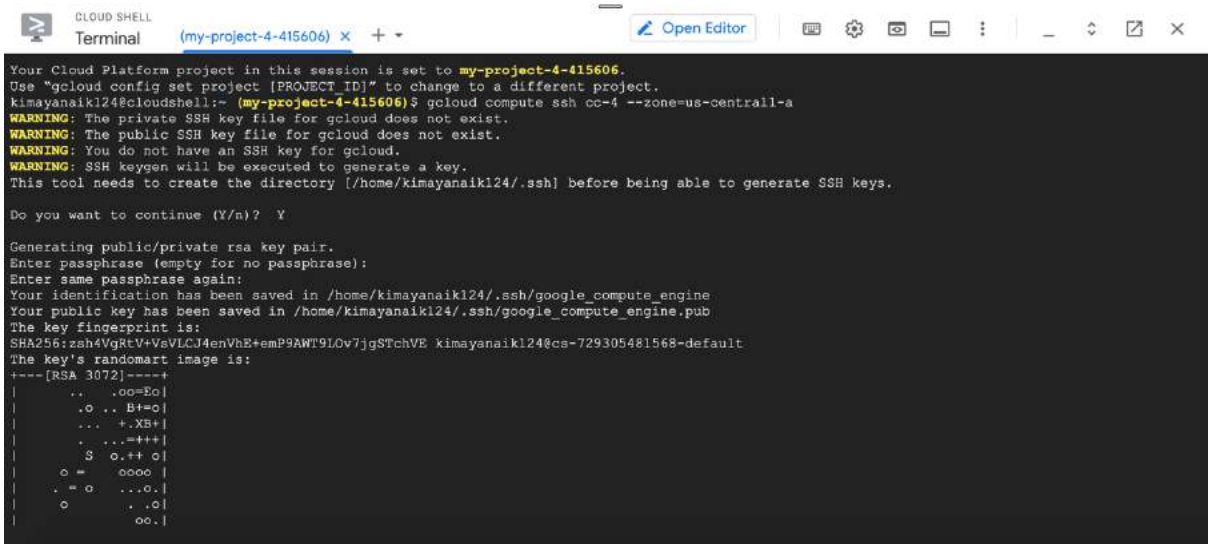


Open Cloud Shell

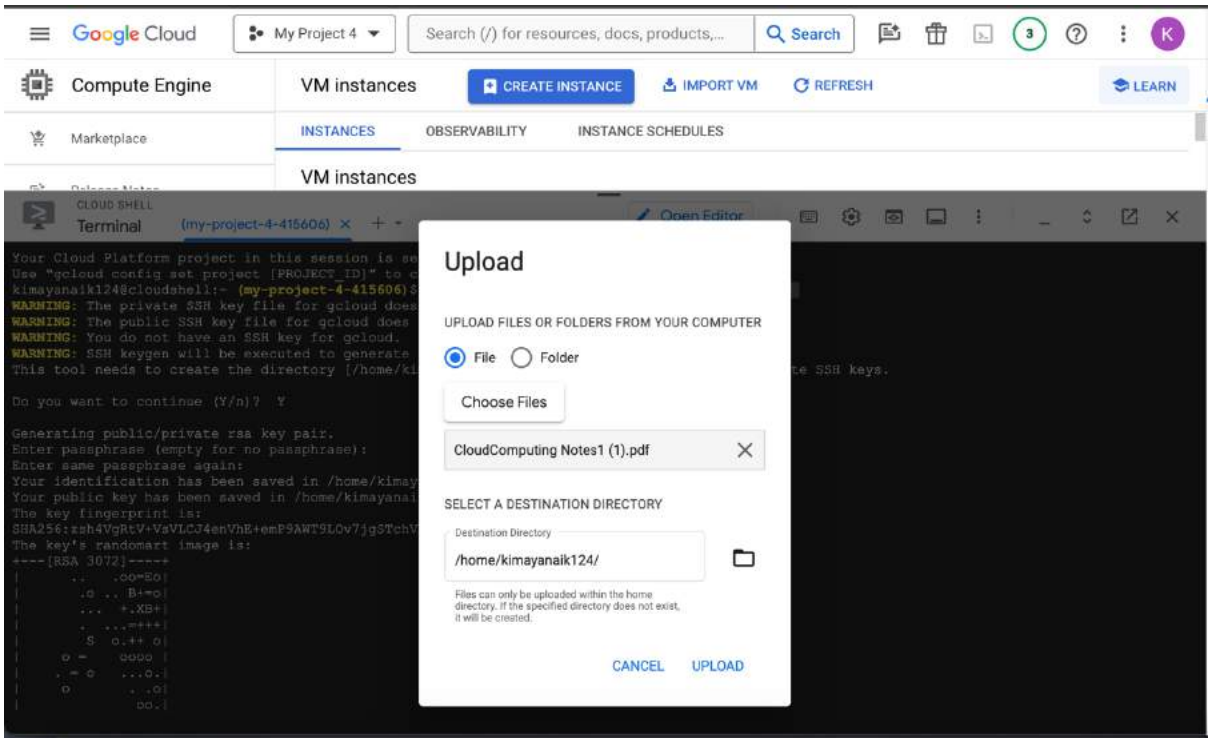


To connect to the VM, run the following command:

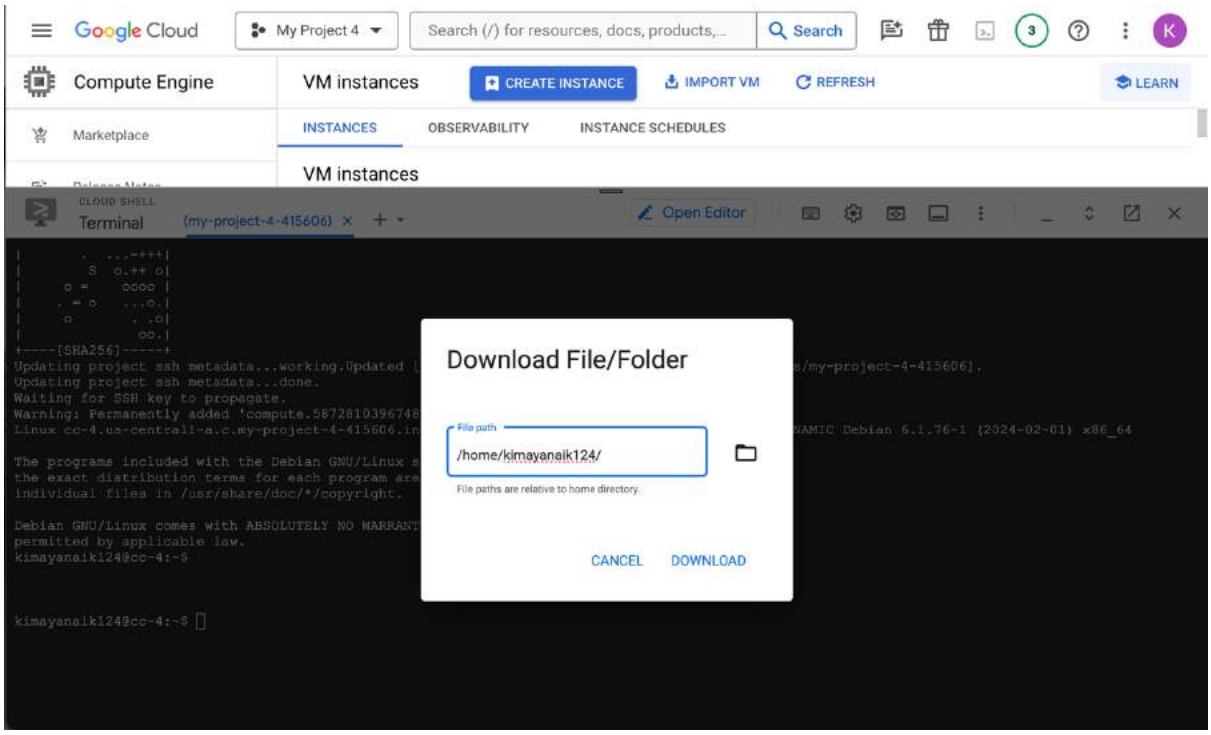
gcloud compute ssh cc-4 --zone=us-central1-a



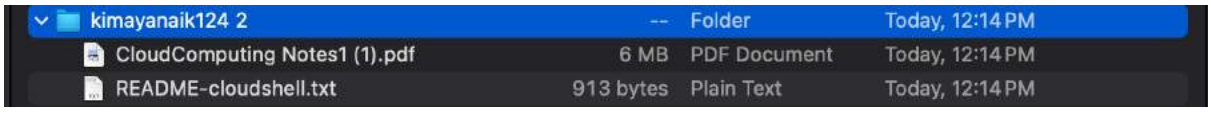
After the connection is established, click **More** and select **Upload**.



After the connection is established, click **More** and select **Download**.



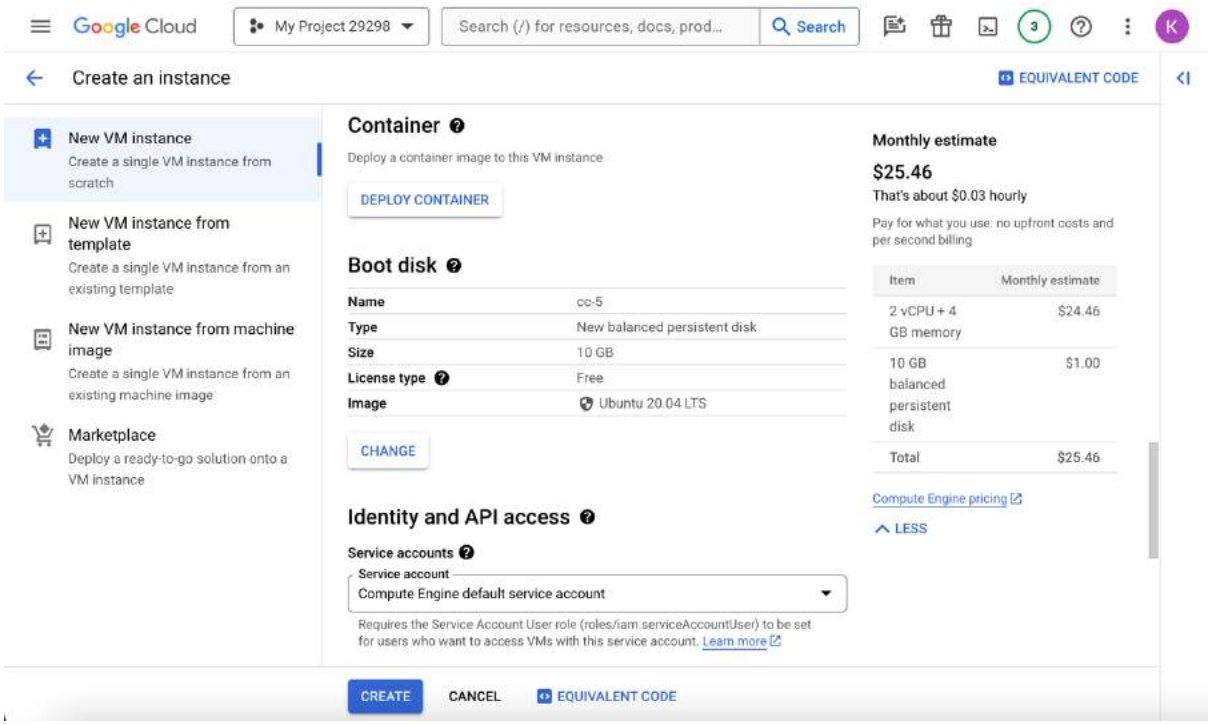
The file is downloaded on your machine. If you downloaded a folder, it is downloaded as a zipped file.



5. Back up a VM's persistent disk

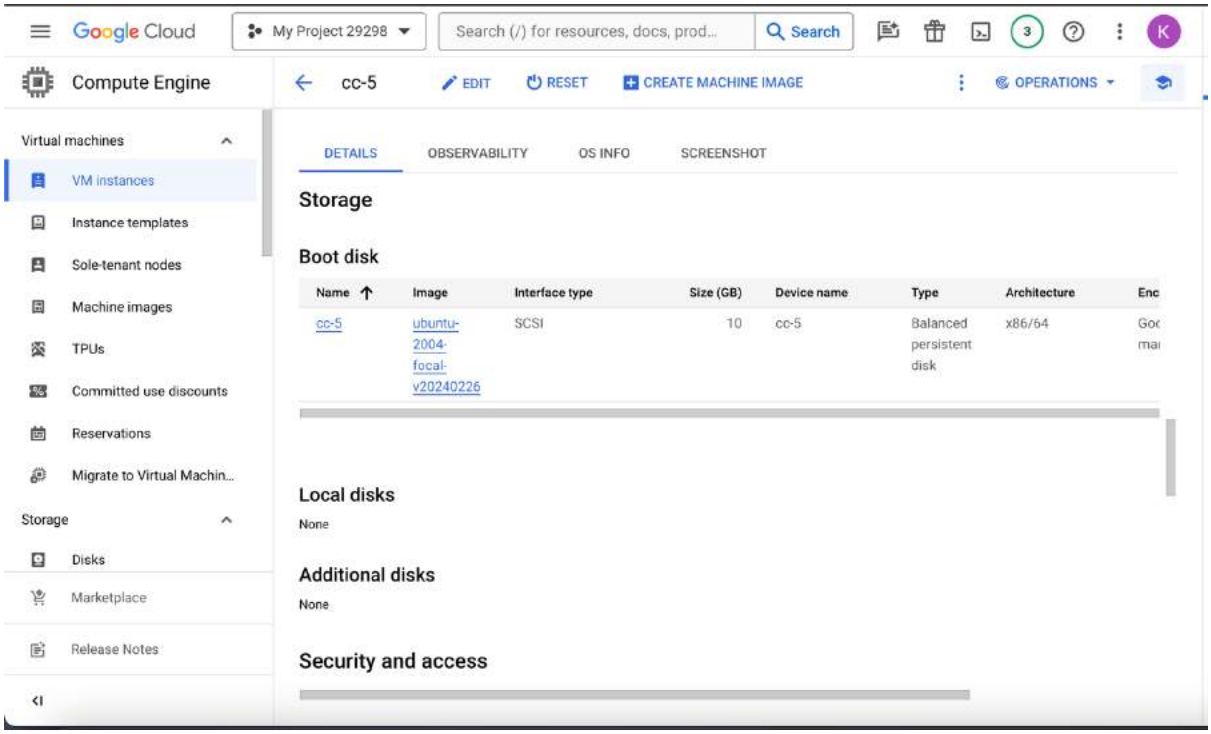
Create a Linux VM instance

1. On the **Public images** tab, change the following settings:
    - **Operating system** to **Ubuntu**
    - **Version** to **Ubuntu 20.04 LTS**



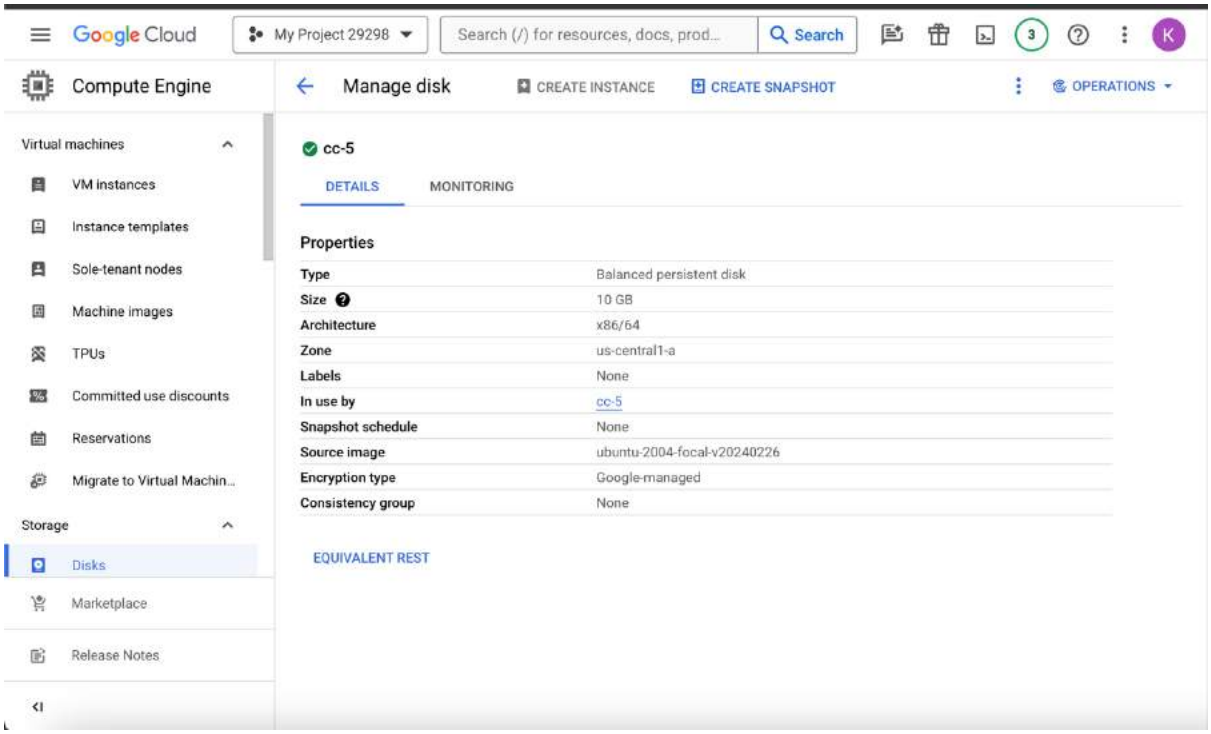
1. Select the project that contains your VM instances. Show me.

2. In the Name column, click the name of the VM that has the persistent disk to back up.



1. In Storage:

To back up the boot disk, in the Boot disk section, click the Name of the boot disk.



Click **Create snapshot**.

5. In Name, enter a unique name to help identify the purpose of the snapshot, for example:

o boot-disk-snapshot-assignment-09

6. In Type, the default is a regular snapshot, which is best for long-term back up and disaster recovery.

Choose Archive snapshot for more cost-efficient data retention

7.In the Location section,

Choose the type of storage location that you want for your snapshot.

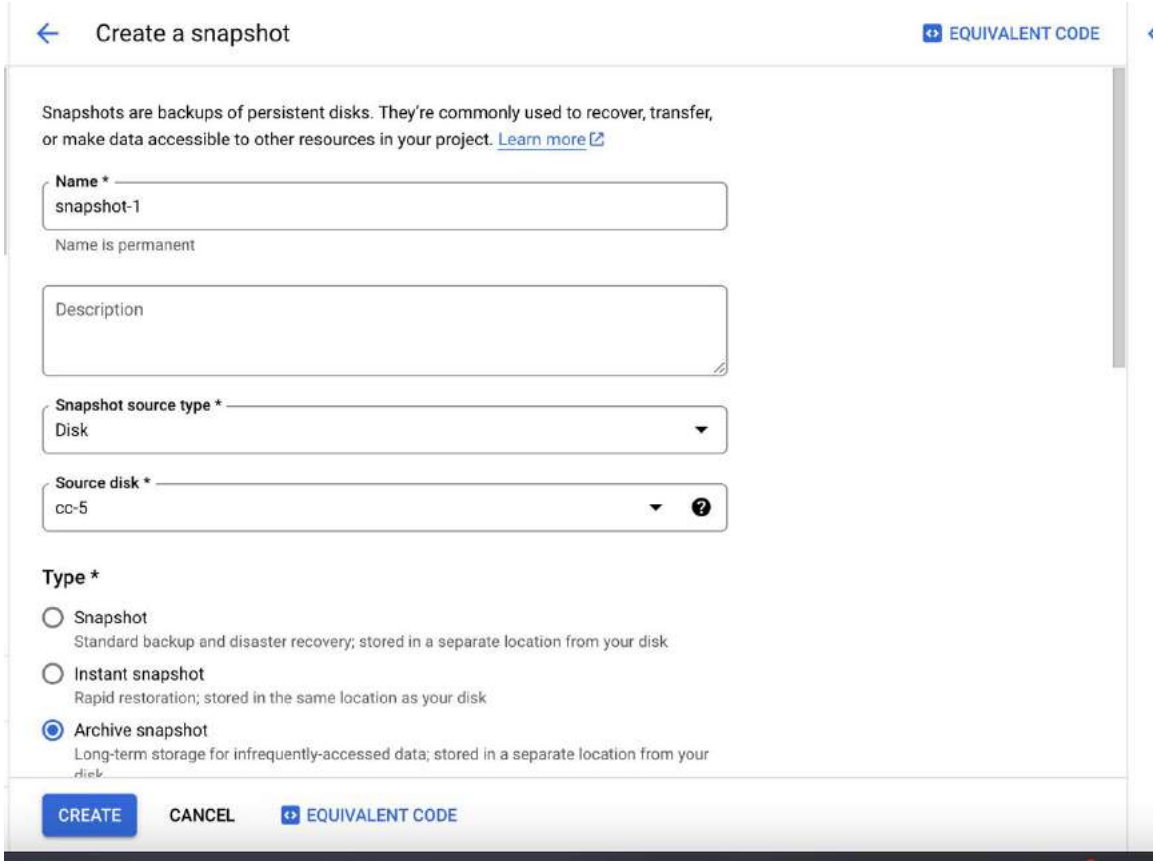
▪ Choose Multi-regional for higher availability at a higher cost.

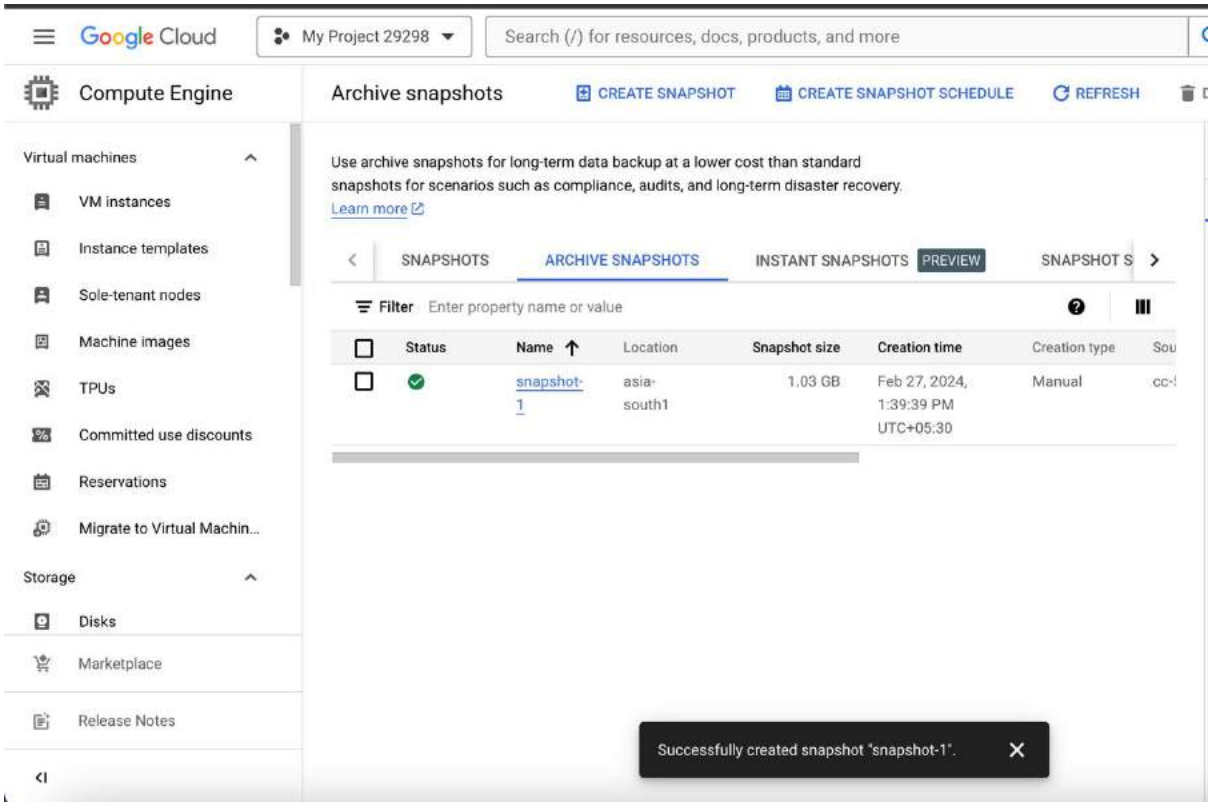
▪ Choose Regional snapshots for more control over the physical location of your data at a lower cost.

In the Select location field, select the specific region or multi-region that you want to use.

To use the region or multi-region that is closest to your source disk, select Based on disk's location.

8. To create a manual snapshot, click Create.





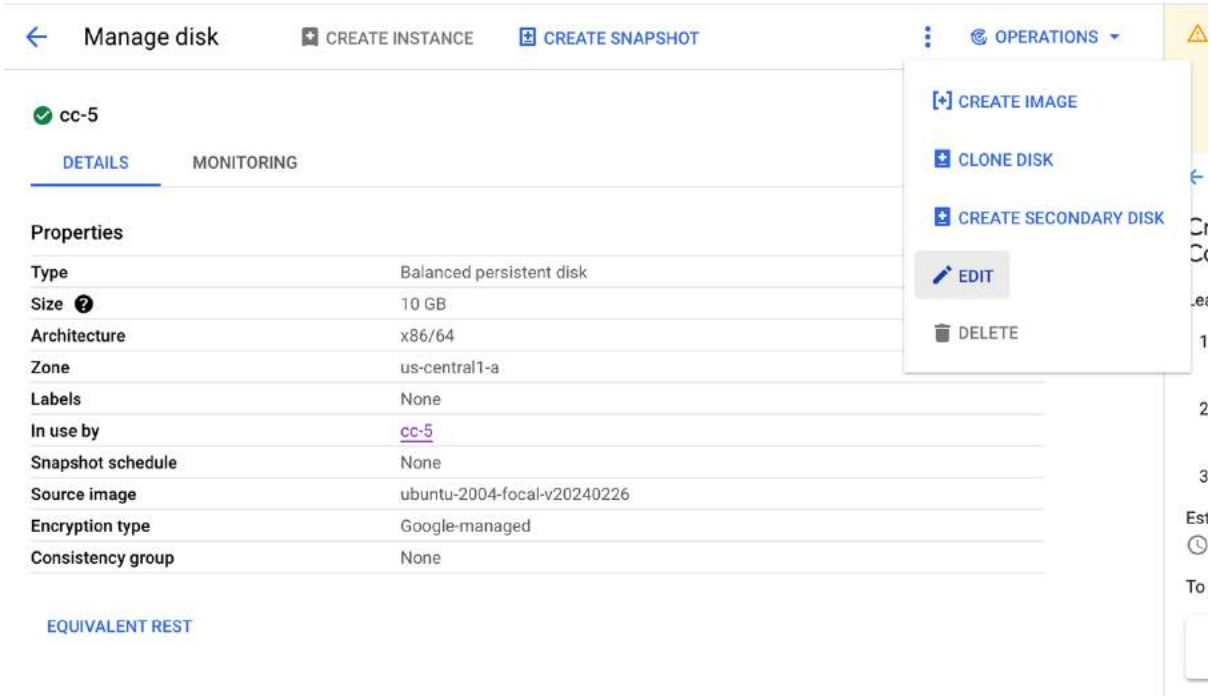
6. Configure periodic backups with a snapshot schedule

1. click Compute Engine → VM instances.

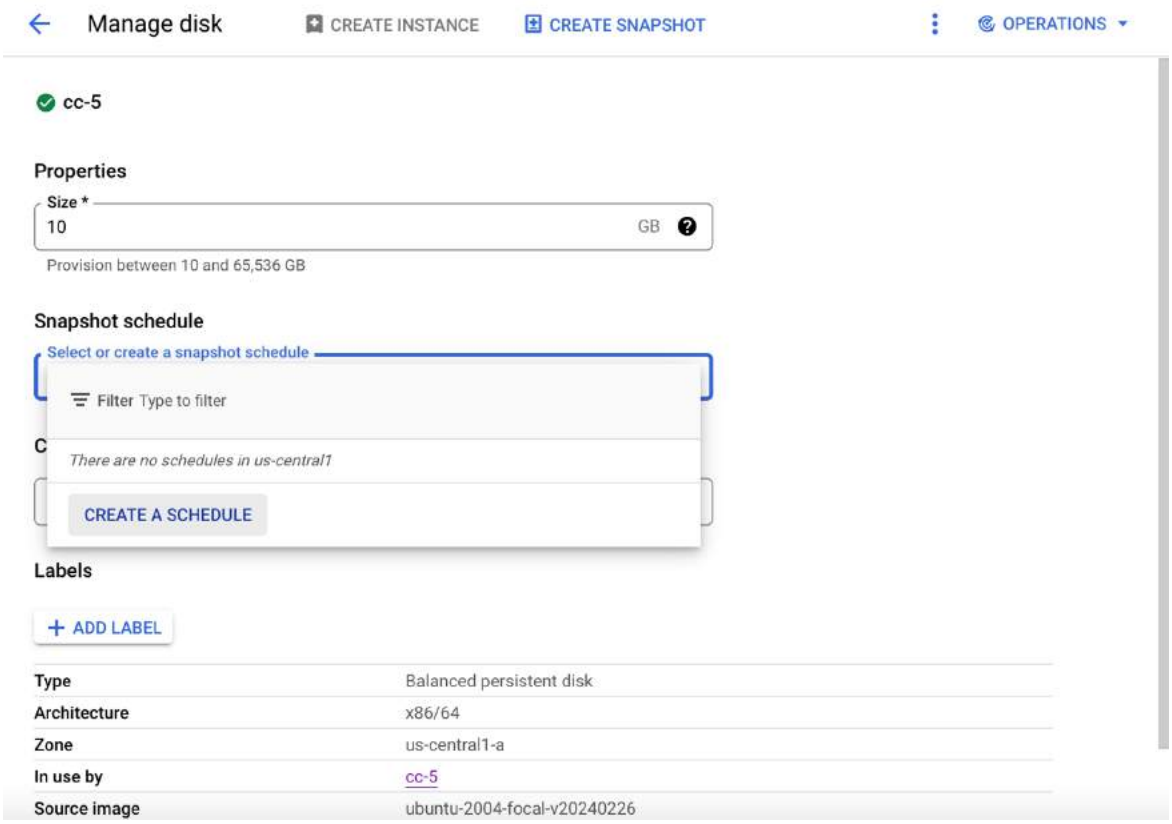
2. In the Name column, click the name of the VM that has the persistent disk to create a snapshot schedule for.

3. In Storage, click the name of the Boot disk or the Additional disk to create a snapshot schedule for.

4. Click Edit.



5. In Snapshot schedule, choose Create a schedule.



6. In Name, enter one of the Name

In the Location section, choose your snapshot storage location. The predefined or customized default location defined in your snapshot settings is automatically selected. Optionally, you can override the snapshot settings and store your snapshots

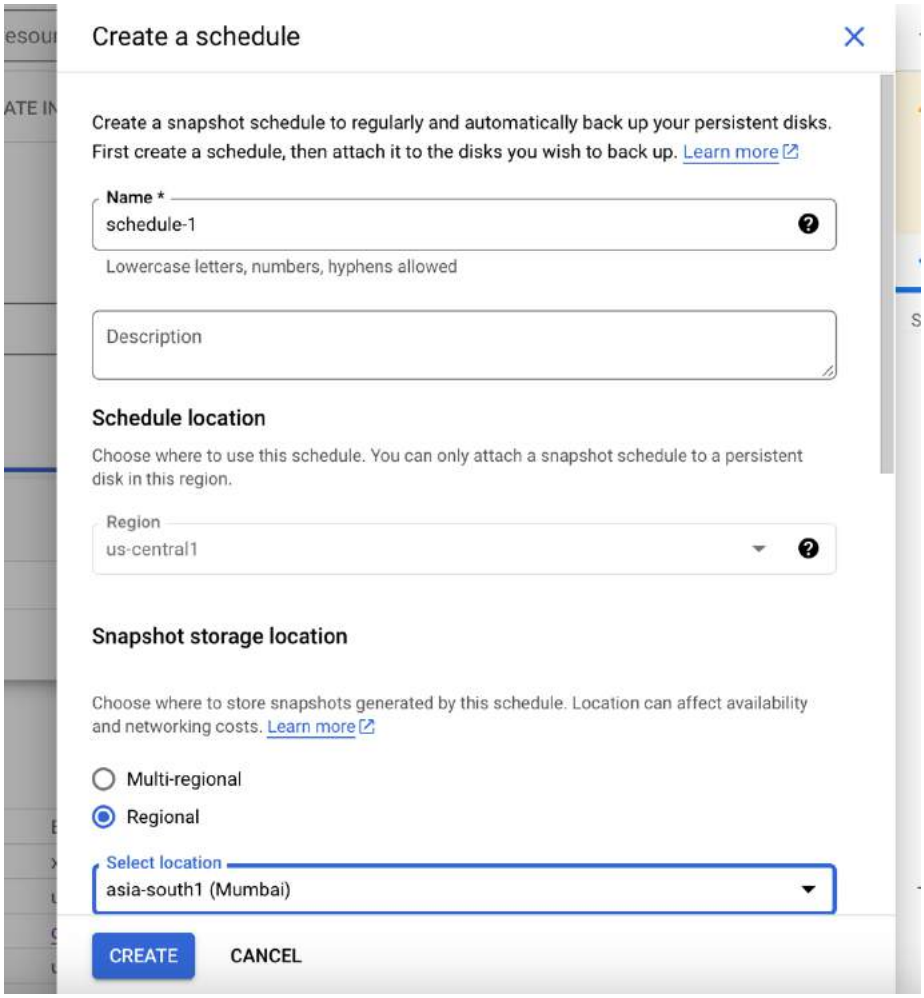
In a custom storage location by doing the following:

Choose the type of storage location that you want for your snapshot.

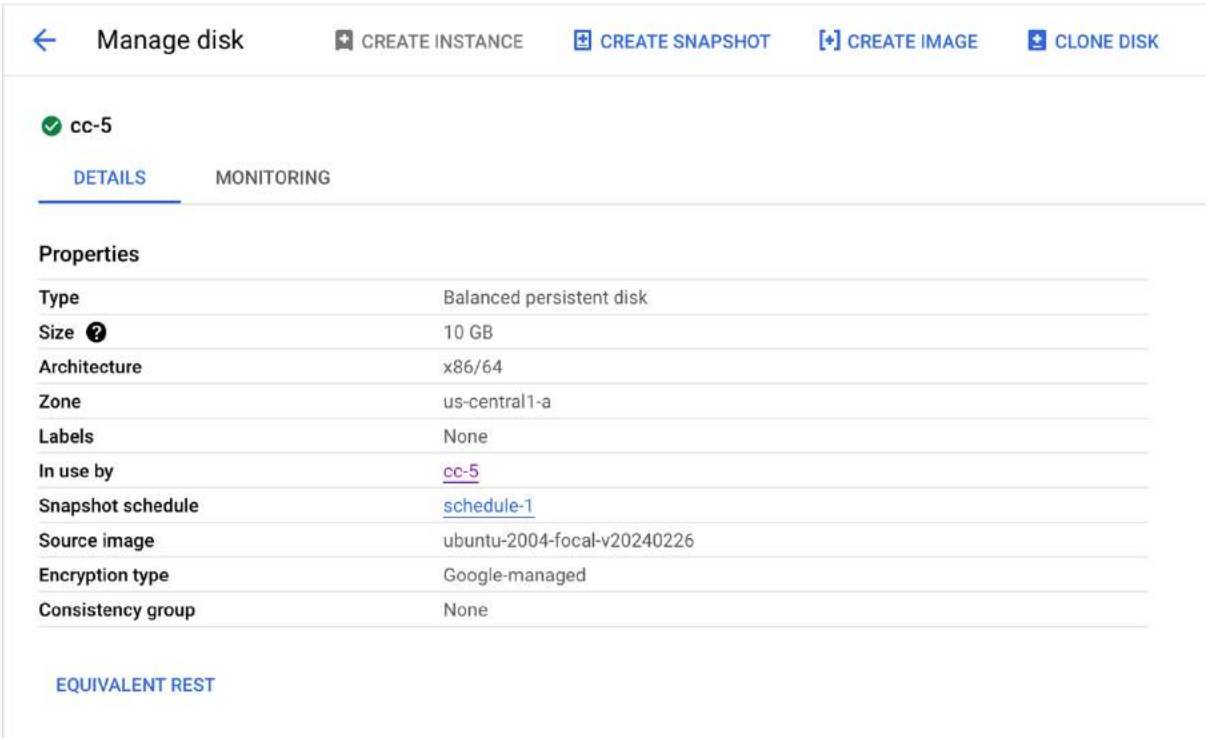
▪ Choose Multi-regional for higher availability at a higher cost.

▪ Choose Regional snapshots for more control over the physical location of your data at a lower cost.

In the Select location field, select the specific region or multi-region that you want to use. To use the region or multi-region that is closest to your source disk, select Based on disk's location.



To attach this snapshot schedule to the persistent disk, click Save.



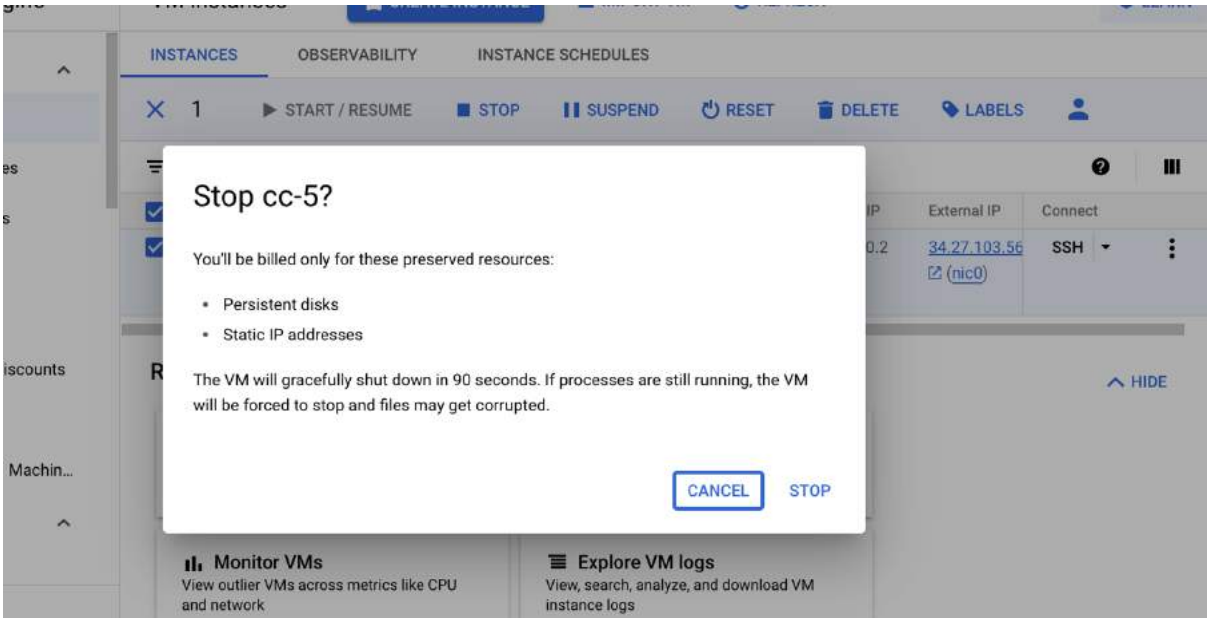
7. Restore a boot disk from a snapshot

Detach the boot disk and configure a new boot disk

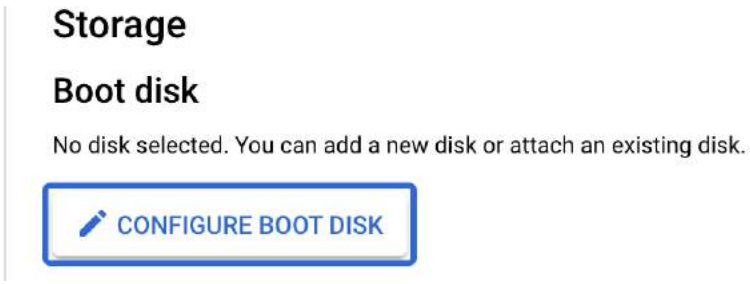
1. click Compute Engine, and then select VM instances.

2. Click the Name of the VM with the persistent disk to restore.

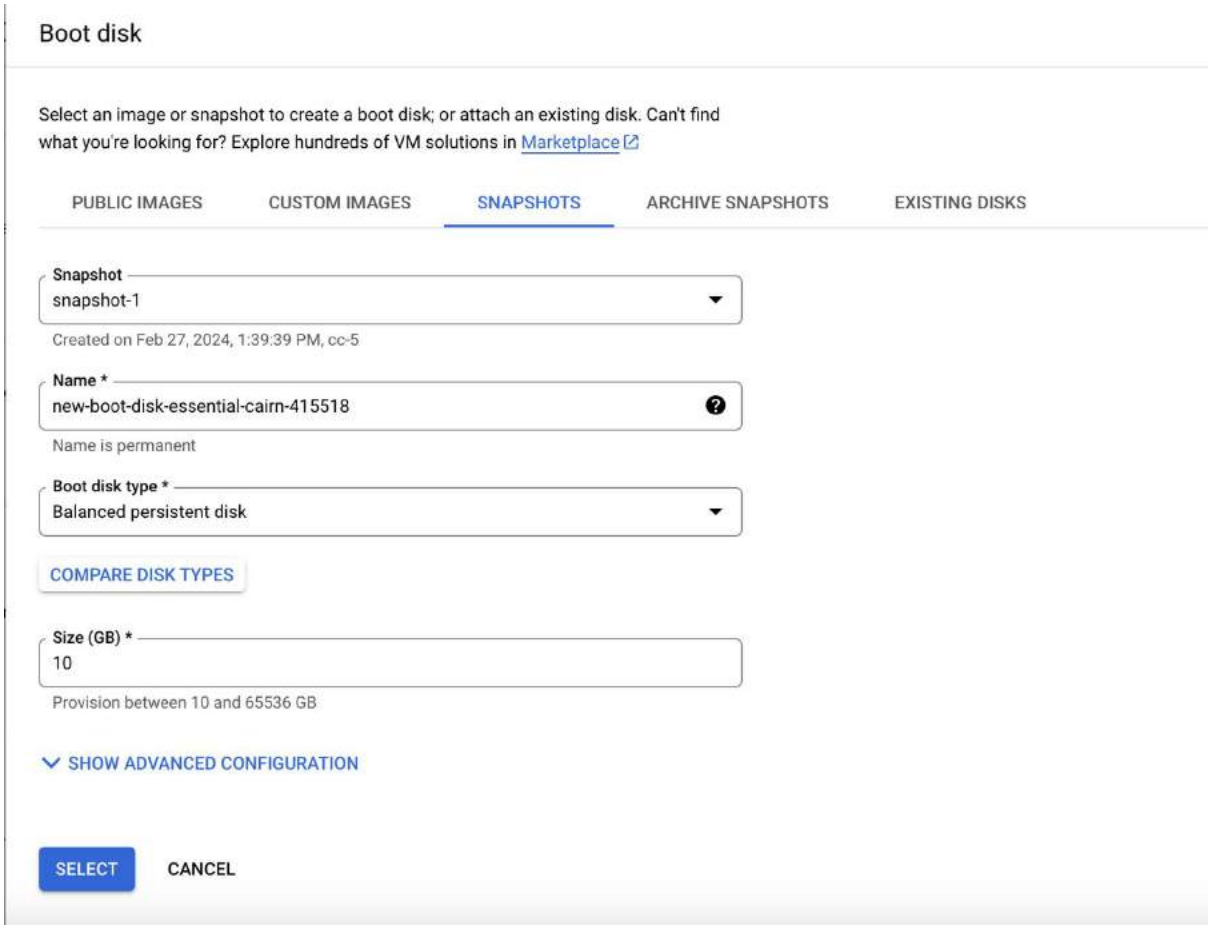
3. Stop the VM.



3. Click Edit the VM.
4. In Storage, click Detach boot disk

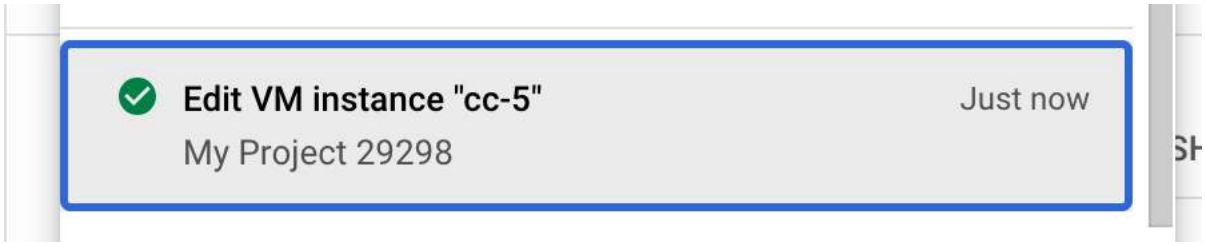


8. In Snapshots, choose a snapshot to create a disk from.
9. In Name, enter new-boot-disk-essential-415518

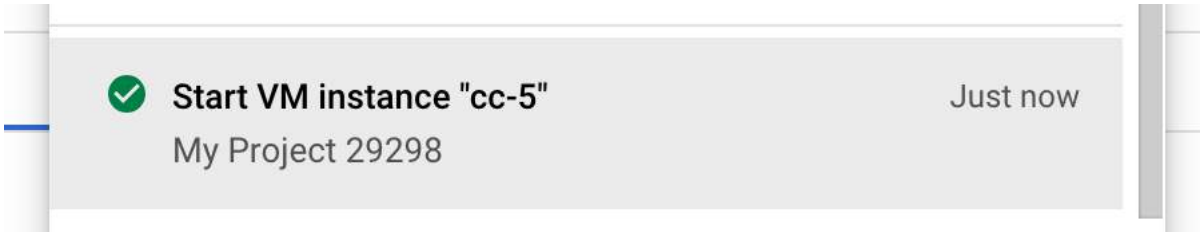


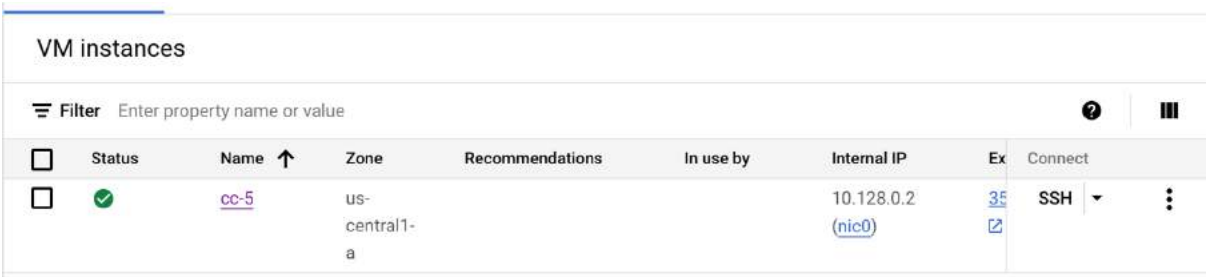
10. After configuring the source for the new boot disk, click Select.

11. To finish configuring the VM, click Save.



12. To start the VM, click Start

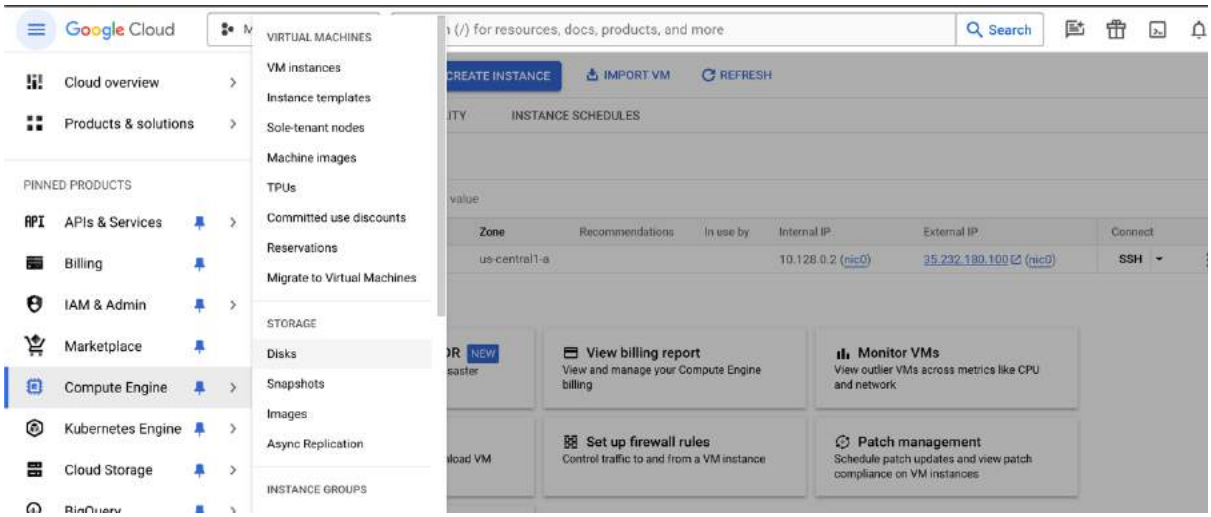




Optionally delete the disk

To delete the original disk if you no longer need it, do the following:

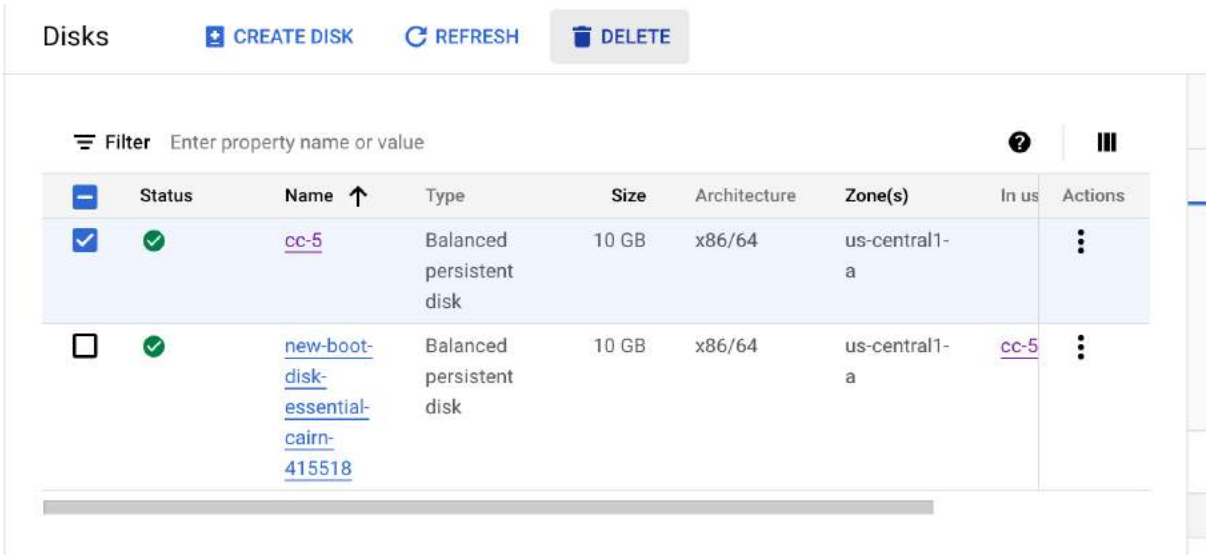
click Compute Engine, and then select Disks.



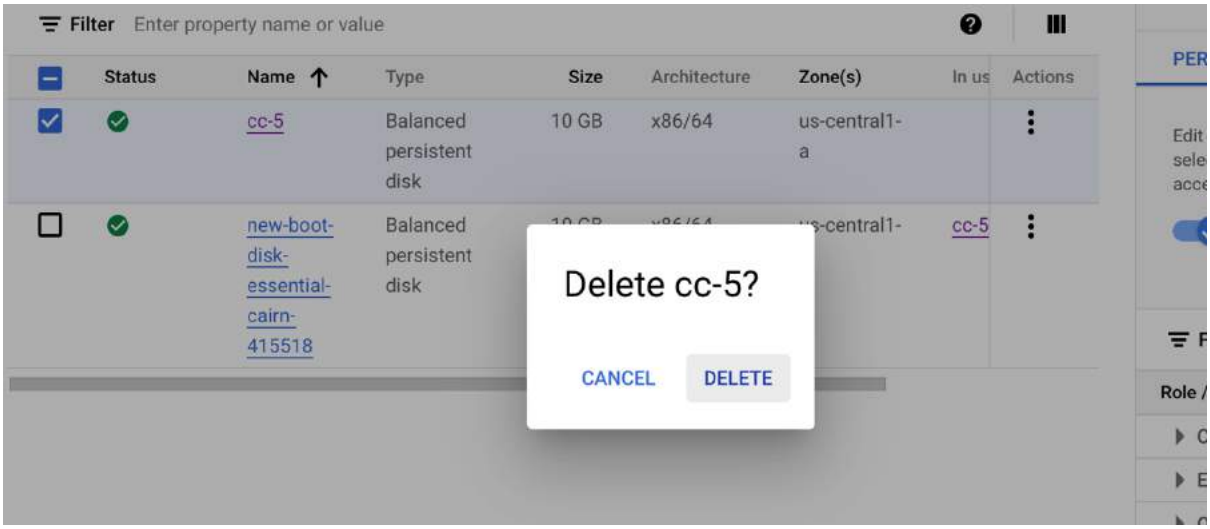
2. In the In use by column, note that the original disk is no longer in use by any VM.

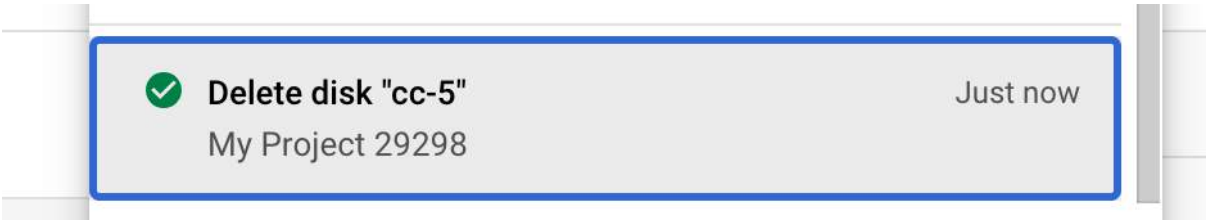
   You can't delete a disk that is in use by a VM.

3. Click the Name of the original disk

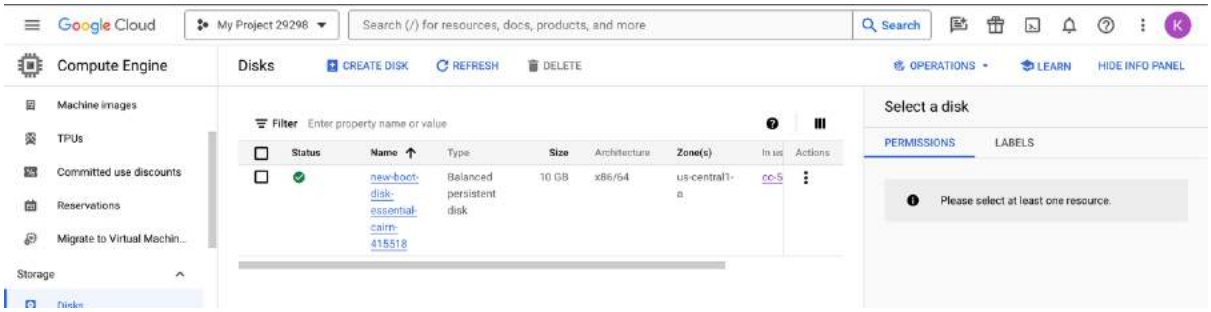


4. Click Delete, and then confirm by clicking Delete again.



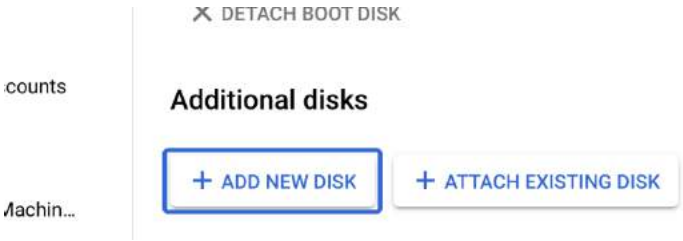


5. You have successfully restored the boot disk to the VM.



8. Restore a persistent disk from a snapshot

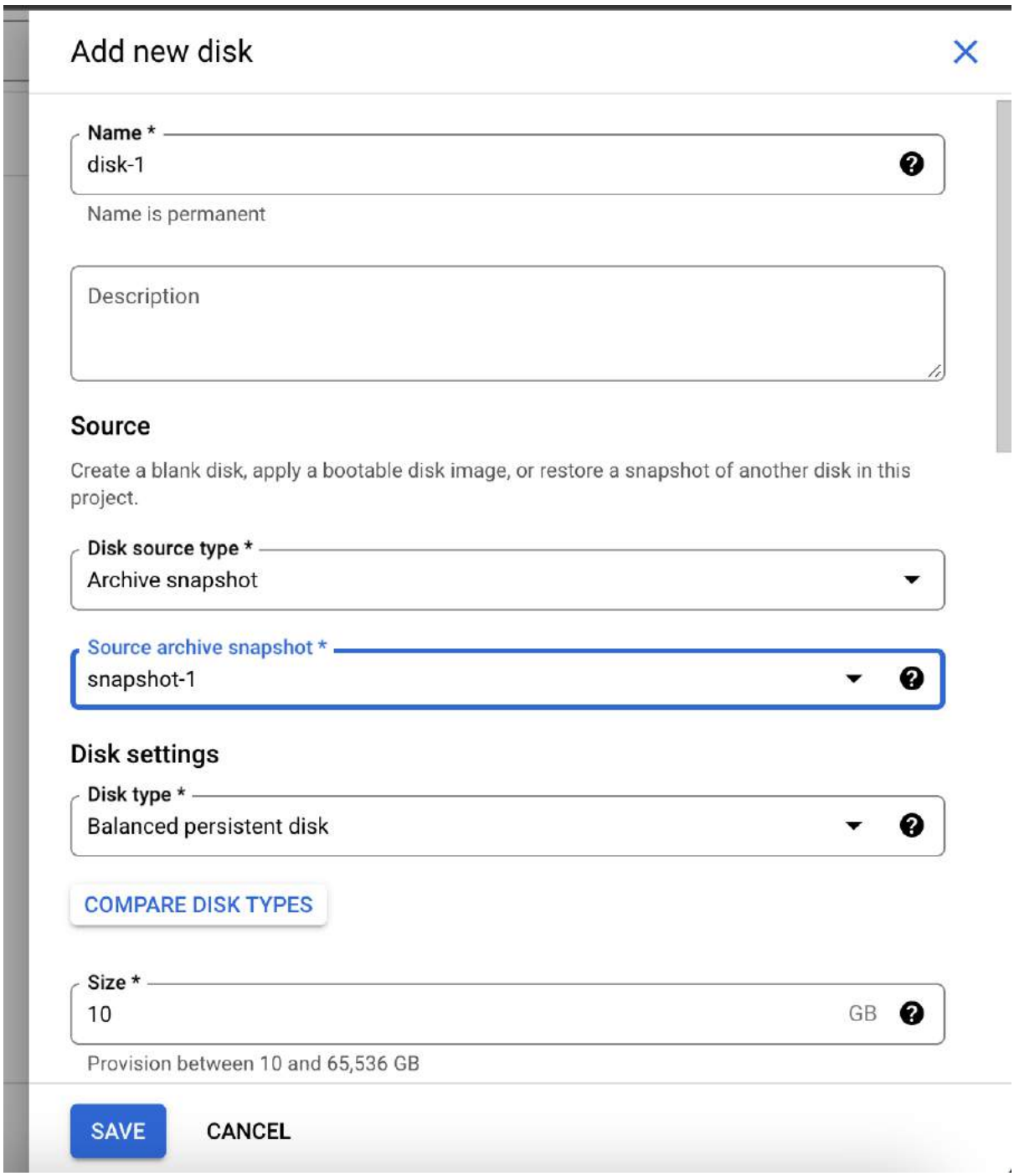
1. click Compute Engine, and then select VM instances. → Select the project which contains VM instance.
2. Click the Name of the VM with the persistent disk to restore.
3. Edit the VM
4. In Additional disks, detach the disk.
5. In Additional disks, click Add new disk.



6. In Name, enter new-persistent-disk-assignment88.

Wait a moment for Compute Engine to verify that the default name is unique. If you get a Name is already in use error, enter a new name for the disk

7. In Disk source type, choose Snapshot.
8. In Source snapshot, select the name of a previously created snapshot.



9. To attach the snapshot to the VM, click Save.

10. To update the VM details, click Save.

Practical 7

Aim : Write a program for web feed.

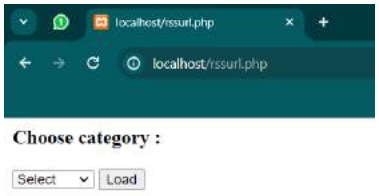
Code:

rssurl.php - Notepad

File Edit Format View Help

```
<h3><b> Choose category : </b></h3>
<form method="post" id="myform">
        <select name="rssurl" required>
                <option value="">Select</option>
                <option value="http://timesofindia.indiatimes.com/rssfeeds/-2128672765.cms">Science</option>
                <option value="https://timesofindia.indiatimes.com/rssfeeds/65857041.cms">Astrology</option>
                <option value="http://timesofindia.indiatimes.com/rssfeeds/66949542.cms">Tech</option>
        </select>
        <input type="submit" value="Load"/>
</form>


<?php

if(isset($_POST['rssurl']))
{
        echo '<h1> Search Result for RSS url: '.$_POST['rssurl'].'</h1>';
        $rssurl=$_POST['rssurl'];
        $rss=new DOMDocument();
        $rss->load($rssurl);
        $feed=array();

        foreach($rss->getElementsByTagName('item')as $node)
        {
                $item=array('title'=>$node->getElementsByTagName('title')->item(0)->nodeValue, 'desc'=>$node->getElementsByTagName('description')->item(0)->nodeValue,
                'link'=>$node->getElementsByTagName('link')->item(0)->nodeValue, 'date'=>$node->getElementsByTagName('pubDate')->item(0)->nodeValue);
                array_push($feed,$item);
        }

        $limit=5;
        for($x=0;$x<$limit;$x++)
        {
                $title=str_replace('&','&amp;',$feed[$x]['title']);
                $link=$feed[$x]['link'];
                $description=$feed[$x]['desc'];
                $date=date('l F d,Y',strtotime($feed[$x]['date']));
                echo '<p> <strong><a href="'.$link.'" title="'.$title.'">'.$title.'</a></strong><br>';
                echo '<p>'.$description.' </p>';
                echo '<small><em>Posted on '.$date.'</em></small>';
        }
}
?>
```

Output:



Choose category :

Select Load

Search Result for RSS url: http://timesofindia.indiatimes.com/rssfeeds/-2128672765.cms

Fertility clinic at civic hospital in Mumbai brings ray of hope for poor couples desiring children

A fertility clinic at a civic hospital in Mumbai has come as a ray of hope for couples from lower income groups who desire to have children as it provides treatment for infertility at low costs, officials

Choose category :

Select Load

Search Result for RSS url: https://timesofindia.indiatimes.com/rssfeeds/65857041.cms

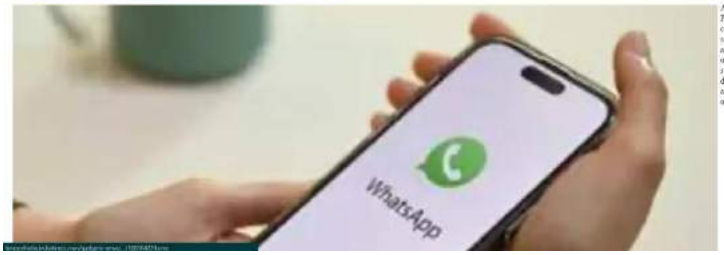
Weekly Horoscope March 10 to March 16, 2024: Read weekly astrological predictions for all zodiac signs

Choose category :

Select Load

Search Result for RSS url: http://timesofindia.indiatimes.com/rssfeeds/66949542.cms

Why a 22-year-old student in Pakistan has been sentenced to death over WhatsApp post



A Pakistani court has sentenced a 22-year-old student to death and a 17-year-old to life

Practical 8

Aim : Case study on Amazon EC2/Microsoft Azure/Google Cloud Platform (Research paper analysis)

Choosing the right cloud platform is crucial for businesses.

Here's how to approach research papers analyzing Amazon EC2, Microsoft Azure, and Google Cloud Platform (GCP).

Finding Research Papers:

Search Engines:

Use keywords like "cloud platform comparison," "EC2 vs Azure vs GCP," or specific areas of interest (e.g., "cloud security Azure").

Academic Databases:

Explore databases like ScienceDirect, IEEE Xplore, or ACM Digital Library for peer-reviewed research.

Cloud Vendor Websites:

Each cloud provider offers white papers and case studies on their platform's strengths. Be mindful of potential bias.

Analyzing Research Papers:

Introduction:

Identify the research paper's focus - is it a general comparison or specific (e.g., cloud for Machine Learning)?

Methodology:

Understand how the study was conducted. Did it involve benchmark testing, user surveys, or case studies?

Evaluation Criteria:

Identify the factors the research compared (e.g., pricing, security, scalability, specific services).

Results and Discussion:

Analyze the findings on each platform's strengths and weaknesses based on the chosen criteria.

Conclusion:

See if the paper offers recommendations for choosing a cloud platform based on specific needs.

Case Study Analysis:

Industry and Application:

Identify the case study's industry and the specific application the cloud platform supported.

Challenges Addressed:

Understand the challenges the organization faced before adopting the cloud platform.

Cloud Platform Choice:

Analyze why the organization chose a specific platform (EC2, Azure, GCP) and the benefits it delivered.

Outcomes and Metrics:

Evaluate the impact of the cloud platform on the organization. Did it improve performance, reduce costs, or achieve other goals?