

Practical No. 02

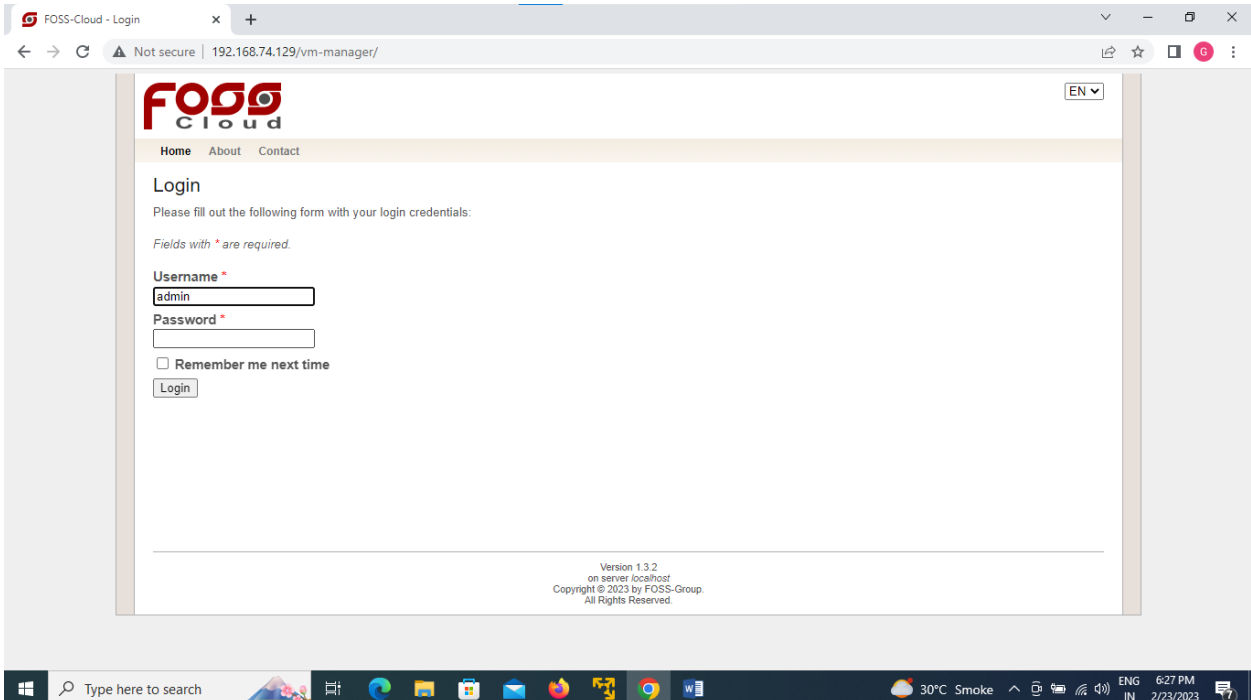
Aim: Study and implementation of Platform as a Service

Theory: Platform as a Service (PaaS) provides a runtime environment. It allows programmers to easily create, test, run, and deploy web applications. You can purchase these applications from a cloud service provider on a pay-as-per use basis and access them using the Internet connection. In PaaS, back end scalability is managed by the cloud service provider, so end- users do not need to worry about managing the infrastructure.

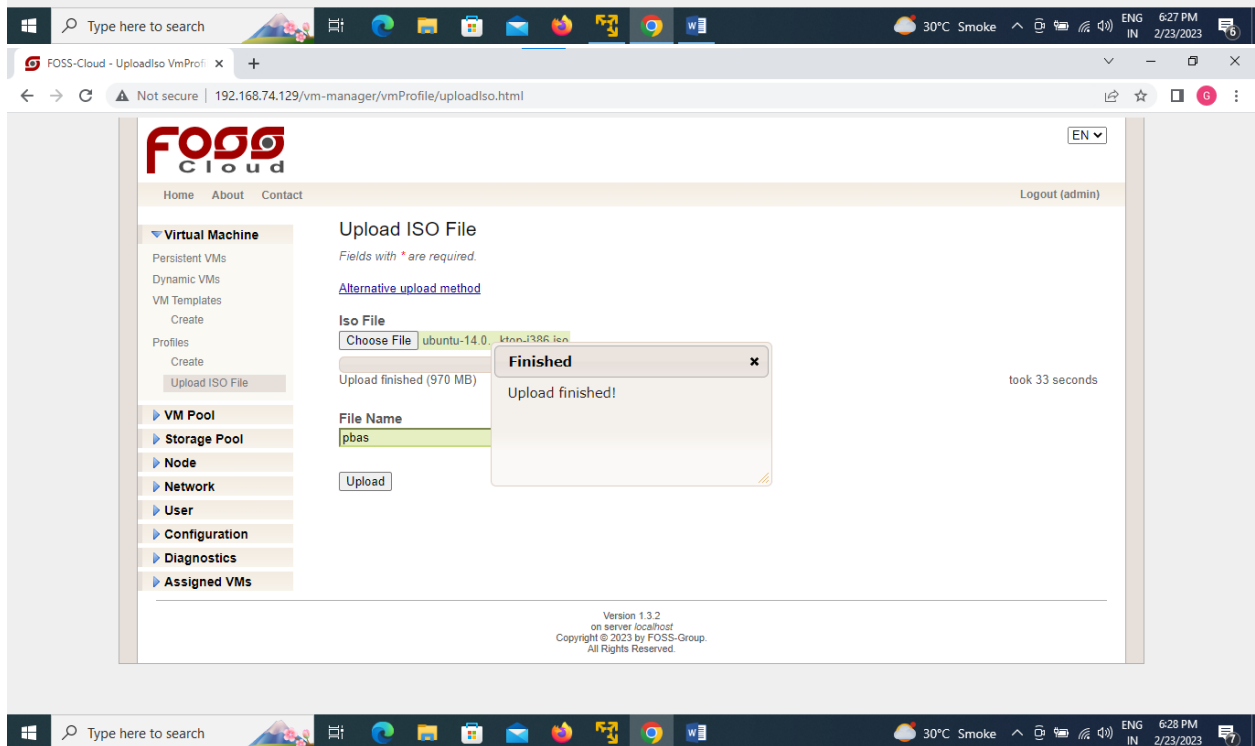
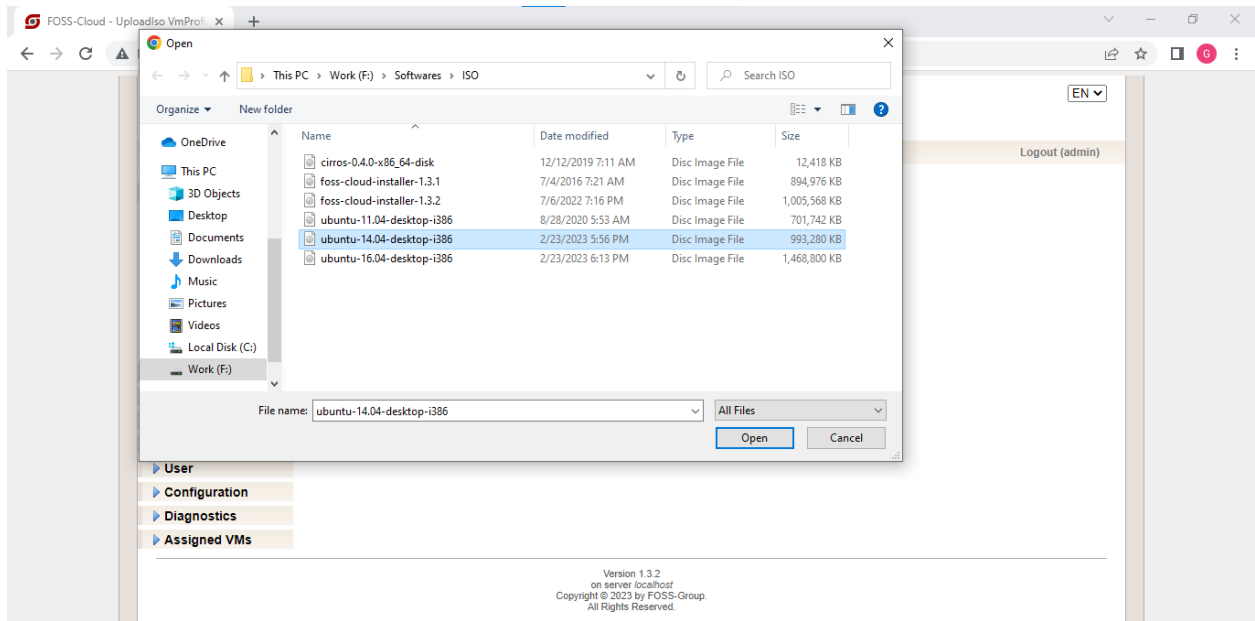
PaaS includes infrastructure (servers, storage, and networking) and platform (middleware, development tools, database management systems, business intelligence, and more) to support the web application life cycle.

Methods and Steps:

A. Using FOSS Server



The screenshot shows a web browser window with the title "FOSS-Cloud - Login". The address bar shows "192.168.74.129/vm-manager/" and a "Not secure" warning. The page features the "FOSS Cloud" logo in the top left and a language selector "EN" in the top right. Below the logo is a navigation bar with "Home", "About", and "Contact" links. The main content area is titled "Login" and contains the instruction "Please fill out the following form with your login credentials:". Below this, it states "Fields with * are required." The login form includes a "Username *" field with "admin" entered, a "Password *" field, a "Remember me next time" checkbox, and a "Login" button. At the bottom of the page, there is a footer with the text: "Version 1.3.2 on server localhost Copyright © 2023 by FOSS-Group. All Rights Reserved." The Windows taskbar is visible at the bottom of the screen, showing the search bar, task view button, and several application icons. The system tray on the right shows the temperature as 30°C, the name "Smoke", and the date and time as 6:27 PM on 2/23/2023.



FOSS-Cloud - Create VmProfile

Not secure | 192.168.74.129/vm-manager/vmProfile/create.html

Virtual Machine

Persistent VMs

Dynamic VMs

VM Templates

Create

Profiles

Create

Upload ISO File

VM Pool

Storage Pool

Node

Network

User

Configuration

Diagnostics

Assigned VMs

Fields with * are required.

Step I
Please select a profile first!

BaseProfile

linux

default

i686

x86_64

multi

de-DE

de-AT

de-CH

en-US

en-GB

fr-CH

fr-FR

it-CH

it-IT

Ubuntu11

U14

Ub16

windows

Step II
Overwrite the default values if necessary!

Isofile *

U14.iso

ubuntu16.iso

U16_32.iso

pbas.iso

Name *

pbas

Description *

this is our first foss

Memory *

128 MB

128 GB

3.5 GB

Volume Capacity *

10 GB

2048 GB

10 GB

CPU *

1

Clock Offset *

utc

Create

Version 1.3.2
on server localhost

FOSS-Cloud - VmProfile

Not secure | 192.168.74.129/vm-manager/vmProfile/index.html?copyaction=6759

FOSS Cloud

Home About Contact

Logout (admin)

Virtual Machine

Persistent VMs

Dynamic VMs

VM Templates

Create

Profiles

Create

Upload ISO File

VM Pool

Storage Pool

Node

Network









User

Configuration

Diagnostics

Assigned VMs

Manage VmProfiles

| No. | Name | Architecture | Language | Description | Action |
|-----|----------|----------------|----------|------------------------|---|
| 1 | Ubuntu11 | linux / x86_64 | multi | Ubuntu11 |   |
| 2 | U14 | linux / x86_64 | multi | U14 |   |
| 3 | Ub16 | linux / x86_64 | multi | Ub16 |   |
| 4 | pbas | linux / x86_64 | multi | this is our first foss |   |

Page 1 of 1

Version 1.3.2
on server localhost
Copyright © 2023 by FOSS-Group.
All Rights Reserved.

31°C Smoke

ENG IN

6:30 PM

2/23/2023

FOSS-Cloud - Create VmTemplate

Not secure | 192.168.74.129/vm-manager/vmTemplate/create.html

VM Templates

Create

Profiles

Create

Upload ISO File

VM Pool

Storage Pool

Node

Network

User

Configuration

Diagnostics

Assigned VMs

Please select a profile first!

Profile

linux

Ubuntu11

U14

Ub16

pbas

x86_64

multi

windows

Please choose a node and overwrite the default values if necessary!

Vmpool *

vm-template-virtual-machine-pool-01

Node *

foss-cloud-01.foss-cloud.org

Name *

pbas

Description *

this is our first foss

Memory *

128 MB

128 GB

3.5 GB

Volume Capacity *

10 GB

2048 GB

10 GB

CPU *

1

Clock Offset *

utc

Number of displays

1

Create

FOSS-Cloud - VmTemplate

Not secure | 192.168.74.129/vm-manager/vmTemplate/index.html

FOSS Cloud

Home About Contact

Logout (admin)

Virtual Machine

Persistent VMs

Dynamic VMs

VM Templates

Create

Profiles

Create

Upload ISO File

VM Pool

Storage Pool

Node

Network

User

Configuration

Diagnostics

























Assigned VMs

Links

Download Spice Client

Manage VMTemplates

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

| No. | DisplayName | Status | Run Action | Memory | Node | Action |
|-----|-------------|---------|---|--------|------------------------------|---|
| 1 | Ubuntu11 | stopped |    | --- | foss-cloud-01.foss-cloud.org |    |
| 2 | U14 | stopped |    | --- | foss-cloud-01.foss-cloud.org |    |
| 3 | Ub16 | stopped |    | --- | foss-cloud-01.foss-cloud.org |    |
| 4 | pbas | stopped |    | --- | foss-cloud-01.foss-cloud.org |    |

Page 1 of 1 10 Refresh 10

Version 1.3.2
on server localhost

FOSS-Cloud - VmTemplate

Not secure | 192.168.74.129/vm-manager/vmTemplate/index.html

FOSS Cloud

Home About Contact Logout (admin)

Virtual Machine

Persistent VMs

Dynamic VMs

VM Templates

Create

Profiles

Create

Upload ISO File

VM Pool

Storage Pool

Node

Network

User

Configuration

Diagnostics

























Assigned VMs

Links

Download Spice Client

Manage VMTemplates

Vm Pool **vm-template-virtual-machine-pool-01**

| No. | DisplayName | Status | Run Action | Memory | Node | Action |
|-----|-------------|---------|---|-----------------|------------------------------|---|
| 1 | Ubuntu11 | stopped |    | --- | foss-cloud-01.foss-cloud.org |    |
| 2 | U14 | stopped |    | --- | foss-cloud-01.foss-cloud.org |    |
| 3 | Ub16 | stopped |    | --- | foss-cloud-01.foss-cloud.org |    |
| 4 | pbas | running |    | 3.5 GB / 3.5 GB | foss-cloud-01.foss-cloud.org |    |

Page 1 of 1 10 Refresh 10

Version 1.3.2 on server local/host

FOSS-Cloud - VmTemplateInfos

Not secure | 192.168.74.129/vm-manager/diagnostics/vmtemplateinfos.html?dn=sstVirtualMachine=9be6d5f3-3e0a-41ae-89d7-70cd1173796d,ou=virtual%20machine...

FOSS Cloud

Home About Contact Logout (admin)

Virtual Machine

VM Pool

Storage Pool

Node

Network

User

Configuration

Diagnostics

Persistent VM Infos

Dynamic VM Infos

VM Template Infos

VM Counter

LDAP Attribute Types

LDAP Object Classes

Assigned VMs

VM Template Infos

- Ubuntu11
- U14
- Ub16
- >> pbas

- Libvirt URI

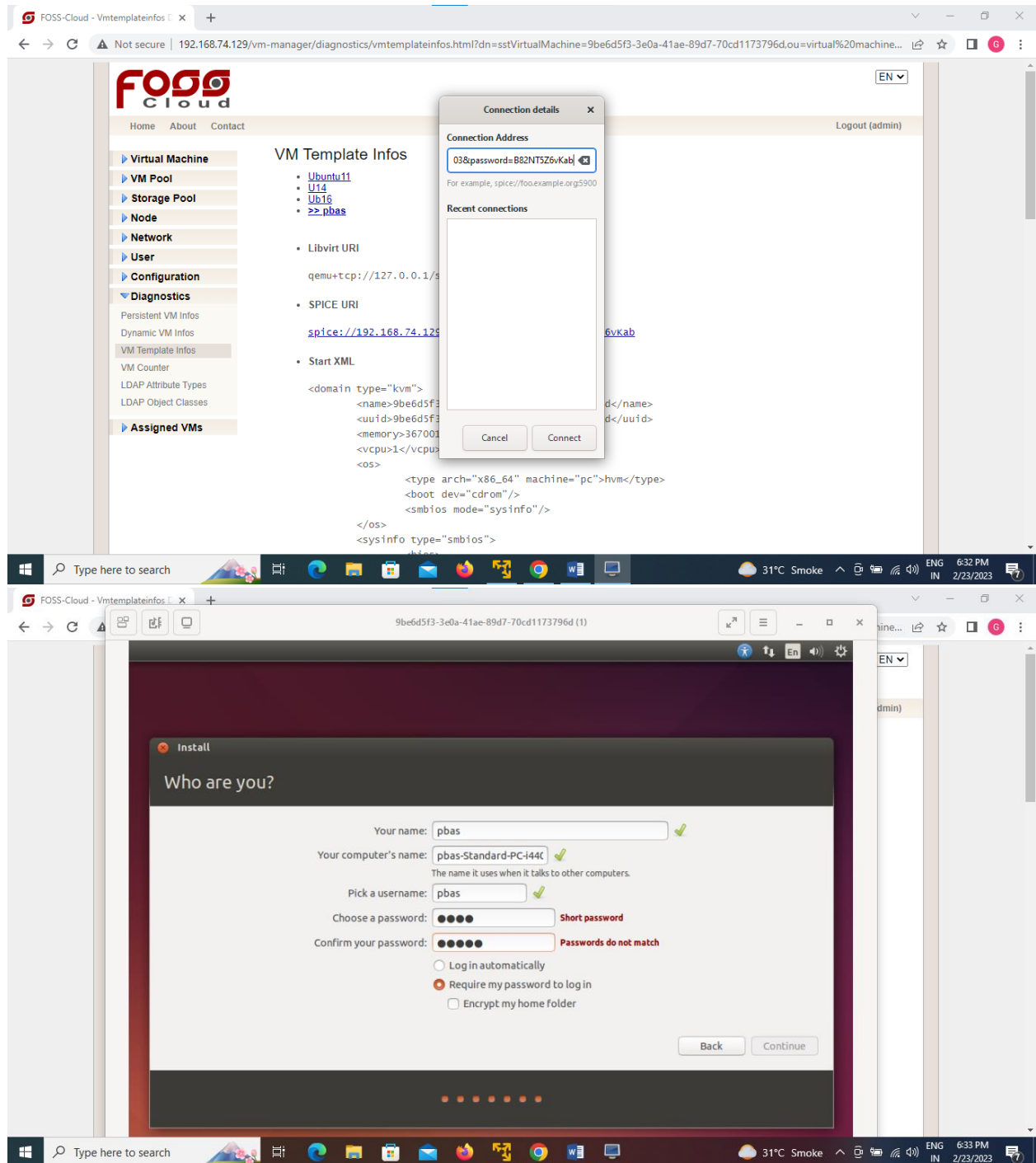
qemu+tcp://127.0.0.1/system

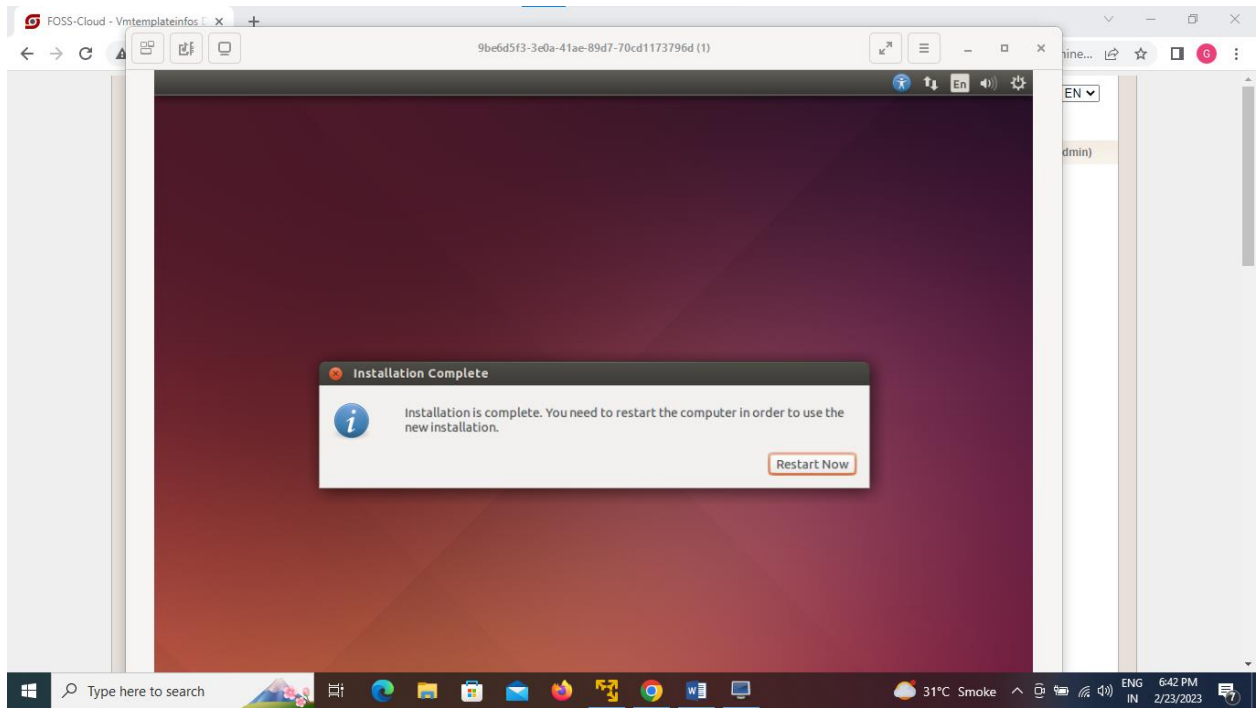
- SPICE URI

spice://192.168.74.129?port=5903&password=882NT5Z6vKab

- Start XML

```
<domain type="kvm">
  <name>9be6d5f3-3e0a-41ae-89d7-70cd1173796d</name>
  <uuid>9be6d5f3-3e0a-41ae-89d7-70cd1173796d</uuid>
  <memory>3670016</memory>
  <vcpu>1</vcpu>
  <os>
    <type arch="x86_64" machine="pc">hvm</type>
    <boot dev="cdrom"/>
    <smbios mode="sysinfo"/>
  </os>
  <sysinfo type="smbios">
```





```
x=int(input("Enter a number: "))
y=int(input("Enter 2 number: "))
mul=x*y
print("Multiplication is ",mul)
```

Thunderbird Mail

```
File Edit View Search Terminal Help
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ubuntu:~$ sudo gedit app.py

* (gedit:3193): WARNING **: 21:28:47.597: Set document metadata failed: Setting
attribute metadata::gedit-spell-language not supported

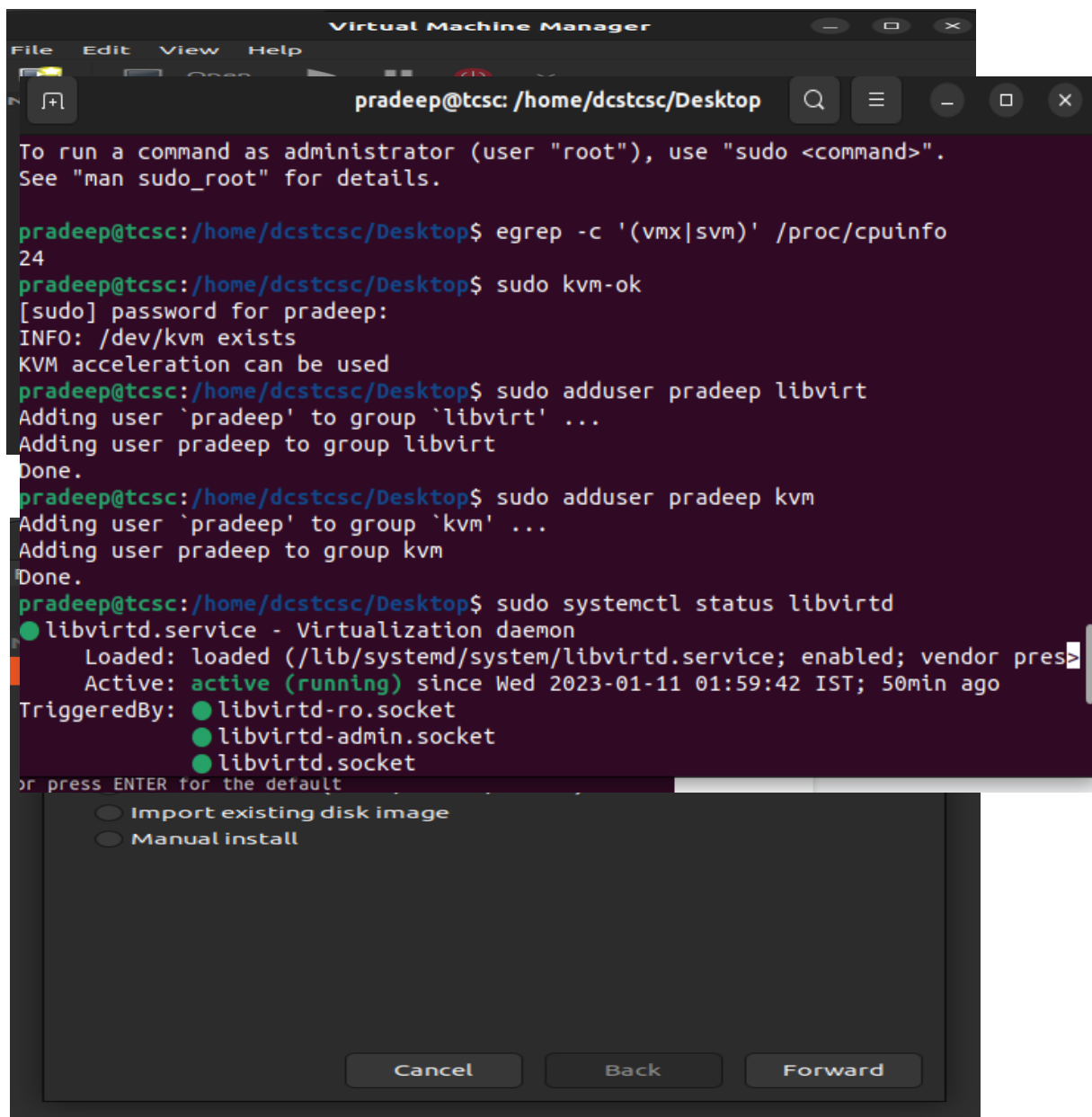
* (gedit:3193): WARNING **: 21:28:47.597: Set document metadata failed: Setting
attribute metadata::gedit-encoding not supported

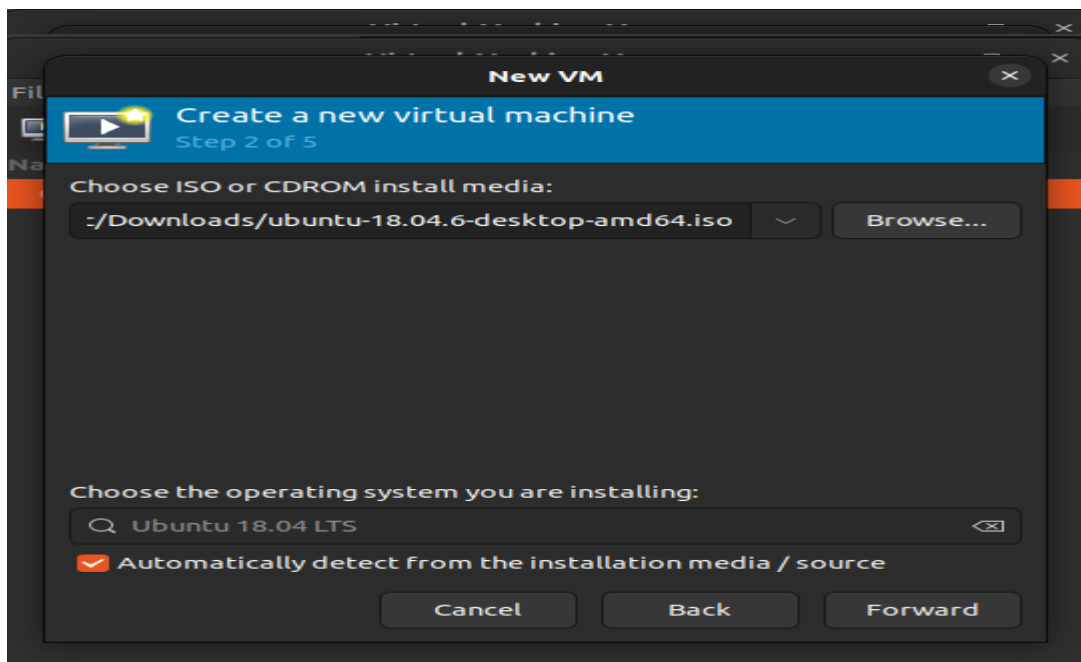
* (gedit:3193): WARNING **: 21:28:55.037: Set document metadata failed: Setting
attribute metadata::gedit-position not supported
ubuntu@ubuntu:~$ python app.py
Enter a number: 5
Enter 2 number: 6
'Multiplication is ', 30)
ubuntu@ubuntu:~$
```

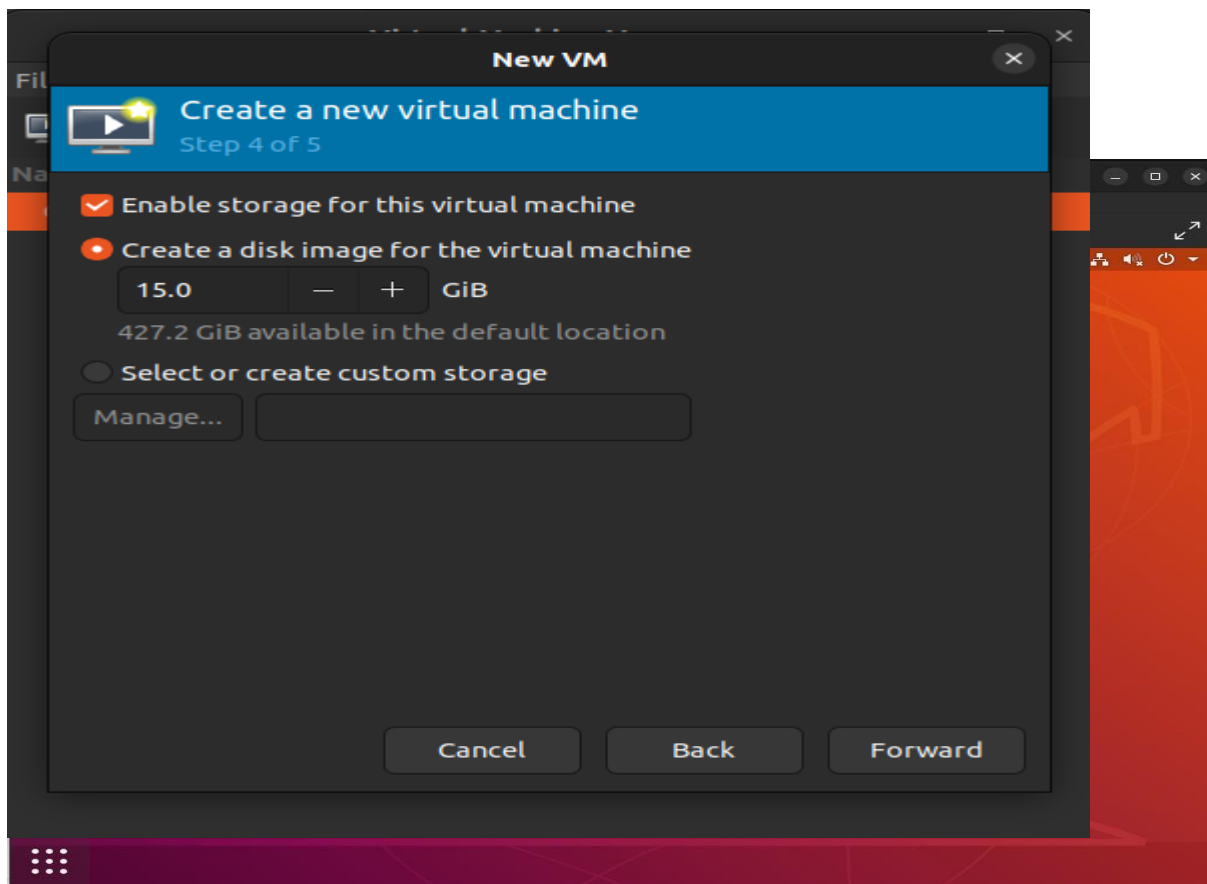
B. Using KVM.

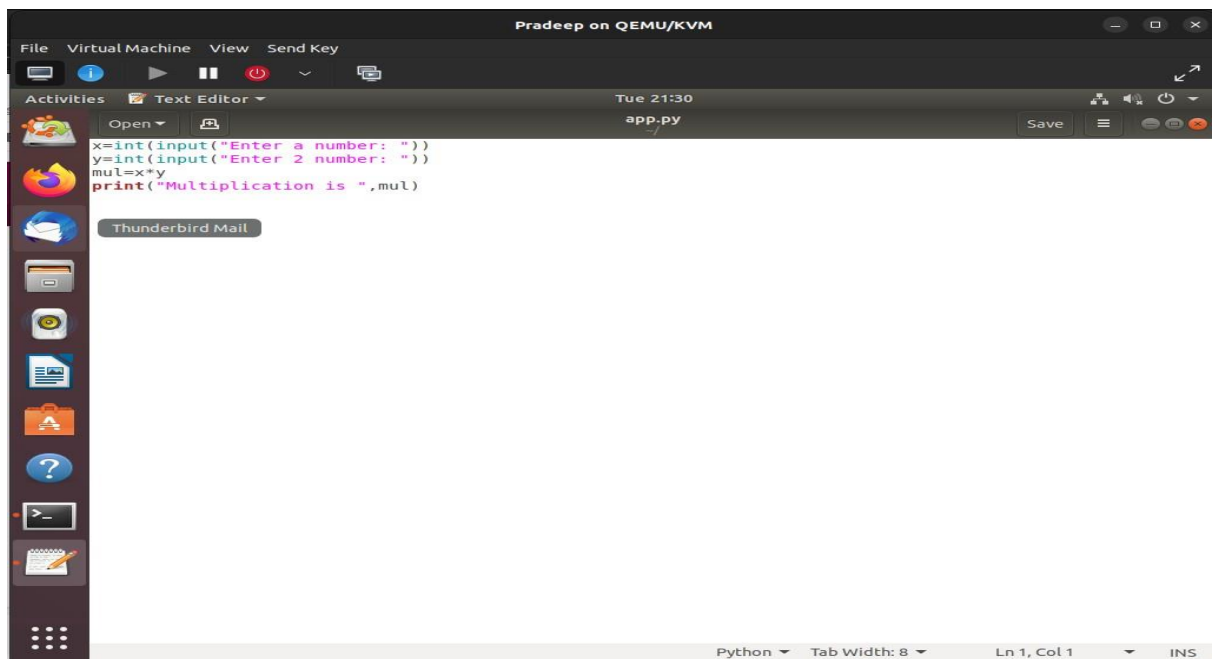
```
pradeep@tcsc: /home/dcstcsc/Desktop
Adding user `pradeep' ...
Adding new group `pradeep' (1044) ...
Adding new user `pradeep' (1044) with group `pradeep' ...
Creating home directory `/home/pradeep' ...
Copying files from `/etc/skel' ...
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: password updated successfully
Changing the user information for pradeep
Enter the new value, or press ENTER for the default
    Full Name []:
    Room Number []:
    Work Phone []:
    Home Phone []:
    Other []:
Is the information correct? [Y/n]
dcstcsc@tcsc:~/Desktop$ sudo usermod -aG sudo pradeep
dcstcsc@tcsc:~/Desktop$ su pradeep
Password:
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

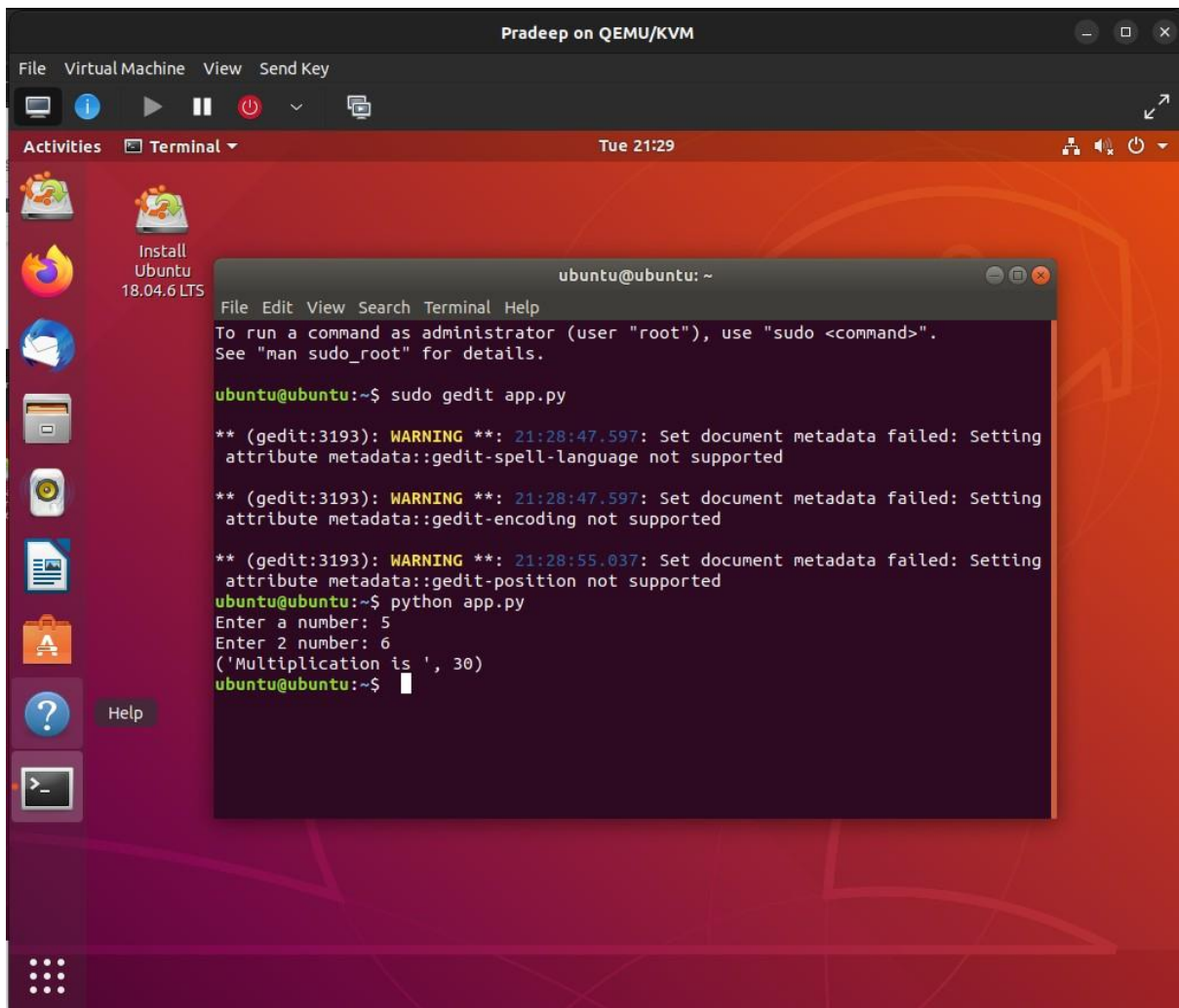
pradeep@tcsc: /home/dcstcsc/Desktop$
```





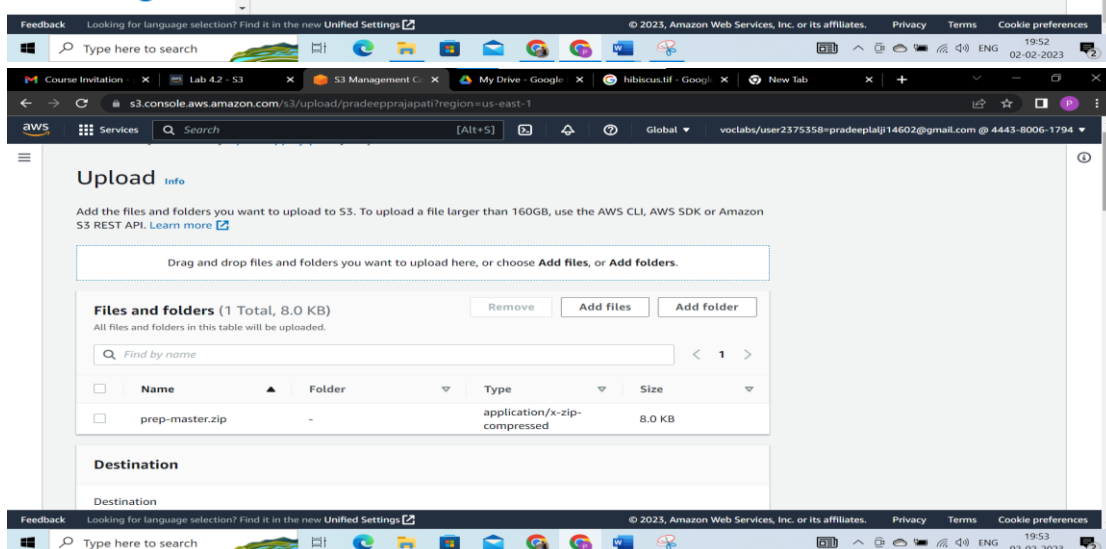
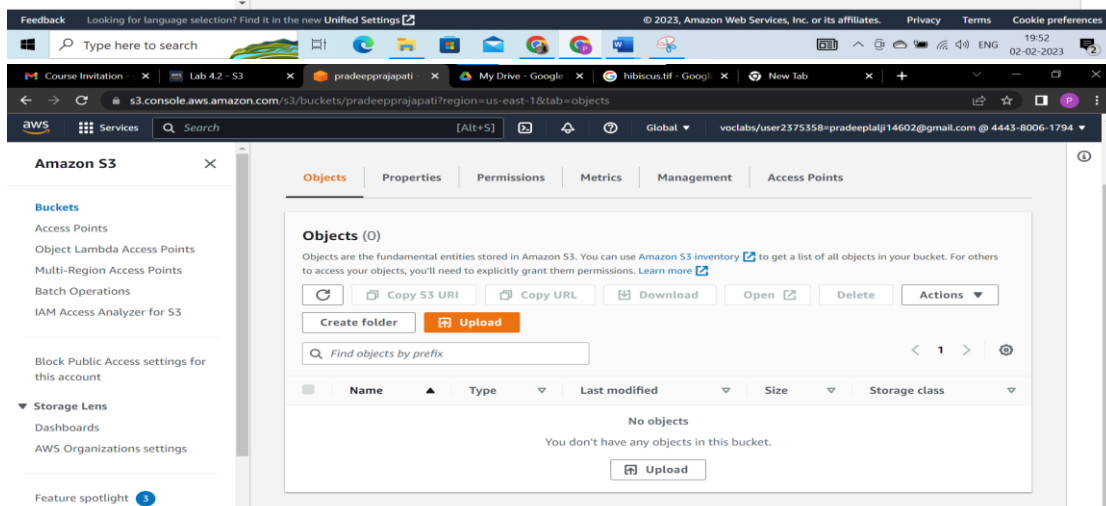
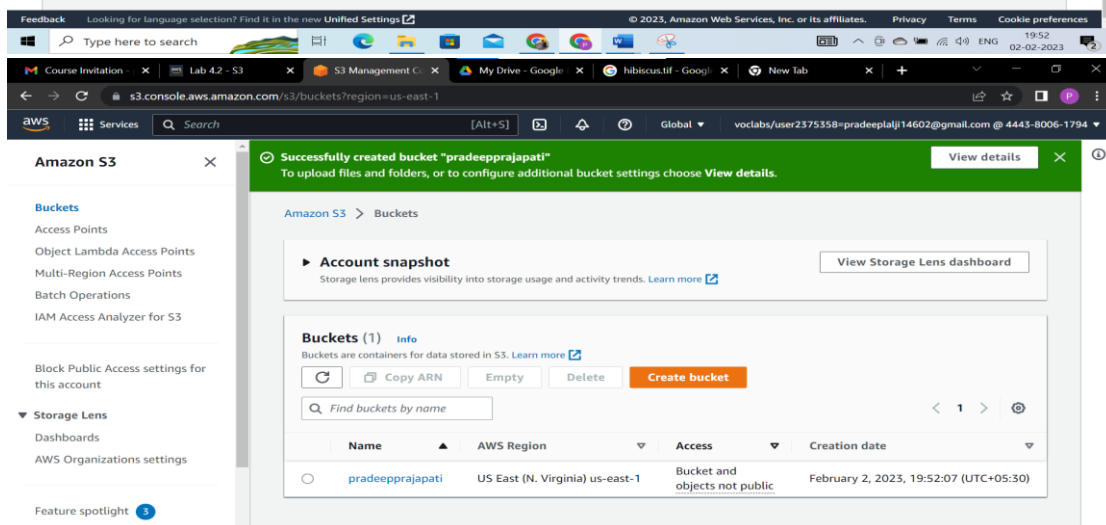
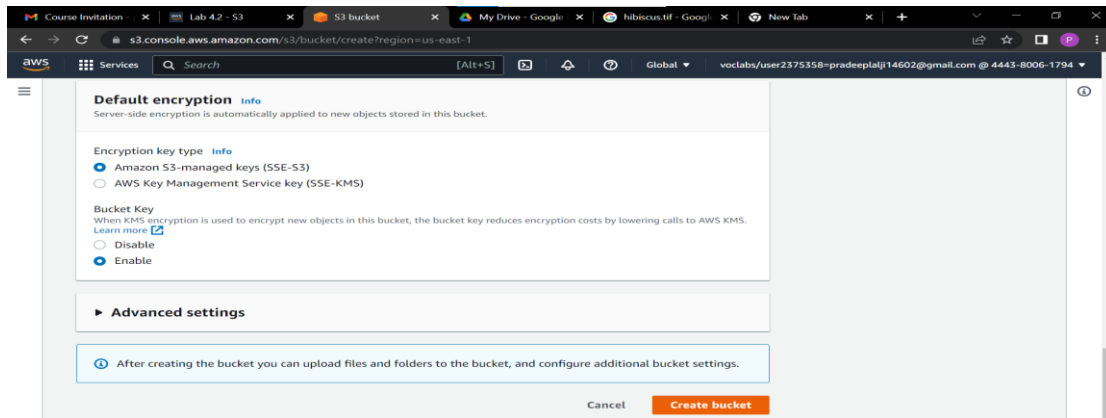




C. GCP/AWS/IBM/Azure/...

S3 Aws:

The first screenshot shows the AWS console search results for 'S3'. The search bar at the top contains 'S3'. On the left, a sidebar lists various resources: Services (8), Features (18), Resources (New), Blogs (1,181), Documentation (107,904), Knowledge Articles (30), Tutorials (10), Events (25), and Marketplace (955). The main content area displays search results for 'S3', including 'S3' (Scalable Storage in the Cloud), 'S3 Glacier' (Archive Storage in the Cloud), 'AWS Snow Family' (Large Scale Data Transport), and 'AWS Transfer Family' (Fully managed support for SFTP, FTPS and FTP). The second screenshot shows the AWS S3 landing page. The header includes the AWS logo and navigation links. The main content area features a large heading 'Amazon S3' and a subheading 'Store and retrieve any amount of data from anywhere'. Below this, there is a 'Create a bucket' button and a 'Pricing' section. The third screenshot shows the 'Create bucket' wizard. The 'General configuration' section includes a 'Bucket name' field with the value 'pradeepprajapati', an 'AWS Region' dropdown menu set to 'US East (N. Virginia) us-east-1', and a 'Copy settings from existing bucket - optional' section with a 'Choose bucket' button. The 'Object Ownership' section is also visible at the bottom.



Course Invitation x Lab 4.2 - S3 x S3 Management C x My Drive - Google x hibiscus.tif - Googl x New Tab x

s3.console.aws.amazon.com/s3/upload/pradeepprajapati?region=us-east-1

Services Search [Alt+S] Global voclabs/user2375358=pradeepplaj14602@gmail.com @ 4443-8006-1794

Upload succeeded
View details below.

Upload: status Close

The information below will no longer be available after you navigate away from this page.

Summary

Destination
s3://pradeepprajapati

Succeeded
1 file, 8.0 KB (100.00%)

Failed
0 files, 0 B (0%)

Files and folders Configuration

Files and folders (1 Total, 8.0 KB)

Feedback Looking for language selection? Find it in the new Unified Settings

Type here to search

Course Invitation x Lab 4.2 - S3 x pradeepprajapati x My Drive - Google x hibiscus.tif - Googl x New Tab x

s3.console.aws.amazon.com/s3/buckets/pradeepprajapati?region=us-east-1&tab=objects

Services Search [Alt+S] Global voclabs/user2375358=pradeepplaj14602@gmail.com @ 4443-8006-1794

Successfully created folder "pradeep".
Operation successfully completed.

Objects Properties Permissions Metrics Management Access Points

Objects (2)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Copy S3 URI Copy URL Download Open Delete Actions Create folder

Upload

Find objects by prefix

| <input type="checkbox"/> | Name | Type | Last modified | Size | Storage class |
|--------------------------|-----------------|--------|--|--------|---------------|
| <input type="checkbox"/> | pradeep/ | Folder | - | - | - |
| <input type="checkbox"/> | prep-master.zip | zip | February 2, 2023, 19:54:08 (UTC+05:30) | 8.0 KB | Standard |

Feedback Looking for language selection? Find it in the new Unified Settings

Type here to search

Course Invitation x Lab 4.2 - S3 x S3 Management C x My Drive - Google x hibiscus.tif - Googl x New Tab x

s3.console.aws.amazon.com/s3/upload/pradeepprajapati?region=us-east-1&prefix=pradeep/

Services Search [Alt+S] Global voclabs/user2375358=pradeepplaj14602@gmail.com @ 4443-8006-1794

Find by name

| <input type="checkbox"/> | Name | Folder | Type | Size |
|--------------------------|---------------------------------------|--------|-----------------|----------|
| <input type="checkbox"/> | certification-Versant-Course-2845.pdf | - | application/pdf | 770.2 KB |

Destination

Destination
s3://pradeepprajapati/pradeep/

Destination details
Bucket settings that impact new objects stored in the specified destination.

Permissions
Grant public access and access to other AWS accounts.

Properties
Specify storage class, encryption settings, tags, and more.

Cancel Upload

Feedback Looking for language selection? Find it in the new Unified Settings

Type here to search

Course Invitation x Lab 4.2 - S3 x S3 Management C x My Drive - Google x hibiscus.tif - Googl x New Tab x

s3.console.aws.amazon.com/s3/upload/pradeepprajapati?region=us-east-1&prefix=pradeep/

Services Search [Alt+S] Global voclabs/user2375358=pradeepplaj14602@gmail.com @ 4443-8006-1794

Find by name

| <input type="checkbox"/> | Name | Folder | Type | Size |
|--------------------------|---------------------------------------|--------|-----------------|----------|
| <input type="checkbox"/> | certification-Versant-Course-2845.pdf | - | application/pdf | 770.2 KB |

Destination

Destination
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Cancel Upload

Course Invitation x Lab 4.2 - S3 x S3 Management C x My Drive - Google x hibiscus.tif - Googl x New Tab x

s3.console.aws.amazon.com/s3/upload/pradeepprajapati?region=us-east-1&prefix=pradeep/

aws Services Search [Alt+S] Global voclabs/user2375358=pradeepplaji14602@gmail.com @ 4443-8006-1794

Upload succeeded
View details below.

Summary

Destination
s3://pradeepprajapati/pradeep/

Succeeded
1 file, 770.2 KB (100.00%)

Failed
0 files, 0 B (0%)

Files and folders

Configuration

Files and folders (1 Total, 770.2 KB)

Find by name

< 1 >

| Name | Folder | Type | Size | Status | Error |
|---------------------------------------|--------|-----------------|----------|-----------|-------|
| certification-Versant-Course-2845.pdf | - | application/pdf | 770.2 KB | Succeeded | - |

Feedback Looking for language selection? Find it in the new Unified Settings © 2023, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Type here to search

Course Invitation x Lab 4.2 - S3 x pradeepprajapati x My Drive - Google x hibiscus.tif - Googl x New Tab x

s3.console.aws.amazon.com/s3/buckets/pradeepprajapati?region=us-east-1&tab=objects

aws Services Search [Alt+S] Global voclabs/user2375358=pradeepplaji14602@gmail.com @ 4443-8006-1794

pradeepprajapati Info

Objects

Properties

Permissions

Metrics

Management

Access Points

Objects (2)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Copy S3 URI

Copy URL

Download

Open

Delete

Actions

Create folder

Upload

Find objects by prefix

< 1 >

| Name | Type | Last modified | Size | Storage class |
|-----------------|--------|--|--------|---------------|
| pradeep/ | Folder | - | - | - |
| prep-master.zip | zip | February 2, 2023, 19:54:08 (UTC+05:30) | 8.0 KB | Standard |

Feedback Looking for language selection? Find it in the new Unified Settings © 2023, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

Type here to search