

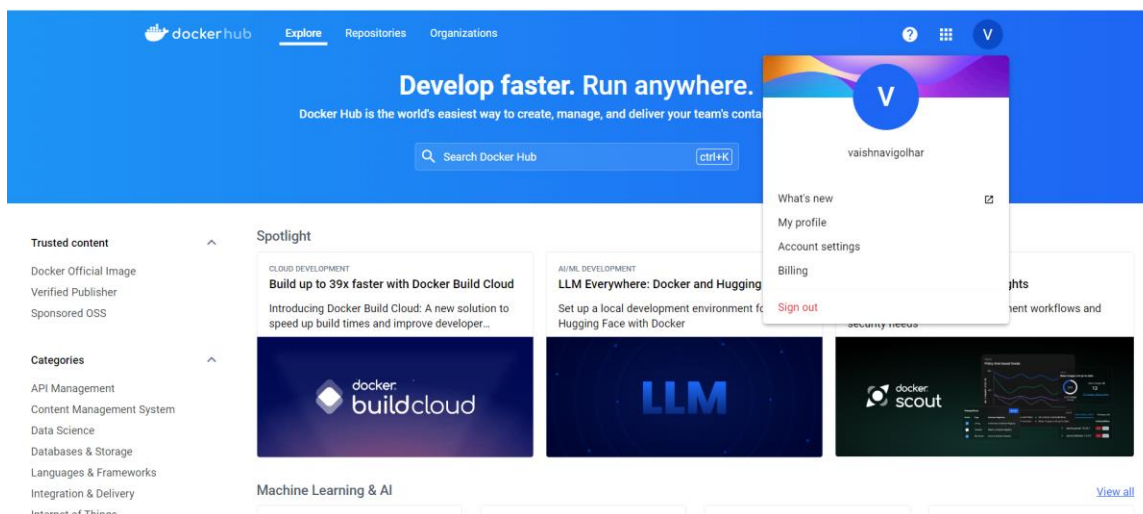
Module 3: Docker Part 1 Assignment - 3

Tasks To Be Performed:

1. Use the saved image in the previous assignment
2. Upload this image on Docker Hub
3. On a separate machine pull this Docker Hub image and launch it on port 80
4. Start the Apache2 service
5. Verify if you are able to see the Apache2 service

Solution:

1. Create Docker Hub Account



2. Use the saved image in the previous assignment

```
ubuntu@ip-172-31-5-28:~$ sudo docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
image1        latest    77b29ab9b9fd   24 minutes ago  222MB
ubuntu        latest    17c0145030df   2 weeks ago    76.2MB
ubuntu@ip-172-31-5-28:~$ sudo docker tag image1 vaishnavigolhar/image1
ubuntu@ip-172-31-5-28:~$ sudo docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
image1        latest    77b29ab9b9fd   32 minutes ago  222MB
vaishnavigolhar/image1  latest    77b29ab9b9fd   32 minutes ago  222MB
ubuntu        latest    17c0145030df   2 weeks ago    76.2MB
ubuntu@ip-172-31-5-28:~$
```

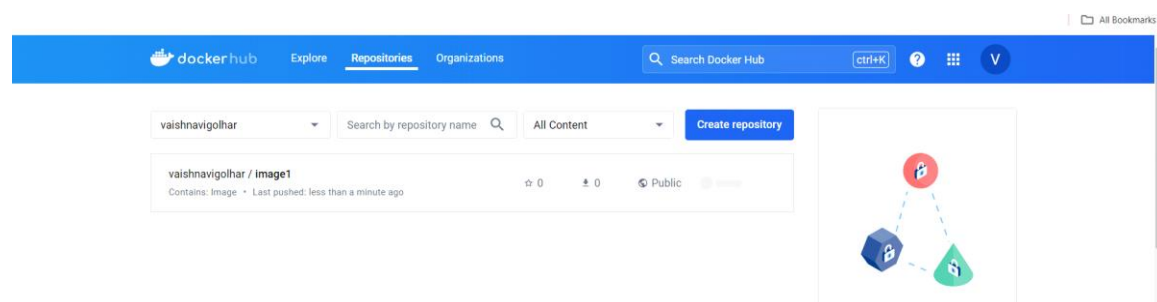
3. Upload this image on Docker Hub

```
ubuntu@ip-172-31-5-28:~$ sudo docker login
Log in with your Docker ID or email address to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com/ to create one.
You can log in with your password or a Personal Access Token (PAT). Using a limited-scope PAT grants better security and is required for organizations using SSO. Learn more at https://docs.docker.com/go/access-tokens/

Username: vaishnavigolhar
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
ubuntu@ip-172-31-5-28:~$
```

```
ubuntu@ip-172-31-5-28:~$ sudo docker push vaishnavigolhar/image1
Using default tag: latest
The push refers to repository [docker.io/vaishnavigolhar/image1]
2c13d77b8909: Pushed
42d3f8788282: Mounted from library/ubuntu
latest: digest: sha256:766da3fc0beb93e1f1de22feab7eff5f02350e8ab6a855cca9e9a5beb88a4b3b size: 741
ubuntu@ip-172-31-5-28:~$
```



4. On a separate machine pull this Docker Hub image and launch it on port

aws

Services

Search

[Alt+S]

N. California

VaishnaviGollur

EC2 > Instances > Launch an instance

Launch an instance

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags

Name

Docker2

Add additional tags

Summary

Number of instances

1

Software Image (AMI)

Amazon Linux 2023 AMI 2023.4.2...read more

ami-0ca1f30768d0c40e1

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

aws

Services

Search

[Alt+S]

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Application and OS Images (Amazon Machine Image)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below.

Search our full catalog including 1000s of application and OS images

Recents Quick Start

Amazon Linux

Ubuntu

Windows

Red Hat

SUSE Linux

Debian

Browse more AMIs

Amazon Machine Image (AMI)

Ubuntu Server 24.04 LTS (HVM), SSD Volume Type

ami-08012c0a9ee8e21c4 (64-bit (x86)) / ami-02404fb464dc3c0c7 (64-bit (Arm))

Virtualization: hvm EHA enabled: true Root device type: ebs

Free tier eligible

Description

Canonical, Ubuntu, 24.04 LTS, amd64 noble image build on 2024-04-23

Architecture

64-bit (x86)

AMI ID

ami-08012c0a9ee8e21c4

Verified provider

Summary

Number of instances

1

Software Image (AMI)

Canonical, Ubuntu, 24.04 LTS, ...read more

ami-08012c0a9ee8e21c4

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 ...

Cancel

Launch instance

Review commands

aws

Services

Search

[Alt+S]

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Instance type

Info Get advice

Instance type

t2.micro

Family: t2 1 vCPU 1 GiB Memory Current generation: true

On-Demand RHEL base pricing: 0.0758 USD per Hour

On-Demand SUSE base pricing: 0.0158 USD per Hour

On-Demand Windows base pricing: 0.0184 USD per Hour

On-Demand Linux base pricing: 0.0138 USD per Hour

Free tier eligible

All generations

Compare instance types

Additional costs apply for AMIs with pre-installed software

Key pair (login)

Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

Ncalifornia

Create new key pair

Summary

Number of instances

1

Software Image (AMI)

Canonical, Ubuntu, 24.04 LTS, ...read more

ami-08012c0a9ee8e21c4

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which

Network settings [Info](#) [Edit](#)

Network [Info](#)
vpc-02eece41d93620d0d2

Subnet [Info](#)
No preference (Default subnet in any availability zone)

Auto-assign public IP [Info](#)
Enable
Additional charges apply when outside of free tier allowance

Firewall (security groups) [Info](#)
A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

☐ Create security group ☒ Select existing security group

Common security groups [Info](#)
Select security groups
Docker sg-0e005cd7502487013 X
VPC vpc-02eece41d93620d0d2 [Compare security group rules](#)

Security groups that you add or remove here will be added to or removed from all your network interfaces.

Configure storage [Info](#) [Advanced](#)

1x 8 GiB gp3 Root volume (Not encrypted)

Summary

Number of instances [Info](#)
1

Software Image (AMI)
Canonical, Ubuntu, 24.04 LTS, ...[read more](#)
ami-08012c0a9ee8e21c4

Virtual server type (instance type)
t2.micro

Firewall (security group)
Docker

Storage (volumes)
1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 ...

[Cancel](#) [Launch instance](#) [Review commands](#)

Instances (2) [Info](#) [Connect](#) [Instance state](#) [Actions](#) [Launch instances](#)

Find Instance by attribute or tag (case-sensitive) All states

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IP
<input type="checkbox"/>	Docker	i-0a47ba3926927531d	Running	t2.micro	2/2 checks passed	View alarms	us-west-1c	ec2-54-67-104-198.us-... 54.67...	54.67...
<input type="checkbox"/>	Docker2	i-044fe54a2c6fd8d6	Running	t2.micro	-	View alarms	us-west-1c	ec2-54-176-2-13.us-we... 54.17...	54.17...

```
ubuntu@ip-172-31-7-223:~$ sudo apt install docker.io -y
```

```
ubuntu@ip-172-31-7-223:~$ sudo docker login
Log in with your Docker ID or email address to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com/ to create one.
You can log in with your password or a Personal Access Token (PAT). Using a limited-scope PAT grants better security and is required for organizations using SSO. Learn more at https://docs.docker.com/go/access-tokens/

Username: vaishnavigolhar
Password:
WARNING! Your password will be stored unencrypted in /root/.docker/config.json.
Configure a credential helper to remove this warning. See
https://docs.docker.com/engine/reference/commandline/login/#credentials-store

Login Succeeded
ubuntu@ip-172-31-7-223:~$
```

i-044fe54a2c6fd8d6 (Docker2)

PublicIPs: 54.176.2.13 PrivateIPs: 172.31.7.223

```

Download an image from a registry
ubuntu@ip-172-31-7-223:~$ sudo docker pull vaishnavigolhar/image1
Using default tag: latest
latest: Pulling from vaishnavigolhar/image1
00d679a470c4: Pull complete
163f075ce128: Pull complete
Digest: sha256:766da3f0beb93elf1de22feab7eff5f02350e8ab6a855cca9e9a5beb88a4b3b
Status: Downloaded newer image for vaishnavigolhar/image1:latest
docker.io/vaishnavigolhar/image1:latest
ubuntu@ip-172-31-7-223:~$ sudo docker images
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
vaishnavigolhar/image1  latest         77b29ab9b9fd   About an hour ago  222MB
ubuntu@ip-172-31-7-223:~$ sudo docker run -itd -p 80:80 --name newC2 vaishnavigolhar/image1
54b4abel214d4a38d630b4cb2b76ca8e10fd73b4f17ac35694193a21fd60209b
ubuntu@ip-172-31-7-223:~$ sudo docker ps
CONTAINER ID        IMAGE               COMMAND          CREATED          STATUS          PORTS                               NAMES
54b4abel214d        vaishnavigolhar/image1  "/bin/bash"     7 seconds ago   Up 5 seconds   0.0.0.0:80->80/tcp, :::80->80/tcp   newC2
ubuntu@ip-172-31-7-223:~$ sudo docker exec -it newC2 bash
root@54b4abel214d:/#

```

i-044fe54a2c6f6d8d6 (Docker2)

PublicIPs: 54.176.2.13 PrivateIPs: 172.31.7.223

5. Start the Apache2 service

6. Verify if you are able to see the Apache2 service



Commands:

commands on Docker (old) ec2 instace

sudo docker images

19 sudo docker tag image1 vaishnavigolhar/image1

20 sudo docker images

21 sudo docker login

22 sudo docker push vaishnavigolhar/image1

23 history

commands on Docker2 (new) ec2 instace

1sudo apt update

2 sudo apt install docker.io -y

3 sudo docker login

4 sudo docker pull vaishnavigolhar / image1

5 sudo docker pull vaishnavigolhar/image1

6 sudo docker images

7 sudo docker run -itd -p 80:80 --name newC2 vaishnavigolhar/image1

8 sudo docker ps

9 sudo docker exec -it newC2 bash

10 history

7 apt-get update

8 service apache2 status

9 service apache2 start

10 service apache2 status

11 history

