

# Module 3 Docker

---

# Assignment

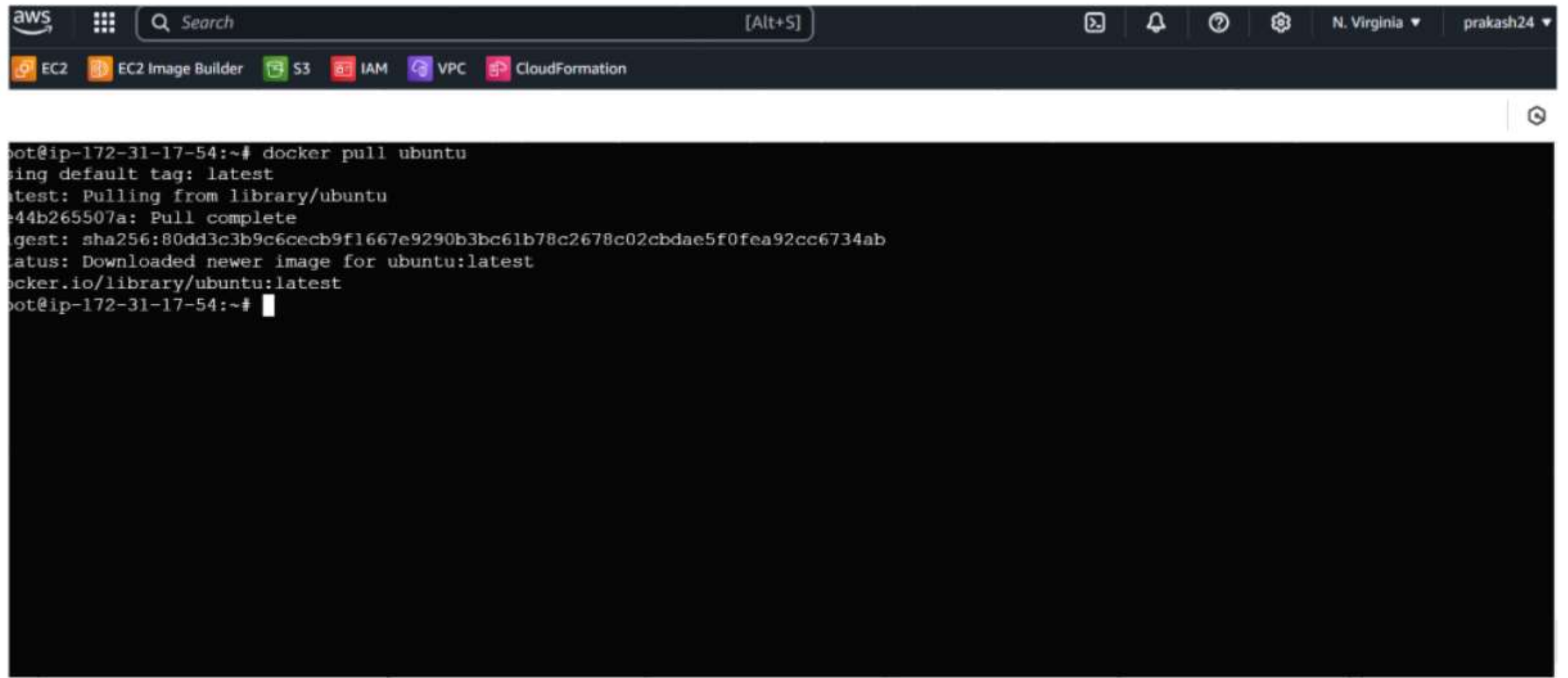
# **Module 3 Docker Part 1**

## **Assignment 1**

## **Tasks To Be Performed:**

1. Pull Ubuntu container
2. Run this container and map port 80 on the local
3. Install Apache2 on this container
4. Check if you are able to access the Apache page on your browser

# Pulling Ubuntu Image



```
aws
[Alt+S]
EC2 EC2 Image Builder S3 IAM VPC CloudFormation
N. Virginia prakash24

root@ip-172-31-17-54:~# docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
e44b265507a: Pull complete
Digest: sha256:80dd3c3b9c6cecb9f1667e9290b3bc61b78c2678c02cbdae5f0fea92cc6734ab
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest
root@ip-172-31-17-54:~#
```

# Running Ubuntu Container in port 80

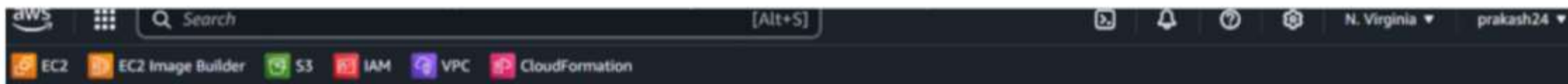
```
aws
Search [Alt+S]
EC2 EC2 Image Builder S3 IAM VPC CloudFormation
N. Virginia prakash24

Digest: sha256:80dd3c3b9c6cecb9f1667e9290b3bc61b78c2678c02cbdae5f0fea92cc6734ab
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest
bot@ip-172-31-17-54:~$ docker run -it --name container1 -p 80:80 ubuntu
bot@57a0d089b9c7:/# apt-get update
Get:1 http://archive.ubuntu.com/ubuntu noble InRelease [256 kB]
Get:2 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:3 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:5 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [719 kB]
Get:6 http://archive.ubuntu.com/ubuntu noble/universe amd64 Packages [19.3 MB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [707 kB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Packages [15.3 kB]
Get:9 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [1028 kB]
Get:10 http://archive.ubuntu.com/ubuntu noble/restricted amd64 Packages [117 kB]
Get:11 http://archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [331 kB]
Get:12 http://archive.ubuntu.com/ubuntu noble/main amd64 Packages [1808 kB]
Get:13 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Packages [19.7 kB]
Get:14 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1254 kB]
Get:15 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Packages [724 kB]
Get:16 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [968 kB]
Get:17 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Packages [11.9 kB]
Fetched 27.7 MB in 2s (13.2 MB/s)
Reading package lists... Done
bot@57a0d089b9c7:/#
```

i-0f7794ec470901309 (docker-ec2)

PublicIPs: 54.82.5.129 PrivateIPs: 172.31.17.54

# Installing apache2 in Ubuntu Container



```
et:17 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Packages [11.9 kB]
etched 27.7 MB in 2s (13.2 MB/s)
Reading package lists... Done
root@57a0d089b9c7:/# apt-get install apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  adduser apache2-bin apache2-data apache2-utils ca-certificates krb5-locales libapr1t64 libaprutil1-dbd-sqlite3 libaprutil1-ldap
  libaprutil1t64 libbrotli1 libcurl4t64 libexpat1 libgdbm-compat4t64 libgdbm6t64 libgssapi-krb5-2 libicu74 libjansson4 libk5crypto3
  libkeyutils1 libkrb5-3 libkrb5support0 libldap-common libldap2 liblua5.4-0 libnghttp2-14 libperl5.38t64 libpsl5t64 librtmp1 libsasl2-2
  libsasl2-modules libsasl2-modules-db libsasl2-modules-gssapi-mit libsasl2-modules-gssapi-heimdal libsasl2-modules-ldap libsasl2-modules-otp
  libsasl2-modules-sql libssh-4 libxml2 media-types netbase openssl perl perl-modules-5.38 publicsuffix
  ssl-cert
Suggested packages:
  liblocale-gettext-perl cron quota ecryptfs-utils apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser ufw gdbm-l10n
  krb5-doc krb5-user libsasl2-modules-gssapi-mit | libsasl2-modules-gssapi-heimdal libsasl2-modules-ldap libsasl2-modules-otp
  libsasl2-modules-sql perl-doc libterm-readline-gnu-perl | libterm-readline-perl-perl make libtap-harness-archive-perl
The following NEW packages will be installed:
  adduser apache2 apache2-bin apache2-data apache2-utils ca-certificates krb5-locales libapr1t64 libaprutil1-dbd-sqlite3
  libaprutil1-ldap libaprutil1t64 libbrotli1 libcurl4t64 libexpat1 libgdbm-compat4t64 libgdbm6t64 libgssapi-krb5-2 libicu74 libjansson4
  libk5crypto3 libkeyutils1 libkrb5-3 libkrb5support0 libldap-common libldap2 liblua5.4-0 libnghttp2-14 libperl5.38t64 libpsl5t64
  librtmp1 libsasl2-2 libsasl2-modules libsasl2-modules-db libsasl2-modules-gssapi-mit libsasl2-modules-gssapi-heimdal libsasl2-modules-ldap
  libsasl2-modules-otp libsasl2-modules-sql libssh-4 libxml2 media-types netbase openssl perl
perl-modules-5.38 publicsuffix ssl-cert
0 upgraded, 43 newly installed, 0 to remove and 0 not upgraded.
Need to get 26.3 MB of archives.
```

i-0f7794ec470901309 (docker-ec2)

Public IPs: 54.82.5.129 Private IPs: 172.31.17.54



# We can see apache2 home page running port 80 in Ubuntu Container





# **Module 3: Docker Part 1**

## **Assignment - 2**



## **Tasks To Be Performed:**

1. Save the image created in assignment 1 as a Docker image
2. Launch container from this new image and map the port to 81
3. Go inside the container and start the Apache2 service
4. Check if you are able to access it on the browser

# List of Docker images & container



```
pot@ip-172-31-17-54:~$ docker images
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
ubuntu              latest         b1d9df8ab815   5 weeks ago    78.1MB
hello-world         latest         d2c94e258dcb   20 months ago  13.3kB
pot@ip-172-31-17-54:~$ docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
pot@ip-172-31-17-54:~$ docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED        STATUS      PORTS   NAMES
7a0d089b9c7   ubuntu   "/bin/bash"   16 minutes ago   Exited (130) 37 seconds ago
pot@ip-172-31-17-54:~$ docker commit container1 imagel
sha256:a8fa9b775df9c6d4cf8df4d59fae196defb2e7a76a99027a076ce7278b7b1bbc
pot@ip-172-31-17-54:~$
```

i-0f7794ec470901309 (docker-ec2)

PublicIPs: 54.82.5.129 PrivateIPs: 172.31.17.54



## Commit as new container

```
bot@ip-172-31-17-54:~# docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
ubuntu               latest             bld9df8ab815       5 weeks ago        78.1MB
hello-world          latest             d2c94e258dcb       20 months ago      13.3kB
bot@ip-172-31-17-54:~# docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS              NAMES
bot@ip-172-31-17-54:~# docker ps -a
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS              NAMES
7a0d089b9c7        ubuntu             "/bin/bash"        16 minutes ago     Exited (130) 37 seconds ago          container1
bot@ip-172-31-17-54:~# docker commit container1 imagel
a256:a8fa9b775df9c6d4cf8df4d59fae196defb2e7a76a99027a076ce7278b7blbbc
bot@ip-172-31-17-54:~# docker ps -a
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS              NAMES
7a0d089b9c7        ubuntu             "/bin/bash"        17 minutes ago     Exited (130) 2 minutes ago          container1
bot@ip-172-31-17-54:~# docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
imagel               latest             a8fa9b775df9       28 seconds ago     230MB
ubuntu               latest             bld9df8ab815       5 weeks ago        78.1MB
hello-world          latest             d2c94e258dcb       20 months ago      13.3kB
bot@ip-172-31-17-54:~#
```

i-0f7794ec470901309 (docker-ec2)

PublicIPs: 54.82.5.129 PrivateIPs: 172.31.17.54

# Running new container in port 81

us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?region=us-east-1&connType=standard&instanceId=i-0f7794ec470901309...

Search

[Alt+S]

EC2

EC2 Image Builder

S3

IAM

VPC

CloudFormation

N. Virginia

prakash24

terminal

```
bt@ip-172-31-17-54:~$ docker run -td --name container3 -p 81:80 image1
b9748301a71d7bb00aeb42ebe613a93dc3beed9c0b1307183d78f883c2a2ab
bt@ip-172-31-17-54:~$ docker ps -a
CONTAINER ID   IMAGE      COMMAND                  CREATED        STATUS        PORTS                               NAMES
b9748301a7    image1     "/bin/bash"             27 seconds ago Up 27 seconds  0.0.0.0:81->80/tcp, [::]:81->80/tcp  container3
a0d089b9c7    ubuntu    "/bin/bash"             19 minutes ago Exited (130) 4 minutes ago          container1
bt@ip-172-31-17-54:~$ docker exec -ti 72b9748301a7 sh
service apache2 status
  apache2 is not running
service apache2 start
  Starting Apache httpd web server apache2
00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.17.0.2. Set the 'ServerName' directive globally to suppress this message
```

i-0f7794ec470901309 (docker-ec2)

PublicIPs: 54.82.5.129 PrivateIPs: 172.31.17.54

# We can see apache2 home page running port 81 in Ubuntu Container



# **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





# Login in docker hub to build and push image in docker hub

```
aws [Alt+S] N. Virginia prakash24
EC2 EC2 Image Builder S3 IAM VPC CloudFormation

root@ip-172-31-17-54:/home/ubuntu# docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
magel         latest    a8fa9b775df9   15 hours ago   230MB
ubuntu        latest    b1d9df8ab815   5 weeks ago    78.1MB
hello-world    latest    d2c94e258dcb   20 months ago  13.3kB
root@ip-172-31-17-54:/home/ubuntu# docker login

WARNING! Using web-based login
To sign in with credentials on the command line, use 'docker login -u <username>'

Your one-time device confirmation code is: FBTH-KTGF
Press ENTER to open your browser or submit your device code here: https://login.docker.com/activate

Waiting for authentication in the browser...
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/#credential-stores

Login Succeeded
root@ip-172-31-17-54:/home/ubuntu#
```

i-0f7794ec470901309 (docker-ec2)

PublicIPs: 54.89.199.36 PrivateIPs: 172.31.17.54

# Building & Pushing docker images in docker hub

```
aws [Search] [Alt+S] N. Virginia prakash24
EC2 EC2 Image Builder S3 IAM VPC CloudFormation

magel      latest      a8fa9b775df9  15 hours ago  230MB
ubuntu     latest      b1d9df8ab815  5 weeks ago   78.1MB
hello-world latest      d2c94e258dcb  20 months ago 13.3kB
root@ip-172-31-17-54:/home/ubuntu# docker login

SIGNING WEB-BASED LOGIN
To sign in with credentials on the command line, use 'docker login -u <username>'

Your one-time device confirmation code is: FBTH-KTGF
Press ENTER to open your browser or submit your device code here: https://login.docker.com/activate


Waiting for authentication in the browser...
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/#credential-stores

Login Succeeded
root@ip-172-31-17-54:/home/ubuntu# docker tag imagel rajratre/ub-finalimage
root@ip-172-31-17-54:/home/ubuntu# docker push rajratre/ub-finalimage
Using default tag: latest
The push refers to repository [docker.io/rajratre/ub-finalimage]
b1laee49f52: Pushed
b7d50f2f6a6: Mounted from library/ubuntu
latest: digest: sha256:29b6877db690900127c92d02686fd952fb2b56cf2010b5a5ff86b66289072791 size: 741
root@ip-172-31-17-54:/home/ubuntu#
```

i-Of7794ec470901309 (docker-ec2)

PublicIPs: 54.89.199.36 PrivateIPs: 172.31.17.54

# We can see the image in docker hub




Explore


Repositories


Organizations


Usage


 Search Docker Hub


ctrl+K












R

rajratre


▼

 Search by repository name


All content

▼

Create a repository

Name	Last Pushed 	Contains	Visibility	Scout
<u>rajratre/ub-finalimage</u>	1 minute ago	IMAGE	Public	Inactive
rajratre/mywebserverng	4 months ago	IMAGE	Public	Inactive
rajratre/mytestapp	7 months ago	IMAGE	Public	Inactive
rajratre/apache-app2	7 months ago	IMAGE	Public	Inactive
rajratre/apache-app	7 months ago	IMAGE	Public	Inactive

1-5 of 5



Create an organization

Create and manage users and grant access to your repositories.

# Pulling docker image form docker hub



```
root@ip-172-31-31-162:~# docker images
REPOSITORY    TAG       IMAGE ID   CREATED   SIZE
root@ip-172-31-31-162:~# docker pull rajratre/ub-finalimage
Using default tag: latest
latest: Pulling from rajratre/ub-finalimage
de44b265507a: Pull complete
f37d8245c864: Pull complete
Digest: sha256:29b6877db690900127c92d02686fd952fb2b56cf2010b5a5ff86b66289072791
Status: Downloaded newer image for rajratre/ub-finalimage:latest
docker.io/rajratre/ub-finalimage:latest
root@ip-172-31-31-162:~# docker images
REPOSITORY    TAG       IMAGE ID   CREATED   SIZE
rajratre/ub-finalimage  latest    a8fa9b775df9   16 hours ago   230MB
root@ip-172-31-31-162:~#
```

i-078bfd29c0155562a (docker-ec2-1)

PublicIPs: 54.209.174.216 PrivateIPs: 172.31.31.162



# Running docker container in other ec2 machine in port 80

```
aws [Alt+S] N. Virginia prakash24
EC2 EC2 Image Builder S3 IAM VPC CloudFormation

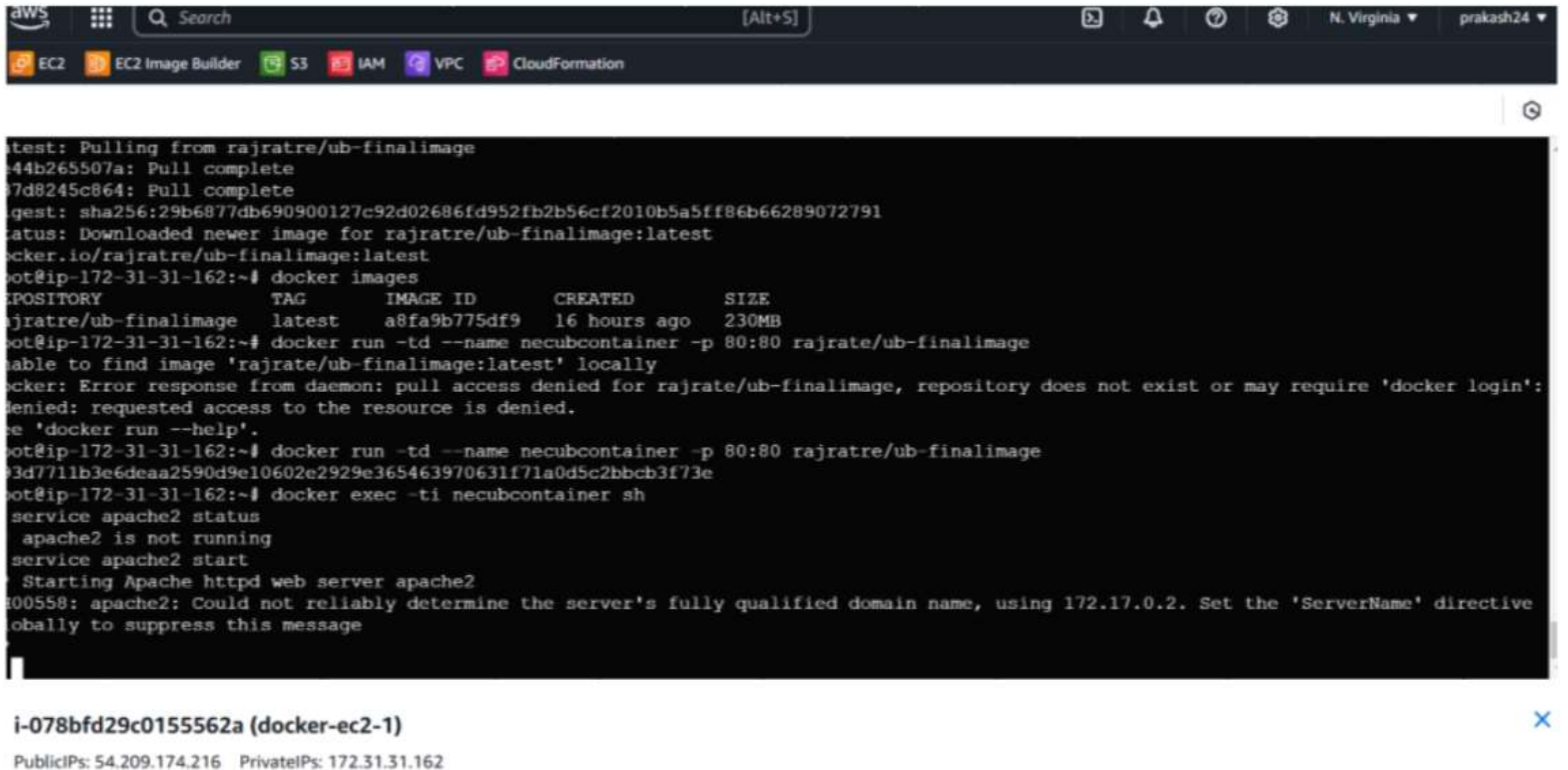
bot@ip-172-31-31-162:~$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
bot@ip-172-31-31-162:~$ docker pull rajratre/ub-finalimage
Using default tag: latest
latest: Pulling from rajratre/ub-finalimage
e44b265507a: Pull complete
87d8245c864: Pull complete
Digest: sha256:29b6877db690900127c92d02686fd952fb2b56cf2010b5a5ff86b66289072791
Status: Downloaded newer image for rajratre/ub-finalimage:latest
docker.io/rajratre/ub-finalimage:latest
bot@ip-172-31-31-162:~$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
rajratre/ub-finalimage latest a8fa9b775df9 16 hours ago 230MB
bot@ip-172-31-31-162:~$ docker run -td --name necubcontainer -p 80:80 rajrate/ub-finalimage
Unable to find image 'rajrate/ub-finalimage:latest' locally
docker: Error response from daemon: pull access denied for rajrate/ub-finalimage, repository does not exist or may require 'docker login':
denied: requested access to the resource is denied.
See 'docker run --help'.
bot@ip-172-31-31-162:~$ docker run -td --name necubcontainer -p 80:80 rajratre/ub-finalimage
93d7711b3e6deaa2590d9e10602e2929e365463970631f71a0d5c2bbcb3f73e
bot@ip-172-31-31-162:~$
```

i-078bfd29c0155562a (docker-ec2-1)

PublicIPs: 54.209.174.216 PrivateIPs: 172.31.31.162



# Running docker container in other ec2 machine in port 80



The screenshot shows the AWS Management Console interface. At the top, there's a navigation bar with the AWS logo, a search bar, and a list of services: EC2, EC2 Image Builder, S3, IAM, VPC, and CloudFormation. The user is logged in as 'prakash24' in the 'N. Virginia' region. Below the navigation bar, a terminal window is open, displaying the following commands and output:

```
test: Pulling from rajratre/ub-finalimage
44b265507a: Pull complete
7d8245c864: Pull complete
Digest: sha256:29b6877db690900127c92d02686fd952fb2b56cf2010b5a5ff86b66289072791
Status: Downloaded newer image for rajratre/ub-finalimage:latest
rajratre/ub-finalimage:latest
root@ip-172-31-31-162:~# docker images
REPOSITORY          TAG          IMAGE ID      CREATED      SIZE
rajratre/ub-finalimage  latest      a8fa9b775df9  16 hours ago  230MB
root@ip-172-31-31-162:~# docker run -td --name necubcontainer -p 80:80 rajrate/ub-finalimage
Unable to find image 'rajrate/ub-finalimage:latest' locally
Docker: Error response from daemon: pull access denied for rajrate/ub-finalimage, repository does not exist or may require 'docker login':
Access denied: requested access to the resource is denied.
See 'docker run --help'.
root@ip-172-31-31-162:~# docker run -td --name necubcontainer -p 80:80 rajratre/ub-finalimage
93d7711b3e6deaa2590d9e10602e2929e365463970631f71a0d5c2bbcb3f73e
root@ip-172-31-31-162:~# docker exec -ti necubcontainer sh
# service apache2 status
apache2 is not running
# service apache2 start
Starting Apache httpd web server apache2
#00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.17.0.2. Set the 'ServerName' directive
globally to suppress this message
```

Below the terminal window, the instance ID **i-078bfd29c0155562a (docker-ec2-1)** is displayed, along with its Public IP (54.209.174.216) and Private IP (172.31.31.162).

# We can see apache2 home page in new ec2 machine on port 80





# **Module 3: Docker Part 1**

## **Assignment - 4**

## **Tasks To Be Performed:**

1. Create a Dockerfile with the following specs:
  - Ubuntu container
  - Apache2 installed
  - Apache2 should automatically run once the container starts
2. Submit the Dockerfile for assignment completion

# Dockerfile

```
GNU nano 6.2 Dockerfile
FROM ubuntu
RUN apt-get update
RUN apt-get install apache2 -y
ENTRYPOINT apachectl -D FOREGROUND
```

[ Read 4 lines ]

<b>^G</b> Help	<b>^O</b> Write Out	<b>^W</b> Where Is	<b>^K</b> Cut	<b>^T</b> Execute	<b>^C</b> Location	<b>M-U</b> Undo	<b>M-A</b> Set Mark
<b>^X</b> Exit	<b>^R</b> Read File	<b>^\<b> Replace</b></b>	<b>^U</b> Paste	<b>^J</b> Justify	<b>^/</b> Go To Line	<b>M-E</b> Redo	<b>M-6</b> Copy

**i-078bfd29c0155562a (docker-ec2-1)**

PublicIPs: 54.209.174.216 PrivateIPs: 172.31.31.162

# Building a docker images using a docker file

```
aws [Alt+S] N. Virginia prakash24
EC2 EC2 Image Builder S3 IAM VPC CloudFormation

37d8245c864: Pull complete
bot@ip-172-31-31-162:~# nano Dockerfile
bot@ip-172-31-31-162:~# docker build . -t images5
+ Building 18.7s (7/7) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 135B
=> [internal] load metadata for docker.io/library/ubuntu:latest
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/3] FROM docker.io/library/ubuntu:latest@sha256:80dd3c3b9c6cecb9f1667e9290b3bc61b78c2678c02cbdae5f0fea92cc6734ab
=> => resolve docker.io/library/ubuntu:latest@sha256:80dd3c3b9c6cecb9f1667e9290b3bc61b78c2678c02cbdae5f0fea92cc6734ab
=> => sha256:80dd3c3b9c6cecb9f1667e9290b3bc61b78c2678c02cbdae5f0fea92cc6734ab 6.69kB / 6.69kB
=> => sha256:6e75a10070b0fcb0bead763c5118a369bc7cc30dfc1b0749c491bbb21f15c3c7 424B / 424B
=> => sha256:b1d9df8ab81559494794e522b380878cf9ba82d4c1fb67293bcf931c3aa69ae4 2.30kB / 2.30kB
=> [2/3] RUN apt-get update
=> [3/3] RUN apt-get install apache2 -y
=> exporting to image
=> => exporting layers
=> => writing image sha256:f96b0731d6589cdbe00da423638624631fcc2dfada727f1f78f18076d88b9261
=> => naming to docker.io/library/images5

! warning found (use docker --debug to expand):
- JSONArgsRecommended: JSON arguments recommended for ENTRYPOINT to prevent unintended behavior related to OS signals (line 4)
bot@ip-172-31-31-162:~#
```

i-078bfd29c0155562a (docker-ec2-1)

PublicIPs: 54.209.174.216 PrivateIPs: 172.31.31.162

# Running docker container using docker image build by a docker file

```
aws [Alt+S] N. Virginia prakash24
EC2 EC2 Image Builder S3 IAM VPC CloudFormation

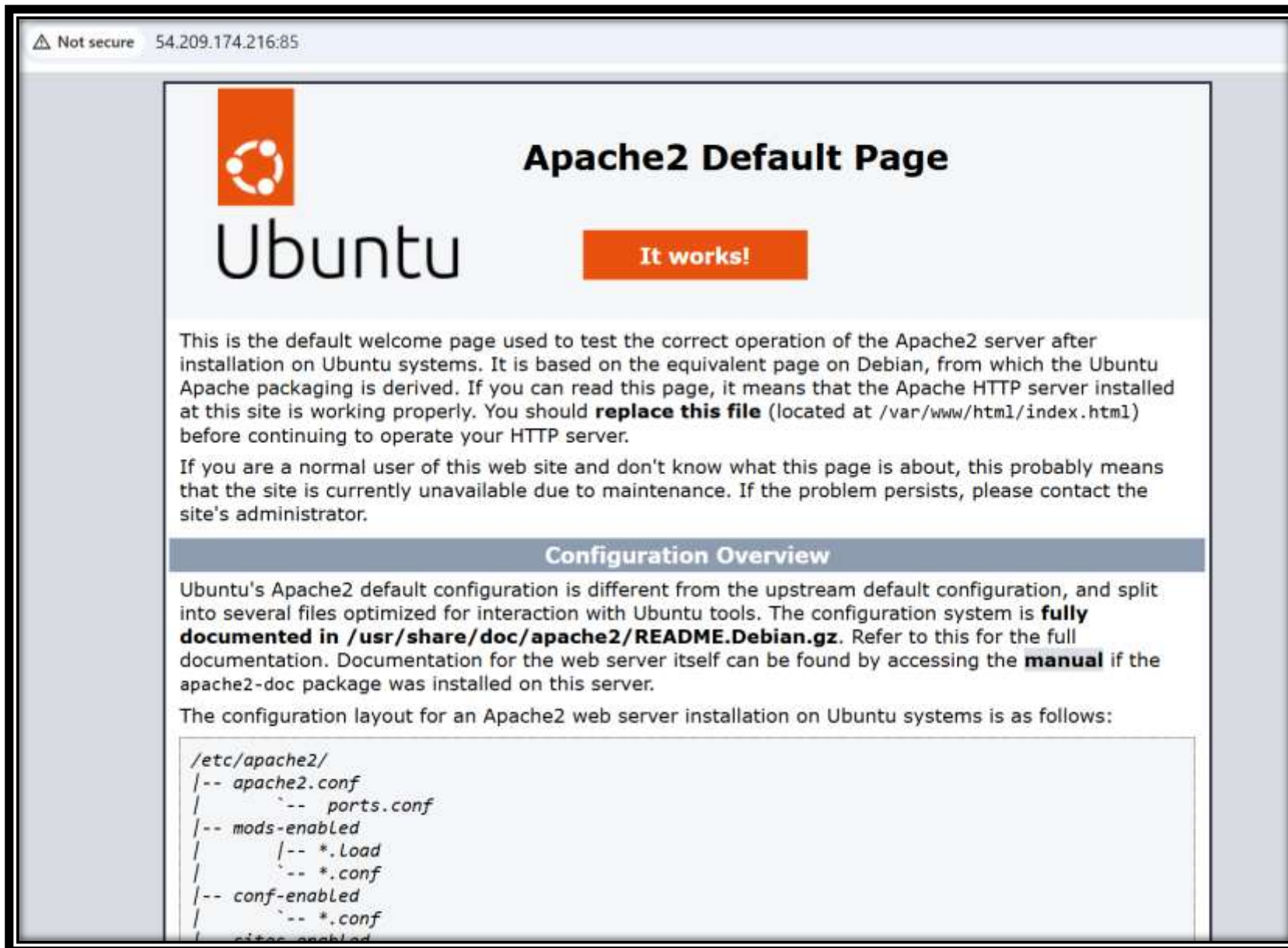
[1/3] FROM docker.io/library/ubuntu:latest@sha256:80dd3c3b9c6cecb9f1667e9290b3bc61b78c2678c02cbdae5f0fea92cc6734ab 0.1s
=> resolve docker.io/library/ubuntu:latest@sha256:80dd3c3b9c6cecb9f1667e9290b3bc61b78c2678c02cbdae5f0fea92cc6734ab 0.0s
=> sha256:80dd3c3b9c6cecb9f1667e9290b3bc61b78c2678c02cbdae5f0fea92cc6734ab 6.69kB / 6.69kB 0.0s
=> sha256:6e75a10070b0fcb0bead763c5118a369bc7cc30dfc1b0749c491bbb21f15c3c7 424B / 424B 0.0s
=> sha256:b1d9df8ab81559494794e522b380878cf9ba82d4c1fb67293bcf931c3aa69ae4 2.30kB / 2.30kB 0.0s
[2/3] RUN apt-get update 3.9s
[3/3] RUN apt-get install apache2 -y 12.0s
exporting to image 2.2s
=> exporting layers 2.2s
=> writing image sha256:f96b0731d6589cd8bc00da423638624631fcc2dfada727f1f78f18076d88b9261 0.0s
=> naming to docker.io/library/images5 0.0s

A warning found (use docker --debug to expand):
- JSONArgsRecommended: JSON arguments recommended for ENTRYPOINT to prevent unintended behavior related to OS signals (line 4)
pot@ip-172-31-31-162:~# docker images
REPOSITORY          TAG         IMAGE ID      CREATED        SIZE
images5              latest     f96b0731d658  2 minutes ago  229MB
njjratre/ub-finalimage latest     a8fa9b775df9  16 hours ago  230MB
pot@ip-172-31-31-162:~# docker run -td --name necubcontainer -p 85:80 images5
docker: Error response from daemon: Conflict. The container name "/necubcontainer" is already in use by container "793d7711b3e6deaa2590d9e0602e2929e365463970631f71a0d5c2bbcb3f73e". You have to remove (or rename) that container to be able to reuse that name.
See 'docker run --help'.
pot@ip-172-31-31-162:~# docker run -td --name necubcontainer2 -p 85:80 images5
b3975942e0c9ccd896b8f02146ca6a8185a63e40edad0374f124b64bd9f8294
pot@ip-172-31-31-162:~#
```

i-078bfd29c0155562a (docker-ec2-1)

PublicIPs: 54.209.174.216 PrivateIPs: 172.31.31.162

# We can see apache2 home page in docker port 85



# **Module 3: Docker Part 1**

## **Assignment - 5**



## **Tasks To Be Performed:**

1. Create a sample HTML file
2. Use the Dockerfile from the previous task
3. Replace this sample HTML file inside the Docker container with the default page

## We added a index html file and copying & replacing in apache2 home page by docker file

```
FROM ubuntu  
RUN apt-get update  
RUN apt-get install apache2 -y  
COPY /assignment/index.html /var/www/html  
ENTRYPOINT apache2ctl -D FOREGROUND
```

# docker file

The screenshot shows an AWS Management Console terminal session. The top navigation bar includes the AWS logo, a search bar, and a list of services: EC2, EC2 Image Builder, S3, IAM, VPC, and CloudFormation. The user is logged in as 'prakash24' in the 'N. Virginia' region. The terminal window is titled 'i-078bfd29c0155562a (docker-ec2-1)' and displays a 'GNU nano 6.2' editor interface for a file named 'Dockerfile'. The file content is as follows:

```
FROM ubuntu
RUN apt-get update
RUN apt-get install apache2 -y
COPY /assignment/index.html /var/www/html
ENTRYPOINT apachectl -D FOREGROUND
```

The terminal window also shows a status bar at the bottom with the following information: PublicIPs: 54.209.174.216, PrivateIPs: 172.31.31.162. The nano editor's help menu is visible at the bottom of the terminal window, listing various keyboard shortcuts for navigation and editing.

# Building a new docker images using modified docker file & running container

aws

Search

[Alt+S]

N. Virginia

prakash24

EC2

EC2 Image Builder

S3

IAM

VPC

CloudFormation

```
Dockerfile assigment snap
root@ip-172-31-31-162:~# nano Dockerfile
root@ip-172-31-31-162:~# docker build . -t images12
[+] Building 0.3s (9/9) FINISHED
=> [internal] load build definition from Dockerfile                                docker:default 0.0s
=> => transferring dockerfile: 178B                                              0.0s
=> [internal] load metadata for docker.io/library/ubuntu:latest                 0.1s
=> [internal] load .dockerignore                                                 0.0s
=> => transferring context: 2B                                                    0.0s
=> [1/4] FROM docker.io/library/ubuntu:latest@sha256:80dd3c3b9c6cecb9f1667e9290b3bc61b78c2678c02cbdae5f0fea92cc6734ab 0.0s
=> [internal] load build context                                                0.0s
=> => transferring context: 117B                                                0.0s
=> CACHED [2/4] RUN apt-get update                                              0.0s
=> CACHED [3/4] RUN apt-get install apache2 -y                                0.0s
=> [4/4] COPY /assigment/index.html /var/www/html                             0.0s
=> exporting to image                                                           0.1s
=> => exporting layers                                                           0.0s
=> => writing image sha256:59b5200c5b451d07cdad22e24867da3a328ad621224abf826503293c2f06996a 0.0s
=> => naming to docker.io/library/images12                                     0.0s

1 warning found (use docker --debug to expand):
- JSONArgsRecommended: JSON arguments recommended for ENTRYPOINT to prevent unintended behavior related to OS signals (line 5)
root@ip-172-31-31-162:~# docker run -itd -p 83:80 images12
2b2971193ca2e260086db3df88b7049ba5d2b26153af35ba201076a60f874c92
root@ip-172-31-31-162:~#
```

i-078bfd29c0155562a (docker-ec2-1)

PublicIPs: 54.209.174.216 PrivateIPs: 172.31.31.162

**We can see index page in new container running port no 83**

