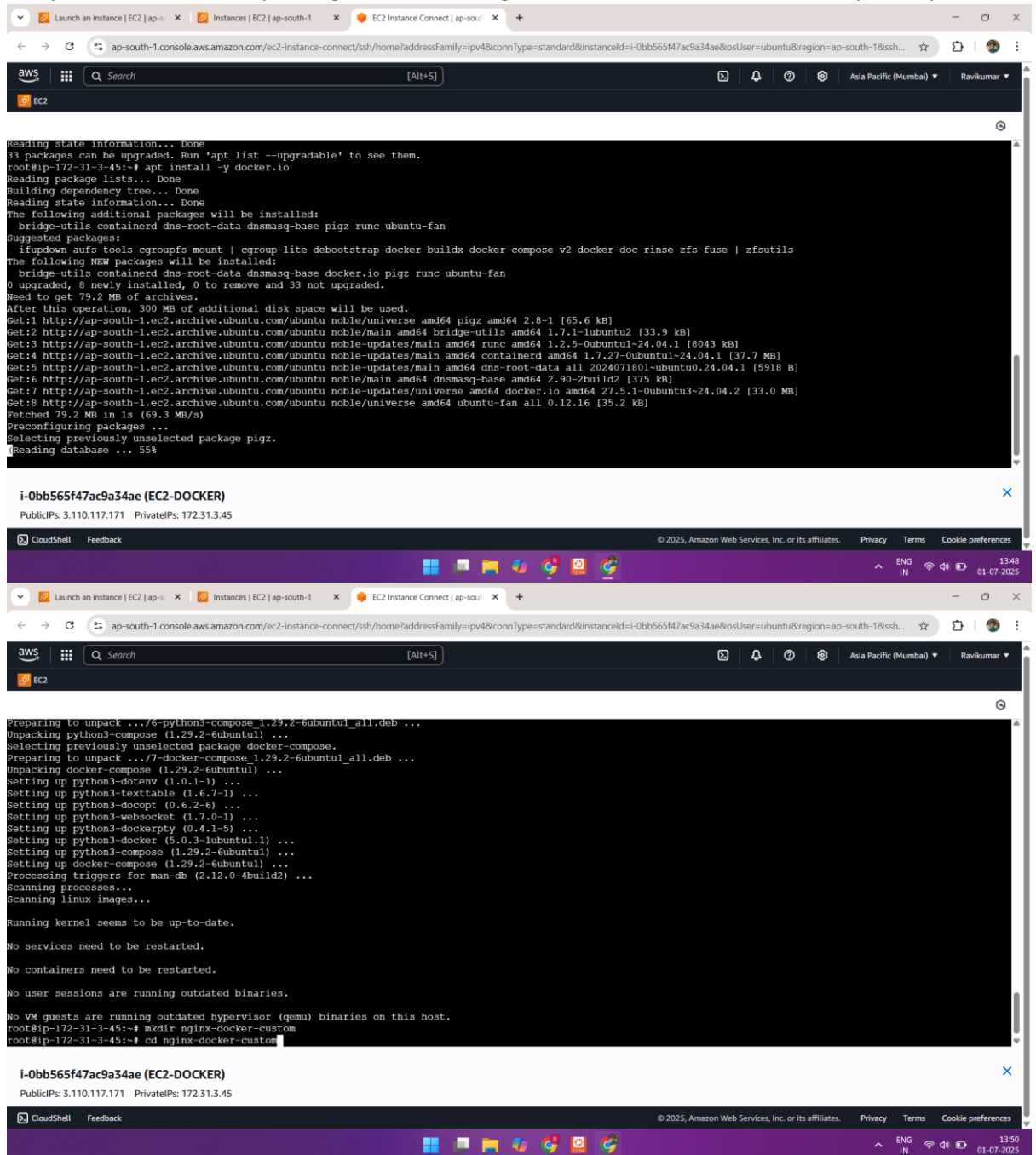


Create a custom docker image for nginx and deploy it using docker compose, where the volume bind mount should be at /var/opt/nginx location. Push the created custom docker image to your docker-hub.

1. First I created a VM in aws console. After that I connected and then I executed docker installation and compose commands. Then I created one directory & into the directory I created html, docker file, docker-compose.yml file, and executed codes and details as per the files. Then I build docker images. And checked with using public ip for working or not.
2. I used docker login command to login the docker, then I get confirmation code and connect to the docker repository. Then I used commands are tag commend and push commend.
3. The push commend is to pushing the docker images from VM terminal to docker Repository.



The screenshot displays the AWS Management Console for an EC2 instance named 'ap-south-1'. The terminal window shows the following sequence of operations:

```
Reading state information... Done
33 packages can be upgraded. Run 'apt list --upgradable' to see them.
root@ip-172-31-3-45:~# apt install -y docker.io
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base pigz runc ubuntu-fan
Suggested packages:
  ifupdown aufs-tools cgroupfs-mount | cgroup-lite debotstrap docker-buildx docker-compose-v2 docker-doc rinse zfs-fuse | zfsutils
The following NEW packages will be installed:
  bridge-utils containerd dns-root-data dnsmasq-base docker.io pigz runc ubuntu-fan
0 upgraded, 8 newly installed, 0 to remove and 33 not upgraded.
Need to get 79.2 MB of archives.
After this operation, 300 MB of additional disk space will be used.
Get:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 pigz amd64 2.8-1 [65.6 kB]
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 bridge-utils amd64 1.7.1-1ubuntu2 [33.9 kB]
Get:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 runc amd64 1.2.5-0ubuntu1-24.04.1 [8043 kB]
Get:4 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 containerd amd64 1.7.27-0ubuntu1-24.04.1 [37.7 MB]
Get:5 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 dns-root-data all 2024071801-ubuntu0.24.04.1 [5918 B]
Get:6 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 dnsmasq-base amd64 2.90-2build2 [375 kB]
Get:7 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 docker.io amd64 27.5.1-0ubuntu3-24.04.2 [33.0 MB]
Get:8 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 ubuntu-fan all 0.12.16 [35.2 kB]
Fetched 79.2 MB in 1s (69.3 MB/s)
Preconfiguring packages ...
Selecting previously unselected package pigz.
Reading database ... 55%
```

Below the terminal output, the instance details are shown:

i-0bb565f47ac9a34ae (EC2-DOCKER)
PublicIPs: 3.110.117.171 PrivateIPs: 172.31.3.45

The terminal window also shows the installation of Docker Compose and the creation of a custom Docker image:

```
Preparing to unpack .../6-python3-compose_1.29.2-6ubuntu1_all.deb ...
Unpacking python3-compose (1.29.2-6ubuntu1) ...
Selecting previously unselected package docker-compose.
Preparing to unpack .../7-docker-compose_1.29.2-6ubuntu1_all.deb ...
Unpacking docker-compose (1.29.2-6ubuntu1) ...
Setting up python3-dotenv (1.0.1-1) ...
Setting up python3-texttable (1.6.7-1) ...
Setting up python3-dockerpty (0.6.2-6) ...
Setting up python3-websocket (1.7.0-1) ...
Setting up python3-dockerpty (0.4.1-5) ...
Setting up python3-docker (5.0.3-1ubuntu1.1) ...
Setting up python3-compose (1.29.2-6ubuntu1) ...
Setting up docker-compose (1.29.2-6ubuntu1) ...
Processing triggers for man-db (2.12.0-4build2) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-45:~# mkdir nginx-docker-custom
root@ip-172-31-3-45:~# cd nginx-docker-custom
```

Launch an instance | EC2 | ap-south-1 | Instances | EC2 | ap-south-1 | EC2 Instance Connect | ap-south-1

ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?addressfamily=ipv4&connType=standard&instanceId=i-0bb565f47ac9a34ae&osUser=ubuntu®ion=ap-south-1&ssh...

Search [Alt+S]

Asia Pacific (Mumbai) Ravikumar

EC2

GNU nano 7.2html/index.html *
DOCTYPE html>
<html>
<head><title>My Custom NGINX Page</title></head>
<body><h1>Hello from Custom NGINX Docker!</h1></body>
</html>

Help Write Out Where Is Cut Execute Location M-U Undo M-A Set Mark M-] To Bracket M-; Previous
Exit Read File Replace Paste Justify Go To Line M-R Redo M-C Copy M-^ Where Was M-W Next

i-0bb565f47ac9a34ae (EC2-DOCKER)
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Launch an instance | EC2 | ap-south-1 | Instances | EC2 | ap-south-1 | EC2 Instance Connect | ap-south-1

ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?addressfamily=ipv4&connType=standard&instanceId=i-0bb565f47ac9a34ae&osUser=ubuntu®ion=ap-south-1&ssh...

Search [Alt+S]

Asia Pacific (Mumbai) Ravikumar

EC2

GNU nano 7.2Dockerfile *
FROM nginx:alpine
Remove default content
RUN rm -rf /usr/share/nginx/html/*
Copy custom HTML content
COPY html /usr/share/nginx/html

Help Write Out Where Is Cut Execute Location M-U Undo M-A Set Mark M-] To Bracket M-; Previous
Exit Read File Replace Paste Justify Go To Line M-R Redo M-C Copy M-^ Where Was M-W Next

i-0bb565f47ac9a34ae (EC2-DOCKER)
PublicIPs: 3.110.117.171 PrivateIPs: 172.31.3.45

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Launch an instance | EC2 | ap-south-1 | Instances | EC2 | ap-south-1 | EC2 Instance Connect | ap-south-1 | +

ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?addressFamily=ipv4&connType=standard&instanceId=i-0bb565f47ac9a34ae&osUser=ubuntu®ion=ap-south-1&ssh...

Search [Alt+S]

EC2

```
Setting up python3-docker (1.0.1-1) ...
Setting up python3-texttable (1.6.7-1) ...
Setting up python3-docopt (0.6.2-6) ...
Setting up python3-websocket (1.7.0-1) ...
Setting up python3-dockerpty (0.4.1-5) ...
Setting up python3-docker (5.0.3-1ubuntu1.1) ...
Setting up python3-compose (1.29.2-6ubuntu1) ...
Setting up docker-compose (1.29.2-6ubuntu1) ...
Processing triggers for man-db (2.12.0-4build2) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
root@ip-172-31-3-45:~# mkdir nginx-docker-custom
root@ip-172-31-3-45:~# cd nginx-docker-custom
root@ip-172-31-3-45:~/nginx-docker-custom# mkdir html
root@ip-172-31-3-45:~/nginx-docker-custom# nano html/index.html
root@ip-172-31-3-45:~/nginx-docker-custom# nano Dockerfile
root@ip-172-31-3-45:~/nginx-docker-custom# nano docker-compose.yml
root@ip-172-31-3-45:~/nginx-docker-custom#
```

i-0bb565f47ac9a34ae (EC2-DOCKER)

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Launch an instance | EC2 | ap-south-1 | Instances | EC2 | ap-south-1 | EC2 Instance Connect | ap-south-1 | +

My Custom NGINX Page

Not secure 3.110.117.171

Hello from Custom NGINX Docker!

ENG IN 13:52 01-07-2025

Launch an instance | EC2 | ap-south-1

Instances | EC2 | ap-south-1

EC2 Instance Connect | ap-south-1

My Custom NGINX Page

login.docker.com/activate

ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?addressFamily=ipv4&connType=standard&instanceId=i-0bb565f47ac9a34ae&osUser=ubuntu®ion=ap-south-1&ssh...

Search [Alt+S]

Asia Pacific (Mumbai)

Ravikumar

Install the buildx component to build images with BuildKit:
<https://docs.docker.com/go/buildx/>

Sending build context to Docker daemon 4.608kB
Step 1/3 : FROM nginx:alpine
--> 77656422f700
Step 2/3 : RUN rm -rf /usr/share/nginx/html/*
--> Using cache
--> 5c367ab1de4b
Step 3/3 : COPY html /usr/share/nginx/html
--> Using cache
--> 7d2b726db317
Successfully built 7d2b726db317
WARNING: Image for service web was built because it did not already exist. To rebuild this image you must use 'docker-compose build' or 'docker-compose up --build'.
Creating nginx-docker-custom web 1... done
root@ip-172-31-3-45:~/nginx-docker-custom# ls -l /var/opt/nginx
ls: cannot access '/var/opt/nginx': No such file or directory
root@ip-172-31-3-45:~/nginx-docker-custom# docker login

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: **PKQC-PJTG**
Press ENTER to open your browser or submit your device code here: <https://login.docker.com/activate>
Waiting for authentication in the browser...

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login.docker.com/activate

docker.

Device Activation

Enter the code displayed on your device

Enter your one-time code*
PKQC-PJTG

Continue

Launch an instance | EC2 | ap-south-1 | Instances | EC2 | ap-south-1 | EC2 Instance Connect | ap-south-1 | My Custom NGINX Page | login.docker.com/device/success | +

ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh/home?addressFamily=ipv4&contentType=standard&instanceId=i-0bb565f47ac9a34ae&osUser=ubuntu®ion=ap-south-1&ssh...

Search [Alt+S]

Asia Pacific (Mumbai) Ravikumar

EC2

https://docs.docker.com/go/buildx/

Sending build context to Docker daemon 4.608kB
Step 1/3 : FROM nginx:alpine
--> 77656422f700
Step 2/3 : RUN rm -rf /usr/share/nginx/html/*
--> Using cache
--> 5c367ab1dc4b
Step 3/3 : COPY html /usr/share/nginx/html
--> Using cache
--> 7d2b726db317
Successfully built 7d2b726db317
Successfully tagged custom-nginx:latest
root@ip-172-31-3-45:~/nginx-docker-custom# docker tag custom-nginx ravimccullum/custom-nginx:latest
root@ip-172-31-3-45:~/nginx-docker-custom# docker push ravimccullum/custom-nginx:latest
The push refers to repository [docker.io/ravimccullum/custom-nginx]
9f2e2d631dd3: Pushed
218328e1e91a: Pushed
640e06e412a9: Pushed
bd66bdd2f47f: Pushed
4f313ed230a0: Pushed
36acb230000e: Pushed
2aaacff968bc: Pushed
bbbd2d1aea89: Pushed
7b97c641cb43: Pushed
fd2758d7a50e: Pushed
latest: digest: sha256:976659883c9c5a51793d100f0012bf84961298517ddd157998c19ba6f83ec459 size: 2403
root@ip-172-31-3-45:~/nginx-docker-custom#

i-0bb565f47ac9a34ae (EC2-DOCKER)
PublicIPs: 3.110.117.171 PrivateIPs: 172.31.3.45

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Launch an instance | EC2 | ap-south-1 | Instances | EC2 | ap-south-1 | EC2 Instance Connect | ap-south-1 | My Custom NGINX Page | Docker Hub | +

hub.docker.com/repositories/ravimccullum

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Search by repository name All content Create a repository

repositories

All repositories within the ravimccullum namespace.

Name	Last Pushed	Contains	Visibility	Scout
ravimccullum/custom-nginx	less than a minute ago	IMAGE	Public	Inactive
ravimccullum/ravirepo	12 days ago	IMAGE	Public	Inactive

1-2 of 2