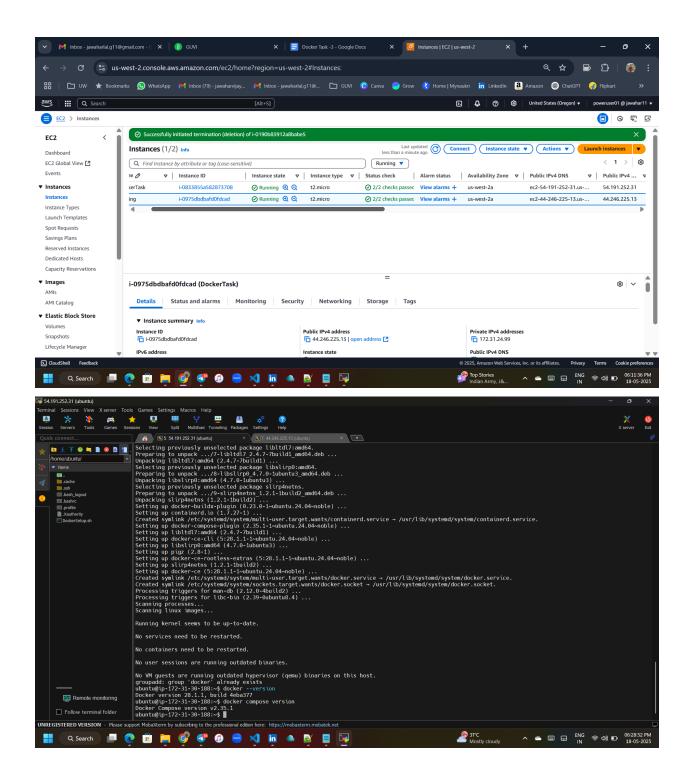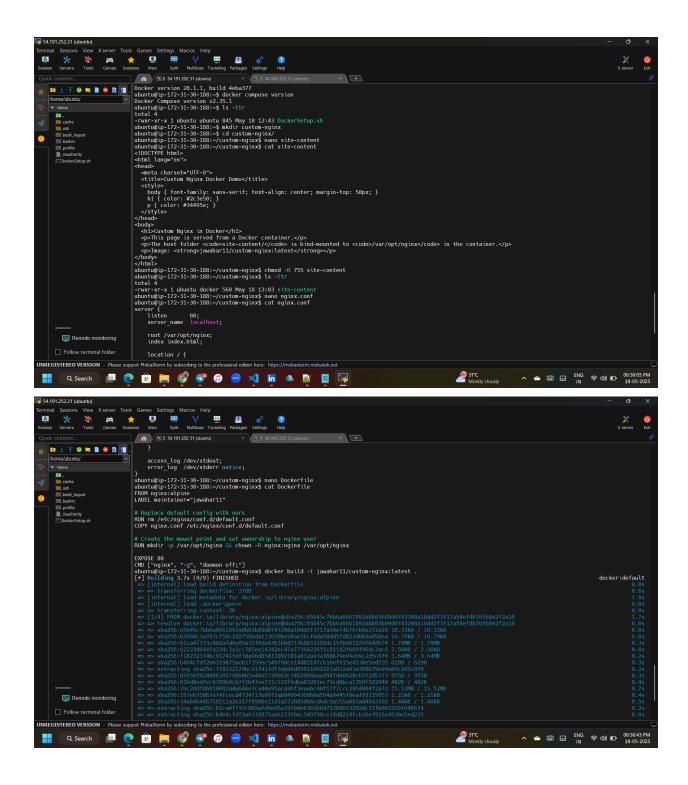# Docker Task –3

Task Description:

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.

AWS EC2 Console (top window)

Successfully initiated termination (deletion) of i-0190b83912a8babe5

Instances (1/2) Info

Last updated less than a minute ago

Connect | Instance state ▼ | Actions ▼ | Launch instances ▼

Find Instance by attribute or tag (case-sensitive)

Running ▼

	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...
kerTask	i-0833855a582873708	⊘ Running	t2.micro	⊘ 2/2 checks passed	View alarms +	us-west-2a	ec2-54-191-252-31.us-...	54.191.252.31
ing	i-0975dbdbafd0fdcad	⊘ Running	t2.micro	⊘ 2/2 checks passed	View alarms +	us-west-2a	ec2-44-246-225-13.us-...	44.246.225.13

i-0975dbdbafd0fdcad (DockerTask)

Details | Status and alarms | Monitoring | Security | Networking | Storage | Tags

▼ Instance summary Info

Instance ID
i-0975dbdbafd0fdcad

Public IPv4 address
44.246.225.13 | open address

Private IPv4 addresses
172.31.24.99

IPv6 address

Instance state

Public IPv4 DNS

MobaXterm Terminal (bottom window)

```
Selecting previously unselected package libltdl7:amd64.
Preparing to unpack .../7-libltdl7_2.4.7-7build1_amd64.deb ...
Unpacking libltdl7:amd64 (2.4.7-7build1) ...
Selecting previously unselected package libslirp0:amd64.
Preparing to unpack .../8-libslirp0_4.7.0-1ubuntu3_amd64.deb ...
Unpacking libslirp0:amd64 (4.7.0-1ubuntu3) ...
Selecting previously unselected package slirp4netns.
Preparing to unpack .../9-slirp4netns_1.2.1-1build2_amd64.deb ...
Unpacking slirp4netns (1.2.1-1build2) ...
Setting up docker-buildx-plugin (0.23.0-1~ubuntu.24.04~noble) ...
Setting up containerd.io (1.7.27-1) ...
Created symlink /etc/systemd/system/multi-user.target.wants/containerd.service → /usr/lib/systemd/system/containerd.service.
Setting up docker-compose-plugin (2.35.1-1~ubuntu.24.04~noble) ...
Setting up libltdl7:amd64 (2.4.7-7build1) ...
Setting up docker-ce-cli (5:28.1.1-1~ubuntu.24.04~noble) ...
Setting up libslirp0:amd64 (4.7.0-1ubuntu3) ...
Setting up pigz (2.8-1) ...
Setting up docker-ce-rootless-extras (5:28.1.1-1~ubuntu.24.04~noble) ...
Setting up slirp4netns (1.2.1-1build2) ...
Setting up docker-ce (5:28.1.1-1~ubuntu.24.04~noble) ...
Created symlink /etc/systemd/system/multi-user.target.wants/docker.service → /usr/lib/systemd/system/docker.service.
Created symlink /etc/systemd/system/sockets.target.wants/docker.socket → /usr/lib/systemd/system/docker.socket.
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for libc-bin (2.39-0ubuntu8.4) ...
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.
groupadd: group 'docker' already exists
ubuntu@ip-172-31-30-188:~$ docker --version
Docker version 28.1.1, build 4eba377
ubuntu@ip-172-31-30-188:~$ docker compose version
Docker Compose version v2.35.1
ubuntu@ip-172-31-30-188:~$
```

```
Docker version 28.1.1, build 4eba377
ubuntu@ip-172-31-30-188:~$ docker compose version
Docker Compose version v2.35.1
ubuntu@ip-172-31-30-188:~$ ls -ltr
total 4
-rwxr-xr-x 1 ubuntu ubuntu 845 May 18 12:43 DockerSetup.sh
ubuntu@ip-172-31-30-188:~$ mkdir custom-nginx
ubuntu@ip-172-31-30-188:~$ cd custom-nginx/
ubuntu@ip-172-31-30-188:~/custom-nginx$ nano site-content
ubuntu@ip-172-31-30-188:~/custom-nginx$ cat site-content
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Custom Nginx Docker Demo</title>
    <style>
        body { font-family: sans-serif; text-align: center; margin-top: 50px; }
        h1 { color: #2c3e50; }
        p { color: #34495e; }
    </style>
</head>
<body>
    <h1>Custom Nginx in Docker</h1>
    <p>This page is served from a Docker container.</p>
    <p>The host folder <code>site-content/</code> is bind-mounted to <code>/var/opt/nginx</code> in the container.</p>
    <p>Image: <strong>jawahar11/custom-nginx:latest</strong></p>
</body>
</html>
ubuntu@ip-172-31-30-188:~/custom-nginx$ chmod -R 755 site-content
ubuntu@ip-172-31-30-188:~/custom-nginx$ ls -ltr
total 4
-rwxr-xr-x 1 ubuntu docker 560 May 18 13:03 site-content
ubuntu@ip-172-31-30-188:~/custom-nginx$ nano nginx.conf
ubuntu@ip-172-31-30-188:~/custom-nginx$ cat nginx.conf
server {
    listen       80;
    server_name  localhost;

    root /var/opt/nginx;
    index index.html;

    location / {
```

```
    }

    access_log /dev/stdout;
    error_log  /dev/stderr notice;
}
ubuntu@ip-172-31-30-188:~/custom-nginx$ nano Dockerfile
ubuntu@ip-172-31-30-188:~/custom-nginx$ cat Dockerfile
FROM nginx:alpine
LABEL maintainer="jawahar11"

# Replace default config with ours
RUN rm /etc/nginx/conf.d/default.conf
COPY nginx.conf /etc/nginx/conf.d/default.conf

# Create the mount point and set ownership to nginx user
RUN mkdir -p /var/opt/nginx && chown -R nginx:nginx /var/opt/nginx

EXPOSE 80
CMD ["nginx", "-g", "daemon off;"]
ubuntu@ip-172-31-30-188:~/custom-nginx$ docker build -t jawahar11/custom-nginx:latest .
[+] Building 3.7s (9/9) FINISHED                                                                    docker:default
 => [internal] load build definition from Dockerfile                                                          0.0s
 => => transferring dockerfile: 378B                                                                          0.0s
 => [internal] load metadata for docker.io/library/nginx:alpine                                               1.0s
 => [internal] load .dockerignore                                                                             0.0s
 => => transferring context: 2B                                                                               0.0s
 => [1/4] FROM docker.io/library/nginx:alpine@sha256:65645c7bb6a0661892a8b03b89d0743208a18dd2f3f17a54ef4b76fb8e2f2a10  1.7s
 => => resolve docker.io/library/nginx:alpine@sha256:65645c7bb6a0661892a8b03b89d0743208a18dd2f3f17a54ef4b76fb8e2f2a10  0.0s
 => => sha256:65645c7bb6a0661892a8b03b89d0743208a18dd2f3f17a54ef4b76fb8e2f2a10 10.33kB / 10.33kB             0.0s
 => => sha256:6769dc3a703c719c1d2756bda113659be28ae16cf0da58dd5fd823d6b9a050ea 10.79kB / 10.79kB             0.0s
 => => sha256:61ca4f733c802afd9e05a32f0de0361b6d713b8b53292dc15fb093229f648674 1.79MB / 1.79MB               0.3s
 => => sha256:62223d644fa234c3a1cc785ee14242ec47a77364226f1c811d2f669f96dc2ac8 2.50kB / 2.50kB               0.0s
 => => sha256:f18232174bc91741fdf3da96d85011092101a032a93a388b79e99e69c2d5c870 3.64kB / 3.64kB               0.2s
 => => sha256:b464cfdf2a6319075aeb27359ec549790ce14d8214fcb16ef915e4530e5ed235 629B / 629B                   0.3s
 => => extracting sha256:f18232174bc91741fdf3da96d85011092101a032a93a388b79e99e69c2d5c870                     0.2s
 => => sha256:d7e507024086395 7ebb0b5a44a5729963c3462666baa2947d00628cb5f2d5773 955B / 955B                 0.3s
 => => sha256:81bd8ed7ec6789b0cb7f1b47ee731c522f6dba83201ec73cd6bca1350f582948 402B / 402B                   0.4s
 => => sha256:39c2ddfd6010082a4a646e7ca44e95aca9bf3eaebc00f17f7ccc2954004f2a7d 15.52MB / 15.52MB             0.7s
 => => sha256:197eb75867ef4fcecd4724f17b0972ab0489436860a594a9445f8eaff8155053 1.21kB / 1.21kB               0.4s
 => => sha256:34a64644b756511a2e217f0508e11d1a572085d66cd6dc9a555a082ad49a3102 1.40kB / 1.40kB               0.5s
 => => extracting sha256:61ca4f733c802afd9e05a32f0de0361b6d713b8b53292dc15fb093229f648674                     0.2s
 => => extracting sha256:b464cfdf2a6319075aeb27359ec549790ce14d8214fcb16ef915e4530e5ed235                     0.0s
```

```
=> => naming to docker.io/jawahar11/custom-nginx:latest                          0.0s
ubuntu@ip-172-31-30-188:~/custom-nginx$ docker images
REPOSITORY                TAG       IMAGE ID       CREATED          SIZE
jawahar11/custom-nginx    latest    359fa646bb4d   24 seconds ago   48.2MB
ubuntu@ip-172-31-30-188:~/custom-nginx$ docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES
ubuntu@ip-172-31-30-188:~/custom-nginx$ ls -ltr
total 12
-rwxr-xr-x 1 ubuntu docker 560 May 18 13:03 site-content
-rw-rw-r-- 1 ubuntu docker 231 May 18 13:04 nginx.conf
-rw-r--r-- 1 ubuntu docker 339 May 18 13:05 Dockerfile
ubuntu@ip-172-31-30-188:~/custom-nginx$ nano docker-compose.yml
ubuntu@ip-172-31-30-188:~/custom-nginx$ cat docker-compose.yml
version: "3.8"

services:
  web:
    image: jawahar11/custom-nginx:latest
    ports:
      - "80:80"
    volumes:
      - ./site-content:/var/opt/nginx:ro
ubuntu@ip-172-31-30-188:~/custom-nginx$ docker compose up -d
WARN[0000] /home/ubuntu/custom-nginx/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusio
n
[+] Running 1/2
 ✔ Network custom-nginx_default  Created                                          0.1s
 ⠿ Container custom-nginx-web-1  Starting                                         0.3s
Error response from daemon: failed to create task for container: failed to create shim task: OCI runtime create failed: runc create failed: unable to start co
ntainer process: error during container init: error mounting "/home/ubuntu/custom-nginx/site-content" to rootfs at "/var/opt/nginx": mount src=/home/ubuntu/cu
stom-nginx/site-content, dst=/var/opt/nginx, dstFd=/proc/thread-self/fd/8, flags=0x5000: not a directory: unknown: Are you trying to mount a directory onto a
file (or vice-versa)? Check if the specified host path exists and is the expected type
ubuntu@ip-172-31-30-188:~/custom-nginx$ ls -ltr
total 16
-rwxr-xr-x 1 ubuntu docker 560 May 18 13:03 site-content
-rw-rw-r-- 1 ubuntu docker 231 May 18 13:04 nginx.conf
-rw-r--r-- 1 ubuntu docker 339 May 18 13:05 Dockerfile
-rw-rw-r-- 1 ubuntu docker 155 May 18 13:07 docker-compose.yml
ubuntu@ip-172-31-30-188:~/custom-nginx$ rm site-content
ubuntu@ip-172-31-30-188:~/custom-nginx$ mkdir site-content
ubuntu@ip-172-31-30-188:~/custom-nginx$ nano index.html
ubuntu@ip-172-31-30-188:~/custom-nginx$ cat index.html
```

```
ubuntu@ip-172-31-30-188:~/custom-nginx$ mkdir site-content
ubuntu@ip-172-31-30-188:~/custom-nginx$ nano index.html
ubuntu@ip-172-31-30-188:~/custom-nginx$ cat index.html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Custom Nginx Docker Demo</title>
  <style>
    body { font-family: sans-serif; text-align: center; margin-top: 50px; }
    h1 { color: #2c3e50; }
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  </style>
</head>
<body>
  <h1>Custom Nginx in Docker</h1>
  <p>This page is served from a Docker container.</p>
  <p>The host folder <code>site-content/</code> is bind-mounted to <code>/var/opt/nginx</code> in the container.</p>
  <p>Image: <strong>jawahar11/custom-nginx:latest</strong></p>
</body>
</html>
ubuntu@ip-172-31-30-188:~/custom-nginx$ chmod -R 755 site-content
ubuntu@ip-172-31-30-188:~/custom-nginx$ docker compose down
WARN[0000] /home/ubuntu/custom-nginx/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusio
n
[+] Running 2/2
 ✔ Container custom-nginx-web-1  Removed                                          0.0s
 ✔ Network custom-nginx_default  Removed                                          0.1s
ubuntu@ip-172-31-30-188:~/custom-nginx$ docker compose up -d
WARN[0000] /home/ubuntu/custom-nginx/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusio
n
[+] Running 2/2
 ✔ Network custom-nginx_default  Created                                          0.1s
 ✔ Container custom-nginx-web-1  Started                                          0.4s
ubuntu@ip-172-31-30-188:~/custom-nginx$ docker compose down
WARN[0000] /home/ubuntu/custom-nginx/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusio
n
[+] Running 2/2
 ✔ Container custom-nginx-web-1  Removed                                          0.2s
 ✔ Network custom-nginx_default  Removed                                          0.1s
ubuntu@ip-172-31-30-188:~/custom-nginx$ nano docker-compose.yml
ubuntu@ip-172-31-30-188:~/custom-nginx$ mv index.html site-content/
```

```
    </style>
</head>
<body>
    <h1>Custom Nginx in Docker</h1>
    <p>This page is served from a Docker container.</p>
    <p>The host folder <code>site-content/</code> is bind-mounted to <code>/var/opt/nginx</code> in the container.</p>
    <p>Image: <strong>jawahar11/custom-nginx:latest</strong></p>
</body>
</html>
ubuntu@ip-172-30-188:~/custom-nginx$ chmod -R 755 site-content
ubuntu@ip-172-30-188:~/custom-nginx$ docker compose down
WARN[0000] /home/ubuntu/custom-nginx/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] Running 2/2
 ✔ Container custom-nginx-web-1  Removed                                                                      0.0s
 ✔ Network custom-nginx_default  Removed                                                                      0.1s
ubuntu@ip-172-30-188:~/custom-nginx$ docker compose up -d
WARN[0000] /home/ubuntu/custom-nginx/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] Running 2/2
 ✔ Network custom-nginx_default  Created                                                                      0.1s
 ✔ Container custom-nginx-web-1  Started                                                                      0.4s
ubuntu@ip-172-30-188:~/custom-nginx$ docker compose down
WARN[0000] /home/ubuntu/custom-nginx/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] Running 2/2
 ✔ Container custom-nginx-web-1  Removed                                                                      0.2s
 ✔ Network custom-nginx_default  Removed                                                                      0.1s
ubuntu@ip-172-30-188:~/custom-nginx$ nano docker-compose.yml
ubuntu@ip-172-30-188:~/custom-nginx$ mv index.html site-content/
ubuntu@ip-172-30-188:~/custom-nginx$ ls -ltr
total 16
-rw-rw-r-- 1 ubuntu docker  231 May 18 13:04 nginx.conf
-rw-rw-r-- 1 ubuntu docker  339 May 18 13:05 Dockerfile
-rw-rw-r-- 1 ubuntu docker  152 May 18 13:14 docker-compose.yml
drwxr-xr-x 2 ubuntu docker 4096 May 18 13:19 site-content
ubuntu@ip-172-30-188:~/custom-nginx$ docker compose up -d
WARN[0000] /home/ubuntu/custom-nginx/docker-compose.yml: the attribute `version` is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] Running 1/1
 ✔ Container custom-nginx-web-1  Started                                                                      0.3s
ubuntu@ip-172-30-188:~/custom-nginx$
```

Custom Nginx in Docker

This page is served from a Docker container.

The host folder site-content/ is bind-mounted to /var/opt/nginx in the container.

Image: **jawahar11/custom-nginx:latest**

```
ubuntu@ip-172-31-30-188:~/custom-nginx$ docker login

USING WEB-BASED LOGIN

i Info → To sign in with credentials on the command line, use 'docker login -u <username>'

Your one-time device confirmation code is: BJGH-RZQS
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 credentials are stored unencrypted in '/home/ubuntu/.docker/config.json'.
Configure a credential helper to remove this warning. See
https://docs.docker.com/go/credential-store/

Login Succeeded
ubuntu@ip-172-31-30-188:~/custom-nginx$ docker push jawahar11/custom-nginx:latest
The push refers to repository [docker.io/jawahar11/custom-nginx]
e4ba1d122b38: Pushed
9a9bb721c981: Pushed
947b228129bb: Pushed
0d853d50b128: Mounted from library/nginx
947e805a4ac7: Mounted from library/nginx
811a4dbbf4a5: Mounted from library/nginx
b8d7d1d22634: Mounted from library/nginx
e244aa659f61: Mounted from library/nginx
c56f134d3805: Mounted from library/nginx
d71eae0084c1: Mounted from library/nginx
08000c18d16d: Mounted from library/nginx
latest: digest: sha256:b3de6595b81404271583ca9ff5582002f9f095d63add358104870341211288c3 size: 2610
ubuntu@ip-172-31-30-188:~/custom-nginx$
```


Repositories

All repositories within the **jawahar11** namespace.

Name	Last Pushed	Contains	Visibility	Scout
jawahar11/custom-nginx	1 minute ago	IMAGE	Public	Inactive

1–1 of 1