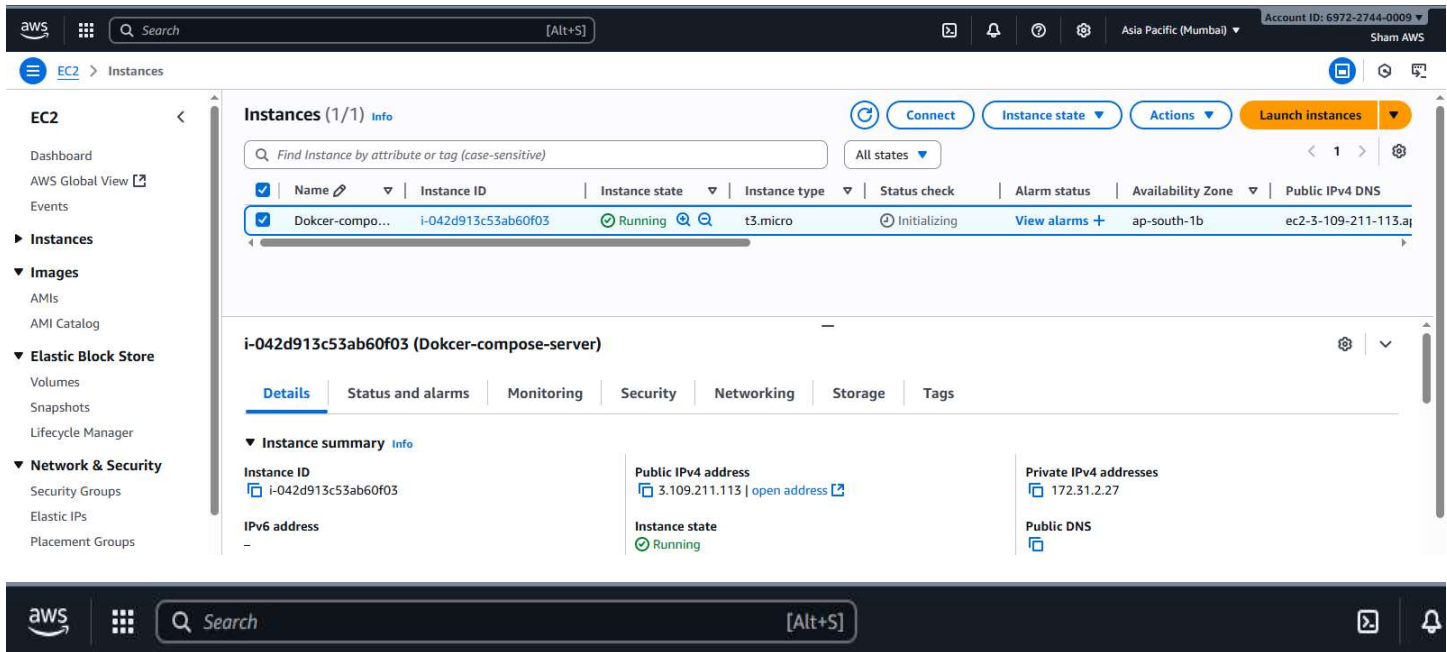


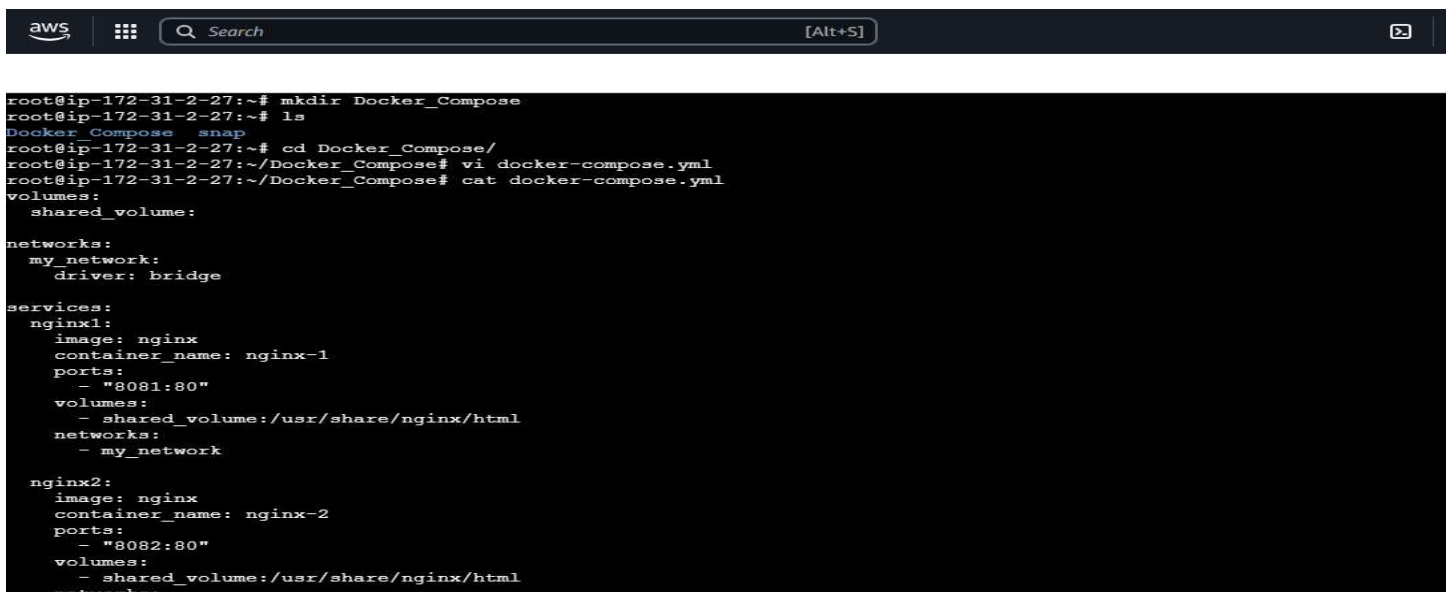
# Docker Compose Setup: Three Nginx Containers on Shared Volume and Network.

## 1. Setup EC2 Server with Configured Docker and Docker Compose.



```
root@ip-172-31-2-27:~# docker --version
Docker version 28.2.2, build 28.2.2-0ubuntu1~24.04.1
root@ip-172-31-2-27:~# docker compose --version
Docker version 28.2.2, build 28.2.2-0ubuntu1~24.04.1
root@ip-172-31-2-27:~#
```

## 2. Write a Docker-Compose.yml File.



```
aws [Search] [Alt+S]

nginx1:
  image: nginx
  container_name: nginx-1
  ports:
    - "8081:80"
  volumes:
    - shared_volume:/usr/share/nginx/html
  networks:
    - my_network

nginx2:
  image: nginx
  container_name: nginx-2
  ports:
    - "8082:80"
  volumes:
    - shared_volume:/usr/share/nginx/html
  networks:
    - my_network

nginx3:
  image: nginx
  container_name: nginx-3
  ports:
    - "8083:80"
  volumes:
    - shared_volume:/usr/share/nginx/html
  networks:
    - my_network

root@ip-172-31-2-27:~/Docker_Compose#
```

### 3. Run Container using Docker-compose.yml.

```
aws [Search] [Alt+S]

root@ip-172-31-2-27:~/Docker_Compose# docker-compose up -d
Creating network "docker_compose_my_network" with driver "bridge"
Creating volume "docker_compose_shared_volume" with default driver
Pulling nginx1 (nginx):...
latest: Pulling from library/nginx
8c7716127147: Pull complete
250b90fb2b9a: Pull complete
5d8ea9f4c626: Pull complete
58d144c4badd: Pull complete
b459da543435: Pull complete
8da8ed3552af: Pull complete
54e822d8ee0c: Pull complete
Digest: sha256:3b7732505933ca591ce4a6d860cb713ad96a3176b82f7979a8dfa9973486a0d6
Status: Downloaded newer image for nginx:latest
Creating nginx-3 ... done
Creating nginx-1 ... done
Creating nginx-2 ... done
root@ip-172-31-2-27:~/Docker_Compose# docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS                                                                 NAMES
b372726b9092   nginx    "/docker-entrypoint..." 51 seconds ago Up 50 seconds 0.0.0.0:8082->80/tcp, [::]:8082->80/tcp nginx-2
7cf175d74f00   nginx    "/docker-entrypoint..." 51 seconds ago Up 50 seconds 0.0.0.0:8081->80/tcp, [::]:8081->80/tcp nginx-1
471f08c23343   nginx    "/docker-entrypoint..." 51 seconds ago Up 50 seconds 0.0.0.0:8083->80/tcp, [::]:8083->80/tcp nginx-3
root@ip-172-31-2-27:~/Docker_Compose# ls
docker-compose.yml
root@ip-172-31-2-27:~/Docker_Compose#
```

```
aws [Search] [Alt+S]

root@ip-172-31-2-27:~/Docker_Compose# docker ps
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS                                                                 NAMES
b372726b9092   nginx    "/docker-entrypoint..." 5 minutes ago Up 5 minutes 0.0.0.0:8082->80/tcp, [::]:8082->80/tcp nginx-2
7cf175d74f00   nginx    "/docker-entrypoint..." 5 minutes ago Up 5 minutes 0.0.0.0:8081->80/tcp, [::]:8081->80/tcp nginx-1
471f08c23343   nginx    "/docker-entrypoint..." 5 minutes ago Up 5 minutes 0.0.0.0:8083->80/tcp, [::]:8083->80/tcp nginx-3
root@ip-172-31-2-27:~/Docker_Compose#
```

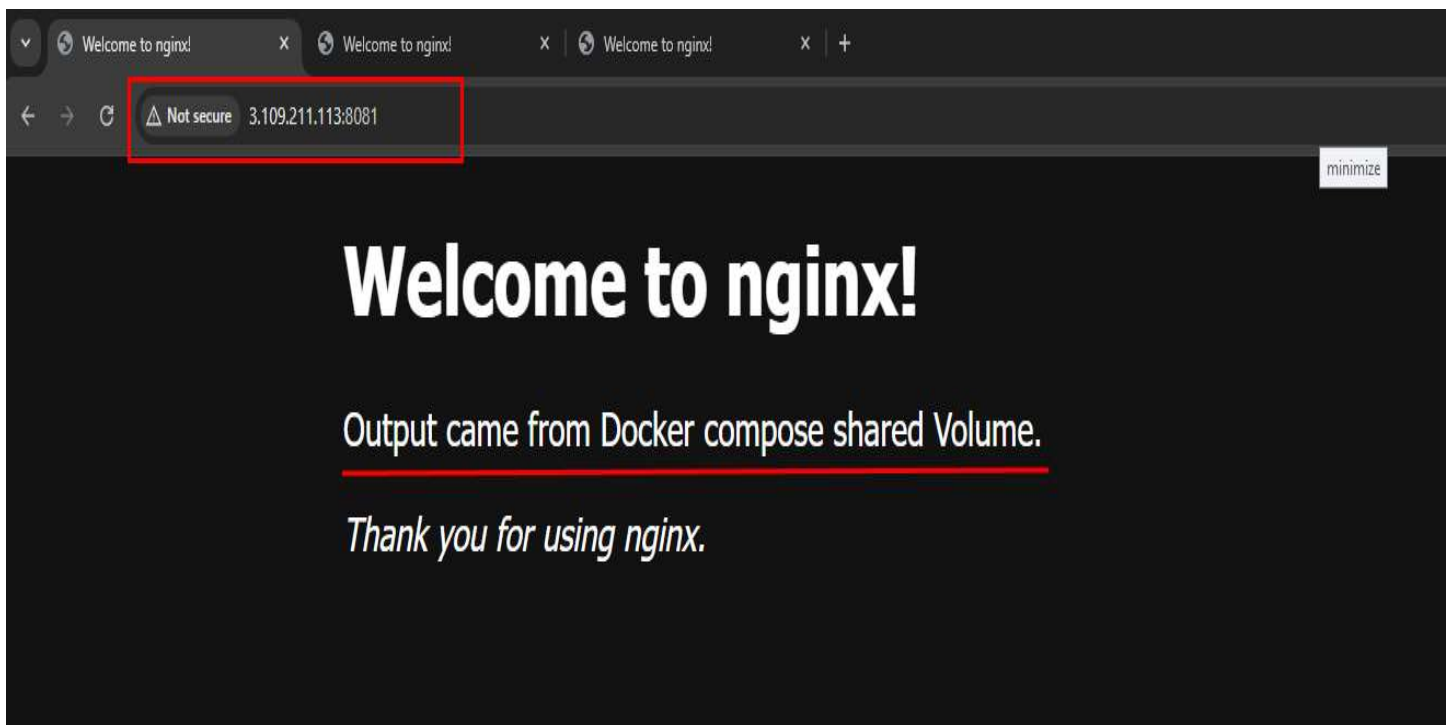
## 4. Move Application/Website Code into shared Volume.

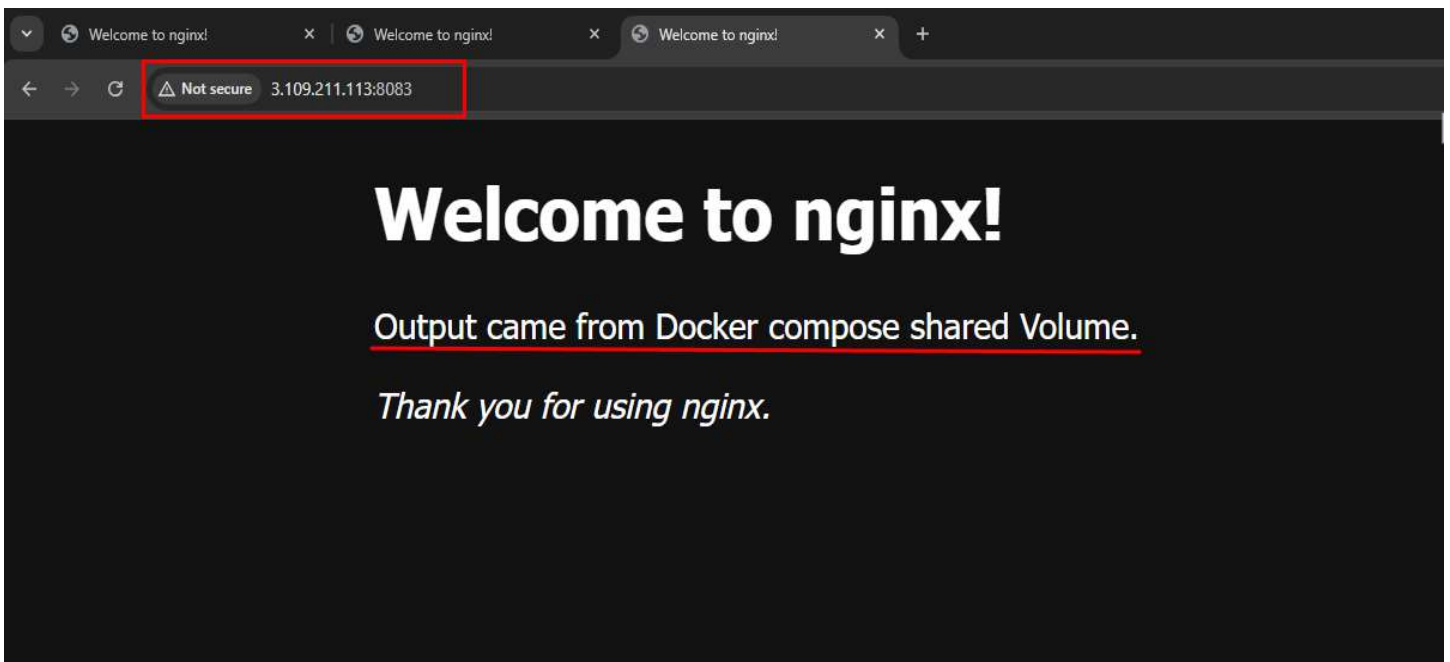
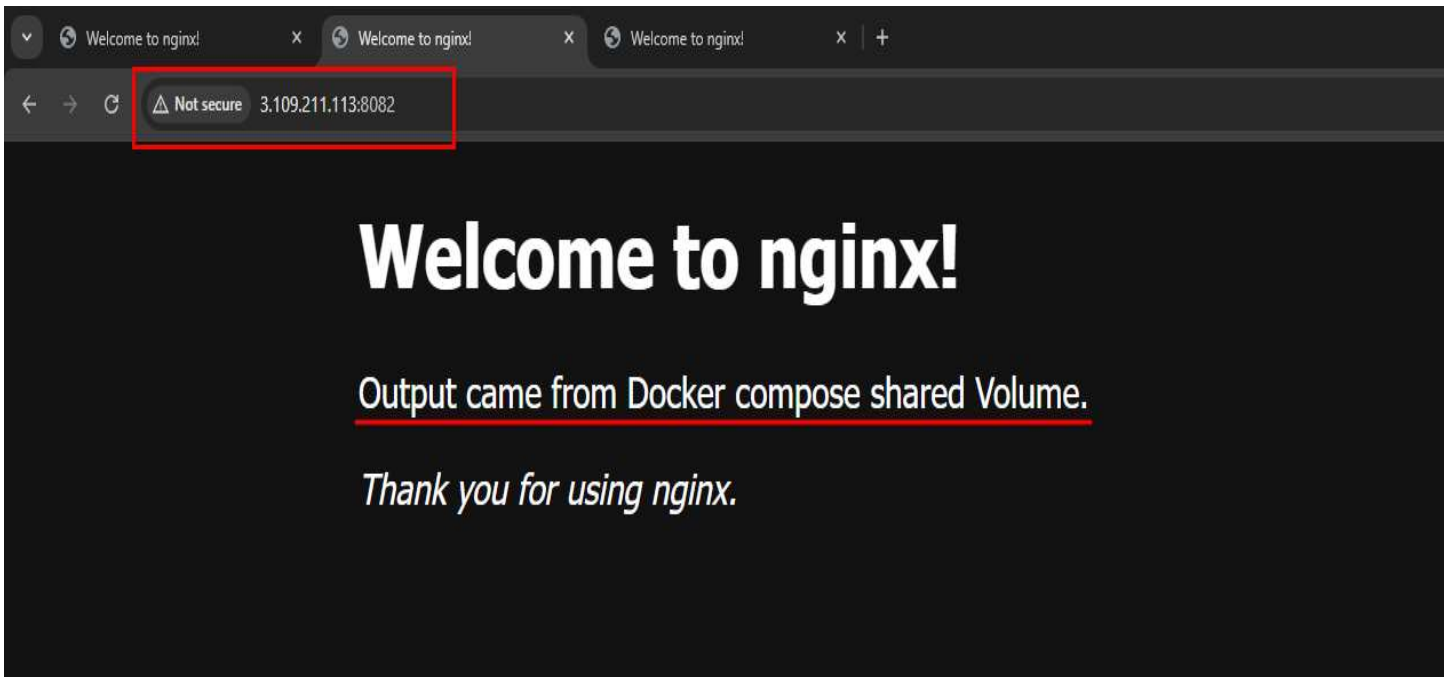
```
aws [Search] [Alt+S] [ ] [ ]
```

```
root@ip-172-31-2-27:/# cd /var/lib/docker/volumes/docker_compose_shared_volume/
root@ip-172-31-2-27:/var/lib/docker/volumes/docker_compose_shared_volume# ls
_data
root@ip-172-31-2-27:/var/lib/docker/volumes/docker_compose_shared_volume# cd _data/
root@ip-172-31-2-27:/var/lib/docker/volumes/docker_compose_shared_volume/_data# ls
50x.html index.html
root@ip-172-31-2-27:/var/lib/docker/volumes/docker_compose_shared_volume/_data# vi index.html
root@ip-172-31-2-27:/var/lib/docker/volumes/docker_compose_shared_volume/_data# cat index.html
<!DOCTYPE html>
<html>
<head>
<title>Welcome to nginx!</title>
<style>
html { color-scheme: light dark; }
body { width: 35em; margin: 0 auto;
font-family: Tahoma, Verdana, Arial, sans-serif; }
</style>
</head>
<body>
<h1>Welcome to nginx!</h1>
<p>Output came from Docker compose shared Volume.</p>

<p><em>Thank you for using nginx.</em></p>
</body>
</html>
root@ip-172-31-2-27:/var/lib/docker/volumes/docker_compose_shared_volume/_data#
```

## 5. Verify Server Output using IP.





## 6. Verify Networks.



```
root@ip-172-31-2-27:///# docker network ls
NETWORK ID      NAME                                DRIVER          SCOPE
86a12a39035f    bridge                             bridge          local
581a4279dcf6    docker_compose_my_network         bridge          local
84d6862e1bb2    host                               host            local
4909886f6bc2    none                               null            local
root@ip-172-31-2-27:///#
```