

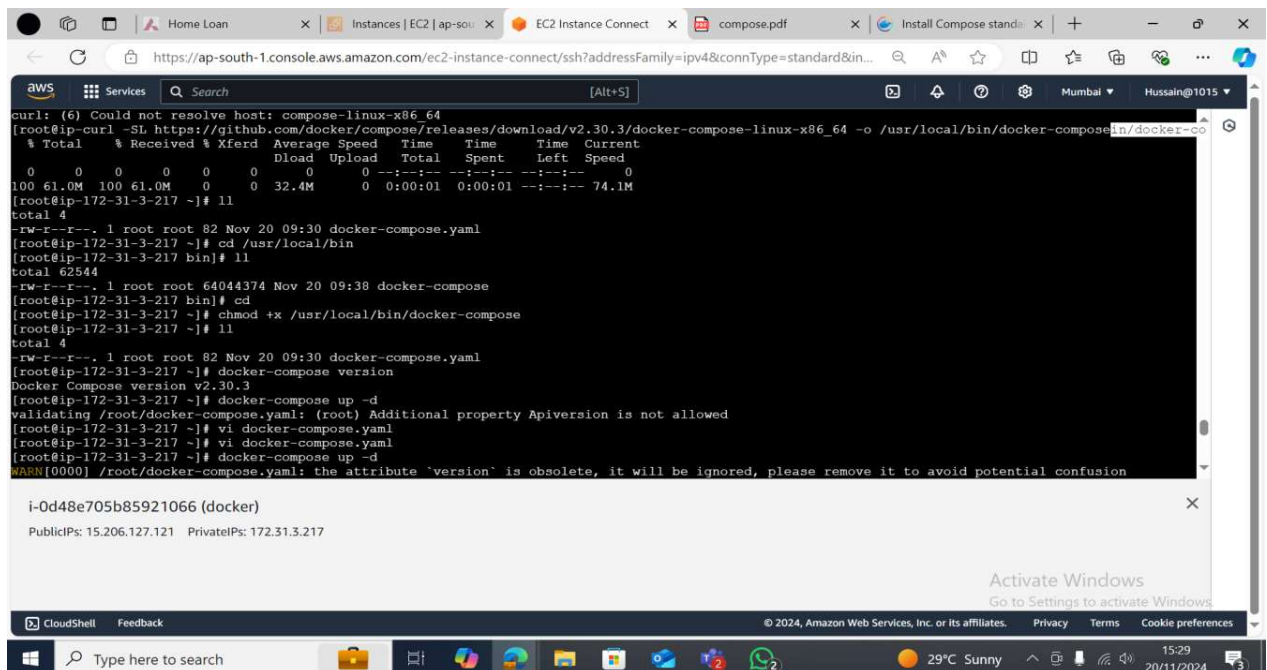
# Docker –Compose

## Docker-compose:

Docker Compose is a powerful tool for managing multi-container applications, and mastering its key components—like services, networks, volumes, and environment variables—can greatly enhance its usage. Let's break down these concepts and how they work within a Docker Compose file.

After starting the docker we have to install the docker using command **curl -SL https://github.com/docker/compose/releases/download/v2.30.3/docker-compose-linux-x86\_64 -o /usr/local/bin/docker-compose**.

To check the docker compose is download are go to path using **cd /usr/local/bin** there we can find the docker-compose file

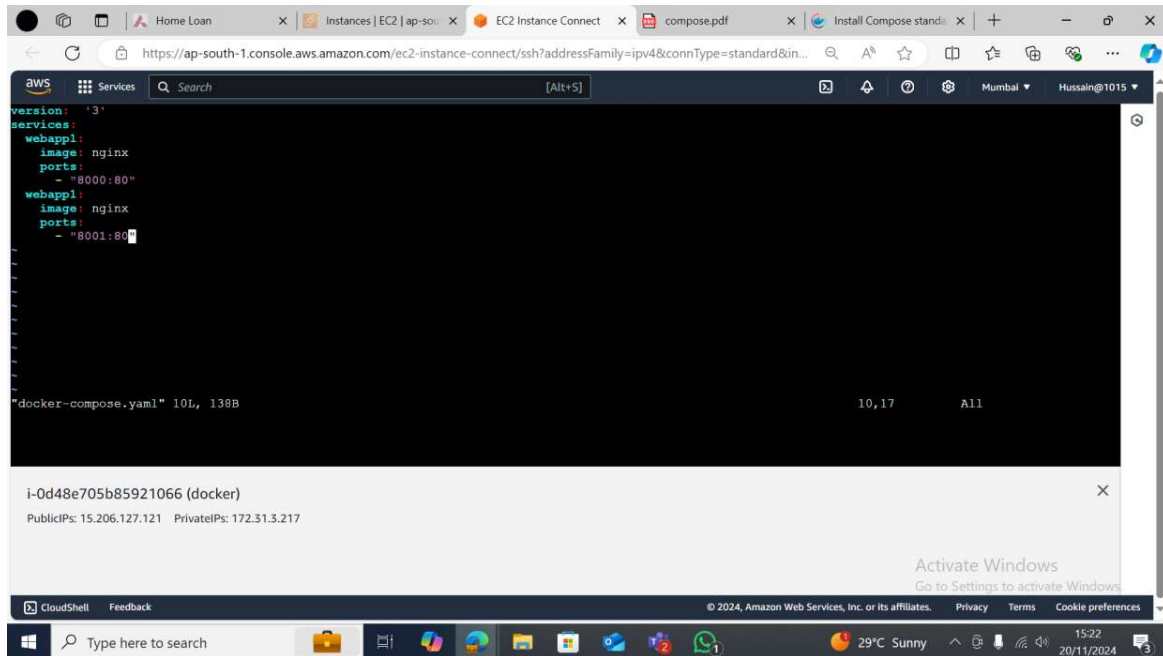


```
curl: (6) Could not resolve host: compose-linux-x86_64
[root@ip-curl -SL https://github.com/docker/compose/releases/download/v2.30.3/docker-compose-linux-x86_64 -o /usr/local/bin/docker-compose
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
           Dload  Upload   Total   Spent    Left     Speed
100 61.0M  100 61.0M    0     0  32.4M    0  0:00:01  0:00:01 --:--:-- 74.1M
[root@ip-172-31-3-217 ~]# ll
total 4
-rw-r--r-- 1 root root 82 Nov 20 09:30 docker-compose.yaml
[root@ip-172-31-3-217 ~]# cd /usr/local/bin
[root@ip-172-31-3-217 bin]# ll
total 62544
-rw-r--r-- 1 root root 64044374 Nov 20 09:38 docker-compose
[root@ip-172-31-3-217 bin]# cd
[root@ip-172-31-3-217 ~]# chmod +x /usr/local/bin/docker-compose
[root@ip-172-31-3-217 ~]# ll
total 4
-rw-r--r-- 1 root root 82 Nov 20 09:30 docker-compose.yaml
[root@ip-172-31-3-217 ~]# docker-compose version
Docker Compose version v2.30.3
[root@ip-172-31-3-217 ~]# docker-compose up -d
validating /root/docker-compose.yaml: (root) Additional property Apiversion is not allowed
[root@ip-172-31-3-217 ~]# vi docker-compose.yaml
[root@ip-172-31-3-217 ~]# vi docker-compose.yaml
[root@ip-172-31-3-217 ~]# docker-compose up -d
WARN[0000] /root/docker-compose.yaml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion

i-0d48e705b85921066 (docker)
PublicIPs: 15.206.127.121 PrivateIPs: 172.31.3.217
```

Now give the docker-compose file execute permission using **chmod +x docker-compose** after this the file colour will be change into green colour which that the file have execution permissions

Go to any path and add vi **docker-compose.yaml** file using visual editor and add the data in it as shown in the below image



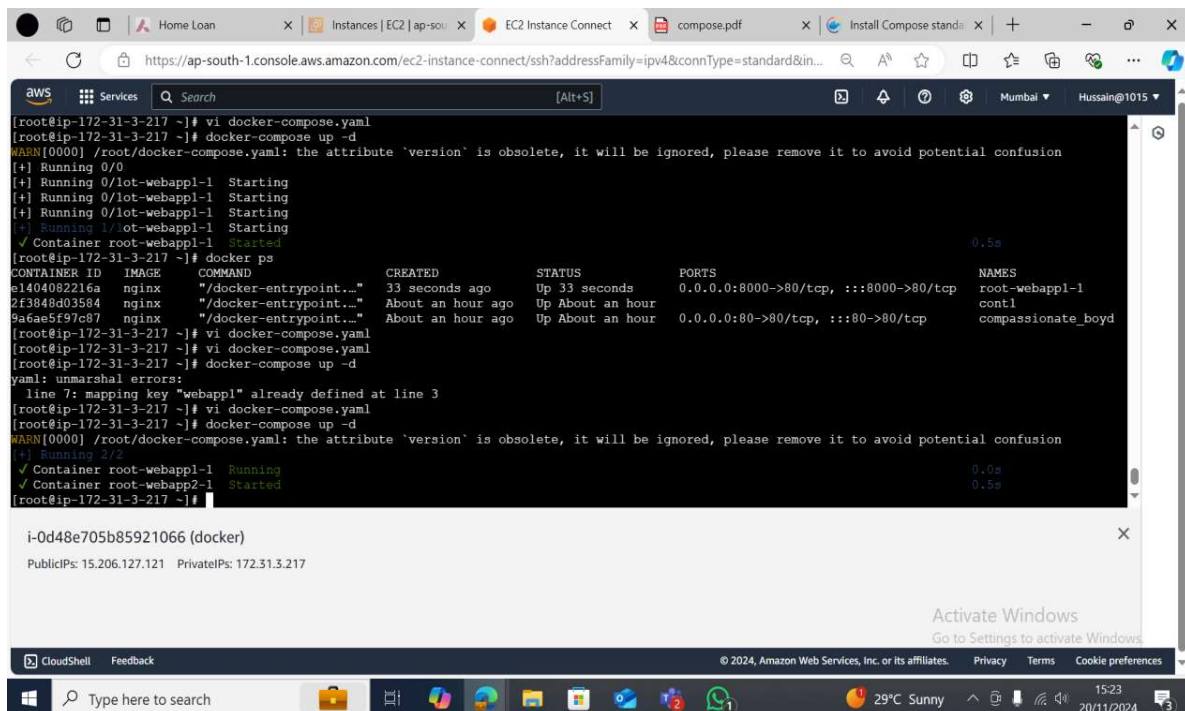
The screenshot shows the AWS CloudShell interface. The terminal displays the following content:

```
version: '3'
services:
  webappl1:
    image: nginx
    ports:
      - "8000:80"
  webappl1:
    image: nginx
    ports:
      - "8001:80"
```

Below the terminal, the file details are shown: "docker-compose.yaml" 10L, 138B. The instance information at the bottom indicates: i-0d48e705b85921066 (docker), PublicIPs: 15.206.127.121, PrivateIPs: 172.31.3.217. The Windows taskbar is visible at the bottom with the date 20/11/2024.

Save the file. Give the command to run the docker-compose

**docker-compose up -d**



The screenshot shows the AWS CloudShell terminal after running the command `docker-compose up -d`. The output is as follows:

```
[root@ip-172-31-3-217 ~]# vi docker-compose.yaml
[root@ip-172-31-3-217 ~]# docker-compose up -d
WARN[0000] /root/docker-compose.yaml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] Running 0/0
[+] Running 0/1ot-webappl1-1 Starting
[+] Running 0/1ot-webappl1-1 Starting
[+] Running 0/1ot-webappl1-1 Starting
[+] Running 1/1ot-webappl1-1 Starting
✓ Container root-webappl1-1 Started 0.5s
[root@ip-172-31-3-217 ~]# docker ps
CONTAINER ID        IMAGE               COMMAND                  CREATED              STATUS              PORTS               NAMES
e1404082216a      nginx              "/docker-entrypoint..." 33 seconds ago      Up 33 seconds      0.0.0.0:8000->80/tcp, :::8000->80/tcp   root-webappl1-1
2f3848d03584      nginx              "/docker-entrypoint..." About an hour ago    Up About an hour    0.0.0.0:80->80/tcp, :::80->80/tcp       compassionate_boyd
9a6ae5f97c87      nginx              "/docker-entrypoint..." About an hour ago    Up About an hour    0.0.0.0:80->80/tcp, :::80->80/tcp       compassionate_boyd
[root@ip-172-31-3-217 ~]# vi docker-compose.yaml
[root@ip-172-31-3-217 ~]# vi docker-compose.yaml
[root@ip-172-31-3-217 ~]# docker-compose up -d
yaml: unmarshal errors:
  line 7: mapping key "webappl1" already defined at line 3
[root@ip-172-31-3-217 ~]# vi docker-compose.yaml
[root@ip-172-31-3-217 ~]# vi docker-compose.yaml
[root@ip-172-31-3-217 ~]# docker-compose up -d
WARN[0000] /root/docker-compose.yaml: the attribute 'version' is obsolete, it will be ignored, please remove it to avoid potential confusion
[+] Running 2/2
✓ Container root-webappl1-1 Running 0.0s
✓ Container root-webappl2-1 Started 0.5s
[root@ip-172-31-3-217 ~]#
```

The instance information at the bottom remains the same: i-0d48e705b85921066 (docker), PublicIPs: 15.206.127.121, PrivateIPs: 172.31.3.217. The Windows taskbar shows the date 20/11/2024.