

## Module-3: Docker – I Assignment – 4

---

You have been asked to:

Create a dockerfile with the following specs:

- Ubuntu container
- Apache2 installed
- Apache2 should automatically run once the container starts

Submit the dockerfile, for assignment completion

---

```
ubuntu@ip-172-31-80-16:~$ docker -v
Docker version 23.0.3, build 3e7cbfd
ubuntu@ip-172-31-80-16:~$ nano Dockerfile
ubuntu@ip-172-31-80-16:~$ cat Dockerfile
FROM ubuntu
RUN apt-get update -y
RUN DEBIAN_FRONTEND="noninteractive" apt-get install tzdata -y
RUN apt-get install apache2 -y
ENTRYPOINT apachectl -D FOREGROUND
ubuntu@ip-172-31-80-16:~$ sudo build . -t docker-assignment4
sudo: build: command not found
ubuntu@ip-172-31-80-16:~$ sudo docker build . -t docker-assignment4
```

## i-04085a6df112fd480 (Docker)

PublicIPs: 3.87.191.171 PrivateIPs: 172.31.80.16

```
ENTRYPOINT apachectl -D FOREGROUND
ubuntu@ip-172-31-80-16:~$ sudo build . -t docker-assignment4
sudo: build: command not found
ubuntu@ip-172-31-80-16:~$ sudo docker build . -t docker-assignment4
[+] Building 4.7s (4/7)
=> [internal] load build definition from Dockerfile 0.1s
=> => transferring dockerfile: 202B 0.0s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [internal] load metadata for docker.io/library/ubuntu:latest 0.4s
=> [1/4] FROM docker.io/library/ubuntu@sha256:67211c14fa74f070d27cc59d69a7fa9aeff8e28ea118ef3babc295a0428a6d21 3.2s
=> => resolve docker.io/library/ubuntu@sha256:67211c14fa74f070d27cc59d69a7fa9aeff8e28ea118ef3babc295a0428a6d21 0.0s
=> => sha256:67211c14fa74f070d27cc59d69a7fa9aeff8e28ea118ef3babc295a0428a6d21 1.13kB / 1.13kB 0.0s
=> => sha256:7a57c69fele9d5b97c5fe649849e79f2cfc3bf11d10bbd5218b4eb61716aeb6 424B / 424B 0.0s
=> => sha256:08d22c0ceb150ddeb2237c5fa3129c0183f3cc6f5eeb2e7aa4016da3ad02140a 2.30kB / 2.30kB 0.0s
=> => sha256:2ab09b027e7f3a0c2e8bb1944ac46de38cebab7145f0bd6effebfe5492c818b6 29.53MB / 29.53MB 0.8s
=> => extracting sha256:2ab09b027e7f3a0c2e8bb1944ac46de38cebab7145f0bd6effebfe5492c818b6 2.1s
=> [2/4] RUN apt-get update -y 0.8s
=> => # Get:3 http://archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
=> => # Get:4 http://archive.ubuntu.com/ubuntu jammy-backports InRelease [108 kB]
=> => # Get:5 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [23.2 kB]
=> => # Get:6 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [908 kB]
=> => # Get:7 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [909 kB]
=> => # Get:8 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [914 kB]
```

i-04085a6df112fd480 (Docker)

PublicIPs: 3.87.191.171 PrivateIPs: 172.31.80.16

Start Course | Intellipaat x Instances | EC2 Managem x EC2 Instance Connect x +

us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-04085a6df112fd480&osUser=ubuntu&region=us-east-1&sshPor...

Gmail Cloud Comput... AWS Learner dashb... AWS Workshops My Courses | s... Online Course... Home | Mynaukri Feed | LinkedIn YouTube

aws Services Search [Alt+S] N. Virginia sachin @ sy-aws-v2

```
=> [internal] load metadata for docker.io/library/ubuntu:latest                                0.4s
=> [1/4] FROM docker.io/library/ubuntu@sha256:67211c14fa74f070d27cc59d69a7fa9aeff8e28ea118ef3babc295a0428a6d21 3.2s
=> => resolve docker.io/library/ubuntu@sha256:67211c14fa74f070d27cc59d69a7fa9aeff8e28ea118ef3babc295a0428a6d21 0.0s
=> => sha256:67211c14fa74f070d27cc59d69a7fa9aeff8e28ea118ef3babc295a0428a6d21 1.13kB / 1.13kB 0.0s
=> => sha256:7a57c69fele9d5b97c5fe649849e79f2cfc3bf11d10bbd5218b4eb61716aeb6 424B / 424B 0.0s
=> => sha256:08d22c0ceb150ddeb2237c5fa3129c0183f3cc6f5eeb2e7aa4016da3ad02140a 2.30kB / 2.30kB 0.0s
=> => sha256:2ab09b027e7f3a0c2e8bb1944ac46de38cebab7145f0bd6effebfe5492c818b6 29.53MB / 29.53MB 0.8s
=> => extracting sha256:2ab09b027e7f3a0c2e8bb1944ac46de38cebab7145f0bd6effebfe5492c818b6 2.1s
=> [2/4] RUN apt-get update -y 3.8s
=> ERROR [3/4] RUN DEBIAN FRONTEND="noninteractive" apt-get install tzdata -y 0.4s

> [3/4] RUN DEBIAN FRONTEND="noninteractive" apt-get install tzdata -y:
#0 0.410 /bin/sh: 1: DEBIAN: not found
-----
Dockerfile:3
-----
1 | FROM ubuntu
2 | RUN apt-get update -y
3 | >>> RUN DEBIAN FRONTEND="noninteractive" apt-get install tzdata -y
4 | RUN apt-get install apache2 -y
5 | ENTRYPOINT apachectl -D FOREGROUND
-----
ERROR: failed to solve: process "/bin/sh -c DEBIAN FRONTEND=\"noninteractive\" apt-get install tzdata -y" did not complete successfully: exit code: 127
ubuntu@ip-172-31-80-16:~$
```

i-04085a6df112fd480 (Docker) X

PublicIPs: 3.87.191.171 PrivateIPs: 172.31.80.16



```
=> => extracting sha256:2ab09b027e7f3a0c2e8bb1944ac46de38cebab7145f0bd6effebfe5492c818b6 2.1s
=> [2/4] RUN apt-get update -y 3.8s
=> ERROR [3/4] RUN DEBIAN FRONTEND="noninteractive" apt-get install tzdata -y 0.4s
-----
> [3/4] RUN DEBIAN FRONTEND="noninteractive" apt-get install tzdata -y:
#0 0.410 /bin/sh: 1: DEBIAN: not found
-----
Dockerfile:3
-----
1 | FROM ubuntu
2 | RUN apt-get update -y
3 | >>> RUN DEBIAN FRONTEND="noninteractive" apt-get install tzdata -y
4 | RUN apt-get install apache2 -y
5 | ENTRYPOINT apachectl -D FOREGROUND
-----
ERROR: failed to solve: process "/bin/sh -c DEBIAN FRONTEND=\"noninteractive\" apt-get install tzdata -y" did not complete successfully: exit code: 127
ubuntu@ip-172-31-80-16:~$ nano Dockerfile
ubuntu@ip-172-31-80-16:~$ cat Dockerfile
FROM ubuntu
RUN apt-get update -y
RUN DEBIAN FRONTEND="noninteractive" apt-get install tzdata -y
RUN apt-get install apache2 -y
ENTRYPOINT apachectl -D FOREGROUND
ubuntu@ip-172-31-80-16:~$
```

i-04085a6df112fd480 (Docker) X

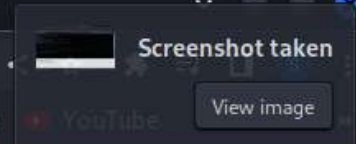
PublicIPs: 3.87.191.171 PrivateIPs: 172.31.80.16

```
7
ubuntu@ip-172-31-80-16:~$ nano Dockerfile
ubuntu@ip-172-31-80-16:~$ cat Dockerfile
FROM ubuntu
RUN apt-get update -y
RUN DEBIAN_FRONTEND="noninteractive" apt-get install tzdata -y
RUN apt-get install apache2 -y
ENTRYPOINT apachectl -D FOREGROUND
ubuntu@ip-172-31-80-16:~$ sudo docker build . -t docker-assignment4
[+] Building 3.9s (6/7)
=> [internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 202B 0.0s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [internal] load metadata for docker.io/library/ubuntu:latest 0.1s
=> [1/4] FROM docker.io/library/ubuntu@sha256:67211c14fa74f070d27cc59d69a7fa9aef8e28ea118ef3babc295a0428a6d21 0.0s
=> CACHED [2/4] RUN apt-get update -y 0.0s
=> [3/4] RUN DEBIAN_FRONTEND="noninteractive" apt-get install tzdata -y 2.5s
=> [4/4] RUN apt-get install apache2 -y 1.3s
=> => # Reading package lists...
```

i-04085a6df112fd480 (Docker) X

PublicIPs: 3.87.191.171 PrivateIPs: 172.31.80.16

```
ubuntu@ip-172-31-80-16:~$ nano Dockerfile
ubuntu@ip-172-31-80-16:~$ cat Dockerfile
FROM ubuntu
RUN apt-get update -y
RUN DEBIAN_FRONTEND="noninteractive" apt-get install tzdata -y
RUN apt-get install apache2 -y
ENTRYPOINT apachectl -D FOREGROUND
ubuntu@ip-172-31-80-16:~$ sudo docker build . -t docker-assignment4
[+] Building 7.1s (6/7)
=> [internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 202B 0.0s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [internal] load metadata for docker.io/library/ubuntu:latest 0.1s
=> [1/4] FROM docker.io/library/ubuntu@sha256:67211c14fa74f070d27cc59d69a7fa9aeff8e28ea118ef3babc295a0428a6d21 0.0s
=> CACHED [2/4] RUN apt-get update -y 0.0s
=> [3/4] RUN DEBIAN_FRONTEND="noninteractive" apt-get install tzdata -y 2.5s
=> [4/4] RUN apt-get install apache2 -y 4.4s
=> => # Get:18 http://archive.ubuntu.com/ubuntu jammy/main amd64 librtmpl amd64 2.4+20151223.gitfa8646d.1-2build4 [58.2 kB]
=> => # Get:19 http://archive.ubuntu.com/ubuntu jammy/main amd64 libssh-4 amd64 0.9.6-2build1 [184 kB]
=> => # Get:20 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 libcurl4 amd64 7.81.0-1ubuntu1.10 [290 kB]
=> => # Get:21 http://archive.ubuntu.com/ubuntu jammy/main amd64 libjansson4 amd64 2.13.1-1.1build3 [32.4 kB]
=> => # Get:22 http://archive.ubuntu.com/ubuntu jammy/main amd64 liblua5.3-0 amd64 5.3.6-1build1 [140 kB]
=> => # Get:23 http://archive.ubuntu.com/ubuntu jammy/main amd64 libicu70 amd64 70.1-2 [10.6 MB]
```



i-04085a6df112fd480 (Docker)

PublicIPs: 3.87.191.171 PrivateIPs: 172.31.80.16



```
ubuntu@ip-172-31-80-16:~$ nano Dockerfile
ubuntu@ip-172-31-80-16:~$ cat Dockerfile
FROM ubuntu
RUN apt-get update -y
RUN DEBIAN_FRONTEND="noninteractive" apt-get install tzdata -y
RUN apt-get install apache2 -y
ENTRYPOINT apachectl -D FOREGROUND
ubuntu@ip-172-31-80-16:~$ sudo docker build . -t docker-assignment4
[+] Building 17.5s (7/8)
=> [internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 202B 0.0s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [internal] load metadata for docker.io/library/ubuntu:latest 0.1s
=> [1/4] FROM docker.io/library/ubuntu@sha256:67211c14fa74f070d27cc59d69a7fa9aeff8e28ea118ef3babc295a0428a6d21 0.0s
=> CACHED [2/4] RUN apt-get update -y 0.0s
=> [3/4] RUN DEBIAN_FRONTEND="noninteractive" apt-get install tzdata -y 2.5s
=> [4/4] RUN apt-get install apache2 -y 13.7s
=> exporting to image 1.1s
=> => exporting layers 1.1s
```

i-04085a6df112fd480 (Docker) X  
PublicIPs: 3.87.191.171 PrivateIPs: 172.31.80.16



```
ubuntu@ip-172-31-80-16:~$ cat Dockerfile
FROM ubuntu
RUN apt-get update -y
RUN DEBIAN_FRONTEND="noninteractive" apt-get install tzdata -y
RUN apt-get install apache2 -y
ENTRYPOINT apachectl -D FOREGROUND
ubuntu@ip-172-31-80-16:~$ sudo docker build . -t docker-assignment4
[+] Building 18.5s (8/8) FINISHED
=> [internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 202B 0.0s
=> [internal] load .dockerignore 0.0s
=> => transferring context: 2B 0.0s
=> [internal] load metadata for docker.io/library/ubuntu:latest 0.1s
=> [1/4] FROM docker.io/library/ubuntu@sha256:67211c14fa74f070d27cc59d69a7fa9aeff8e28ea118ef3babc295a0428a6d21 0.0s
=> CACHED [2/4] RUN apt-get update -y 0.0s
=> [3/4] RUN DEBIAN_FRONTEND="noninteractive" apt-get install tzdata -y 2.5s
=> [4/4] RUN apt-get install apache2 -y 13.7s
=> exporting to image 2.1s
=> => exporting layers 2.1s
=> => writing image sha256:6ddad371d934a1f6f9457ade5dfd5554815f4733b1f40887e0e75c2b5206b492 0.0s
=> => naming to docker.io/library/docker-assignment4 0.0s
ubuntu@ip-172-31-80-16:~$ sudo docker images
REPOSITORY          TAG          IMAGE ID      CREATED        SIZE
docker-assignment4  latest      6ddad371d934  5 minutes ago  233MB
ubuntu@ip-172-31-80-16:~$
```

i-04085a6df112fd480 (Docker)

PublicIPs: 3.87.191.171 PrivateIPs: 172.31.80.16

```
ENTRYPOINT apachectl -D FOREGROUND
ubuntu@ip-172-31-80-16:~$ sudo docker build . -t docker-assignment4
[+] Building 18.5s (8/8) FINISHED
=> [internal] load build definition from Dockerfile                                0.0s
=> => transferring dockerfile: 202B                                              0.0s
=> [internal] load .dockerignore                                                  0.0s
=> => transferring context: 2B                                                  0.0s
=> [internal] load metadata for docker.io/library/ubuntu:latest                 0.1s
=> [1/4] FROM docker.io/library/ubuntu@sha256:67211c14fa74f070d27cc59d69a7fa9aeff8e28ea118ef3babc295a0428a6d21 0.0s
=> CACHED [2/4] RUN apt-get update -y                                           0.0s
=> [3/4] RUN DEBIAN_FRONTEND="noninteractive" apt-get install tzdata -y        2.5s
=> [4/4] RUN apt-get install apache2 -y                                         13.7s
=> exporting to image                                                           2.1s
=> => exporting layers                                                           2.1s
=> => writing image sha256:6ddad371d934a1f6f9457ade5dfd5554815f4733b1f40887e0e75c2b5206b492 0.0s
=> => naming to docker.io/library/docker-assignment4                          0.0s
ubuntu@ip-172-31-80-16:~$ sudo docker images
REPOSITORY          TAG             IMAGE ID        CREATED         SIZE
docker-assignment4  latest         6ddad371d934   5 minutes ago  233MB
ubuntu@ip-172-31-80-16:~$ sudo docker run -itd -p 71:80 docker-assignment4
f4b12a98947e4170fa960e4d84d4dc1d1675d1905be15cef84f30a68450457c0
ubuntu@ip-172-31-80-16:~$ sudo docker ps -a
CONTAINER ID   IMAGE             COMMAND                  CREATED        STATUS        PORTS                               NAMES
f4b12a98947e   docker-assignment4  "/bin/sh -c 'apachec..."  15 seconds ago Up 14 seconds  0.0.0.0:71->80/tcp, :::71->80/tcp  magical_joliot
ubuntu@ip-172-31-80-16:~$
```

i-04085a6df112fd480 (Docker)

PublicIPs: 3.87.191.171 PrivateIPs: 172.31.80.16

## Inbound rules [Info](#)

Security group rule ID	Type <a href="#">Info</a>	Protocol <a href="#">Info</a>	Port range <a href="#">Info</a>	Source <a href="#">Info</a>	Description - optional <a href="#">Info</a>	
sgr-07ce982cba383f25e	SSH ▼	TCP	22	Custom ▼ <input type="text" value="0.0.0.0/0"/>		Delete
sgr-0d061b5f20ddbcfe5	HTTP ▼	TCP	80	Custom ▼ <input type="text" value="0.0.0.0/0"/>		Delete
sgr-0bade900d889817e8	HTTPS ▼	TCP	443	Custom ▼ <input type="text" value="0.0.0.0/0"/>		Delete
-	Custom TCP ▼	TCP	71	Anywh... ▼ <input type="text" value="0.0.0.0/0"/>		Delete

Add rule

Cancel

Preview changes

Save rules





# Ubuntu

## Apache2 Default Page

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

### Configuration Overview

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in `/usr/share/doc/apache2/README.Debian.gz`**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the `apache2-doc` package was installed on this server.

The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:

```
/etc/apache2/
|-- apache2.conf
|   |-- ports.conf
|-- mods-enabled
|   |-- *.load
|   |-- *.conf
|-- conf-enabled
|   |-- *.conf
```