

## Module-3: Docker – I Assignment - 1

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You have been asked to:

- Pull ubuntu container
  - Run this container, and map port 80 on the local
  - Install apache2 on this container
  - Check if you are able to access the apache page on your browser
-

aws

Services

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```
Get:15 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [4960 B]
Get:16 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [996 B]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 c-n-f Metadata [286 kB]
Get:18 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [240 B]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [217 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse Translation-en [112 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 c-n-f Metadata [8372 B]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [899 kB]
root@ip-172-31-5-21:~# apt install 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 debootstrap 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 22 not upgraded.
Need to get 66.8 MB of archives.
After this operation, 287 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 pigz amd64 2.6-1 [63.6 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 bridge-utils amd64 1.7-1ubuntu3 [34.4 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 runc amd64 1.1.0-0ubuntu1.1 [4242 kB]
```

i-05f39b3c1c02fb2b7 (Docker)

PublicIPs: 3.237.93.172 PrivateIPs: 172.31.5.21

 Services

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```
Scanning linux images... [=====]
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-172-31-5-21:~# apt install docker
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  wmdocker
The following NEW packages will be installed:
  docker wmdocker
0 upgraded, 2 newly installed, 0 to remove and 22 not upgraded.
Need to get 14.3 kB of archives.
After this operation, 58.4 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
```

i-05f39b3c1c02fb2b7 (Docker)

PublicIPs: 3.237.93.172 PrivateIPs: 172.31.5.21

```
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-172-31-5-21:~# docker --version
Docker version 20.10.12, build 20.10.12-0ubuntu4
root@ip-172-31-5-21:~# docker images
REPOSITORY    TAG       IMAGE ID   CREATED   SIZE
root@ip-172-31-5-21:~# docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS     NAMES
root@ip-172-31-5-21:~# docker pull ubuntu
Using default tag: latest
latest: Pulling from library/ubuntu
677076032cca: Pull complete
Digest: sha256:9a0bdde4188b896a372804be2384015e90e3f84906b750c1a53539b585fbb7f
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest
root@ip-172-31-5-21:~#
```

i-05f39b3c1c02fb2b7 (Docker)

PublicIPs: 3.237.93.172 PrivateIPs: 172.31.5.21




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sachin @ sy-aws-v2

No user sessions are running outdated binaries.  
No VM guests are running outdated hypervisor (qemu) binaries on this host.  
root@ip-172-31-5-21:~# docker --version  
Docker version 20.10.12, build 20.10.12-0ubuntu4  
root@ip-172-31-5-21:~# docker images  
REPOSITORY TAG IMAGE ID CREATED SIZE  
root@ip-172-31-5-21:~# docker ps -a  
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES  
root@ip-172-31-5-21:~# docker pull ubuntu  
Using default tag: latest  
latest: Pulling from library/ubuntu  
677076032cca: Pull complete  
Digest: sha256:9a0bdde4188b896a372804be2384015e90e3f84906b750c1a53539b585fbb7f  
Status: Downloaded newer image for ubuntu:latest  
docker.io/library/ubuntu:latest  
root@ip-172-31-5-21:~# docker run -itd -p 80:80 ubuntu  
9b86dc160625eb1190dfadbd178a703ed527c2288479b0518b8436e64d676d  
root@ip-172-31-5-21:~# docker ps  
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES  
9b86dc160625 ubuntu "/bin/bash" 5 seconds ago Up 3 seconds 0.0.0.0:80->80/tcp, :::80->80/tcp youthful\_maxwell  
root@ip-172-31-5-21:~# docker images  
REPOSITORY TAG IMAGE ID CREATED SIZE  
ubuntu latest 58db3edaf2be 4 weeks ago 77.8MB  
root@ip-172-31-5-21:~#

i-05f39b3c1c02fb2b7 (Docker)

PublicIPs: 3.237.93.172 PrivateIPs: 172.31.5.21


```
Scanning linux images... [=====]
root@ip-172-31-5-21:~# docker exec -it 9b86dc160625 /bin/bash
root@9b86dc160625:/# apt update -y
Get:1 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:2 http://archive.ubuntu.com/ubuntu jammy InRelease [270 kB]
Get:3 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [862 kB]
Get:4 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [752 kB]
Get:5 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [5557 B]
Get:6 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [810 kB]
Get:7 http://archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:8 http://archive.ubuntu.com/ubuntu jammy-backports InRelease [107 kB]
Get:9 http://archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [266 kB]
Get:10 http://archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [17.5 MB]
Get:11 http://archive.ubuntu.com/ubuntu jammy/main amd64 Packages [1792 kB]
Get:12 http://archive.ubuntu.com/ubuntu jammy/restricted amd64 Packages [164 kB]
Get:13 http://archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [10.9 kB]
Get:14 http://archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [808 kB]
Get:15 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1136 kB]
Get:16 http://archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1095 kB]
Get:17 http://archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [22.4 kB]
Get:18 http://archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [49.0 kB]
Fetched 25.9 MB in 4s (7317 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
```

i-05f39b3c1c02fb2b7 (Docker) 

PublicIPs: 3.237.93.172 PrivateIPs: 172.31.5.21



```
Get:18 http://archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [49.0 kB]
Fetched 25.9 MB in 4s (7317 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
6 packages can be upgraded. Run 'apt list --upgradable' to see them.
root@9b86dc160625:/# apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils bzip2 ca-certificates file libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap libbrotli1 libcurl4 libexpat1 libgdbm-compat4 libgdbm6 libicu70 libjansson4 libldap-2.5-0 libldap-common liblua5.3-0 libmagic-mgc libmagic1 libnghttp2-14 libperl5.34 libpsl5 librtmp1 libssl2 libssl3 libsystemd0 libtasn1-6 libunistring2 libxml2 libxslt1.1 mailcap media-types mime-support netbase openssl perl perl-modules-5.34 publicsuffix ssl-cert xz-utils
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser ufw bzip2-doc gdbm-l10n libssl-dev libssl-doc libtasn1-doc libunistring-doc libxslt1.1-dev libxml2-dev libxslt1.1-doc mailcap mime-support netbase openssl perl-modules-5.34 publicsuffix ssl-cert xz-utils
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils bzip2 ca-certificates file libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap libbrotli1 libcurl4 libexpat1 libgdbm-compat4 libgdbm6 libicu70 libjansson4 libldap-2.5-0 libldap-common liblua5.3-0 libmagic-mgc libmagic1 libnghttp2-14 libperl5.34 libpsl5 librtmp1 libssl2 libssl3 libsystemd0 libtasn1-6 libunistring2 libxml2 libxslt1.1 mailcap media-types mime-support netbase openssl perl perl-modules-5.34 publicsuffix ssl-cert xz-utils
```

i-05f39b3c1c02fb2b7 (Docker) 

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# 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
|-- sites-enabled
```