

DOCKER AND CONTAINER : INSTALLATION & DEPLOYMENT

Submitted by ,

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Roll no:50

1. Installation of Docker and Container.

```
Activities Terminal May 16 21:45 feba@feba-VirtualBox -
Get:27 http://ft.archive.ubuntu.com/ubuntu focal/multiverse Translation-en [104 kB]
Get:28 http://ft.archive.ubuntu.com/ubuntu focal/multiverse amd64 DEP-11 Metadata [48.4 kB]
Get:29 http://ft.archive.ubuntu.com/ubuntu focal/multiverse DEP-11 48x48 Icons [23.1 kB]
Get:30 http://ft.archive.ubuntu.com/ubuntu focal/multiverse DEP-11 64x64 Icons [192 kB]
Get:31 http://ft.archive.ubuntu.com/ubuntu focal/multiverse DEP-11 64x642 Icons [214 B]
Get:32 http://ft.archive.ubuntu.com/ubuntu focal/multiverse amd64 c-n-f Metadata [9,116 B]
Get:33 http://ft.archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [1,796 kB]
Get:34 http://ft.archive.ubuntu.com/ubuntu focal-updates/main i386 Packages [550 kB]
Get:35 http://ft.archive.ubuntu.com/ubuntu focal-updates/main Translation-en [330 kB]
Get:36 http://ft.archive.ubuntu.com/ubuntu focal-updates/main DEP-11 Metadata [278 kB]
Get:37 http://ft.archive.ubuntu.com/ubuntu focal-updates/main DEP-11 48x48 Icons [60.8 kB]
Get:38 http://ft.archive.ubuntu.com/ubuntu focal-updates/main DEP-11 64x64 Icons [86.1 kB]
Get:39 http://ft.archive.ubuntu.com/ubuntu focal-updates/main DEP-11 64x642 Icons [79 B]
Get:40 http://ft.archive.ubuntu.com/ubuntu focal-updates/main amd64 c-n-f Metadata [21.5 kB]
Get:41 http://ft.archive.ubuntu.com/ubuntu focal-updates/restricted i386 Packages [24.3 kB]
Get:42 http://ft.archive.ubuntu.com/ubuntu focal-updates/restricted amd64 Packages [595 kB]
Get:43 http://ft.archive.ubuntu.com/ubuntu focal-updates/restricted Translation-en [139 kB]
Get:44 http://ft.archive.ubuntu.com/ubuntu focal-updates/restricted amd64 c-n-f Metadata [528 B]
Get:45 http://ft.archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [521 kB]
Get:46 http://ft.archive.ubuntu.com/ubuntu focal-updates/universe i386 Packages [679 kB]
Get:47 http://ft.archive.ubuntu.com/ubuntu focal-updates/universe Translation-en [298 kB]
Get:48 http://ft.archive.ubuntu.com/ubuntu focal-updates/universe amd64 DEP-11 Metadata [391 kB]
Get:49 http://ft.archive.ubuntu.com/ubuntu focal-updates/universe DEP-11 48x48 Icons [757 kB]
Get:50 http://ft.archive.ubuntu.com/ubuntu focal-updates/universe DEP-11 64x64 Icons [458 kB]
Get:51 http://ft.archive.ubuntu.com/ubuntu focal-updates/universe DEP-11 64x642 Icons [29 B]
Get:52 http://ft.archive.ubuntu.com/ubuntu focal-updates/universe amd64 c-n-f Metadata [20.6 kB]
Get:53 http://ft.archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 Packages [21.4 kB]
Get:54 http://ft.archive.ubuntu.com/ubuntu focal-updates/multiverse i386 Packages [6,432 B]
Get:55 http://ft.archive.ubuntu.com/ubuntu focal-updates/multiverse Translation-en [7,336 B]
Get:56 http://ft.archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 DEP-11 Metadata [544 B]
Get:57 http://ft.archive.ubuntu.com/ubuntu focal-updates/multiverse DEP-11 48x48 Icons [1,607 B]
Get:58 http://ft.archive.ubuntu.com/ubuntu focal-updates/multiverse DEP-11 64x64 Icons [1,507 B]
Get:59 http://ft.archive.ubuntu.com/ubuntu focal-updates/multiverse DEP-11 64x642 Icons [28 B]
Get:60 http://ft.archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 c-n-f Metadata [192 B]
Get:61 http://ft.archive.ubuntu.com/ubuntu focal-backports/main i386 Packages [34.8 kB]
Get:62 http://ft.archive.ubuntu.com/ubuntu focal-backports/main amd64 Packages [42.7 kB]
Get:63 http://ft.archive.ubuntu.com/ubuntu focal-backports/main Translation-en [10.1 kB]
Get:64 http://ft.archive.ubuntu.com/ubuntu focal-backports/main amd64 DEP-11 Metadata [9,598 B]
Get:65 http://ft.archive.ubuntu.com/ubuntu focal-backports/main DEP-11 48x48 Icons [6,993 B]
Get:66 http://ft.archive.ubuntu.com/ubuntu focal-backports/main DEP-11 64x64 Icons [16.3 kB]
Get:67 http://ft.archive.ubuntu.com/ubuntu focal-backports/main DEP-11 64x642 Icons [29 B]
Get:68 http://ft.archive.ubuntu.com/ubuntu focal-backports/main amd64 c-n-f Metadata [864 B]
Get:69 http://ft.archive.ubuntu.com/ubuntu focal-backports/universe amd64 c-n-f Metadata [316 B]
Get:70 http://ft.archive.ubuntu.com/ubuntu focal-backports/universe i386 Packages [72.7 kB]
Get:71 http://ft.archive.ubuntu.com/ubuntu focal-backports/universe amd64 Packages [72.7 kB]
Get:72 http://ft.archive.ubuntu.com/ubuntu focal-backports/universe Translation-en [13.5 kB]
Get:73 http://ft.archive.ubuntu.com/ubuntu focal-backports/universe amd64 DEP-11 Metadata [130.8 kB]
Get:74 http://ft.archive.ubuntu.com/ubuntu focal-backports/universe DEP-11 48x48 Icons [13.2 kB]
Get:75 http://ft.archive.ubuntu.com/ubuntu focal-backports/universe DEP-11 64x64 Icons [22.6 kB]
Get:76 http://ft.archive.ubuntu.com/ubuntu focal-backports/universe DEP-11 64x642 Icons [78 B]
Get:77 http://ft.archive.ubuntu.com/ubuntu focal-backports/universe amd64 c-n-f Metadata [896 B]
Get:78 http://ft.archive.ubuntu.com/ubuntu focal-backports/multiverse amd64 c-n-f Metadata [316 B]
Fetched 44.8 MB in 4min 29s (107 kB/s)
Reading package lists... Done
feba@feba-VirtualBox:~$
```

```
Activities Terminal May 16 22:02 feba@feba-VirtualBox -
$ docker run -it ubuntu bash
Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/
For more examples and ideas, visit:
https://docs.docker.com/get-started/
feba@feba-VirtualBox:~$ sudo docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS              NAMES
feba@feba-VirtualBox:~$ sudo docker ps -a
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS              NAMES
1c99f6e631c        hello-world        /hello              30 seconds ago     Exited (0) 29 seconds ago              blissful_williams
feba@feba-VirtualBox:~$ sudo docker images
REPOSITORY        TAG               IMAGE ID            CREATED             SIZE
hello-world       latest           feb5d9fea6a5        7 months ago       13.3kB
feba@feba-VirtualBox:~$ sudo docker pull mysql
Using default tag: latest
latest: Pulling from library/mysql
c32ce6654453: Pull complete
415d6ee31a: Pull complete
7a38fec2542f: Pull complete
352881ec08f9: Pull complete
8bc26d4c316d: Pull complete
66c2a8cc1999: Pull complete
d3a3a8e49878: Pull complete
e33a48832bac: Pull complete
410b942b8b28: Pull complete
63232c4d2d5f: Pull complete
3212737731c0: Pull complete
d003204b0d5c: Pull complete
Digest: sha256:4868d537d4d298bd1e0dfac1f0ddff6408b453fa25d7aad420485a02417eeb
Status: Downloaded newer image for mysql:latest
docker.io/library/mysql:latest
feba@feba-VirtualBox:~$ sudo docker run -d -p 0.0.0:80:80 mysql:latest
c68a2b77c6b95086d55174696667130b1855d8d0d4012398c8e5c7e3099
feba@feba-VirtualBox:~$ sudo docker run -it --name sl mysql /bin/bash
root@341d302af2be:/# exit
exit
feba@feba-VirtualBox:~$ sudo docker start sl
sl
feba@feba-VirtualBox:~$ sudo docker stop sl
Error response from daemon: cannot stop container: sl: permission denied
feba@feba-VirtualBox:~$ sudo docker kill sl
Error response from daemon: Cannot kill container: sl: permission denied
feba@feba-VirtualBox:~$ sudo docker image rm -f image mysql
Untagged: mysql:latest
Untagged: mysql@sha256:4868d537d4d298bd1e0dfac1f0ddff6408b453fa25d7aad420485a02417eeb
Error: No such image: image
feba@feba-VirtualBox:~$ sudo docker ps -a
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS              NAMES
341d302af2be       76152bee0449       "docker-entrypoint..." 4 minutes ago       Up 3 minutes        3306/tcp, 33060/tcp  sl
c68a2b77c6b0       76152bee0449       "docker-entrypoint..." 7 minutes ago       Exited (1) 7 minutes ago              sad_franklin
1c99f6e631c        hello-world        /hello              16 minutes ago     Exited (0) 16 minutes ago              blissful_williams
feba@feba-VirtualBox:~$
```

2. Deployment of Apache and MySQL in your container.

```

# [Terminal]
# [May 12, 2022]
# [feba@feba-VirtualBox ~]

feba@feba-VirtualBox:~$ sudo snap install docker
[sudo] password for feba:
snap 'docker' is already installed, see 'snap help refresh'
feba@feba-VirtualBox:~$ sudo docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
sha256:80f31da1ac73132ba29d65008fdd779d7d76acfb70be777390d5acba9741b17
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (cmd54)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

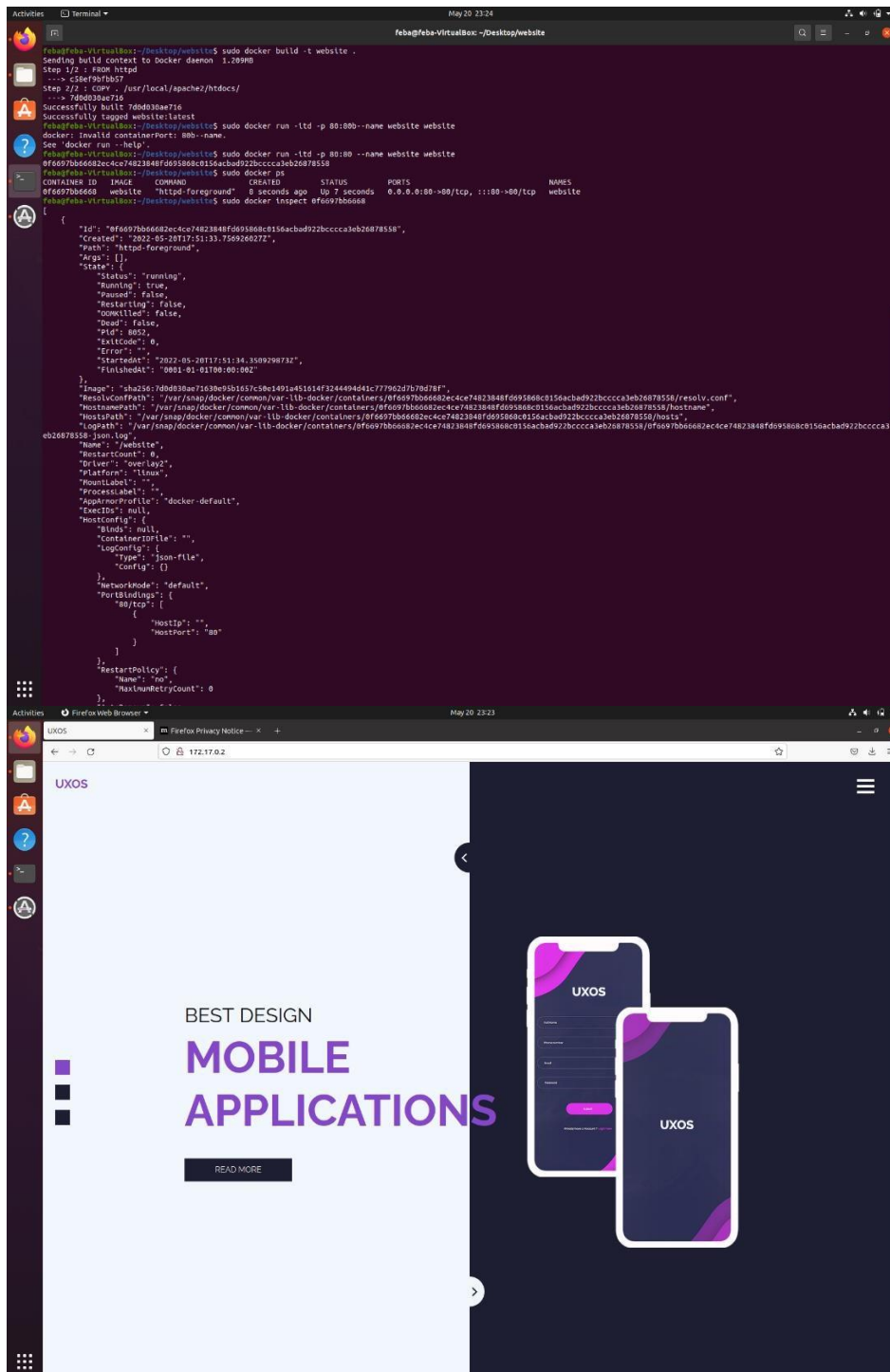
For more examples and ideas, visit:
https://docs.docker.com/get-started/

feba@feba-VirtualBox:~$ sudo docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
feba@feba-VirtualBox:~$ sudo docker ps -a
CONTAINER ID   IMAGE     COMMAND   CREATED   STATUS    PORTS   NAMES
c3c9f8e6b31c   hello-world   "hello"   30 seconds ago   Exited (0) 29 seconds ago   blissful_williams
feba@feba-VirtualBox:~$ sudo docker images
REPOSITORY   TAG       IMAGE ID   CREATED   SIZE
hello-world   latest   f60d53f244   7 months ago   13.3kB
feba@feba-VirtualBox:~$ sudo docker pull mysql
Using default tag: latest
latest: Pulling from library/mysql
c32c4e654453: Pull complete
4150e6eb3131: Pull complete
7a38f2c242f1: Pull complete
352831e88f69: Pull complete
b8e29d6a29180: Pull complete
66c2a8c19991: Pull complete
c3a3a8a46878: Pull complete
e33a488329ec: Pull complete
d10864938b39: Pull complete
d5323c96d265: Pull complete
32127377310c: Pull complete
0803246486c5: Pull complete
Digest: sha256:08885d373d42298b61e0df6a16f0dddf64a88b43fa25d7aad24085ae2417a0b

```

[illegible]

3. Research & find out how can host your own simple website with it.



```
Activities Terminal May 20 23:19 feba@feba-VirtualBox: ~/Desktop/website
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/vimdiff (vimdiff) in auto mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/rvim (rvim) in auto mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/rview (rview) in auto mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/vi (vi) in auto mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/view (view) in auto mode
update-alternatives: using /usr/bin/vim.basic to provide /usr/bin/ex (ex) in auto mode
Processing triggers for man-db (2.9.1-1) ...
feba@feba-VirtualBox:~$ sudo docker pull httpd
Using default tag: latest
latest: Pulling from library/httpd
214ca5fb9032: Pull complete
7cf31a2eeec6: Pull complete
bf666e57b9f2: Pull complete
c15a4e94ae6b: Pull complete
dc25474c7f97: Pull complete
Digest: sha256:2d1f8839d6127e400ac5f65481d8a0f17ac46a3b91de40b01e649c9a0324dea0
Status: Downloaded newer image for httpd:latest
docker.io/library/httpd:latest
feba@feba-VirtualBox:~$ vim Dockerfile
feba@feba-VirtualBox:~$ cd Desktop/
feba@feba-VirtualBox:~/Desktop$ cd website/
feba@feba-VirtualBox:~/Desktop/website$ vim Dockerfile
feba@feba-VirtualBox:~/Desktop/website$

Activities Terminal May 20 23:19 feba@feba-VirtualBox: ~/Desktop/website
Processing triggers for systemd (245.4-4ubuntu3.15) ...
feba@feba-VirtualBox:~$ sudo snap install docker
docker 20.10.14 from Canonical* installed
feba@feba-VirtualBox:~$ sudo apt install vim
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  vim-runtime
Suggested packages:
  ctags vim-doc vim-scripts
The following NEW packages will be installed:
  vim vim-runtime
0 upgraded, 2 newly installed, 0 to remove and 137 not upgraded.
Need to get 7,110 kB of archives.
After this operation, 34.6 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 vim-runtime all 2:8.1.2269-1ubuntu5.7 [5,872 kB]
Get:2 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 vim amd64 2:8.1.2269-1ubuntu5.7 [1,238 kB]
Fetched 7,110 kB in 5s (1,346 kB/s)
Selecting previously unselected package vim-runtime.
(Reading database ... 156724 files and directories currently installed.)
Preparing to unpack .../vim-runtime_2%3a8.1.2269-1ubuntu5.7_all.deb ...
Adding 'diversion of /usr/share/vim/vim81/doc/help.txt to /usr/share/vim/vim81/doc/help.txt.vim-tiny by vim-runtime'
Adding 'diversion of /usr/share/vim/vim81/doc/tags to /usr/share/vim/vim81/doc/tags.vim-tiny by vim-runtime'
```

