NETWORKING & SYSTEM ADMINISTRATION LAB

Experiment No: 24

Aim

Docker installation.

Procedure

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Step 1: Open the terminal on Ubuntu.

Step 2: Remove any Docker files that are running in the system, using the following command:

$ sudo apt-get remove docker docker-engine docker.io

After entering the above command, you will need to enter the password of the root and press enter.

```
mca@S37:~$ sudo apt-get remove docker docker-engine docker.io
[sudo] password for mca:
Reading package lists... Done
Building dependency tree
Reading state information... Done
Package 'docker-engine' is not installed, so not removed
Package 'docker' is not installed, so not removed
Package 'docker.io' is not installed, so not removed
The following packages were automatically installed and are no longer required:
  debhelper dh-autoreconf dh-strip-nondeterminism distro-info
  libarchive-cpio-perl libfile-stripnondeterminism-perl libmail-sendmail-perl
  libpcre16-3 libpcre3-dev libpcre32-3 libpcrecpp0v5 libssl-dev libssl-doc
  libsys-hostname-long-perl php-common php-pear php-xml php7.2-cli
  php7.2-common php7.2-json php7.2-opcache php7.2-readline php7.2-xml
  pkg-php-tools po-debconf shtool x11proto-dri2-dev x11proto-gl-dev
Use 'sudo apt autoremove' to remove them.
0 upgraded, 0 newly installed, 0 to remove and 41 not upgraded.
```

Step 3: Check if the system is up-to-date using the following command:

$ sudo apt-get update

Step 4: Install Docker using the following command:

$ sudo apt install docker.io

You'll then get a prompt asking you to choose between y/n - choose *y*

Step 5:Install all the dependency packages using the following command:

$ sudo snap install docker

Step 6: Before testing Docker, check the version installed using the following command:

$ docker --version

```
mca@S37:~$ docker --version
Docker version 20.10.7, build 20.10.7-0ubuntu5~18.04.3
```

Step 7: Pull an image from the Docker hub using the following command:

$ sudo docker run hello-world

Here, *hello-world* is the docker image present on the Docker hub.

```
mca@S37:~$ sudo docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
2db29710123e: Pull complete
Digest: sha256:80f31da1ac7b312ba29d65080fddf797dd76acfb870e677f390d5acba9741b17
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.
    (amd64)
 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/
```

Step 8: Check if the docker image has been pulled and is present in your system using the following command:

$ sudo docker images

```
mca@S37:~$ sudo docker images
REPOSITORY    TAG        IMAGE ID       CREATED        SIZE
hello-world   latest     feb5d9fea6a5   8 months ago   13.3kB
```

Step 9: To display all the containers pulled, use the following command:

$ sudo docker ps -a

```
mca@S37:~$ sudo docker ps -a
CONTAINER ID   IMAGE        COMMAND     CREATED         STATUS                    PORTS     NAMES
269499d226a5   hello-world  "/hello"    2 minutes ago   Exited (0) 2 minutes ago            pedantic_euler
```

Step 10: To check for containers in a running state, use the following command:

$ sudo docker ps

```
mca@S37:~$ sudo docker ps
CONTAINER ID    IMAGE       COMMAND     CREATED     STATUS      PORTS       NAMES
```
Successfully installed Docker on Ubuntu!