Lesson 02 Demo 05

Deploying and Configuring a Registry

Objective: To configure a local Docker registry for efficient storage and transfer of container images, facilitating streamlined image management within the development environment

Tools required: Docker

Prerequisites: None

Steps to be followed:

1. Run a local registry

Step 1: Run a local registry

1.1 Run the following command to start the registry container:

sudo docker run -d -p 5000:5000 --restart=always --name registry registry:2

1.2 Run the following command to list the running containers to check the newly created container:

sudo docker ps

```
d6eacd74f46b79597b0a0879dc07a00fb764dc127c001cbbda43bb698f2f3457
labsuser@ip-172-31-32-178:~$ sudo docker ps
CONTAINER ID   IMAGE        COMMAND                  CREATED              STATUS              PORTS
    NAMES
d6eacd74f46b   registry:2   "/entrypoint.sh /etc…"   About a minute ago   Up About a minute   0.0.0.0:5000->5000/tcp, :::5000->5000/tc
p   registry
labsuser@ip-172-31-32-178:~$
```

1.3 Pull the Ubuntu image using the following command:

sudo docker pull ubuntu:16.04

```
labsuser@ip-172-31-32-178: ~
labsuser@ip-172-31-32-178:~$ sudo docker pull ubuntu:16.04
16.04: Pulling from library/ubuntu
58690f9b18fc: Pull complete
b51569e7c507: Pull complete
da8ef40b9eca: Pull complete
fb15d46c38dc: Pull complete
Digest: sha256:1f1a2d56de1d604801a9671f301190704c25d604a416f59e03c04f5c6ffee0d6
Status: Downloaded newer image for ubuntu:16.04
docker.io/library/ubuntu:16.04

What's Next?
  1. Sign in to your Docker account → docker login
  2. View a summary of image vulnerabilities and recommendations → docker scout quickview ubuntu:16.04
labsuser@ip-172-31-32-178:~$
```

1.4 Use the following commands to tag the Ubuntu image and check the running images:

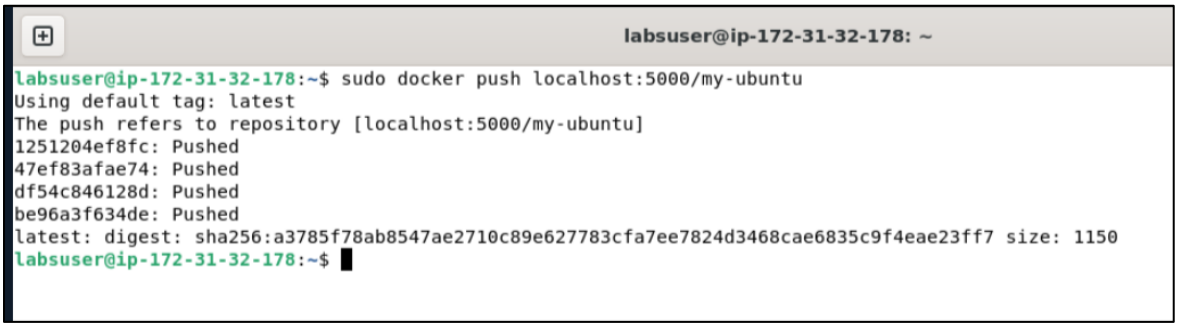
sudo docker tag ubuntu:16.04 localhost:5000/my-ubuntu

sudo docker images

```
labsuser@ip-172-31-32-178:~$ sudo docker tag ubuntu:16.04 localhost:5000/my-ubuntu
labsuser@ip-172-31-32-178:~$ sudo docker images
REPOSITORY                      TAG                 IMAGE ID       CREATED       SIZE
<none>                          <none>              d7aad287f1df   4 days ago    183MB
demo/nginx_img                  version1.0          e4720093a3c1   3 weeks ago   187MB
demo/nginx_img                  version2.0          e4720093a3c1   3 weeks ago   187MB
demo/nginx_img                  version3.0.latest   e4720093a3c1   3 weeks ago   187MB
nginx                           latest              e4720093a3c1   3 weeks ago   187MB
myregistry:5000/demo/nginx_img  version4.0          e4720093a3c1   3 weeks ago   187MB
registry                        2                   a8781fe3b7a2   6 weeks ago   25.4MB
ubuntu                          16.04               b6f507652425   2 years ago   135MB
localhost:5000/my-ubuntu        latest              b6f507652425   2 years ago   135MB
labsuser@ip-172-31-32-178:~$
```

1.5 Push the image to the local registry using the following command:

sudo docker push localhost:5000/my-ubuntu



1.6 Remove the locally cached images using the following commands:

sudo docker image remove ubuntu:16.04

sudo docker image remove localhost:5000/my-ubuntu

1.7 Pull the localhost:5000/my-ubuntu image from the local registry

sudo docker pull localhost:5000/my-ubuntu

1.8 Use the following command to stop the running registry container:
sudo docker container stop registry

By following these steps, you have successfully configured a local registry, transferred an Ubuntu image to it, and demonstrated the ability to push and pull images to and from the registry.