Docker Assignment 3

1. What is the way to establish communication between the docker and Linux hosts?

Create a docker file with the following commands:

FROM – Defines the ubuntu:16.04 base image to use.

RUN – Executes commands in a new layer on the top of the base image.

CMD – CMD allows you to run the commands. There are two ways in which commands are executed either via exec or using shell formats.

EXPOSE – Informs Docker that the container listens on the specified network ports at runtime.

- Next, run the docker build command to create the Docker image. The t flag tags the image sshd_container and. allows Docker to pick all the necessary files from the present working directory.
- Now, run the docker images command to inspect the created image. Note the REPOSITORY attribute. This attribute is the tag created with the -t flag in the previous step.
- Run docker run to create and run the container from the image telling Docker to run the image in the background (-d).
- Run docker port to verify SSH connectivity between the Docker host and the container. The docker port command list's the port mappings or a specific mapping for the container.

Next, find the IP address of the container. To do that, run the docker inspect command. The docker inspect command queries Docker information and renders the results in JSON array using a format parameter.

- Finally, now that you have the IP address to SSH to, try to SSH to the container, and it should work!

2. Differentiate between COPY and ADD commands that are used in a Dockerfile?

COPY takes in a source and destination. It only lets you copy in a local or directory from your host (the machine-building the Docker image) into the Docker image itself.

ADD lets you do that too, but it also supports two other sources. First, you can use a URL instead of a local file/directory. Secondly, you can extract tar from the source directory into the destination.

3. Can you tell what the functionality of a hypervisor is?

A hypervisor, also known as a virtual machine monitor or VMM, is software that creates and runs virtual machines (VMs). A hypervisor allows one host computer to support multiple guest VMs by virtually sharing its resources, such as memory and processing.

4. Can you tell me something about the docker namespace?

Docker uses a technology called namespaces to provide the isolated workspace called the container. When you run a container, Docker creates a

set of namespaces for that container. These namespaces provide a layer of isolation.

5.In what circumstances will you lose data stored in a container?

*If the container is dropped ,our data is lost.

6.Can you use a container, edit it, and update it? Also, how do you make it new and store it on the local system?

Yes,we can use a container, edit it and update it with one command.

$ docker commit <conatainer id> <username/imagename>

7.How to delete an image from the local storage system?

Using below command

$ docker rmi <image-id>

8.How to build a Dockerfile?

Once we written a Dockerfile, we need to build it to create an image with those specifications. Use the following command to build a Dockerfile:

$ docker build <path to docker file>

We use ".dockerfile_name" when the dockerfile exits in the same file directory and you use the entire path if it is somewhere.

9. Do you know why the docker system prune is used? What does it do?

Docker Prune is used to remove all the stopped containers, all the networks that are not used, all images and all build caches.

10. What command can you run to export a docker image as an archive?

The below command Export a container's filesystem as a tar archive

docker container export