**Docker Lab Demo**

**1. Docker Basic Commands**

$apt-get install docker.io (Ref: https://docs.docker.com/engine/install/ubuntu/)

$docker pull ubuntu - pull docker images from dockerhub

$docker images - List all the docker images

$docker create ubuntu

$docker create --name test ubuntu

$docker create -i -t --name user1 ubuntu

$docker start user1

$docker stop user1

$docker attach user1

create containers with user.txt (user.txt contains 10 user names)

copy file from host to docker viceversa:

$docker cp user.txt user1:user.txt (host to docker)

$docker cp user1:user.txt /home/raju/user.txt (docker to host)

$docker ps -a -q -List all the existing containers

$docker rm $(docker ps -a -q) -remove all the existing containers

$docker rmi <image name> -remove the given docker image

**2. Docker access through ssh**

**ssh server configuration**

$sudo apt-get install openssh-server

$sudo service ssh restart

$service ssh status

$sudo apt install openjdk-11-jdk

$java –version

create user account : $sudo useradd -m user1 (-m to create /home/user1 directory)

set password for user1 ($sudo passwd user1)

create user1 as sudo user: $usermod -aG sudo user1

create user1 container

Modify /home/user1/.profile file as:

sudo docker start -a -i user1; exit

(if exit is not mentioned, client can get access to host(server) after getting out of container with exit cmd)

ssh to <ip address> login as user1 and you will get user1 container shell.

([User1@0.0.0.0](mailto:User1@0.0.0.0g): stop ssh listening on all ipv4 interfaces ==> modify /etc/ssh/sshd\_config : change #ListenAddress 0.0.0.0 to ListenAddress <ip address>

**3. Docker Monitoring**

$docker stats $(docker ps -a -q)

$docker logs user1

$docker logs -f user1 (real time)

**4. Docker web server demo**

$docker start –a user1 -run user1 docker container

$apt-get update

$apt-get install -y apache2

$apt-get install -y apache2-utils

$apt-get install vim

$vim /var/www/html/index.html

$change line number 228:

$service apache2 start (apt-get install systemd)

$elinks <container ip address>

**5. Docker image creation and move to docker hub**

$docker commit -a <Author Name> <container id> <image name> -Docker image creation

$docker tag <image id> <username/image name:latest>

$docker login (iiitb)

$docker push <username/image name>

dockerhub.com - edit and verify

**Docker image stored in Host**: https://blog.thoward37.me/articles/where-are-docker-images-stored/

$cat /var/lib/docker/image/overlay2/repositories.json | python -mjson.tool