Docker Case Study

##### Problem: Automate Infra allocation for L&D

### Requirements

* Each user should have independent Linux System
* Specific training environment should be created in Container
* User should not allow to access other containers/images and docker commands
* Monitor participant’s containers.
* Debug/live demo for the participants if they have any doubts/bug in running applications
* Automate container creation and deletion

### Setup Linux containers for users

1. Allocation of a Linux based system can be done through a shell script create\_user\_container.sh. Such a script would create a docker container for each user based on a docker image.

* users.txt

user1

user2

.

.

userN

* createUserContainer.sh

#! /bin/bash

echo -n "Enter the user list file : "

read file

while read user

do

docker create -it --name $user <docker-image> /bin/bash

done < $file

The execution of such a shell script would create a docker container corresponding to each user.

1. The user can use the allocated container by using the shell script useContainer.sh

* useContainer.sh

#! /bin/bash

echo -n "Enter your username : "

read name

docker start $name

docker attach $name

Note that the user has access only to that Linux system only.

### Monitor the containers

Monitor the activities of a particular user through the shell script monitorContainer.sh

* monitorContainer.sh

#! /bin/bash

echo -n "Enter the container name which has to be monitored : "

read name

docker logs -f $name

### Deleting the containers

Automate the task of deletion of containers through the shell script  deleteContainer.sh

* deleteContainer.sh

echo -n "Enter the user list file : "

read file

while read user

do

docker stop $user

docker rm $user

done < $file

Note: execute the shell script through the following command

sh <shell\_script>