Docker Case Study

Requirements:

- Dynamic Allocation of Linux systems for users
- Each user should have independent Linux System
- Specific training environment should be created in Container
- User should not allow to access other containers/images
- User should not allow to access docker command
- Monitor participants containers
- Debug/live demo for the participants if they have any doubts/bug in running applications.
- Automate container creation and deletion.

This document will walk through creation of userlists, creating containers for each user, using the allocated containers, monitoring and deleting them.

1. ### Creating the user lists:
   A text file “userlist.txt”

   User1

   User2

   User3

2. ### Creating Containers:
   (createContainer.sh)

   The following script will generate a docker container for each of the users.

   ```
   echo –n “Enter the filename containing the list of users:”

   read filename

   while read username

       do
   ```

```
            docker  create –it –-name $username docker_image/bin/bash
        done <$filename
```

3. Allocation:

(useContainer.sh)

The following snippet enables the user to use the allocated container:

```
echo –n “Enter username:”
read name
docker start $name
docker attach $name
```

4. Monitoring:

(monitorContainers.sh)

The following shell script monitors the docker container.

```
echo  -n “Name of the container to be monitored:”
read containerName
docker logs –f $containerName
```

5. Deletion:

(deleteContainer.sh)

The following shell script deletes the docker container:

```
echo –n “Enter filename:”
read filename
while read username
    do
        docker stop $username
        docker rm $username
    done <$filename
```

The shell script can be executed using the command:

```
sh <shell_script>
```