Phase-5 Practice Project: Assisted Practice

4. Container Scaling with Docker Swarm.

Creating service for scaling

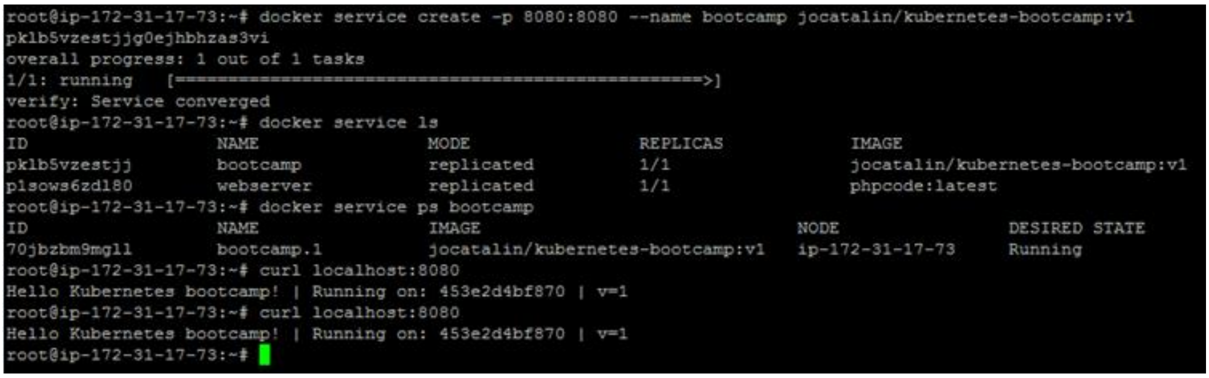
- Docker containers deployed on Docker swarm cluster can be scaled up and down to implement high availability of Docker containers. If in case any Docker container gets crashed, we can get a new one created and other containers can easily handle the load.
- Use the commands below to create a service and scale the service up and down to increase or decrease Docker containers

```
docker service create -p 8080:8080 --name bootcampjocatalin/kubernetes-bootcamp:v1

docker service ls

docker service psbootcamp

curl localhost:8080
```



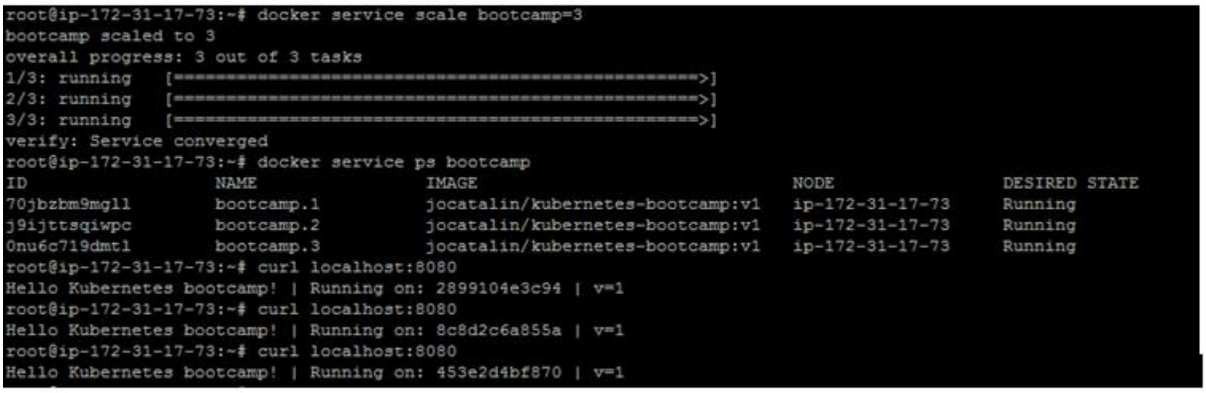
```
root@ip-172-31-17-73:~# docker service create -p 8080:8080 --name bootcamp jocatalin/kubernetes-bootcamp:v1
pklb5vzestjjg0ejhbhzas3vi
overall progress: 1 out of 1 tasks
1/1: running   [==================================================>]
verify: Service converged
root@ip-172-31-17-73:~# docker service ls
ID              NAME            MODE            REPLICAS        IMAGE
pklb5vzestjj    bootcamp        replicated      1/1             jocatalin/kubernetes-bootcamp:v1
p1sows6zd180    webserver       replicated      1/1             phpcode:latest
root@ip-172-31-17-73:~# docker service ps bootcamp
ID              NAME            IMAGE                               NODE            DESIRED STATE
70jbzbm9mgll    bootcamp.1      jocatalin/kubernetes-bootcamp:v1    ip-172-31-17-73 Running
root@ip-172-31-17-73:~# curl localhost:8080
Hello Kubernetes bootcamp! | Running on: 453e2d4bf870 | v=1
root@ip-172-31-17-73:~# curl localhost:8080
Hello Kubernetes bootcamp! | Running on: 453e2d4bf870 | v=1
root@ip-172-31-17-73:~#
```

- Once the container deployed, we can scale up and down the Docker swarm service following the process shown below

```
docker service scale bootcamp=3

docker service psbootcamp

curl localhost:8080
```



```
root@ip-172-31-17-73:~# docker service scale bootcamp=3
bootcamp scaled to 3
overall progress: 3 out of 3 tasks
1/3: running   [==================================================>]
2/3: running   [==================================================>]
3/3: running   [==================================================>]
verify: Service converged
root@ip-172-31-17-73:~# docker service ps bootcamp
ID                  NAME                IMAGE                                NODE                DESIRED STATE
70jbzbm9mgll        bootcamp.1          jocatalin/kubernetes-bootcamp:v1     ip-172-31-17-73     Running
j9ijttsqiwpc        bootcamp.2          jocatalin/kubernetes-bootcamp:v1     ip-172-31-17-73     Running
0nu6c719dmtl        bootcamp.3          jocatalin/kubernetes-bootcamp:v1     ip-172-31-17-73     Running
root@ip-172-31-17-73:~# curl localhost:8080
Hello Kubernetes bootcamp! | Running on: 2899104e3c94 | v=1
root@ip-172-31-17-73:~# curl localhost:8080
Hello Kubernetes bootcamp! | Running on: 8c8d2c6a855a | v=1
root@ip-172-31-17-73:~# curl localhost:8080
Hello Kubernetes bootcamp! | Running on: 453e2d4bf870 | v=1
```

In the screenshot above, we can see that when we are trying to access swarm service on 8080 port, we are getting different ids in the response. This means that our request is going to different containers in round robin manner.