Experiment: 6

Title: Docker Linking and Swarm

Docker Linking :-

- Run a container in detached mode with name "db" from image "training/postgres"

  $ docker run -it -d --name db training/postgres

```
[root@mansi ~]# docker run -dit --name db training/postgres
Unable to find image 'training/postgres:latest' locally
latest: Pulling from training/postgres
a3ed95caeb02: Pull complete
6e71c809542e: Pull complete
2978d9af87ba: Pull complete
e1bca35b062f: Pull complete
500b6decf741: Pull complete
74b14ef2151f: Pull complete
7afd5ed3826e: Pull complete
3c69bb244f5e: Pull complete
d86f9ec5aedf: Pull complete
010fabf20157: Pull complete
Digest: sha256:a945dc6dcfbc8d009c3d972931608344b76c2870ce796da00a827bd50791907e
Status: Downloaded newer image for training/postgres:latest
80614800c35d3b3ed8badbda8ee414ce061922bb0bdf231b2328565283833ed3
[root@mansi ~]#
```

- Run another container in detached mode with name "web" from image "training/webapp", link container "db" with alias "mydb" to this container and finally pass an inline command "python app.py" while running container.

  $ docker run -it -d –-name web –-link db:mydb training/webapp

```
[root@mansi ~]# docker run -dit --link db:mydb --name web training/webapp
Unable to find image 'training/webapp:latest' locally
latest: Pulling from training/webapp
e190868d63f8: Pull complete
909cd34c6fd7: Pull complete
0b9bfabab7c1: Pull complete
a3ed95caeb02: Pull complete
10bbbc0fc0ff: Pull complete
fca59b508e9f: Pull complete
e7ae2541b15b: Pull complete
9dd97ef58ce9: Pull complete
a4c1b0cb7af7: Pull complete
Digest: sha256:06e9c1983bd6d5db5fba376ccd63bfa529e8d02f23d5079b8f74a616308fb11d
Status: Downloaded newer image for training/webapp:latest
519c82d37a777a56fdb9a49bfb76ala50fc1c8c36fc3cf35e29e1ccf53657dde
[root@mansi ~]#
```

- Take a bash terminal in "web" container and Test container linking by doing a ping to "mydb"

  $ docker exec -it web bash

```
[root@mansi ~]# docker exec -it web bash
root@519c82d37a77:/opt/webapp#
```

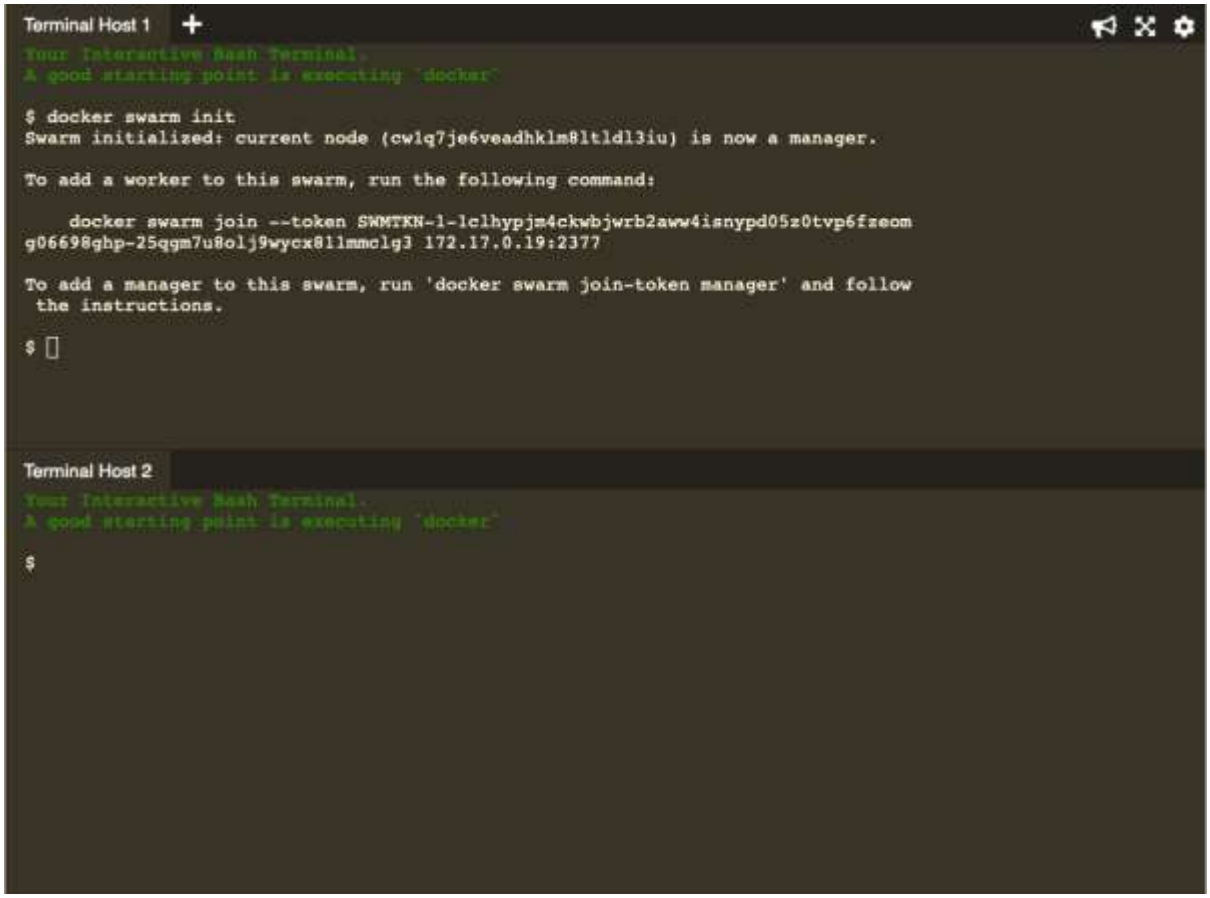
- Run ping db

```
root@519c82d37a77:/opt/webapp# ping db
PING mydb (172.17.0.2) 56(84) bytes of data.
64 bytes from mydb (172.17.0.2): icmp_seq=1 ttl=64 time=0.076 ms
64 bytes from mydb (172.17.0.2): icmp_seq=2 ttl=64 time=0.113 ms
64 bytes from mydb (172.17.0.2): icmp_seq=3 ttl=64 time=0.118 ms
64 bytes from mydb (172.17.0.2): icmp_seq=4 ttl=64 time=0.073 ms
64 bytes from mydb (172.17.0.2): icmp_seq=5 ttl=64 time=0.087 ms
^C
--- mydb ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4073ms
rtt min/avg/max/mdev = 0.073/0.093/0.118/0.020 ms
root@519c82d37a77:/opt/webapp#
```

Docker Swarm :

- Initialize the Swarm Cluster into one of the terminal or virtual machine by using the following command.

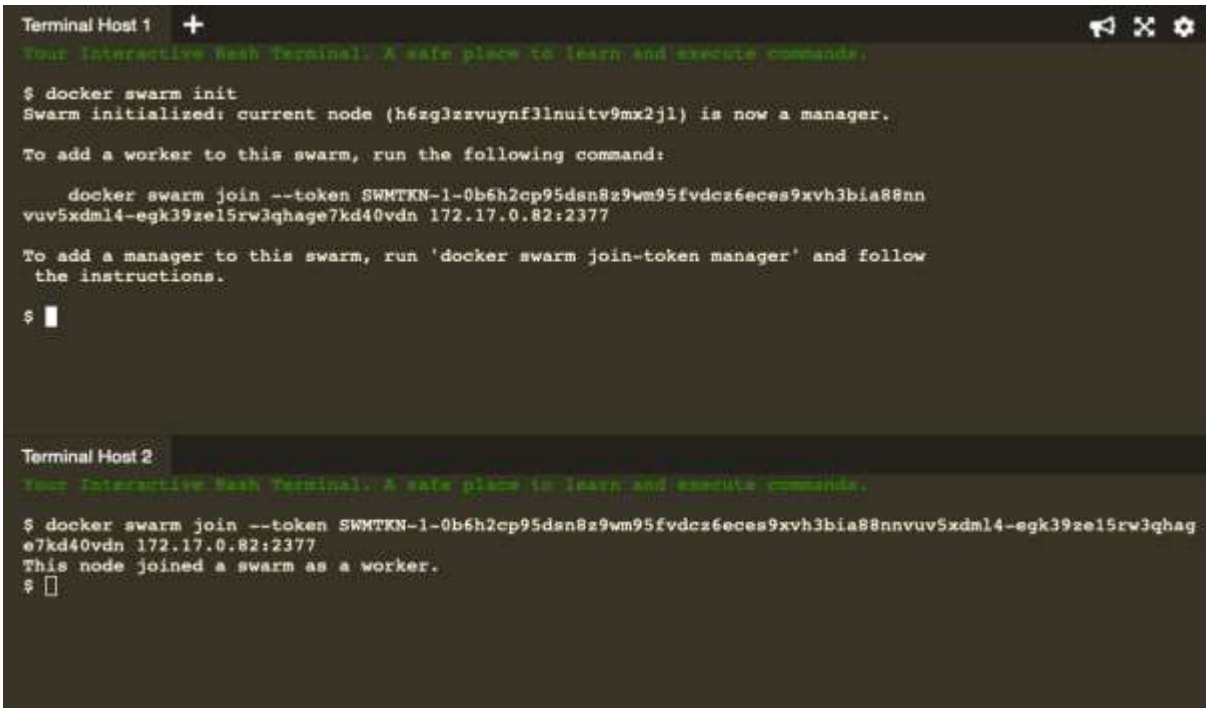
  $ docker swarm init



Join the Cluster : -

To add a worker to this swarm, run the following command to join the node to this swarm.

$ docker swarm join --token SWMTKN-1-0b6h2cp95dsn8z9wm95fvdcz6eces9xvh3bia88nnvuv5xdml4-egk39ze15rw3qhage7kd40vdn 172.17.0.82:2377



- To see that how many nodes are joined in this Cluster by using the following command.

  $ docker node ls