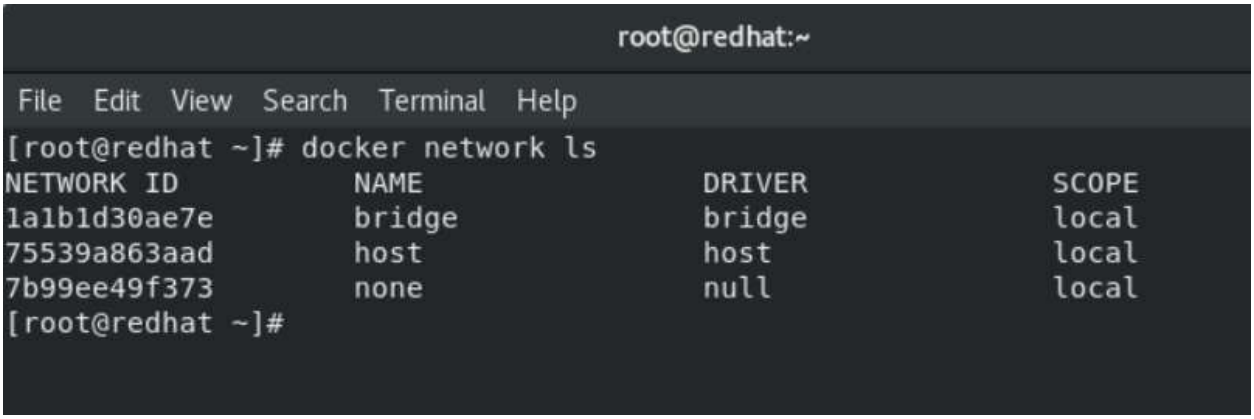
Experiment 3: Docker Network

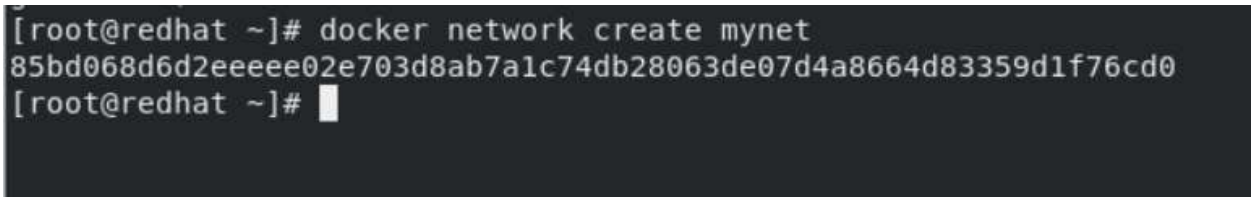
Aim

To understand networking in docker and create a network allowing containers to communicate.

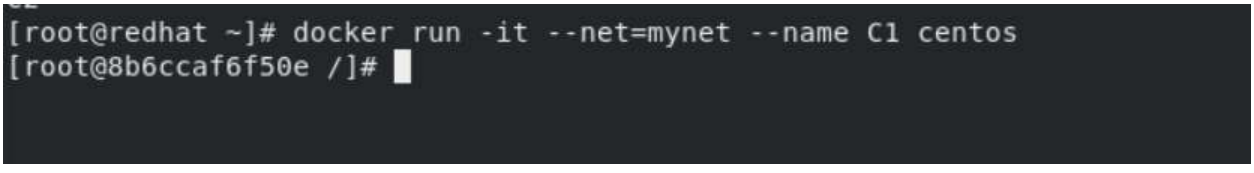
Step 1: Listing all networks



Step2: Creating our network



Step 3: Launching container in the created mynet network



Step 4: Launching another container in the same network

```
[root@redhat ~]# docker run -it --net=mynet --name C2 centos
[root@eca363b5389f /]#
[root@eca363b5389f /]#
```

Step 5: Now from C2 we can ping to C1

```
[root@eca363b5389f /]# ping C1
PING C1 (172.18.0.3) 56(84) bytes of data.
64 bytes from C1.mynet (172.18.0.3): icmp_seq=1 ttl=64 time=0.227 ms
64 bytes from C1.mynet (172.18.0.3): icmp_seq=2 ttl=64 time=0.284 ms
64 bytes from C1.mynet (172.18.0.3): icmp_seq=3 ttl=64 time=0.176 ms
64 bytes from C1.mynet (172.18.0.3): icmp_seq=4 ttl=64 time=0.176 ms
64 bytes from C1.mynet (172.18.0.3): icmp_seq=5 ttl=64 time=0.184 ms
64 bytes from C1.mynet (172.18.0.3): icmp_seq=6 ttl=64 time=0.199 ms
64 bytes from C1.mynet (172.18.0.3): icmp_seq=7 ttl=64 time=0.177 ms
64 bytes from C1.mynet (172.18.0.3): icmp_seq=8 ttl=64 time=0.288 ms
^X64 bytes from C1.mynet (172.18.0.3): icmp_seq=9 ttl=64 time=0.174 ms
64 bytes from C1.mynet (172.18.0.3): icmp_seq=10 ttl=64 time=0.180 ms
^C
--- C1 ping statistics ---
10 packets transmitted, 10 received, 0% packet loss, time 216ms
rtt min/avg/max/mdev = 0.174/0.206/0.288/0.044 ms
[root@eca363b5389f /]#
```

Inspecting network mynet :-

```
[root@redhat ~]# docker network inspect mynet
[
    {
        "Name": "mynet",
        "Id": "85bd068d6d2eeeee02e703d8ab7a1c74db28063de07d4a8664d83359d1f76cd0"
,
        "Created": "2021-02-13T16:39:27.579720819+05:30",
        "Scope": "local",
        "Driver": "bridge",
        "EnableIPv6": false,
        "IPAM": {
            "Driver": "default",
            "Options": {},
            "Config": [
                {
                    "Subnet": "172.18.0.0/16",
                    "Gateway": "172.18.0.1"
                }
```

Disconnecting the container from the network :-