DOCKER NETWORKS

Types of Docker Networks

There are four types of docker networks

- 1. Bridge Network
- 2. Host Network
- 3. None Network
- 4. Overlay Network

Bridge Network:

In Bridge Network containers are communicate with each other in the same host and the default network is bridge network

Host Network:

In Host Network the host IP and container IP is same

None Network:

None Network is not exposing the container because it can't provide the IP for the container

Overlay Network:

Overlay Network is used to create communication between one server container to another server container

Steps to create Bridge Network

1. First create one network in terminal by using command

docker network create	It is used to create the
network name	network

2. To list the Networks there is command

docker network Is	To list the networks
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As shown in below figure

```
aws
         Services
                                                                            [Alt+S]
                    Q Search
                        59ab366372d5
                                       3 weeks ago
                                                      78.1MB
ubuntu
             latest
image1
             latest
                        fe36f7f56857
                                       3 weeks ago
                                                      78.1MB
[root@ip-172-31-19-173 ~]# docker ps
CONTAINER ID IMAGE
                         COMMAND CREATED
                                              STATUS
                                                         PORTS
                                                                   NAMES
[root@ip-172-31-19-173 ~]# docker ps -a
CONTAINER ID
              IMAGE
                          COMMAND
                                        CREATED
                                                        STATUS
                                                                                      PORTS
                                                                                                NAMES
9494ca375c86
               image1
                          "/bin/bash"
                                        19 hours ago
                                                        Exited (137) 19 hours ago
                                                                                                cont-2
                          "/bin/bash"
                                        19 hours ago
4d82bb517f3f
              ubuntu
                                                        Exited (137) 19 hours ago
                                                                                                cont1
[root@ip-172-31-19-173 ~] # docker networks
docker: 'networks' is not a docker command.
See 'docker --help'
[root@ip-172-31-19-173 ~] # docker networks ls
docker: 'networks' is not a docker command.
See 'docker --help'
[root@ip-172-31-19-173 ~]# docker network ls
NETWORK ID
b290a3839d37
               NAME
                          DRIVER
                                    SCOPE
               bridge
                                    local
                         bridge
f12d3efd4131
              host
                         host
                                    local
9cde96655fb1
                         null
              none
                                    local
[root@ip-172-31-19-173 ~]# docker network create mani
bd9867c93b786310b6990e5629d68d2ae7e94b4e49f34a8708a952411f84fa82
[root@ip-172-31-19-173 ~] # docker network ls
ETWORK ID
              NAME
                          DRIVER
b290a3839d37
               bridge
                          bridge
                                    local
f12d3efd4131
               host
                          host
                                    local
bd9867c93b78
               mani
                          bridge
                                    local
                          null
 cde96655fb1
[root@ip-172-31-19-173 ~]#
```

3. Create the network for the container by the command is

docker run -it --name new cont name --network network name image name

4. After creating the container with created network just inspect that container to see the information by the command

Docker inspect container	To see the information of the
name	container

As shown in below figure

5. Switch to the container by using command

docker attach cont name	To switch into the container
apt update -y	To update in container
apt install iputils-ping	To install ping package in cont

6. Check the running containers

docker ps	To check the running
	container
docker inspect cont1 ID	Copy the IP in cont1

7. Switch into container Type ping paste the copied IP in cont2 – check the connection if the connection is providing then it is working as shown in below figure

```
[root@ip-172-31-19-173 ~]# docker attach cont1
root@4d82bb517f3f:/# ping 172.18.0.2
PING 172.18.0.2 (172.18.0.2) 56(84) bytes of data.
64 bytes from 172.18.0.2: icmp_seq=1 ttl=127 time=0.104 ms
64 bytes from 172.18.0.2: icmp_seq=2 ttl=127 time=0.067 ms
64 bytes from 172.18.0.2: icmp_seq=3 ttl=127 time=0.067 ms
64 bytes from 172.18.0.2: icmp_seq=4 ttl=127 time=0.051 ms
64 bytes from 172.18.0.2: icmp_seq=5 ttl=127 time=0.067 ms
64 bytes from 172.18.0.2: icmp_seq=5 ttl=127 time=0.067 ms
65 packets transmitted, 5 received, 0% packet loss, time 4136ms
rtt min/avg/max/mdev = 0.051/0.071/0.104/0.017 ms
root@4d82bb517f3f:/#
```