

Docker Part 2 Assignment – 5

1. Use the previous assignment's deployment

Previous deployments

```
ubuntu@ip-172-31-45-255:~$ docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
19b3fda33c7f	httpd:latest	"httpd-foreground"	10 hours ago	Up 10 hours	80/tcp	apache-service.1.yld
ixhensywe91lgj471k6j2z						
a27f6de86958	nginx:latest	"/docker-entrypoint..."	13 hours ago	Up 13 hours	0.0.0.0:85->80/tcp, :::85->80/tcp	container5
085507b4df54	nginx:latest	"/docker-entrypoint..."	13 hours ago	Up 13 hours	0.0.0.0:81->80/tcp, :::81->80/tcp	container1
1a8df0ee59c9	nginx:latest	"/docker-entrypoint..."	13 hours ago	Up 13 hours	0.0.0.0:83->80/tcp, :::83->80/tcp	container3
c87ca0386516	nginx:latest	"/docker-entrypoint..."	13 hours ago	Up 13 hours	0.0.0.0:84->80/tcp, :::84->80/tcp	container4
46lee957342c	nginx:latest	"/docker-entrypoint..."	13 hours ago	Up 13 hours	0.0.0.0:82->80/tcp, :::82->80/tcp	container2
248468272ecd	venkat/image1	"/bin/sh -c 'apachec..."	2 days ago	Up 2 days		busy_thompson
265d596b0823	venkat/image1	"/bin/sh -c 'apachec..."	2 days ago	Up 2 days		beautiful_bohr
2c9841a7b910	ubuntu	"/bin/bash"	3 days ago	Up 3 days	0.0.0.0:80->80/tcp, :::80->80/tcp	jolly_noyce
de8071d4baef	18c42ccf14b9	"/bin/sh -c 'apachec..."	3 weeks ago	Up 3 weeks		awesome_haibt

2. Deploy any 2 containers in a overlay network

- Overlay network is created naming my-overlay-network

```
ubuntu@ip-172-31-45-255:~$ docker network create --driver overlay my-overlay-network
jl185kjs6epu85c1gb8fnvg1lw
```

- Ensuring overlay network status using "\$ docker network ls" command

```
ubuntu@ip-172-31-45-255:~$ docker network ls
```

NETWORK ID	NAME	DRIVER	SCOPE
8082b60b8ca3	bridge	bridge	local
2444eff0d1b5	docker_gwbridge	bridge	local
b0abf12d039a	host	host	local
v7jfrqrcng2c	ingress	overlay	swarm
kjujin2ecpuj	my-overlay-network	overlay	swarm
ddfb819c3443	none	null	local
2deb36612634	ubuntu_default	bridge	local

- Container5 is attached to the overlay network created

```
ubuntu@ip-172-31-45-255:~$ docker network connect my-overlay-network 46lee957342c
```

- Similarly container2 is also attached to overlay network

```
ubuntu@ip-172-31-45-255:~$ docker network connect my-overlay-network a27f6de86958
```

3. Try pinging each of the containers from within the containers

- Entered into the container5 by docker exec command
- And performed ping to container3

```
ubuntu@ip-172-31-45-255:~$ docker exec -it container5 /bin/bash
root@a27f6de86958:/# ping 461ee957342c
PING 461ee957342c (10.0.2.5) 56(84) bytes of data.
64 bytes from container2.my-overlay-network (10.0.2.5): icmp_seq=1 ttl=64 time=0.125 ms
64 bytes from container2.my-overlay-network (10.0.2.5): icmp_seq=2 ttl=64 time=0.096 ms
64 bytes from container2.my-overlay-network (10.0.2.5): icmp_seq=3 ttl=64 time=0.078 ms
64 bytes from container2.my-overlay-network (10.0.2.5): icmp_seq=4 ttl=64 time=0.085 ms
64 bytes from container2.my-overlay-network (10.0.2.5): icmp_seq=5 ttl=64 time=0.081 ms
64 bytes from container2.my-overlay-network (10.0.2.5): icmp_seq=6 ttl=64 time=0.076 ms
64 bytes from container2.my-overlay-network (10.0.2.5): icmp_seq=7 ttl=64 time=0.080 ms
64 bytes from container2.my-overlay-network (10.0.2.5): icmp_seq=8 ttl=64 time=0.080 ms
64 bytes from container2.my-overlay-network (10.0.2.5): icmp_seq=9 ttl=64 time=0.080 ms
^C
--- 461ee957342c ping statistics ---
9 packets transmitted, 9 received, 0% packet loss, time 8152ms
rtt min/avg/max/mdev = 0.076/0.086/0.125/0.014 ms
root@a27f6de86958:/# exit
exit
```

Similarly entered into container2 and performed ping to container5

```
ubuntu@ip-172-31-45-255:~$ docker exec -it container2 /bin/bash
root@461ee957342c:/# ping container5
bash: ping: command not found
root@461ee957342c:/# sudo apt update
bash: sudo: command not found
root@461ee957342c:/# apt update
Get:1 http://deb.debian.org/debian bookworm InRelease [151 kB]
Get:2 http://deb.debian.org/debian bookworm-updates InRelease [52.1 kB]
Get:3 http://deb.debian.org/debian-security bookworm-security InRelease [48.0 kB]
Get:4 http://deb.debian.org/debian bookworm/main amd64 Packages [8787 kB]
Get:5 http://deb.debian.org/debian bookworm-updates/main amd64 Packages [11.3 kB]
Get:6 http://deb.debian.org/debian-security bookworm-security/main amd64 Packages [130 kB]
Fetched 9180 kB in 2s (5739 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
2 packages can be upgraded. Run 'apt list --upgradable' to see them.
root@461ee957342c:/# apt install iputils-ping
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
root@461ee957342c:/# ping container5
PING container5 (10.0.2.2) 56(84) bytes of data.
64 bytes from container5.my-overlay-network (10.0.2.2): icmp_seq=1 ttl=64 time=0.066 ms
64 bytes from container5.my-overlay-network (10.0.2.2): icmp_seq=2 ttl=64 time=0.083 ms
64 bytes from container5.my-overlay-network (10.0.2.2): icmp_seq=3 ttl=64 time=0.080 ms
64 bytes from container5.my-overlay-network (10.0.2.2): icmp_seq=4 ttl=64 time=0.080 ms
64 bytes from container5.my-overlay-network (10.0.2.2): icmp_seq=5 ttl=64 time=0.078 ms
64 bytes from container5.my-overlay-network (10.0.2.2): icmp_seq=6 ttl=64 time=0.075 ms
64 bytes from container5.my-overlay-network (10.0.2.2): icmp_seq=7 ttl=64 time=0.086 ms
^C
--- container5 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 6146ms
rtt min/avg/max/mdev = 0.066/0.078/0.086/0.006 ms
root@461ee957342c:/# exit
exit
ubuntu@ip-172-31-45-255:~$
```