Overlay network commands

1. This command can be used to create an overlay network

docker network create --driver overlay < network name >

```
root@ip-172-31-32-116:/home/ubuntu# docker network create --driver overlay overlay-net
903x3elns2fep9dd185aph416
root@ip-172-31-32-116:/home/ubuntu#
```

i-01f2abbdb0d592e12 (Manager)

PublicIPs: 18.179.178.175 PrivateIPs: 172.31.32.116

Check in networks

docker network ls

```
root@ip-172-31-32-116:/home/ubuntu# docker network ls
NETWORK ID     NAME             DRIVER    SCOPE
aa4954a2e1d3   bridge           bridge    local
e3cc09e064c0   bridge-net       bridge    local
e9c8bdda68ec   docker_gwbridge  bridge    local
174394cf6e9c   host             host      local
tqjyxdouwobe   ingress          overlay   swarm
4754405da1a8   none             null      local
903x3elns2fe   overlay-net      overlay   swarm
root@ip-172-31-32-116:/home/ubuntu#
```

i-01f2abbdb0d592e12 (Manager)

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2. This command can be used to start a service using the overlay network

docker service create --name <service_name> --replicas 3 --network <network_name> <image_name>

```
root@ip-172-31-32-116:/home/ubuntu# docker service create --name my-ol-service --replicas 3 --network overlay-net nginx:latest
thwy0y7d5z3y9ji1v7vupm0tt
overall progress: 3 out of 3 tasks
1/3: running   [==================================================>]
2/3: running   [==================================================>]
3/3: running   [==================================================>]
verify: Service converged
root@ip-172-31-32-116:/home/ubuntu#
```

i-01f2abbdb0d592e12 (Manager)

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docker ps

```
root@ip-172-31-32-116:/home/ubuntu# docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED          STATUS          PORTS     NAMES
064016f252d3   nginx:latest   "/docker-entrypoint.…"   37 seconds ago   Up 35 seconds   80/tcp    my-ol-service.3.ylk4zo2f65ulghcgs8jze2mtt
a61fc41656c7   nginx:latest   "/docker-entrypoint.…"   37 seconds ago   Up 35 seconds   80/tcp    my-ol-service.2.vyoblhxafpci9ykiizvgatfrx
f07da6a254f2   nginx:latest   "/docker-entrypoint.…"   37 seconds ago   Up 35 seconds   80/tcp    my-ol-service.1.sjaul0z5zkou3z7525nfeswgc
root@ip-172-31-32-116:/home/ubuntu#
```

i-01f2abbdb0d592e12 (Manager)

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And if we inspect container (it is connected to our overlay network)

docker inspect <container_id>

aws Services Search


```
            "IPv6Gateway": "",
            "MacAddress": "",
            "Networks": {
                "overlay-net": {
                    "IPAMConfig": {
                        "IPv4Address": "10.0.1.5"
                    },
                    "Links": null,
                    "Aliases": [
                        "064016f252d3"
                    ],
```

3. This command can be used to remove the service.

docker service rm < service name >

```
root@ip-172-31-32-116:/home/ubuntu# docker service rm my-ol-service
my-ol-service
root@ip-172-31-32-116:/home/ubuntu#
```

i-01f2abbdb0d592e12 (Manager)

PublicIPs: 18.179.178.175 PrivateIPs: 172.31.32.116

Let's check if our my-ol-service is still there or not

docker service ls

```
root@ip-172-31-32-116:/home/ubuntu# docker service ls
ID             NAME        MODE         REPLICAS   IMAGE          PORTS
qe9jizkorpi7   placement   replicated   6/6        nginx:latest
root@ip-172-31-32-116:/home/ubuntu#
```

i-01f2abbdb0d592e12 (Manager)

PublicIPs: 18.179.178.175 PrivateIPs: 172.31.32.116

4. This command can be used to remove the network

docker network rm <network_name>

```
root@ip-172-31-32-116:/home/ubuntu# docker network rm overlay-net
overlay-net
root@ip-172-31-32-116:/home/ubuntu#
```

i-01f2abbdb0d592e12 (Manager)

PublicIPs: 18.179.178.175 PrivateIPs: 172.31.32.116

Let’s check in networks now (overlay-net has been removed)

docker network ls

```
root@ip-172-31-32-116:/home/ubuntu# docker network ls
NETWORK ID     NAME              DRIVER    SCOPE
aa4954a2e1d3   bridge            bridge    local
e3cc09e064c0   bridge-net        bridge    local
e9c8bdda68ec   docker_gwbridge   bridge    local
174394cf6e9c   host              host      local
tqjyxdouwobe   ingress           overlay   swarm
4754405da1a8   none              null      local
root@ip-172-31-32-116:/home/ubuntu#
```

i-01f2abbdb0d592e12 (Manager)

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5. To connect stand-alone containers to the network, --attachable flag has to be used.

docker network create --driver overlay --attachable <network_name>

```
root@ip-172-31-32-116:/home/ubuntu# docker network create --driver overlay --attachable tes-overlay
ffli5hdvtm5qi8qkn6haa6a9f
root@ip-172-31-32-116:/home/ubuntu#
```

i-01f2abbdb0d592e12 (Manager)

PublicIPs: 18.179.178.175 PrivateIPs: 172.31.32.116

docker network ls

```
root@ip-172-31-32-116:/home/ubuntu# docker network ls
NETWORK ID     NAME              DRIVER    SCOPE
aa4954a2e1d3   bridge            bridge    local
e3cc09e064c0   bridge-net        bridge    local
e9c8bdda68ec   docker_gwbridge   bridge    local
174394cf6e9c   host              host      local
tqjyxdouwobe   ingress           overlay   swarm
4754405da1a8   none              null      local
ffli5hdvtm5q   tes-overlay       overlay   swarm
root@ip-172-31-32-116:/home/ubuntu#
```

i-01f2abbdb0d592e12 (Manager)

PublicIPs: 18.179.178.175 PrivateIPs: 172.31.32.116

docker run -it -d --name <container_name> --network <network_name> <image_name>

```
root@ip-172-31-32-116:/home/ubuntu# docker run -it -d --name container --network tes-overlay nginx
5b0f17a8f79ff4bbf5cccea2762fb6312e6c2169ddf2a49b0fe0daecb3e7a95d
root@ip-172-31-32-116:/home/ubuntu#
```

i-01f2abbdb0d592e12 (Manager)

PublicIPs: 18.179.178.175 PrivateIPs: 172.31.32.116

docker inspect <container_id or Name>

aws Services Search


```
            "IPv6Gateway": "",
            "MacAddress": "",
            "Networks": {
                "tes-overlay": {
                    "IPAMConfig": {
                        "IPv4Address": "10.0.2.2"
                    },
                    "Links": null,
                    "Aliases": [
                        "5b0f17a8f79f"
```