



DOCKER

Docker Swarm Networks

Docker : Docker Swarm

- Docker Swarm has new Network Driver **overlay Network**.
- The overlay network driver creates a distributed network among multiple Docker hosts.
- Overlay Network is allow containers to communicate inside the Single Swarm.

Docker : Docker Swarm

- When you initialize a swarm or join a Docker host to an existing swarm, two new networks are created on that Docker host:
- **Ingress**: Ingress is an Overlay Network, which handles control and data traffic related to swarm services.
- If Swarm Service is not connected with user defined Overlay Network, it connect to ingress Network.
- **Bridge Network**: Bridge network called `docker_gwbridge`, which connects the individual Docker node to the other node participating in the swarm.

Docker : Docker Swarm

- Rules for user defined Overlay Network
- Need the following ports open to traffic to and from each Docker host participating on an overlay network:
 - TCP port 2377 for cluster management communications
 - TCP and UDP port 7946 for communication among nodes
 - UDP port 4789 for overlay network traffic
- Before create an overlay network, docker Swarm must be initialised on Node or join it to an existing swarm.

Docker : Docker Swarm

- Create an Overlay Network.

```
docker network create -d overlay <network_name>
```

- Create Service on user Define Overlay Network

```
docker service create --name <Service_name> --network  
<network_name> -e POSTGRES_PASSWORD=mypassword  
<Image_name>
```

- Create web-service to access the DB and same network

```
docker service create --name <service_name> --network  
<network_name> -p 80:80 <image_name>
```

Will see you in Next Lecture...

Thank you!

A close-up photograph of a hand holding a black marker, writing the words 'Thank you!' in a cursive script on a white surface. The hand is positioned on the right side of the frame, with the marker tip touching the paper. The background is plain white.

See you in next lecture ...