

Demystifying Docker Networking

Practical guide to black magic

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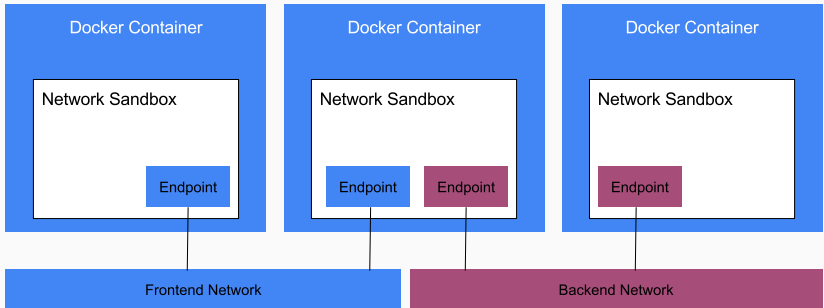
February 8, 2017

Libnetwork

CNM: Container Network Model

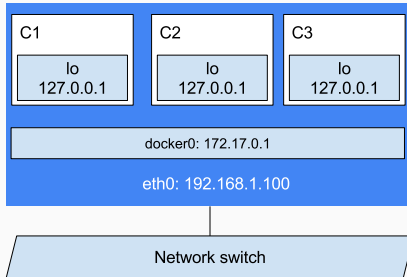
- Sandbox
- Endpoint
- Network

CNM: Container Network Model (cont'd)



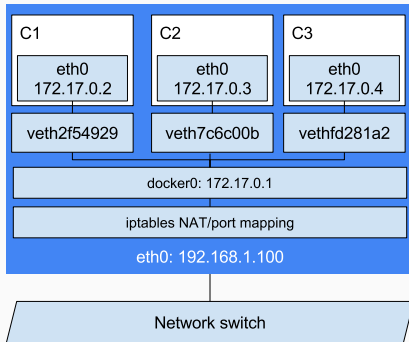
Network Drivers 101

Null



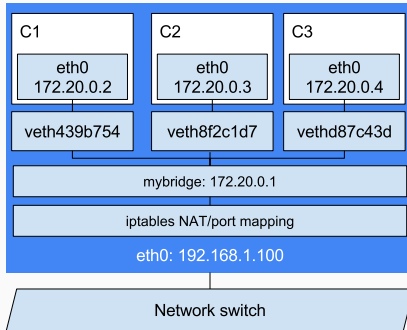
```
# docker run -it --network=none alpine sh
```

Default Bridge (docker0)



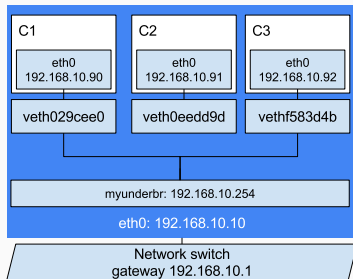
```
# docker run -it alpine sh
```

Custom Bridge (mybridge)



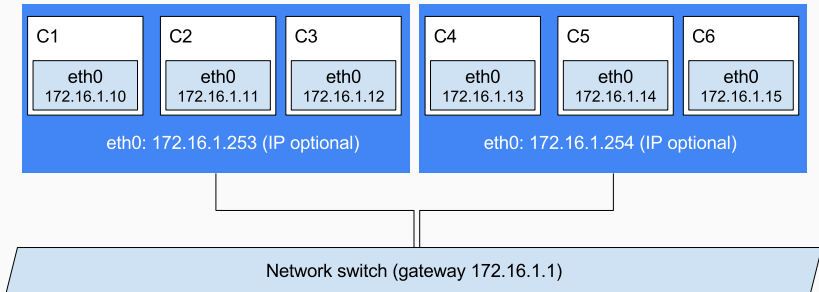
```
# docker network create -d bridge \  
-o com.docker.network.bridge.name=mybridge \  
mybridge  
  
# docker run -it --net mybridge alpine sh
```


Custom Bridge Network IPAM underlay (myunderbr)

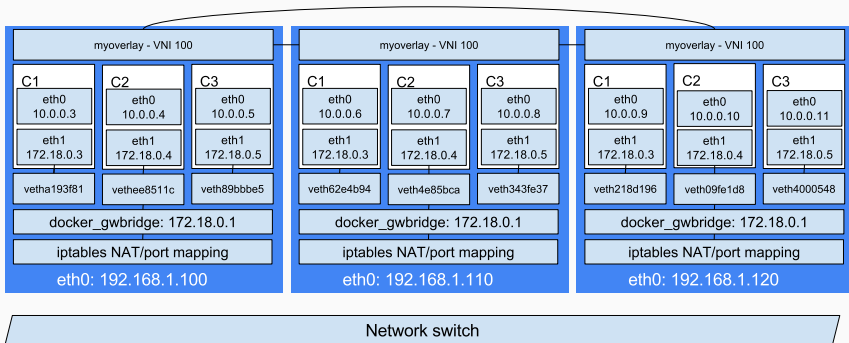


```
# docker network create -d bridge --subnet
  =192.168.10.0/24 --gateway=192.168.10.254 \
  --aux-address DefaultGatewayIPv4=192.168.10.1 -o
  com.docker.network.bridge.name=myunderbr
  myunderbr
# brctl addif myunderbr enp5s0
# docker run -it --net myunderbr alpine sh
# docker run -it --net myunderbr --ip 192.168.10.90
  nginx:1.9
# ip a del 192.168.10.254/24 dev myunderbr
```

Macvlan & IPvlan

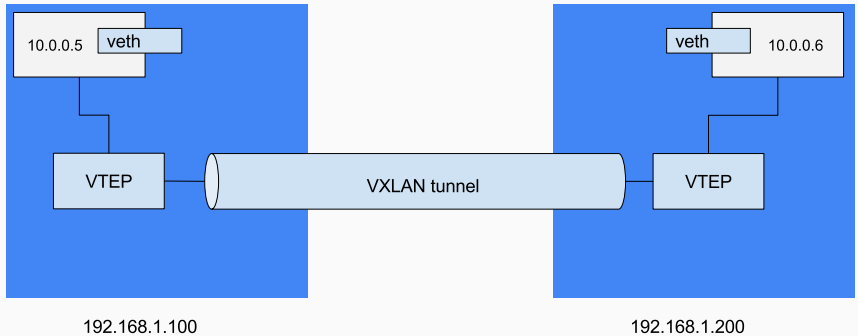


Overlay network (myoverlay)

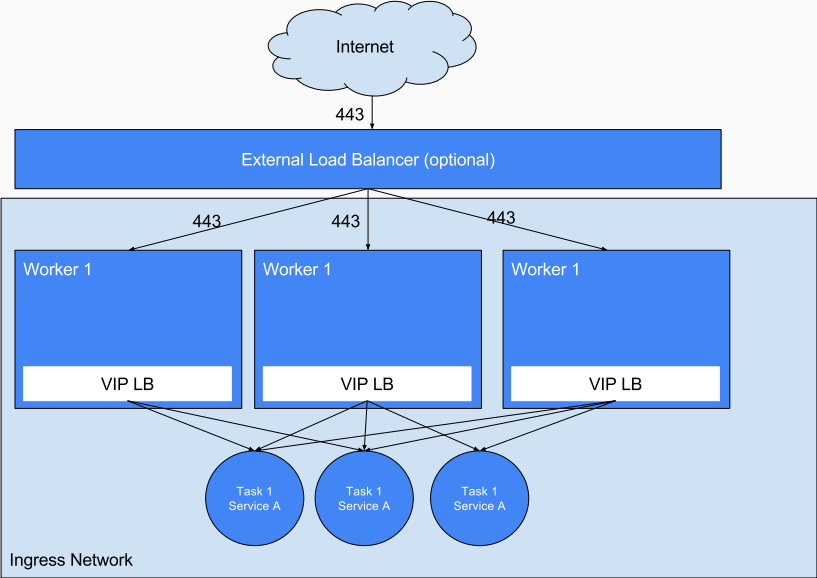


```
# docker network create -d overlay myoverlay
# docker service create --network myoverlay nginx
```

Overlay network (cont'd)



IPVS



Questions?