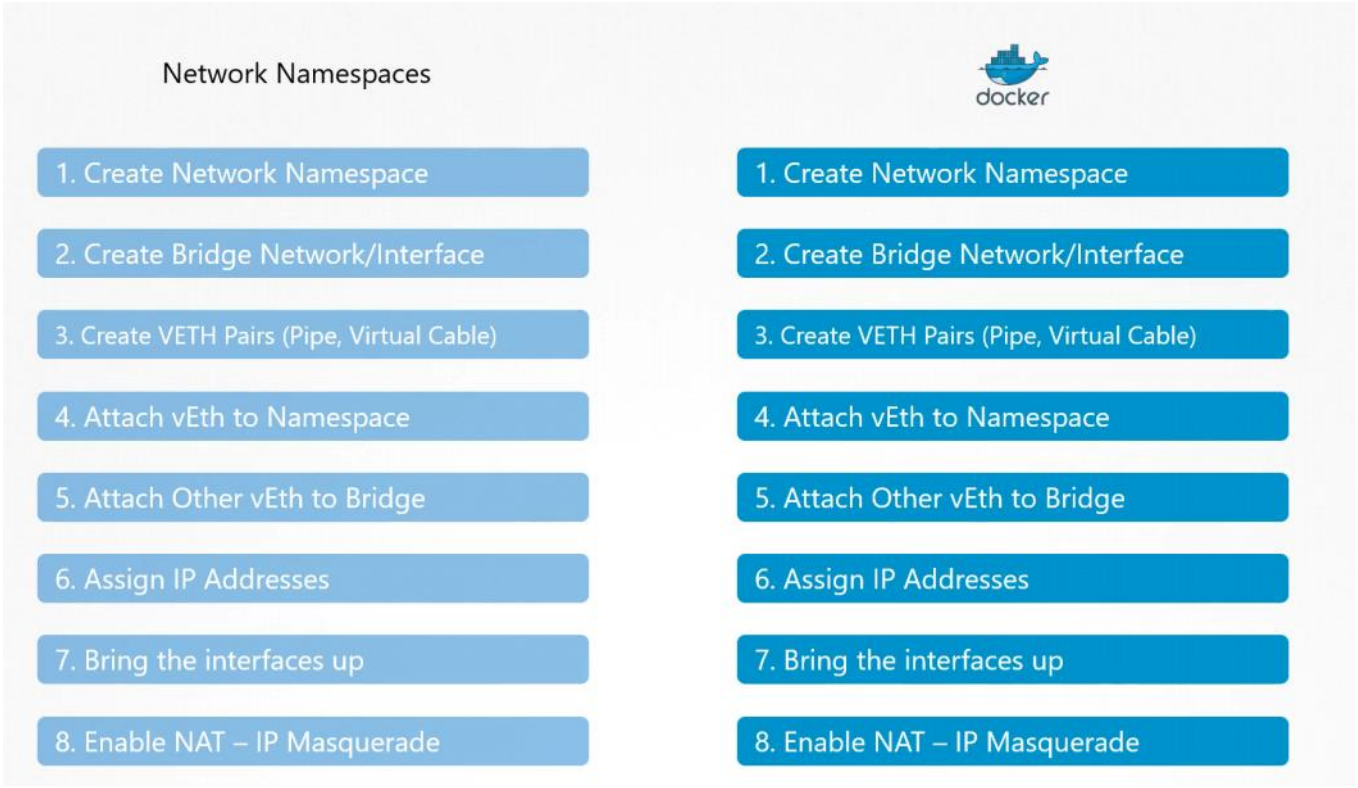
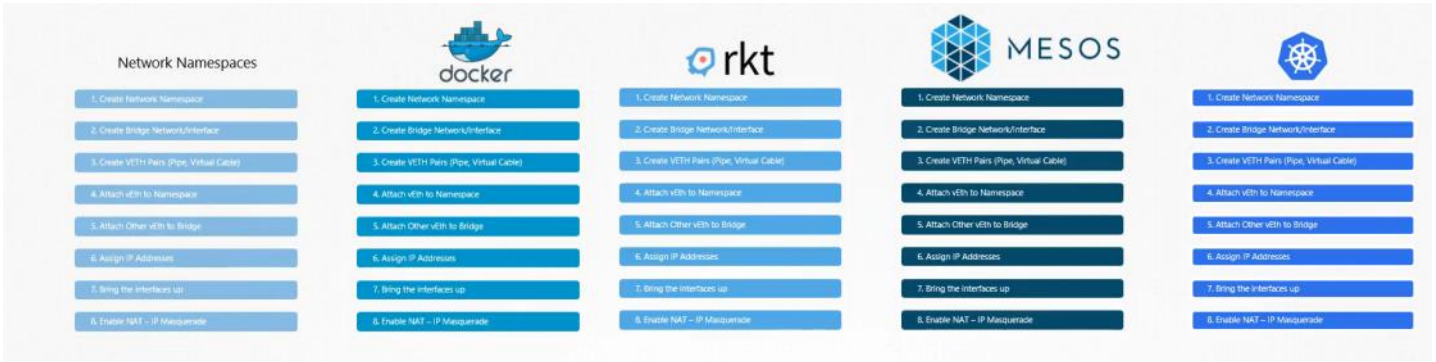
Container Networking Interface (CNI)






Network Namespaces
docker
rkt
MESOS
1. Create Network Namespace
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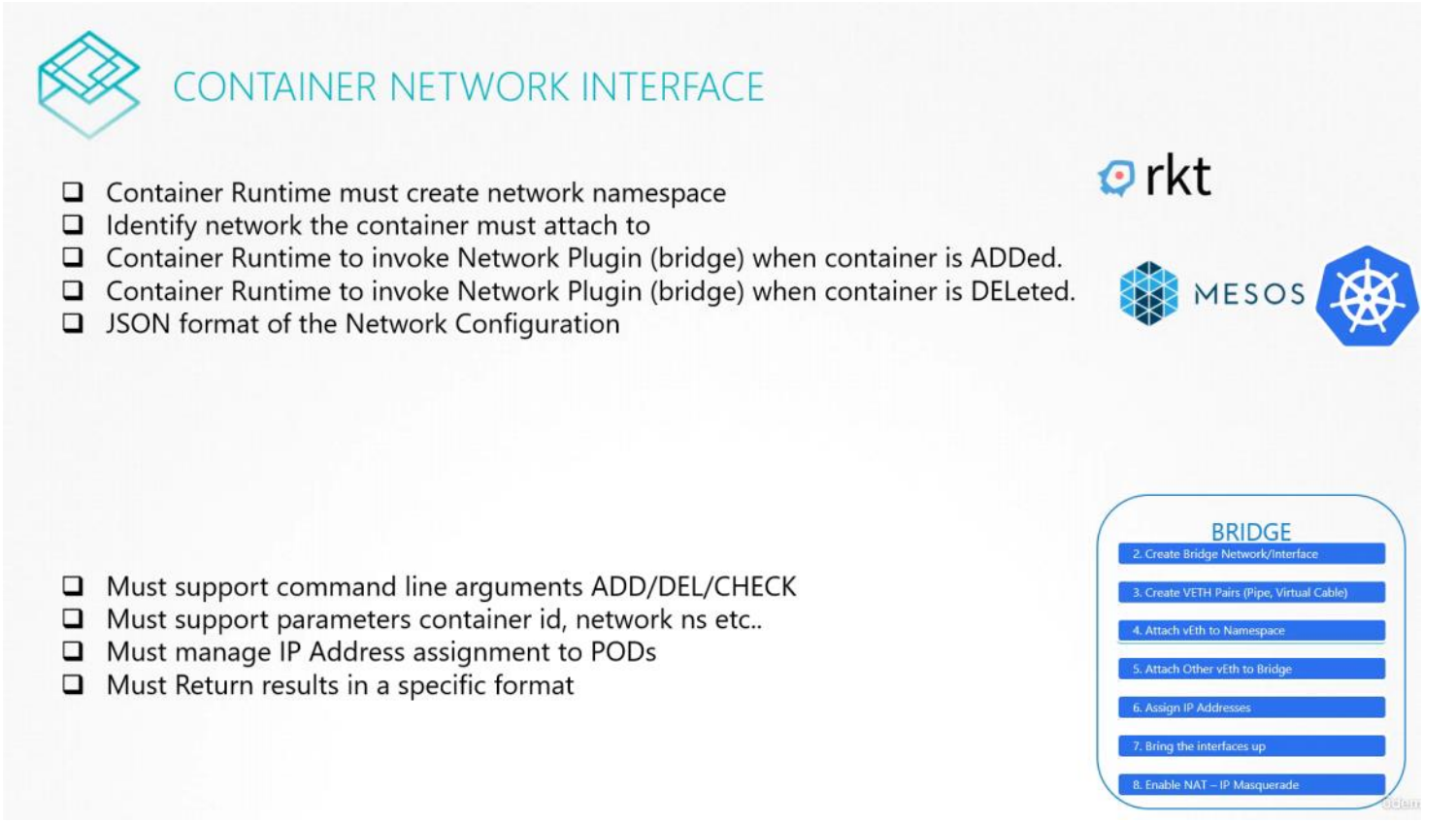
bridge add <cid> <namespace>
bridge add <cid> <namespace>
bridge add 2e34dcf34 /var/run/netns/2e34dcf34
BRIDGE
2. Create Bridge Network/Interface
3. Create VETH Pairs (Pipe, Virtual Cable)
4. Attach vEth to Namespace
5. Attach Other vEth to Bridge
6. Assign IP Addresses
7. Bring the interfaces up
8. Enable NAT – IP Masquerade


CONTAINER NETWORK INTERFACE
rkt
MESOS
Container Runtime must create network namespace
Identify network the container must attach to
Container Runtime to invoke Network Plugin (bridge) when container is ADDed.
Container Runtime to invoke Network Plugin (bridge) when container is DELeted.
JSON format of the Network Configuration
Must support command line arguments ADD/DEL/CHECK
Must support parameters container id, network ns etc..
Must manage IP Address assignment to PODs
Must Return results in a specific format
BRIDGE
2. Create Bridge Network/Interface
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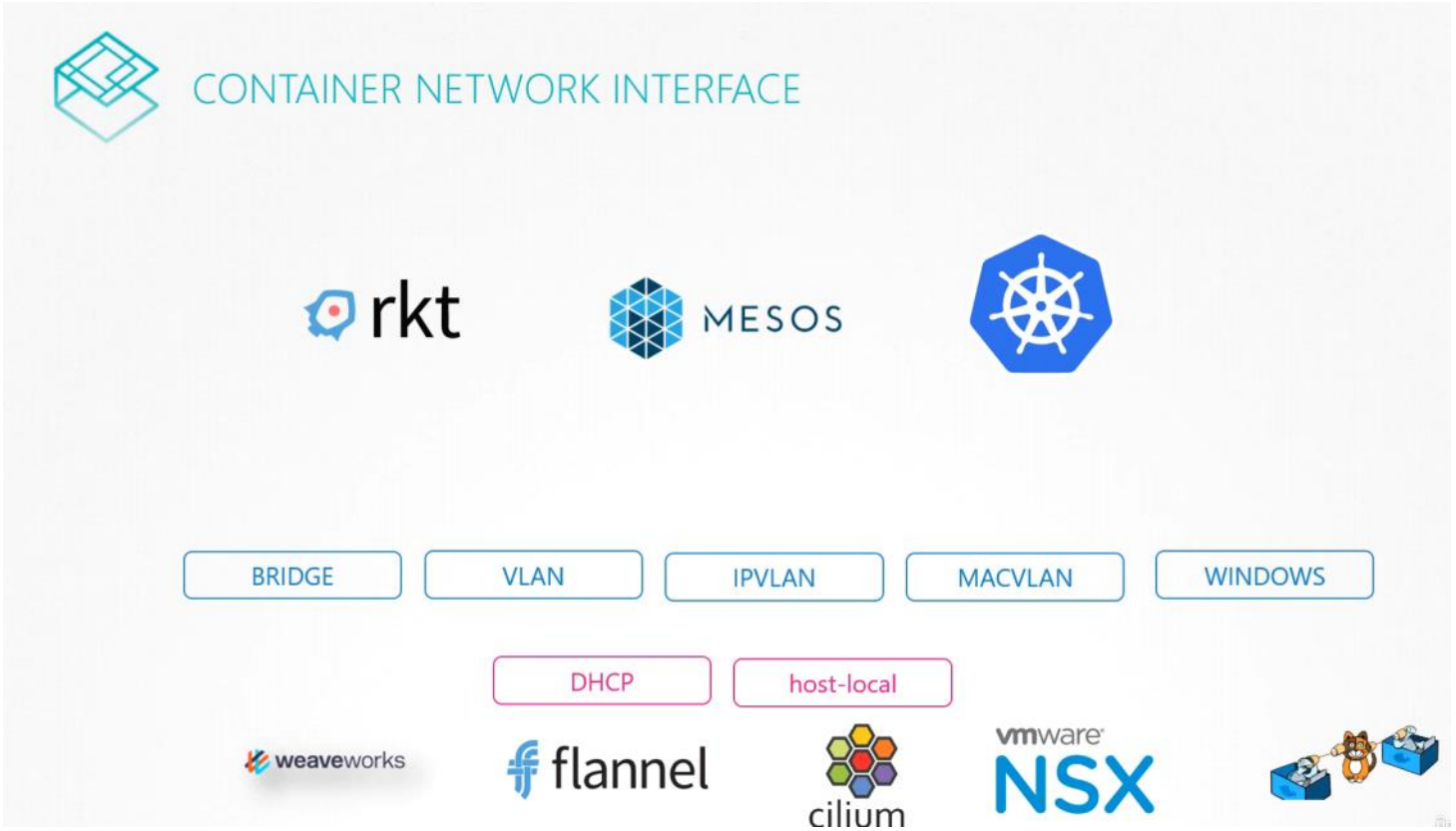
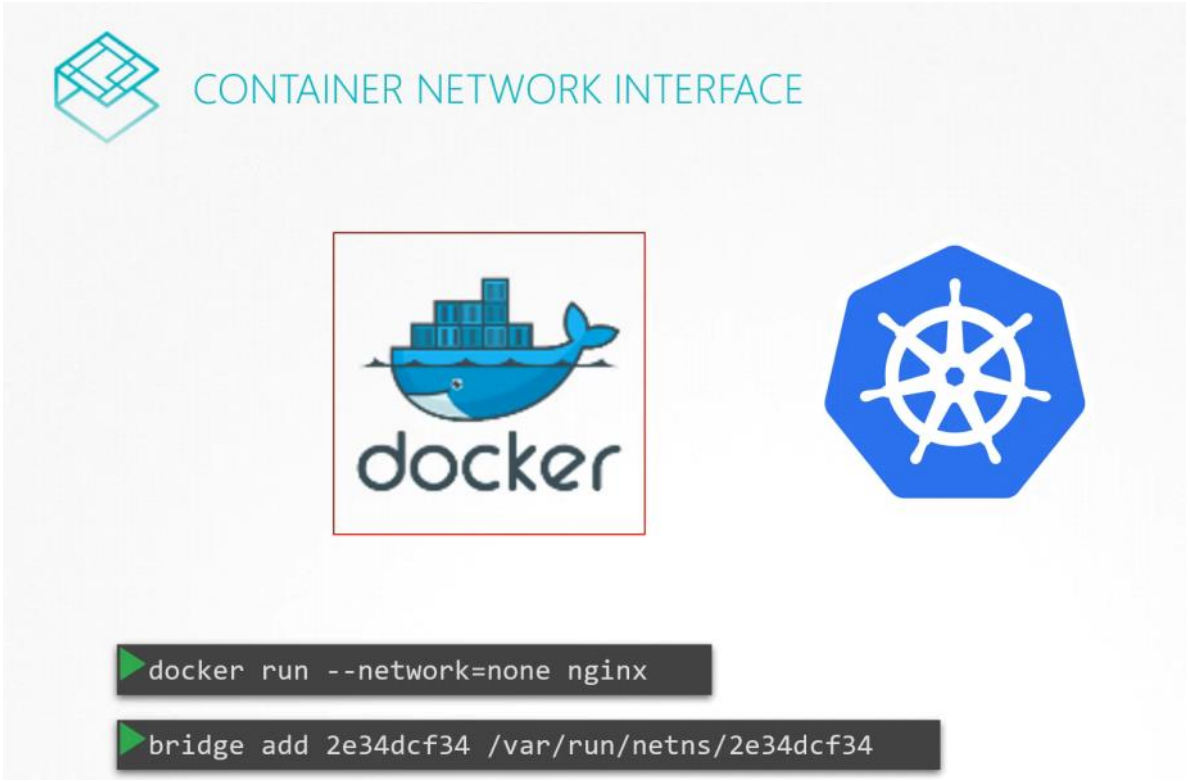


CONTAINER NETWORK MODEL (CNM)

```
docker run --network=cni-bridge nginx
```

```
docker run --network=none nginx
```

```
bridge add 2e34dcf34 /var/run/netns/2e34dcf34
```


CONTAINER NETWORK INTERFACE
docker
docker run --network=none nginx
bridge add 2e34dcf34 /var/run/netns/2e34dcf34