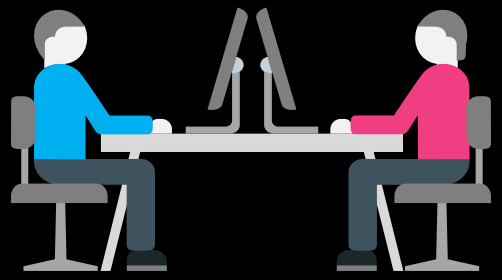
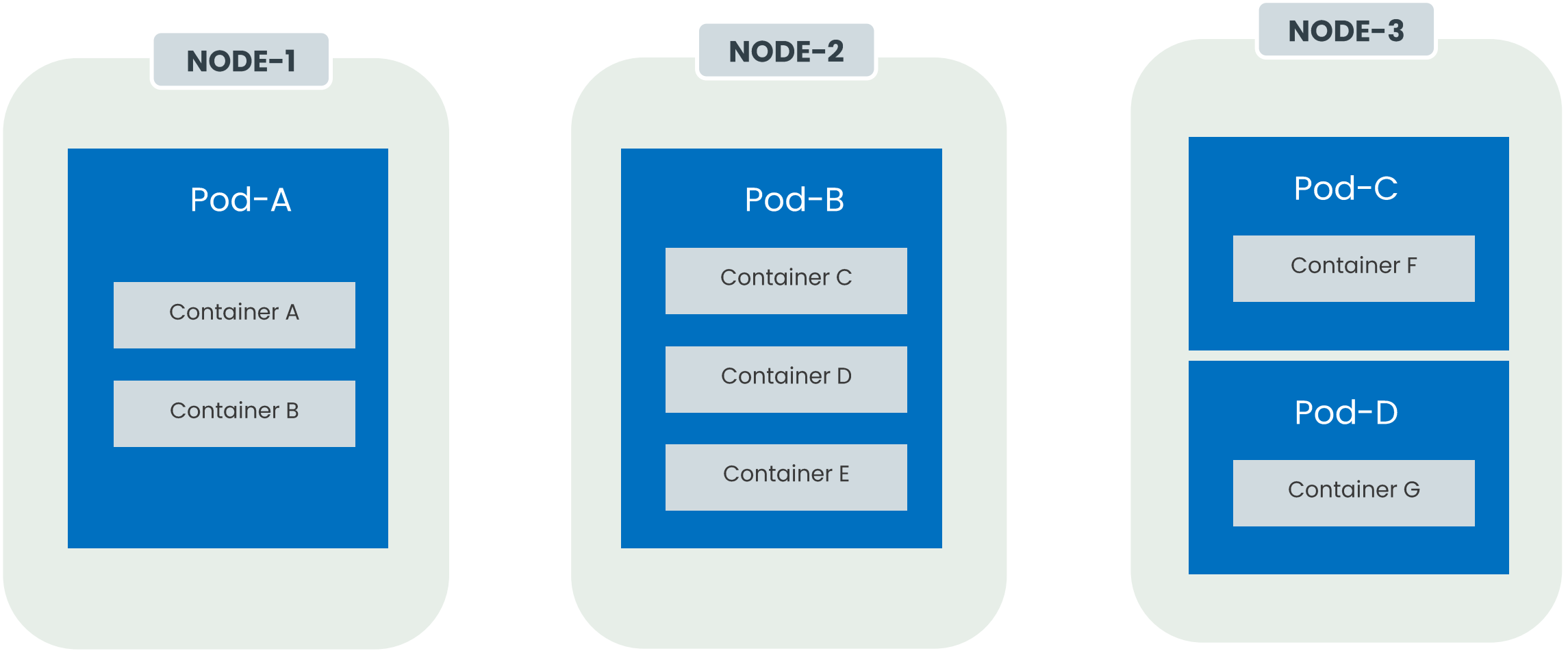
Container Network Interface (CNI)



What is Container Network Interface ?



Choosing CNI Plug-in

Requirements

1. Unique IP per POD
2. POD-to-POD Communication

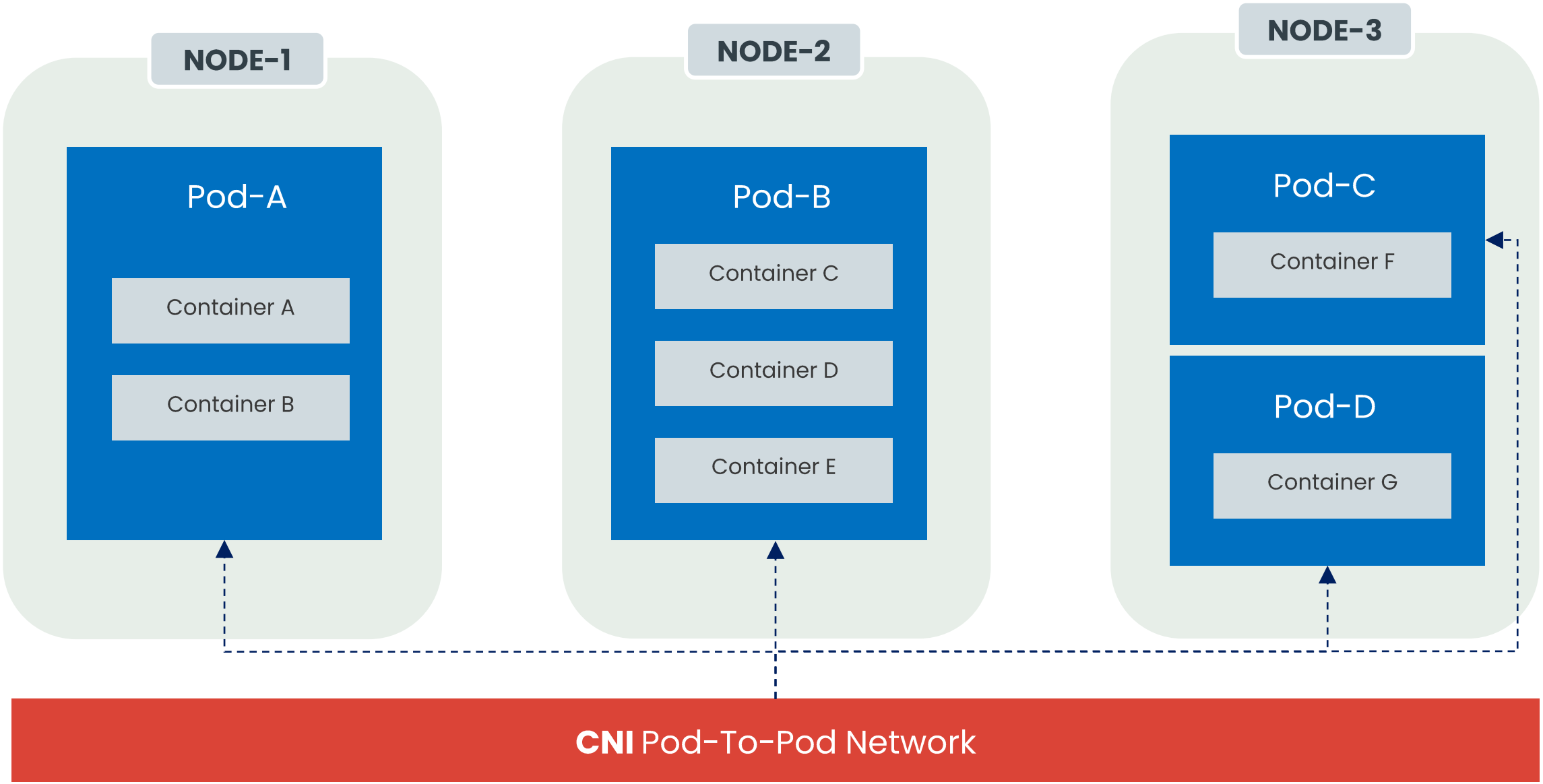
Challenges

1. POD Scheduling
2. POD are Ephemeral

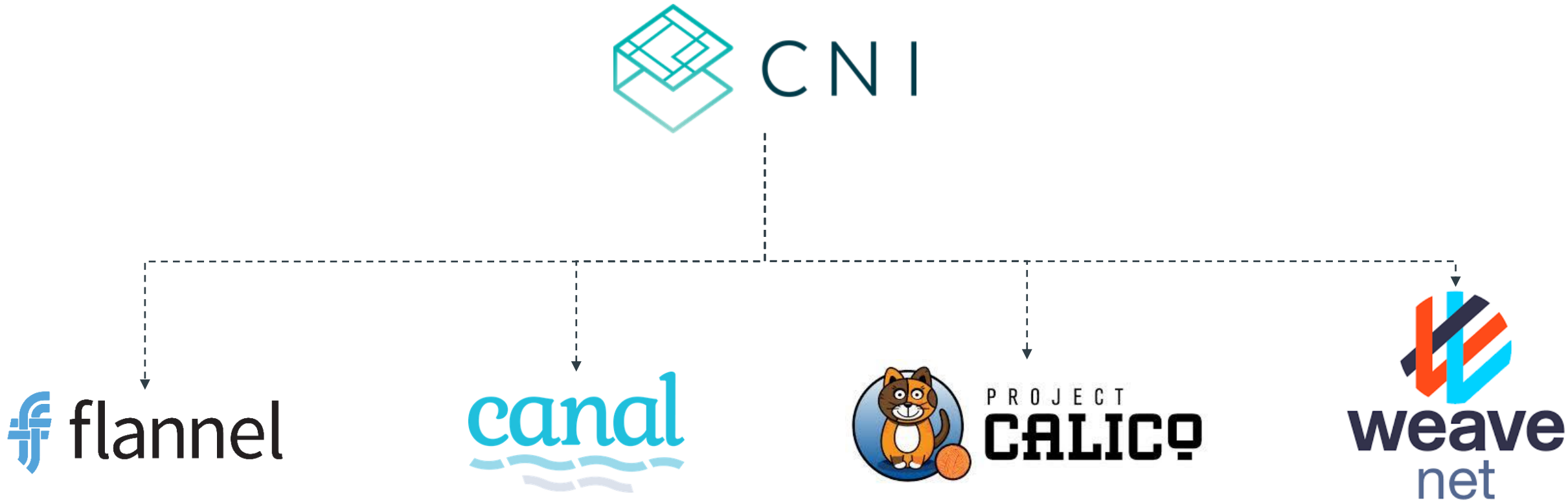
Container Network Interface

source: https://rancher.com/docs/rancher/v2.x/en/faq/networking/cni-providers/

What is Container Network Interface ?



CNI Plug-in



Example: Installing Weave CNI Plugin

```
kubectl apply -f "https://cloud.weave.works/k8s/net?k8s-version=$(kubectl version | base64 | tr -d '\n')"
```

KUBERNETES – NETWORKING **PLUG-IN**

```
ps -aux | grep kubelet
```

```
root       652  2.5  0.9 1160272 74608 ?       Ssl  16:08   0:41 /usr/bin/kubelet --
bootstrap-kubeconfig=/etc/kubernetes/bootstrap-kubelet.conf --
kubeconfig=/etc/kubernetes/kubelet.conf --config=/var/lib/kubelet/config.yaml --cgroup-
driver=systemd --network-plugin=cni --pod-infra-container-image=k8s.gcr.io/pause:3.1
```

```
ls /opt/cni/bin
```

```
bridge  dhcp  flannel  host-device  host-local  ipvlan  loopback  macvlan  portmap  ptp
sample  tuning  vlan
```

```
ls /etc/cni/net.d
```

```
10-flannel.conflist
```

```
kubectl get pods -n kube-system | grep flannel
```

```
kube-flannel-ds-amd64-62jmh      1/1     Running   6          13d
kube-flannel-ds-amd64-8h8ll      1/1     Running   5          13d
kube-flannel-ds-amd64-pbfcp      1/1     Running   5          13d
```