

## Week 1:

### Fundamentals course:

= Containers:

You start from the image.

= Pod: Group 1 or more containers.

Pod runs on nodes,  $\Rightarrow$  connected with networking

Kubernetes Managed  
GCP, EKS, AKS, Oracle

Hybrid  
Rancher, Anthos, VMware

(((Custom Edge???)

\* Scalability & Elasticity

H scaling

More nodes

\* Security { RBAC, FLS, certManager, SecretManager }

\* Volume { mount, I/O  $\Rightarrow$  connect different containers }

\* Balancing { Load Balancer }

\* Portability

\* Resource { CPU, Memory }

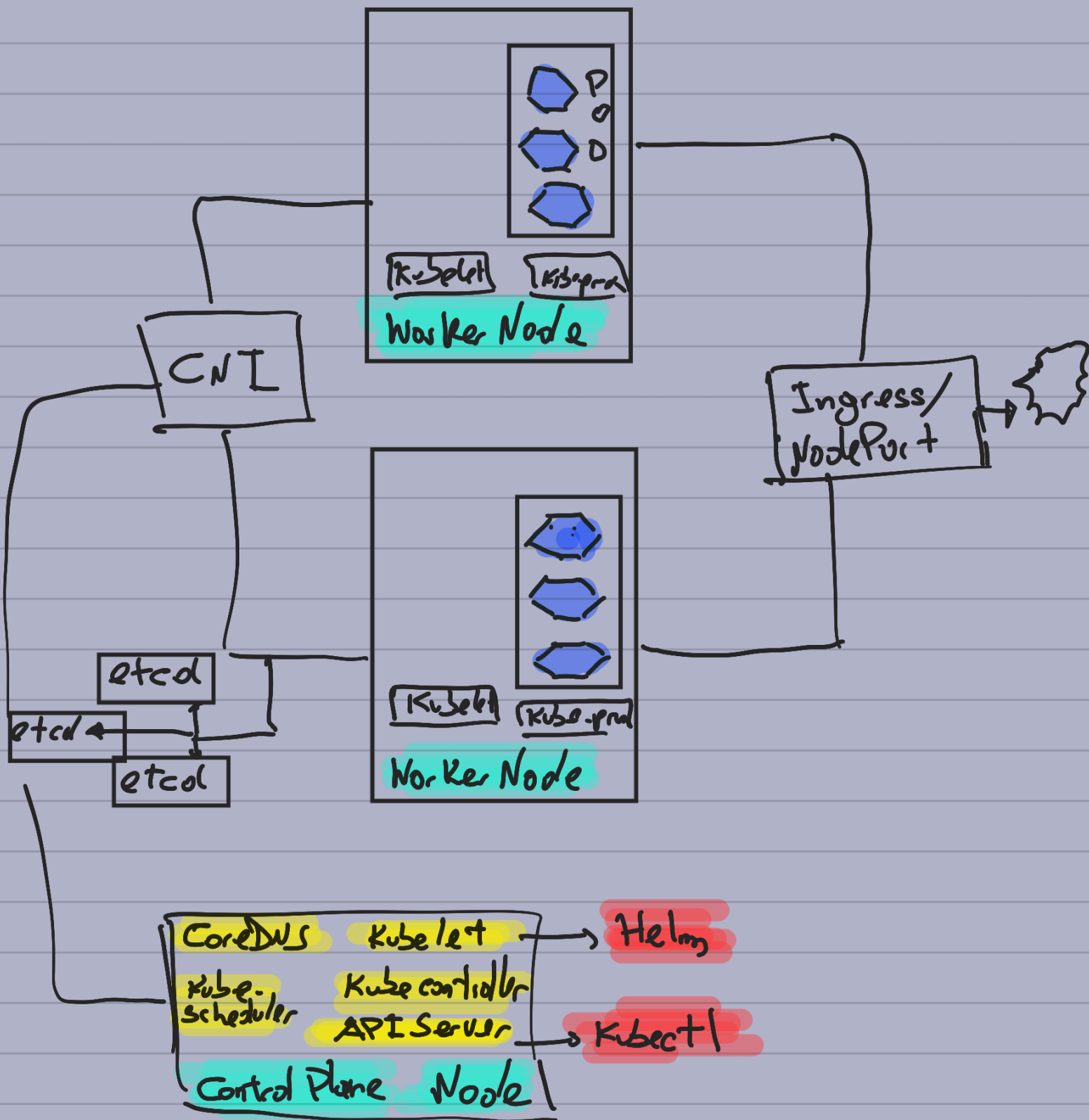
\* Scheduling { IP Addresses }

\* Declarative

\* Distributed { Faulty }

\* Networking





kubectl create namespace ticketing  
 kubectl label namespace ticketing venue=opera  
 watch -n cp

kubectl get namespaces  
kubectl get namespace + creating no YAML

```
apiVersion: v1
kind: Namespace
metadata:
  name: tricketing
  labels:
    venue: opera
    watch: cpu
spec:
```

```
apiVersion: v1
kind: Pod
metadata:
  labels:
    app: nginx
spec:
  containers:
    - name: nginx
      image: nginx:1.19.2
      ports:
        - containerPort: 80
```

```
apiVersion: v1
kind: Service
metadata:
  name: nginx-service
spec:
  type: NodePort
  selector:
    app: nginx
  ports:
    - port: 3100
      targetPort: nginx-port
      type: TCP
      nodePort: 3100
```

Helm: package  
manager

From  
other  
Files