

Kubernetes crash course

Official definition of Kubernetes



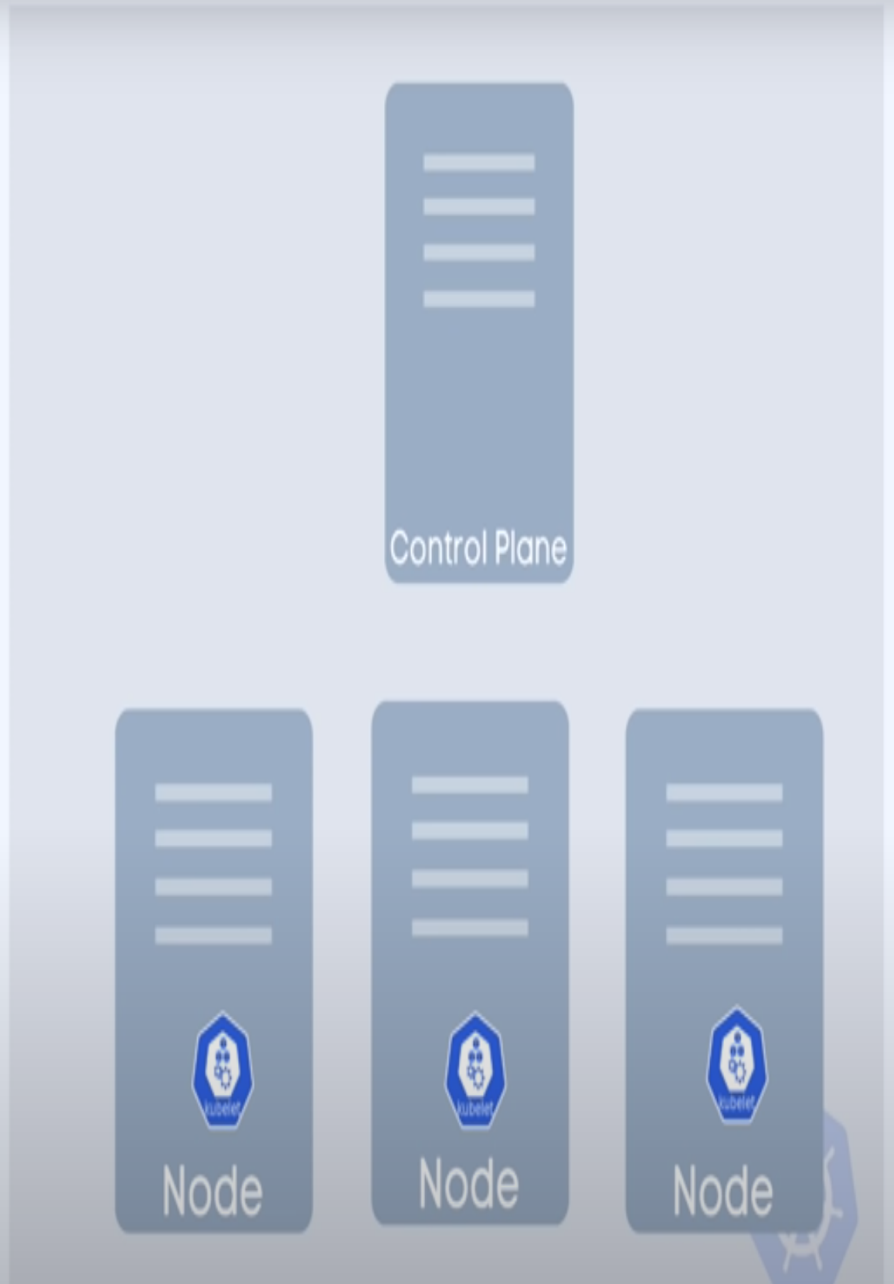
- ▶ Open source container **orchestration tool**
- ▶ Developed by **Google**
- ▶ Helps manage containerized applications in **different deployment environments**

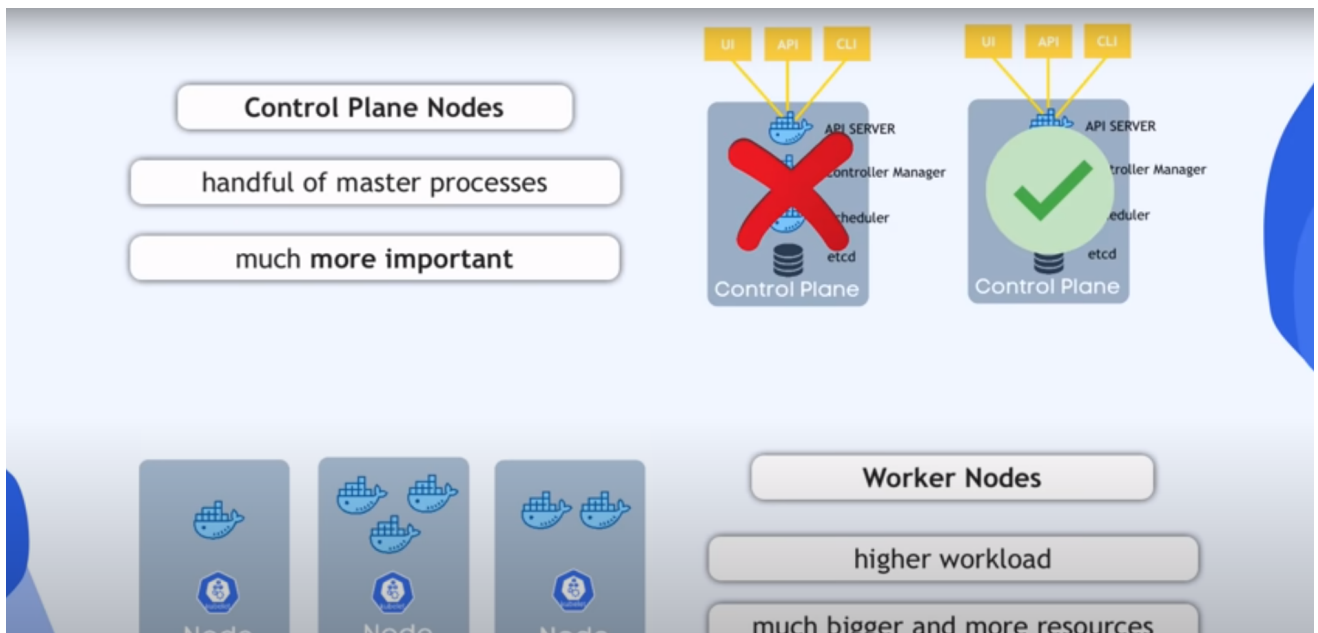
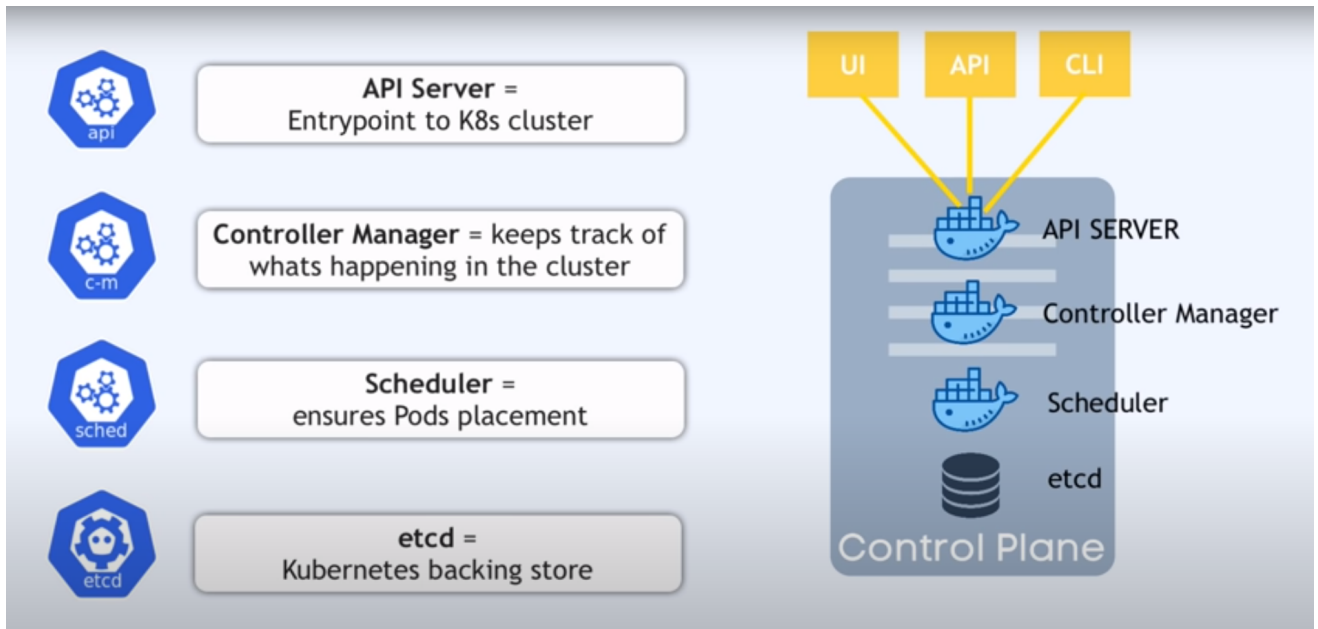


Kubernetes Architecture

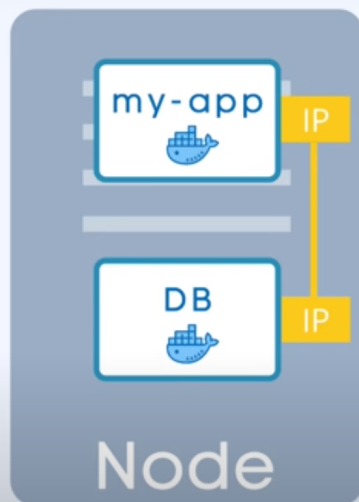
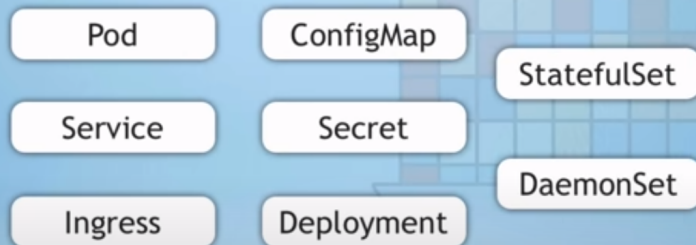


primary "node agent"



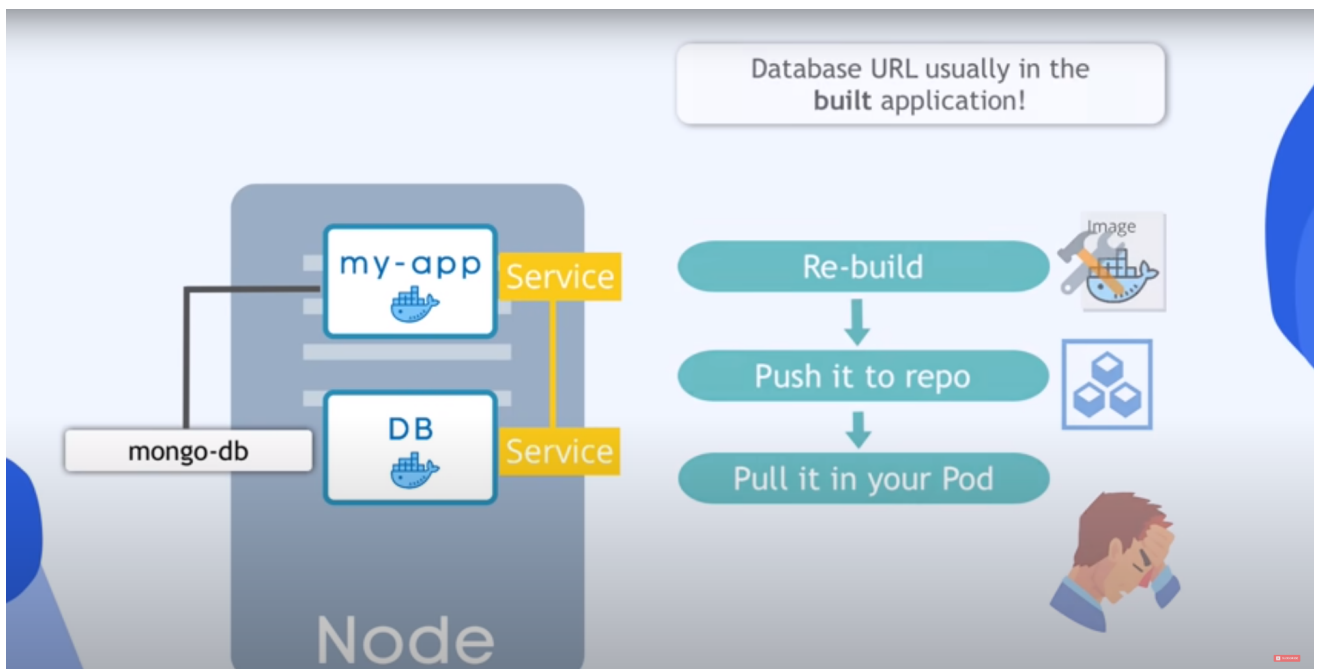
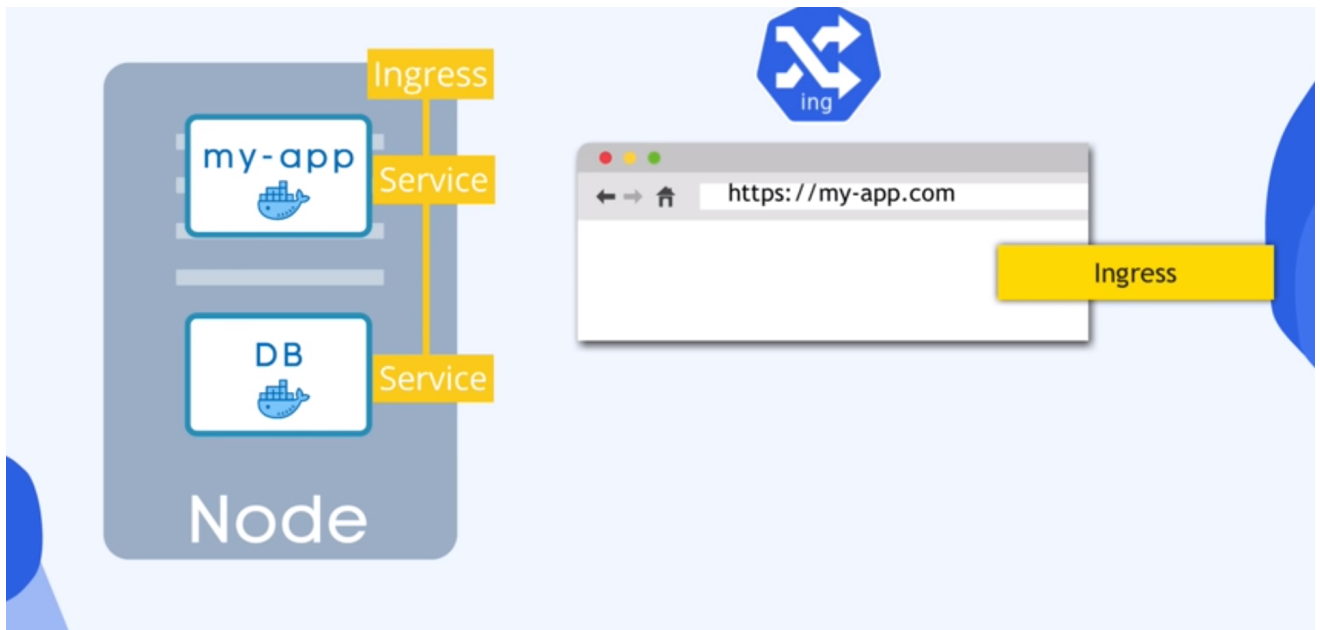


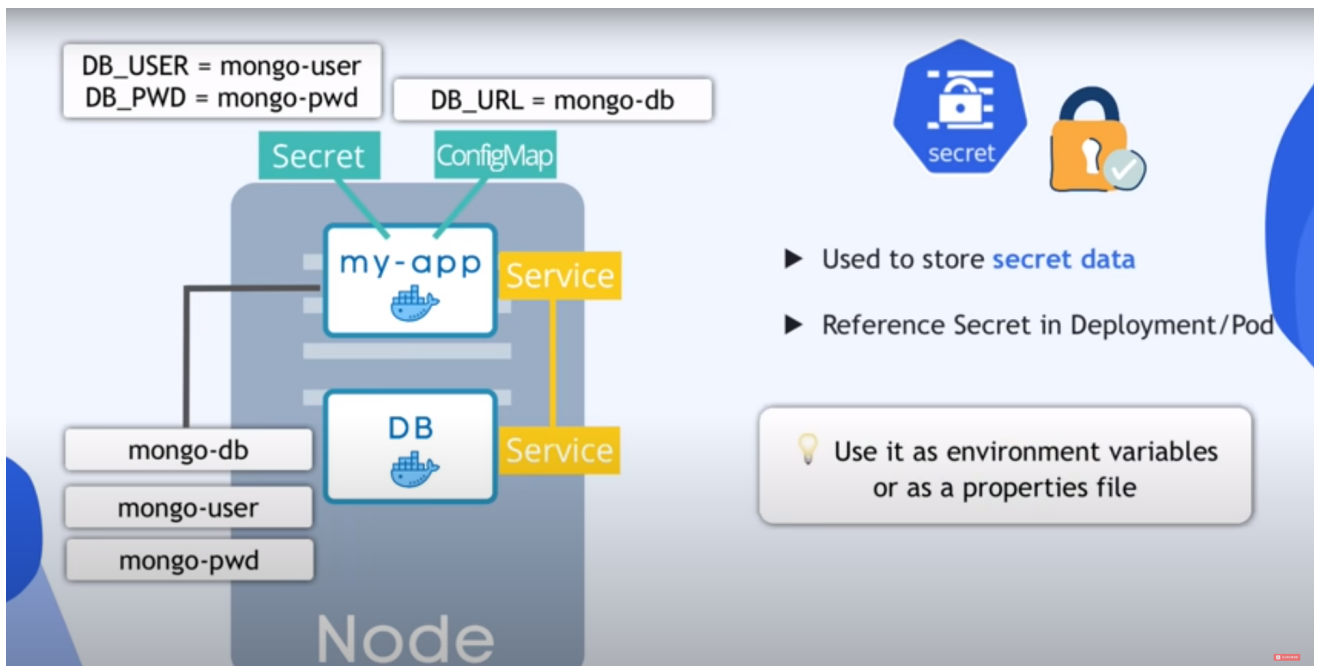
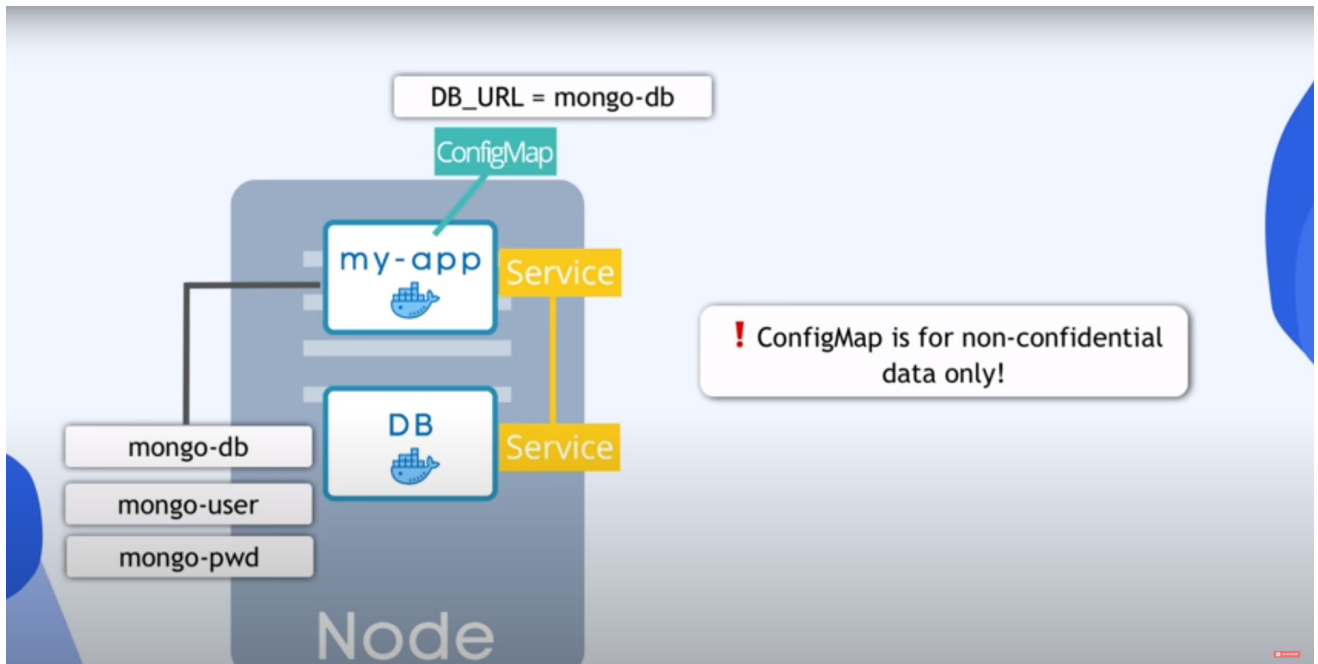
Main Kubernetes Components

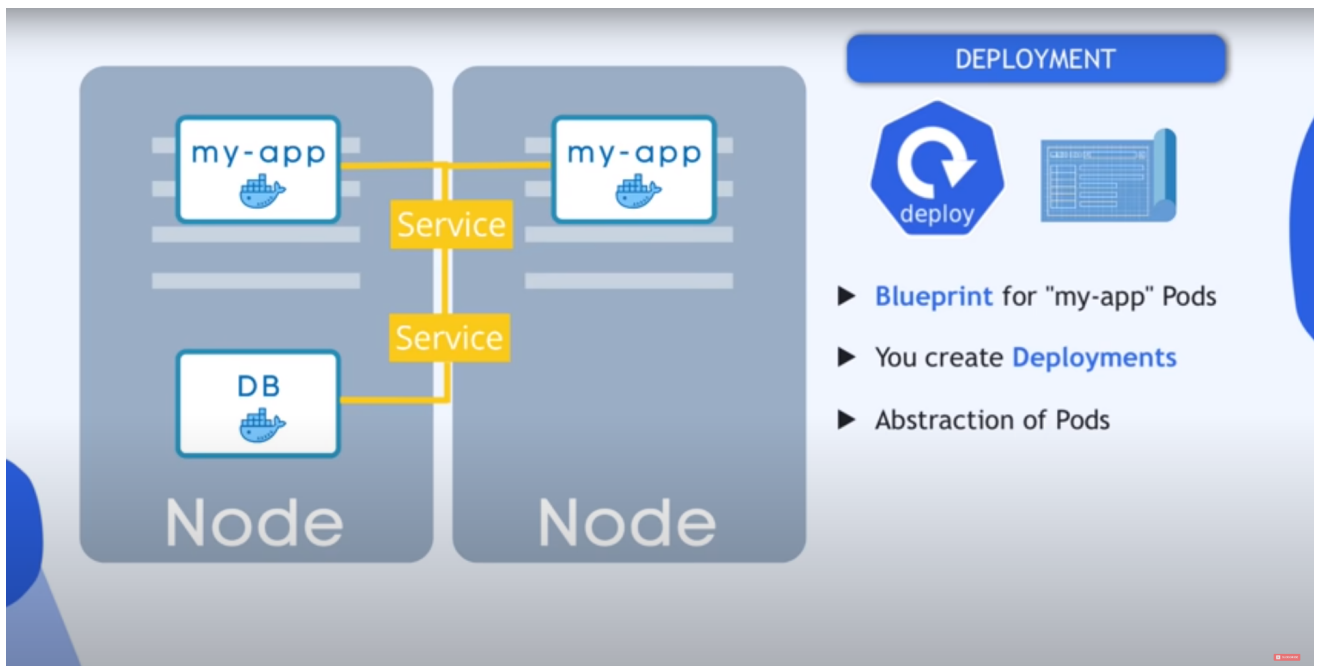
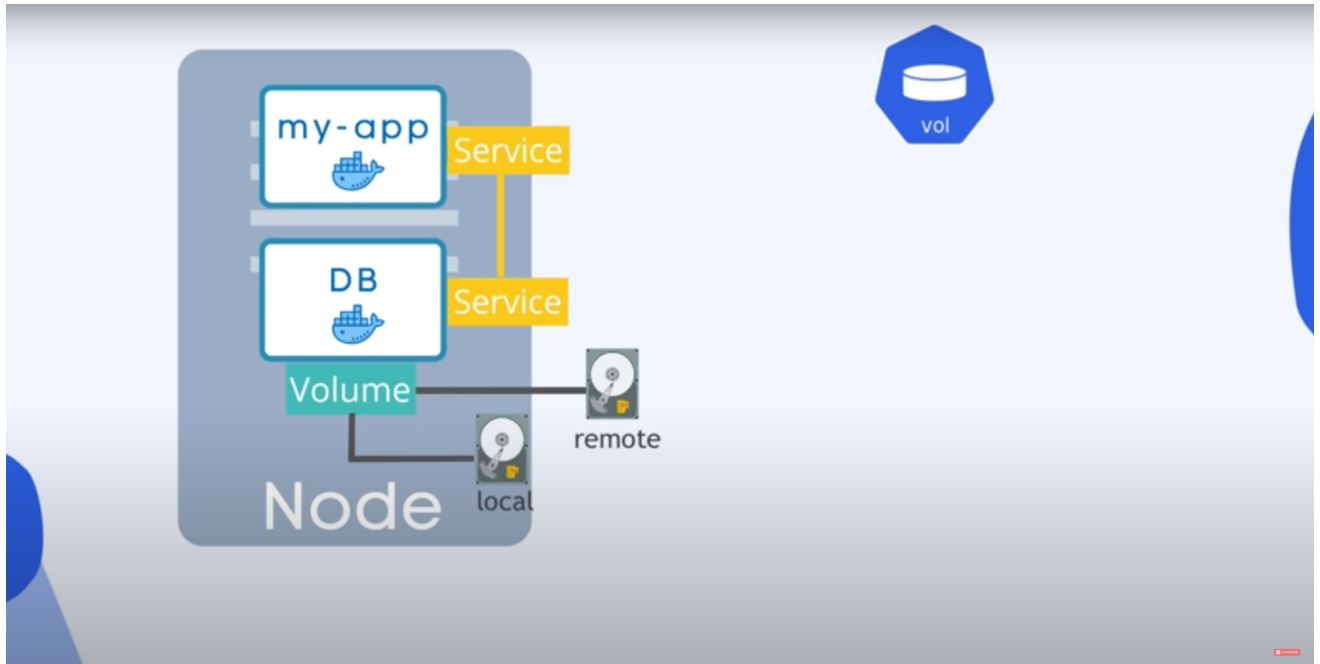


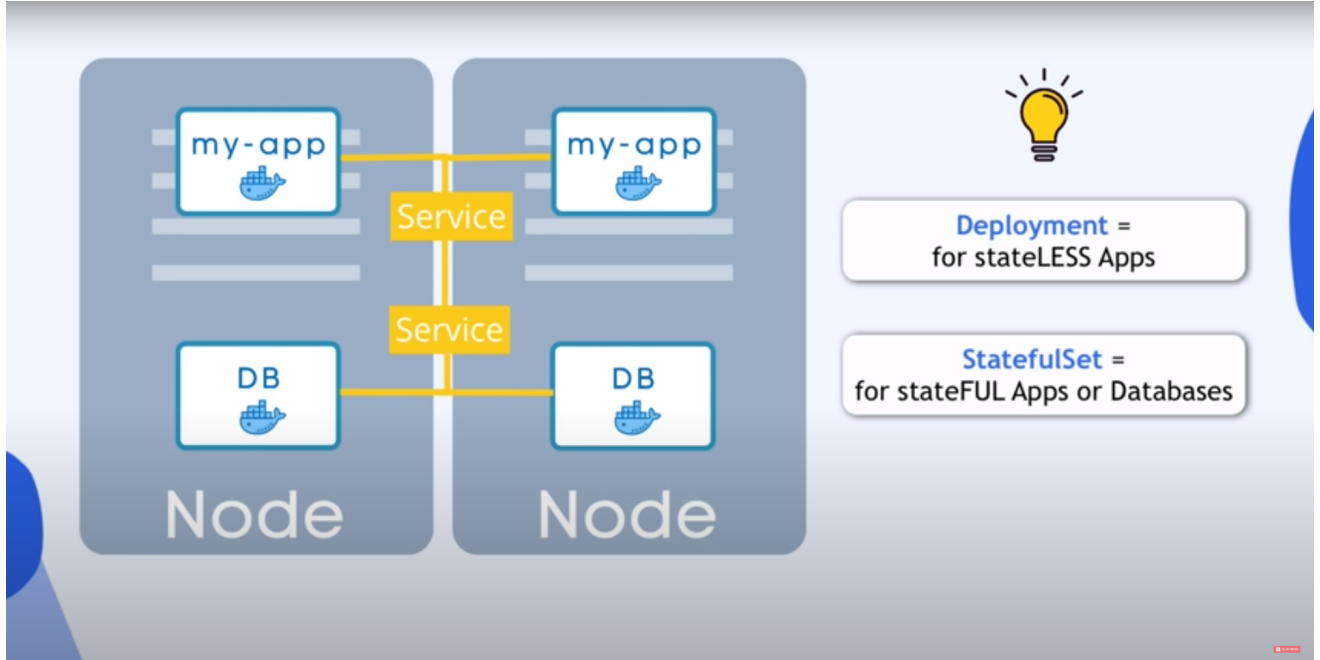
- ▶ **Smallest** unit in Kubernetes
- ▶ **Abstraction** over container
- ▶ Usually **1 Application** per Pod
- ▶ Each Pod gets its **own IP address**

Pods are **ephemeral!**









```
! nginx-deployment.yaml x
1  apiVersion: apps/v1
2  kind: Deployment
3  metadata:
4    name: nginx-deployment
5  labels: ...
6  spec:
7    replicas: 2
8    selector: ...
9    template: ...
```

3rd part: status

Desired? \neq Actual?