

KUBERNETES

* Configuration Management. - chef, Puppet.

(Immutability) → (Reliability)

Package Managers

Managing Containers

Monolithic Applications

Frontend
Backend
chat Messages
Database
Networking

bundle as a
Single application.

Micro Services

- containers

- fault Isolation

→ How to manage?

→ How to communicate
with each other?

Frontend

Backend

Database

Message

Networking

application
different server.
different servers.

**

One app one one V.M is not cool for Scalability

Hence Docker

Orchestrator

helps us in deploying and managing application dynamically.

→ Deploy

→ Zero-downtime updates

→ Scale

→ Heal Containers.

→ Cloud-native

* Kubernetes is much more than a Container Orchestrator

* Google made K8s

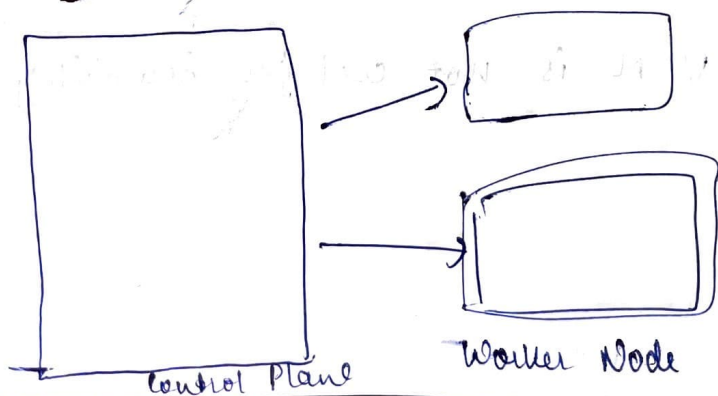
Kubernetes (OS of the Cloud)

Open source in 2014 and donated it to CNCF

★ CRI → Container Runtime Interface.

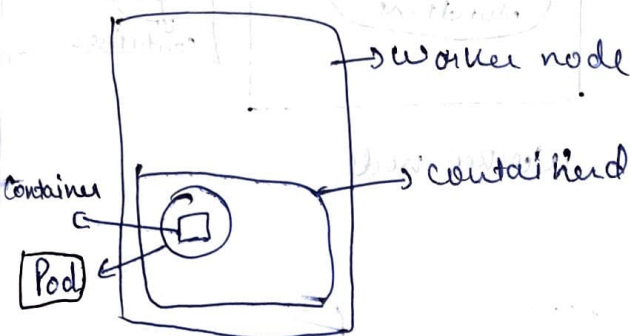
↓
containers.

Cluster → Control Plane + nodes



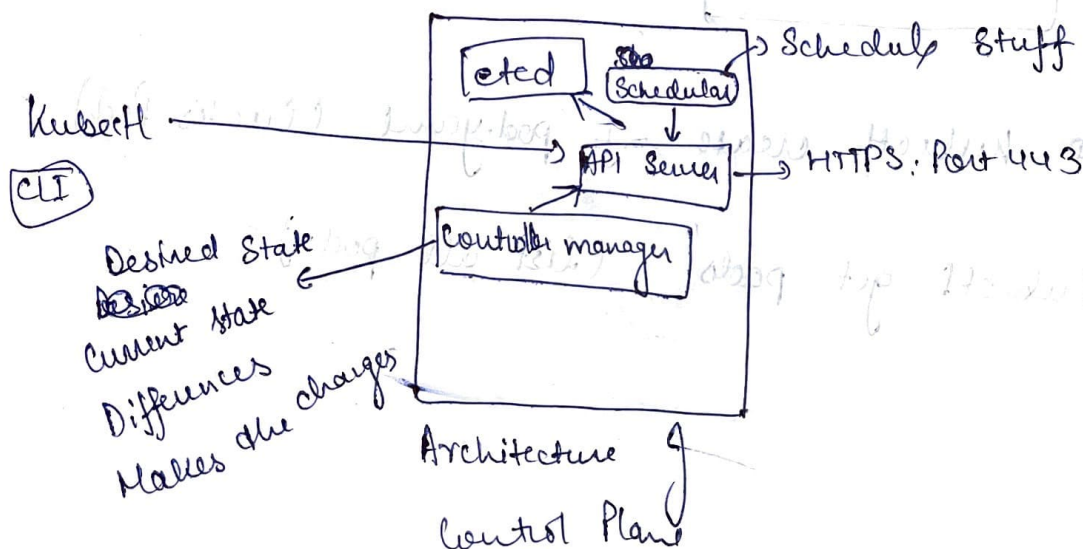
* Kubectl is the Kubernetes cli Command Line tool.

Pod → Scheduling unit in K8s



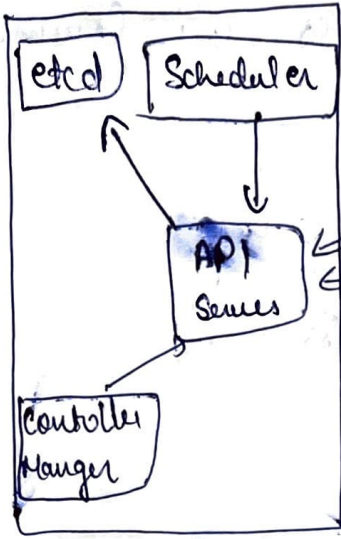
- ① Create Micro service
- ② Containerise it
- ③ Put Container in Pods
- ④ Deploy these Pods to Controller.

Control Plane:

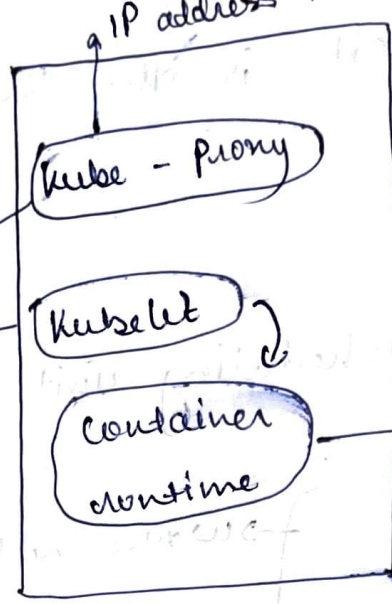


kubectl

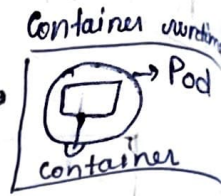
CLI



Control Plane

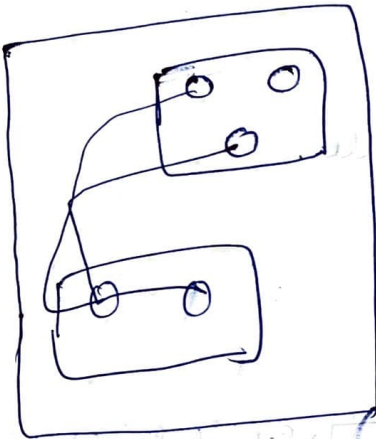


Worker node



Linux

Hardware



K8s DNS

Core DNS

\$ ~~add~~ kubectl create -f pod.yaml (Creates Pod)

\$ kubectl get pods (list all pods)