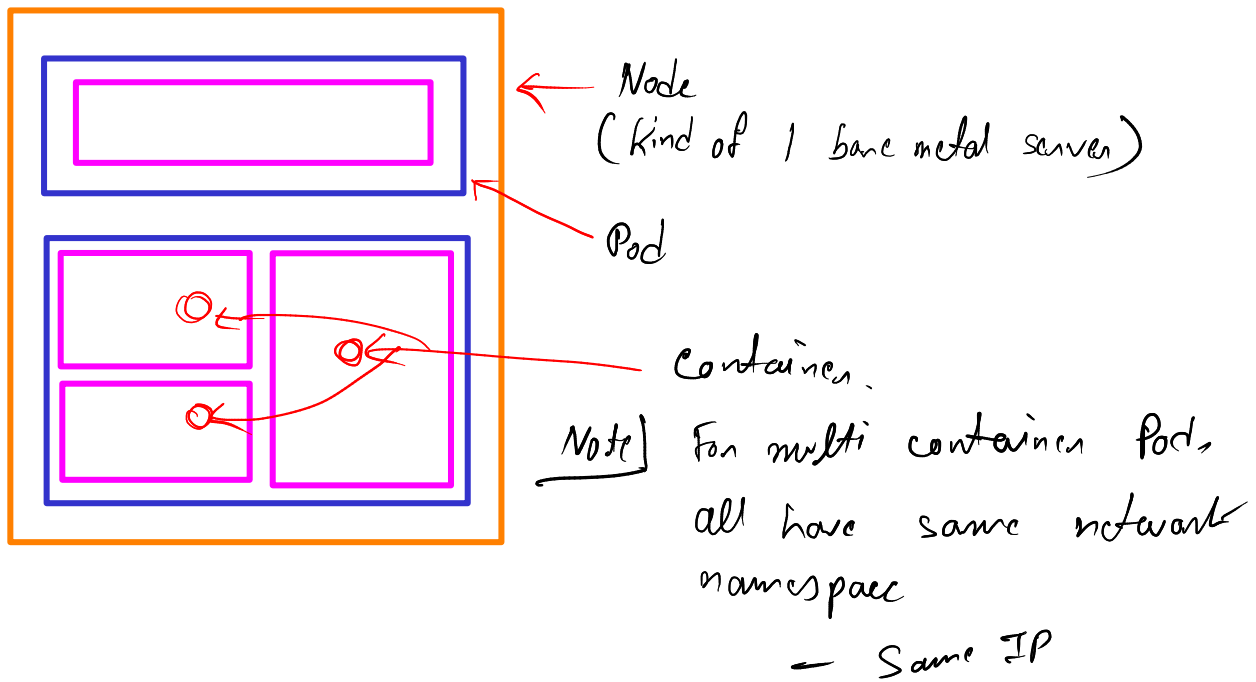


POD



Container's IP \equiv Pod's IP

Replication Controller is deprecated

ReplicaSet → Will maintain the no of healthy pods in overall system

Deployment → Use replicaset for managing versioning

→ Recreate → ① Scale down existing replicaset to 0
② Create new replicaset

→ Rolling Update

↳ ① Scale down existing replicaset by 1
② Increase new replicaset by 1

Do until existing one becomes 0

Deployment



ReplicaSet



Pods



Imperative
Commands
[check here]

for deployment,
kind: Deployment

apiVersion: apps/v1

kind: ReplicaSet

metadata:

name: myapp-replicaset

labels:

app: myapp

type: front-end

spec:

template:

metadata:

name: myapp-pod

labels:

app: myapp

type: front-end

spec:

containers:

- name: nginx-container

image: nginx

strategy:

type: RollingUpdate

replicas: 3

selector:

matchLabels:

type: front-end

Can be ~~deployment~~ also
→ metadata of
Replicaset

→ Pod definition mainly

strategy → RollingUpdate, Recreate
Default

→ Only for Deployment

→ No of replicas

→ Selector for Pod

Important Command -

kubectl scale --replicas=<new_no> replicaset <name>

kubectl rollout status <name>

kubectl rollout history <name>

kubectl rollout undo <name>

Static Pod

- ↳ This does not require Kubelet on Kube API Server
- ↳ Used in bootstrapping cluster
- ↳ We can see details in Kube API Server, but can't control
- ↳ managed by Kubelet
- ↳ Store Pod definition in `/etc/kubernetes/manifests`

Daemonsets

- ↳ When a new node gets added, Daemonset will be deployed on the node

↳ K8S will ensure that the Pod is available on each node

In-hand

① Create Pod with nginx: 1.24

```
apiVersion: v1
kind: Pod
metadata:
  labels:
    app: nginx-pod
    type: frontend
  name: nginx-pod
spec:
  containers:
  - image: nginx:1.24
    name: nginx-pod
    restartPolicy: Always
```

② Create ReplicaSet with same

```
apiVersion: apps/v1
kind: ReplicaSet
metadata:
  name: nginx-replicaset
  labels:
    app: nginx
    type: frontend
spec:
  template:
    metadata:
      labels:
        app: nginx-pod
        type: frontend
        name: nginx-pod
    spec:
      containers:
      - image: nginx:1.24
        name: nginx-pod
        restartPolicy: Always
  replicas: 3
  selector:
    matchLabels:
      type: frontend
```

③ Create Deployment

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: nginx-daemonset
  labels:
    app: nginx
    type: frontend
spec:
  template:
    metadata:
      labels:
        app: nginx-pod
        type: frontend
        name: nginx-pod
    spec:
      containers:
      - image: nginx:1.24
        name: nginx-pod
        restartPolicy: Always
  replicas: 3
  selector:
    matchLabels:
      type: frontend
  strategy:
    type: RollingUpdate
```

copied!

changes

changes