

Day-13 C Kubernetes
Kubernetes → Orchestration Tool

Docker
└ Containerization
Shipping

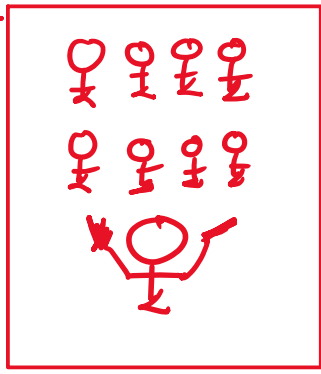
X
Docker Swarm

Kubernetes

2015 CNCF

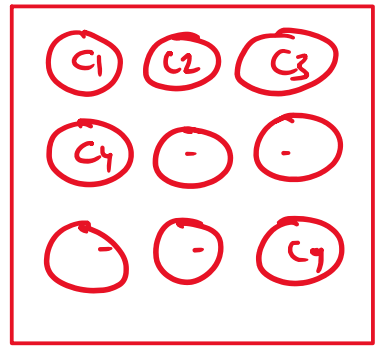
Container Orchestration Tool
Docker

Orchestra



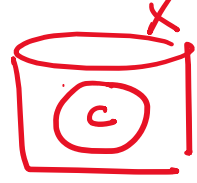
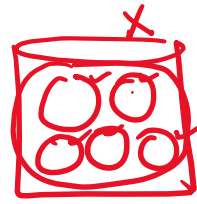
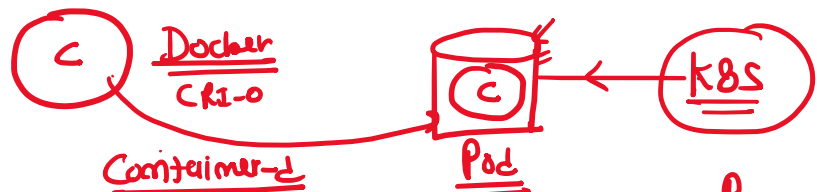
Orchestra

Orchestration



Kubernetes

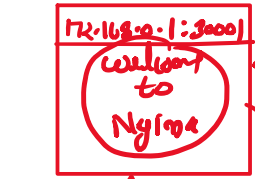
(K8S) ←



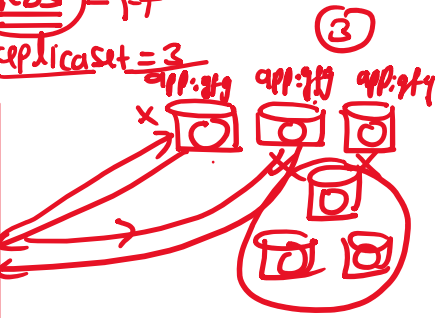
P C
1:1
1:N

- HA
- Zero down
- FT
(K8S)

replicaset = 3



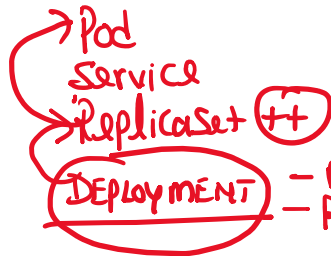
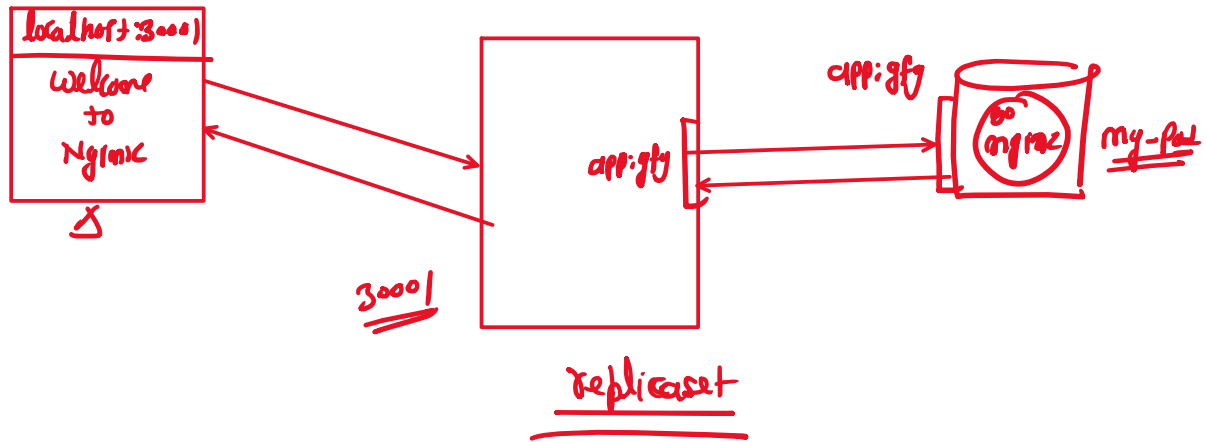
3000
3000
32767



- 1) Pod
2) Services

docker pull engine
docker run
stuff
↓
docker CLI

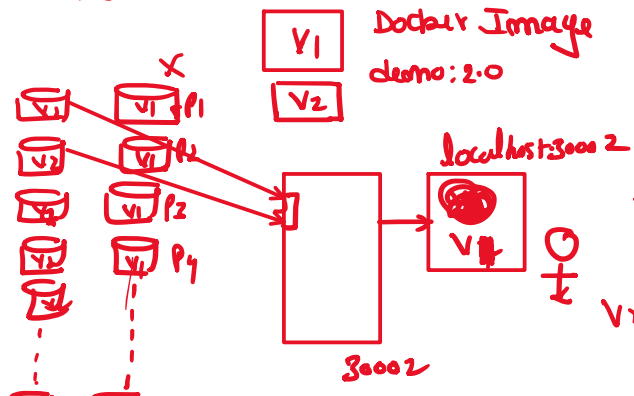
Kubectl



- Rolling update \hookrightarrow
- Recreate

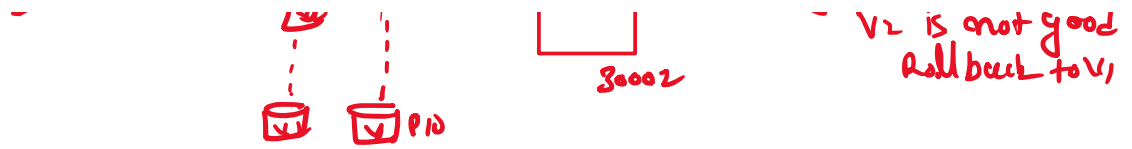
Demo: 1.0

10 Pods



Downtime ~~X~~

v_2 is not good
roll back to v_1



Kubectl rollout undo deployment dep-Name

```
PS D:\KUBERNETES-LAB> kubectl get all
```

NAME	READY	STATUS	RESTARTS	AGE
pod/deployment-rolling-55d9548f96-2gk87	0/1	ContainerCreating	0	2s
pod/deployment-rolling-55d9548f96-2w42f	0/1	ContainerCreating	0	2s
pod/deployment-rolling-55d9548f96-ftn6t	0/1	ContainerCreating	0	2s
pod/deployment-rolling-55d9548f96-jk0hg	0/1	ContainerCreating	0	2s
pod/deployment-rolling-55d9548f96-m292k	0/1	ContainerCreating	0	2s
pod/deployment-rolling-55d9548f96-phhbp	0/1	ContainerCreating	0	2s
pod/deployment-rolling-55d9548f96-ppz2z	0/1	ContainerCreating	0	2s
pod/deployment-rolling-55d9548f96-x6vsq	0/1	ContainerCreating	0	2s
pod/deployment-rolling-77645b5c47-6h2zs	1/1	Running	0	105s
pod/deployment-rolling-77645b5c47-fq95c	1/1	Running	0	105s
pod/deployment-rolling-77645b5c47-gv2d8	1/1	Running	0	105s
pod/deployment-rolling-77645b5c47-hhpf8	1/1	Running	0	105s
pod/deployment-rolling-77645b5c47-hl7ch	1/1	Running	0	105s
pod/deployment-rolling-77645b5c47-hqmch	1/1	Running	0	105s
pod/deployment-rolling-77645b5c47-kv5bt	1/1	Terminating	0	105s
pod/deployment-rolling-77645b5c47-n8rrd	1/1	Terminating	0	105s
pod/deployment-rolling-77645b5c47-sxvv2	1/1	Terminating	0	105s
pod/deployment-rolling-77645b5c47-tjjkp	1/1	Running	0	105s

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
service/kubernetes	ClusterIP	10.96.0.1	<none>	443/TCP	72m
service/nodeport-service	NodePort	10.110.61.122	<none>	80:30001/TCP	59m

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
deployment.apps/deployment-rolling	7/10	8	7	105s

NAME	DESIRED	CURRENT	READY	AGE
replicaset.apps/deployment-rolling-55d9548f96	0 8	8	0	2s
replicaset.apps/deployment-rolling-77645b5c47	10 7	7	7	105s

Kubernetes

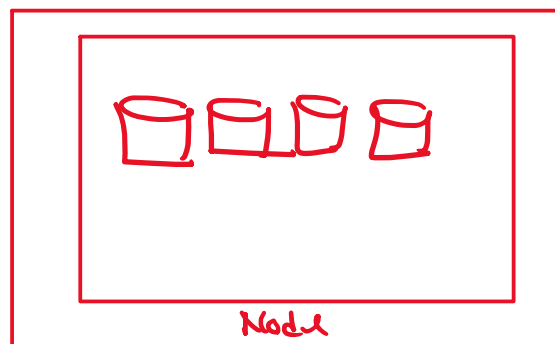
- Pod
 - Service
 - Replicaset
 - Deployment
- K8S Architecture
- Namespace ✓
- Quota ✓
- Configmap

Core Object

K



Elastic Kubernetes Service

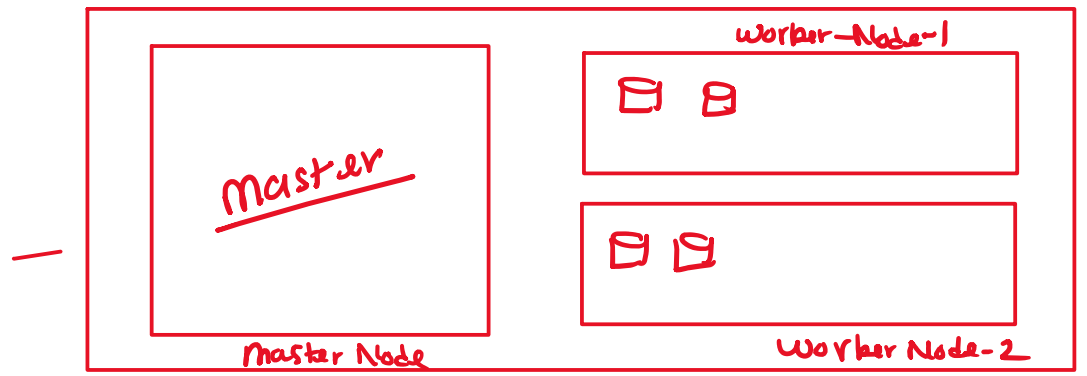


Docker-Desktop

Single Node

Kubectl get Nodes

Architecture of K8S



Interview

Three-Node K8S Cluster
Seven Components in K8S-Architecture

DOUBT SESSION