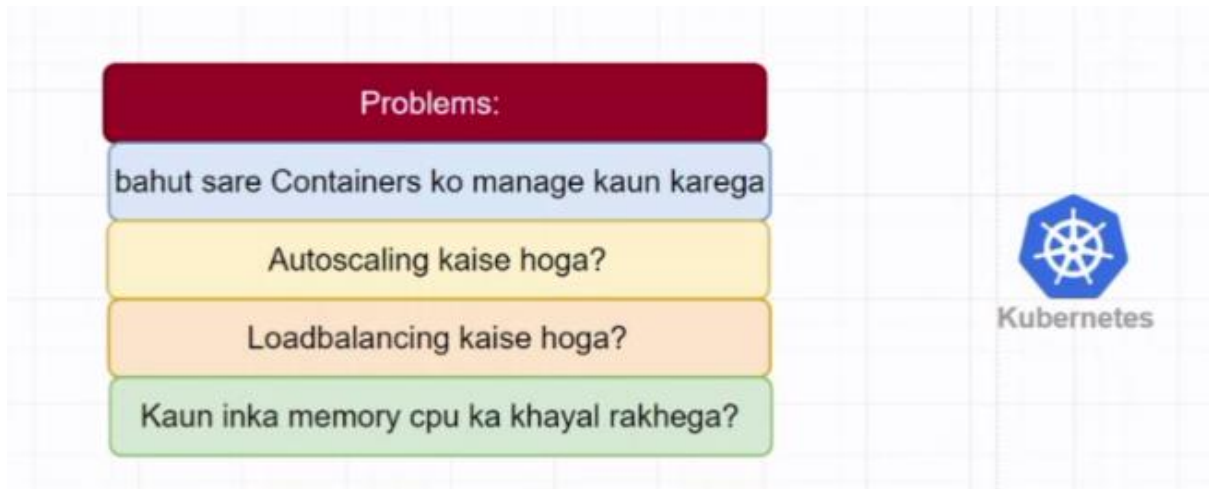
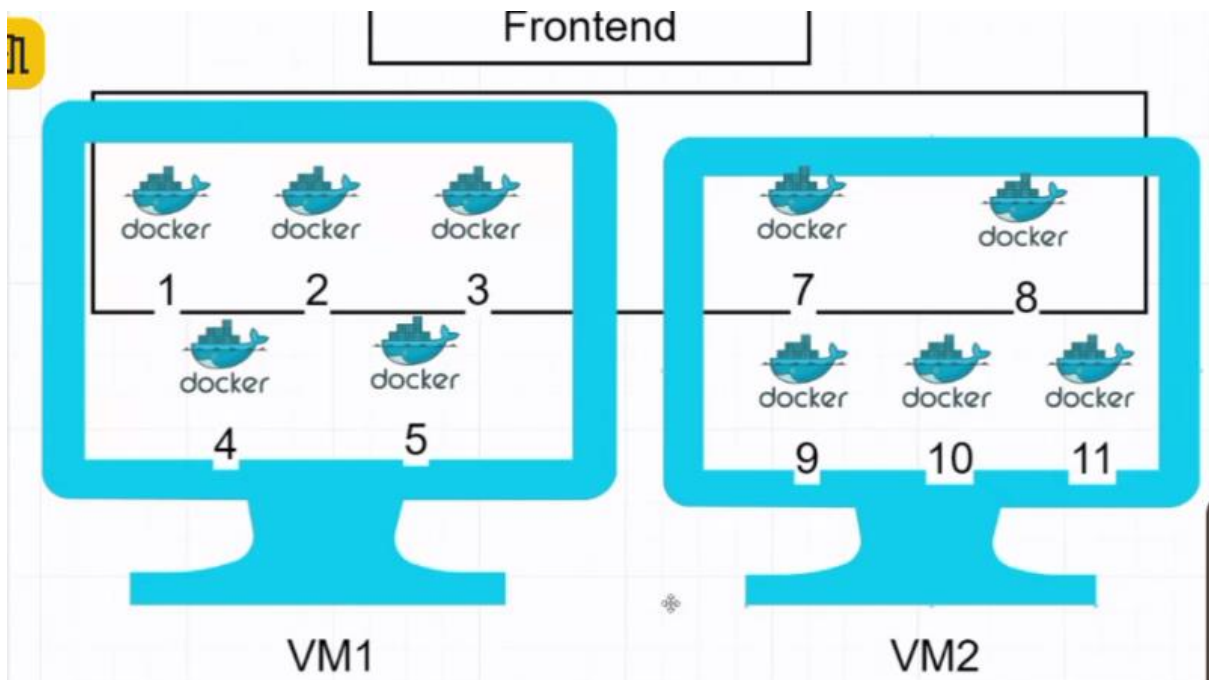


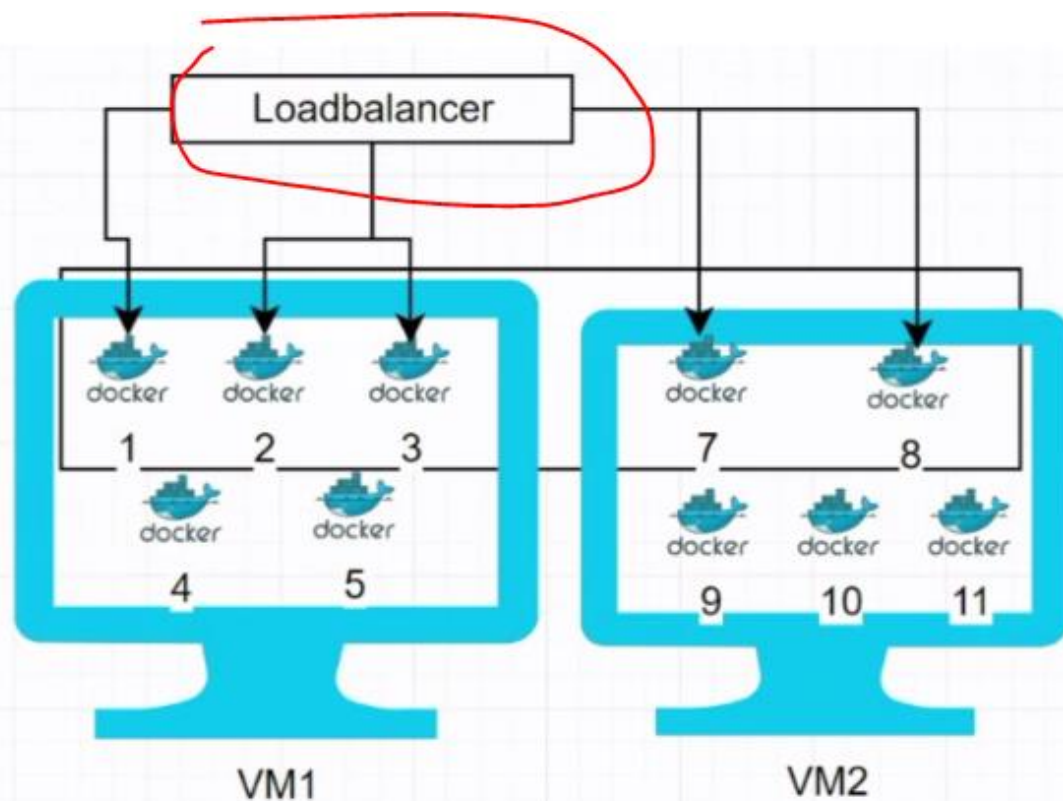
- 1) Back up, DR, Monitoring, Security, Cost optimization – In these 5 things, Devops is completed
- 2)



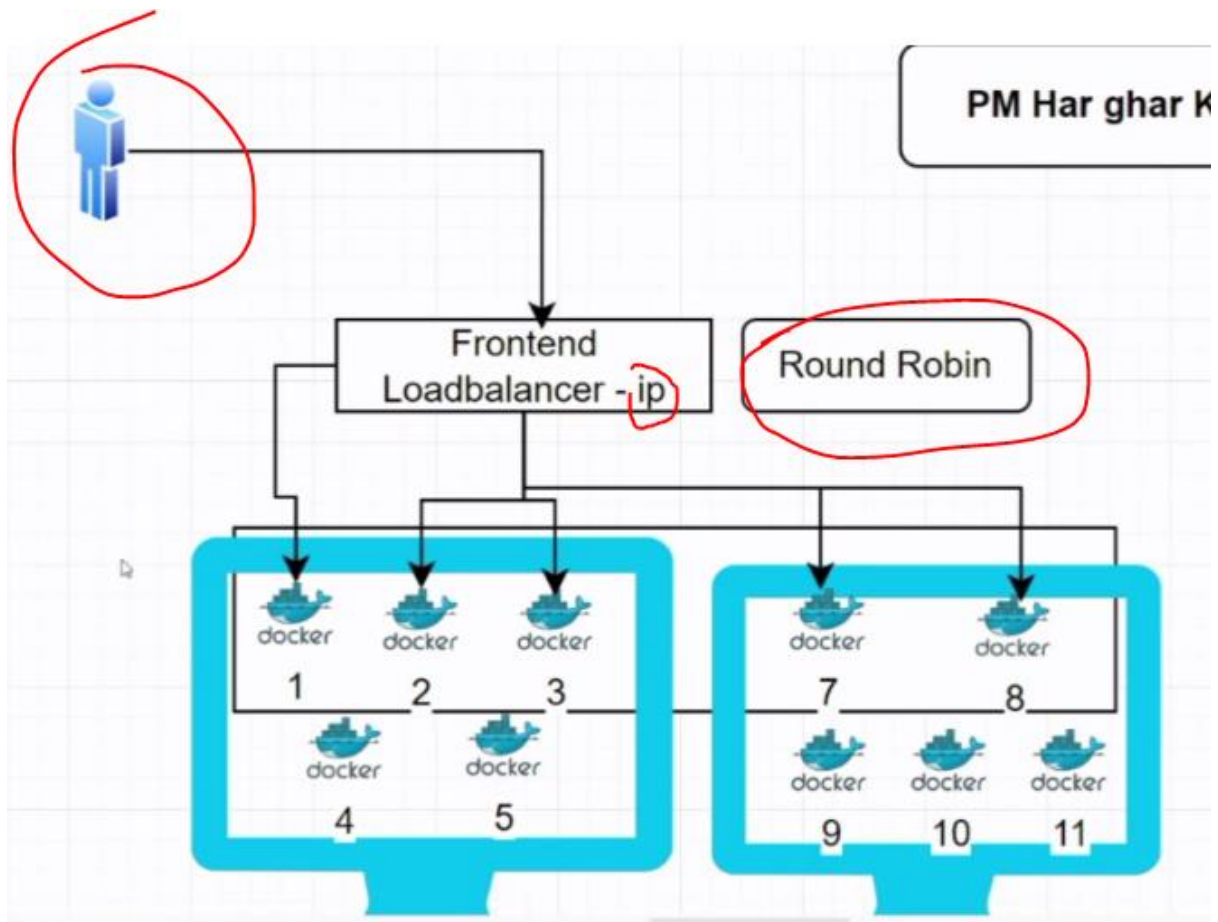
- 3) Suppose frontend containers 1,2,3,7,8 are down. And 4,5,9,10,11 are backend containers.



1. Jab container badte jaa rahe hai toh unke lie naya computer kaun banaega

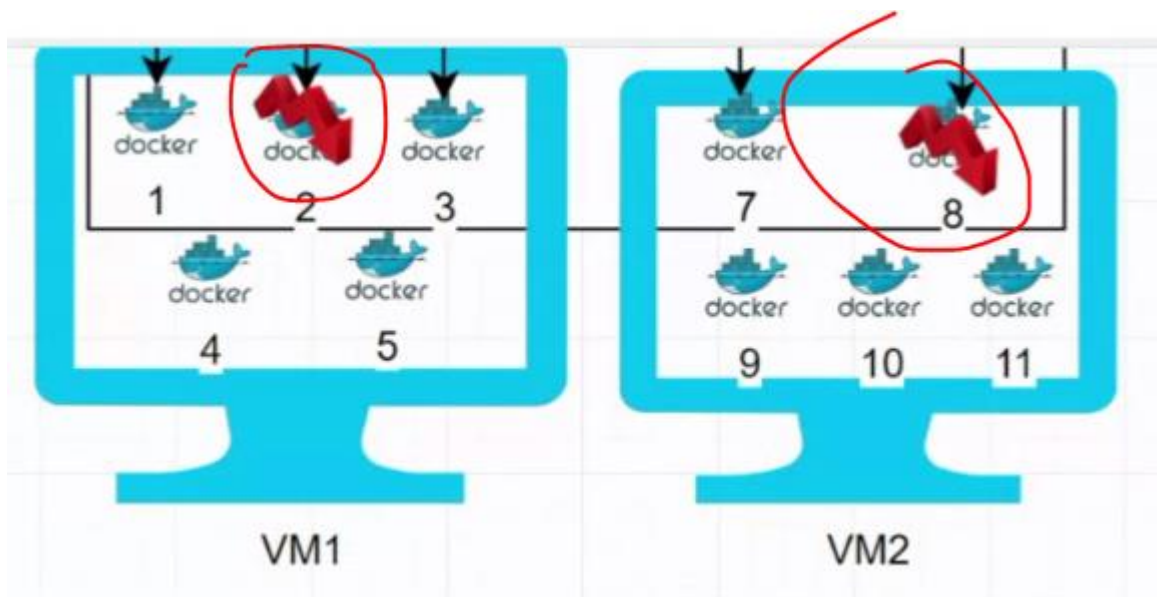


2. Loadbalancer nahi hai toh vo kaam kaun krega container ke lie?

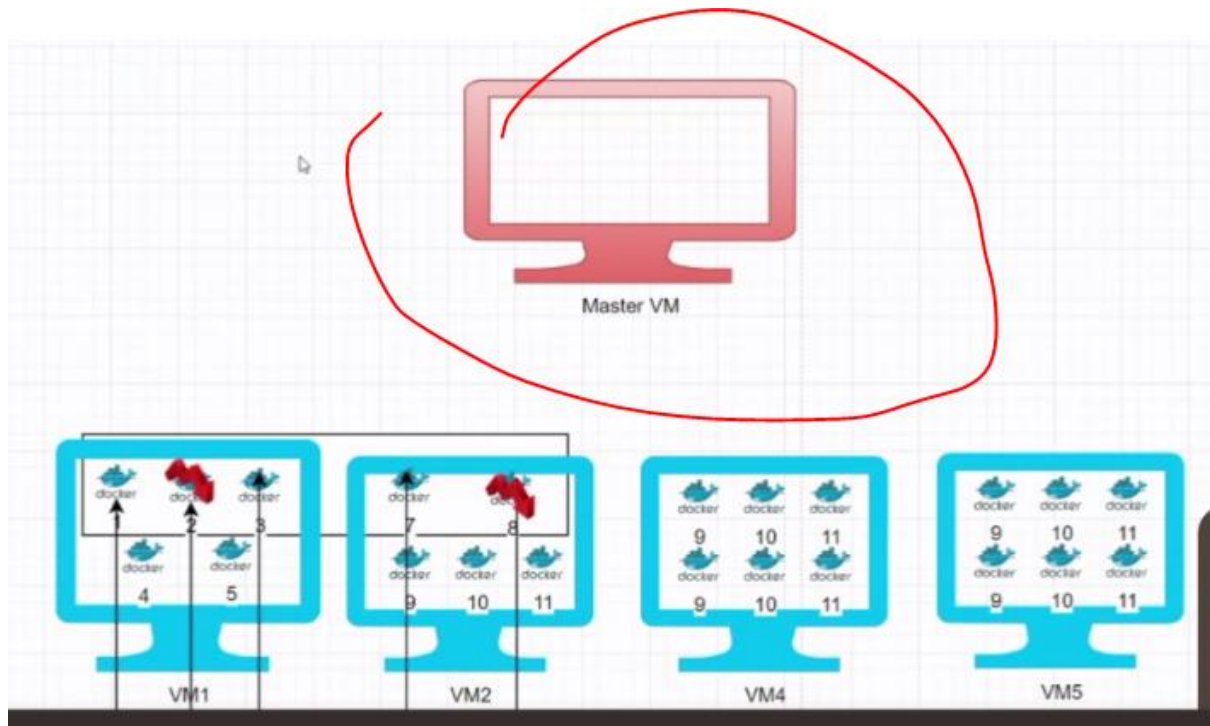


4) Now if 2 and 8 container is stopped, then 2 things we can do

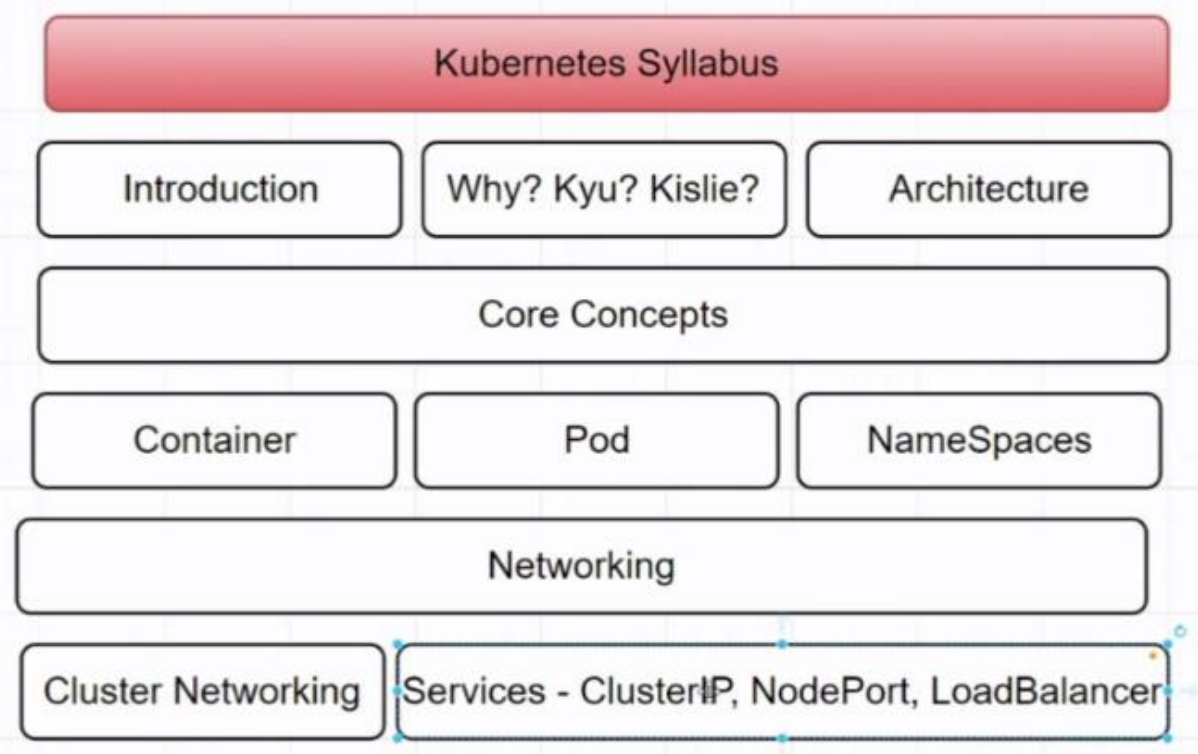
- i) we can run `docker start <container id>`
- ii) delete a container and replace with a new one



3. Container down ho gaya toh chalu  
kaun krega?



5) Syllabus



Networking

Cluster Networking

Services - ClusterIP, NodePort, LoadBalancer

Network Policies

Deployment

Replicat Set

Deployment

Rollout/Rollback

Horizontal and Vertical Scaling

Storage in Kubernetes

Persistent Volumes

Persistent Volumes Claim

Storage Class

Kubernetes Ingress

Ingress Controllers

Ingress Rules

Kubernetes Security

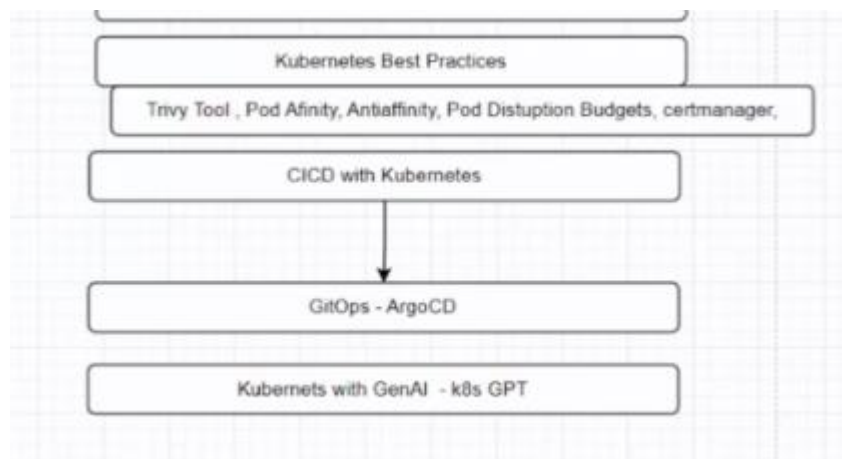
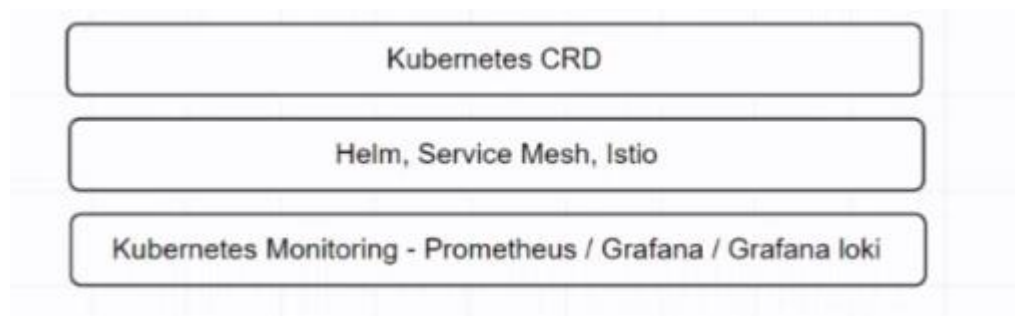
Kube Benchmarking

Secret

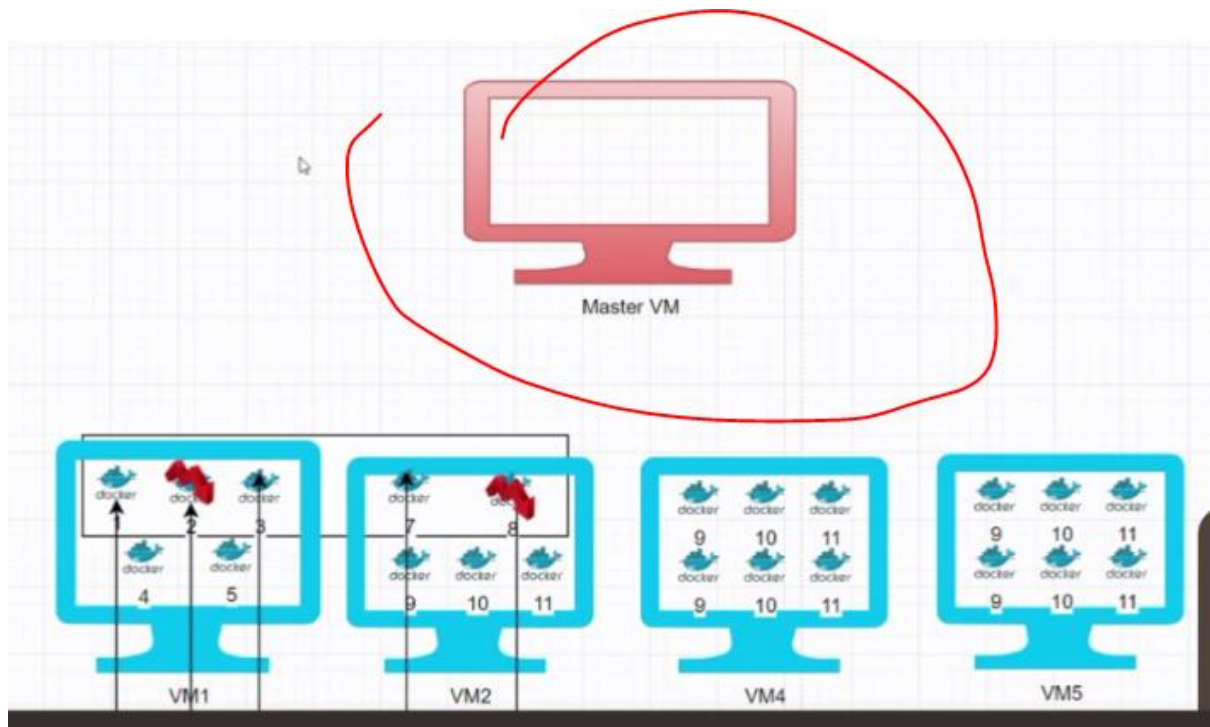
Config Map

Key Vault Integration





+++++



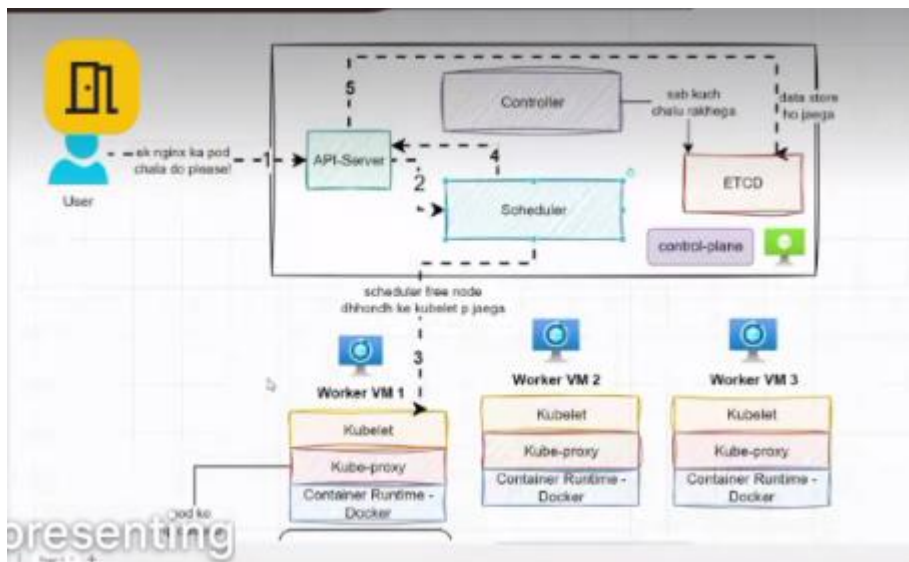
## ARCHITECTURE COMPONENTS OF KUBERNETES

### 1) Architecture Components Of Kubernetes

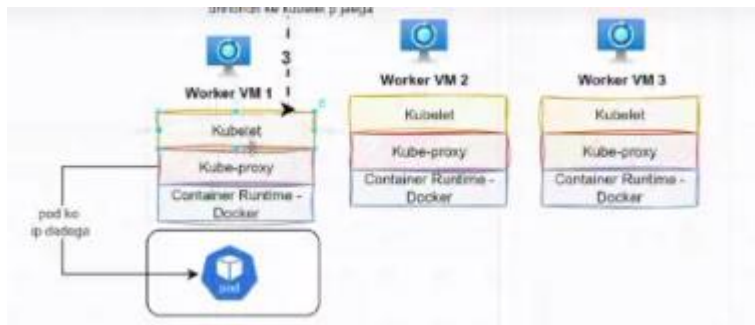
Kubernetes Architecture Components
1. API Server
2. Scheduler
3. Controller
4. ETCD Database
5. Kube-Proxy
6. Kubelet
7. Container



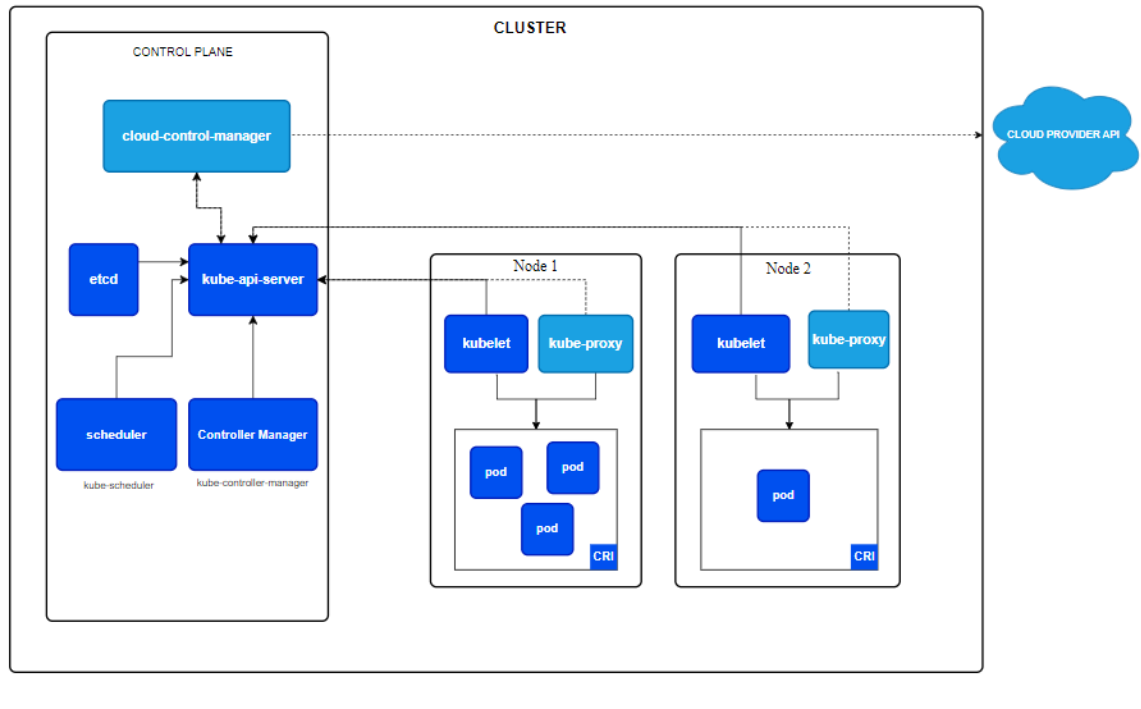
1. Jitni bhi aadan aur pradan ki baat ho vo sab API server se hi hona chahiye....



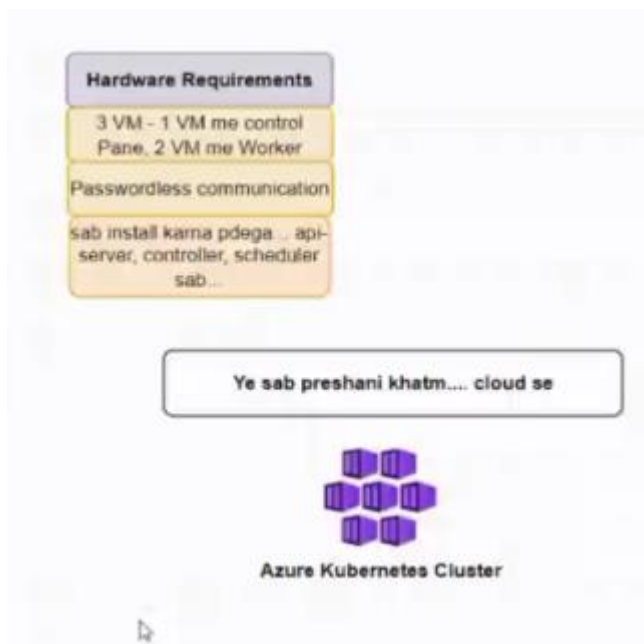




- 2) All the transactions will happen only through API servers.
- 3) As the request will come it will go to api server.
- 4) Now api server will ask scheduler to help
- 5) Now scheduler will go to worker nodes/ VMs by telling to api server that it is going to check that which worker node has empty space into it.
- 6) Now suppose worker node has memory on it so scheduler's new component "kubelet" will activate.
- 7) Now kubelet will ask container to run nginx.
- 8) Now scheduler will ask kube proxy (networking) to assign IP to pod which is preparing by docker container.
- 9) Now after backtrack scheduler will go to api and say everything is done so now what?
- 10) Now scheduler will ask ETCD database to store the information about nginx pod that has been created.
- 11) Now ETCD will again go to scheduler, then scheduler will ask controller to maintain availability of pod.
- 12) **FAULT TOLERANCE** - controller maintains availability of pod.
- 13) SEARCH – Kubernetes.io - <https://kubernetes.io/docs/home/>
- 14) Manually creating each component of Kubernetes Architecture will be very hectic and time taking.



15) In azure portal, we can create Kubernetes cluster



16)



