

* Managing Kubernetes



kubernetes

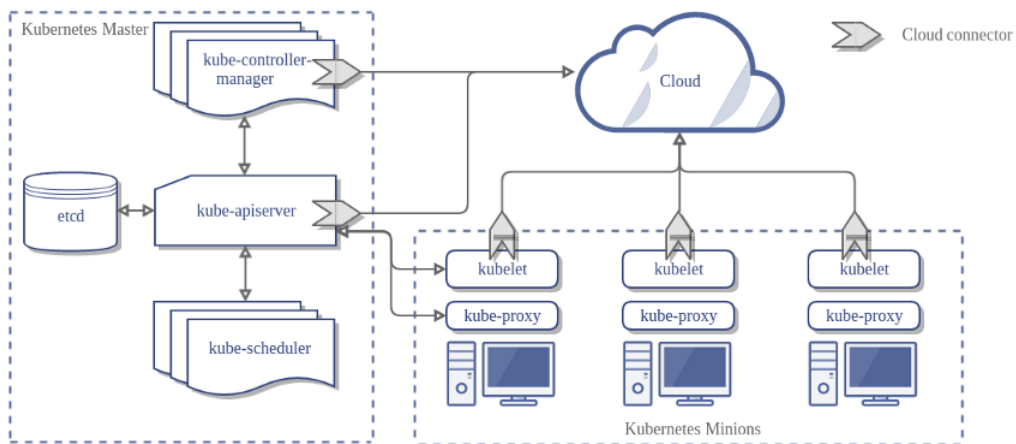
1.

1) Docker Docker-compose

2)

3) ,

ii) Pod Health Check Liveness probe Readiness probe



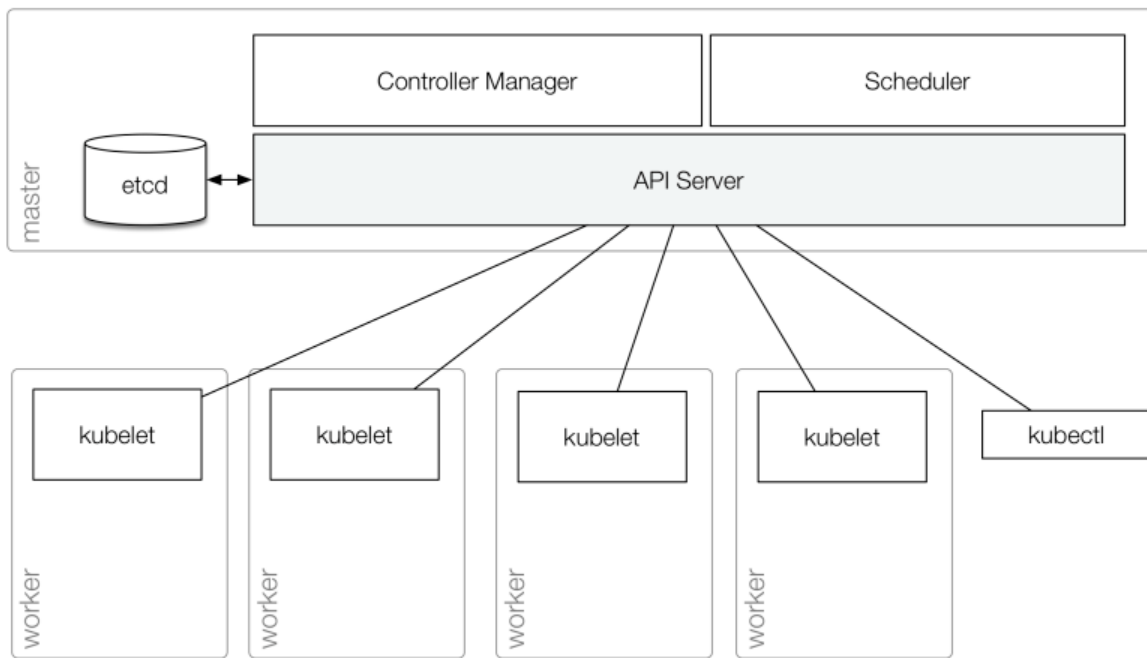
2. API

1) API HTTP JSON RESTful API API

2) API

3)

4) API API



3. Basic Object: Pod, ReplicaSet, Service

API

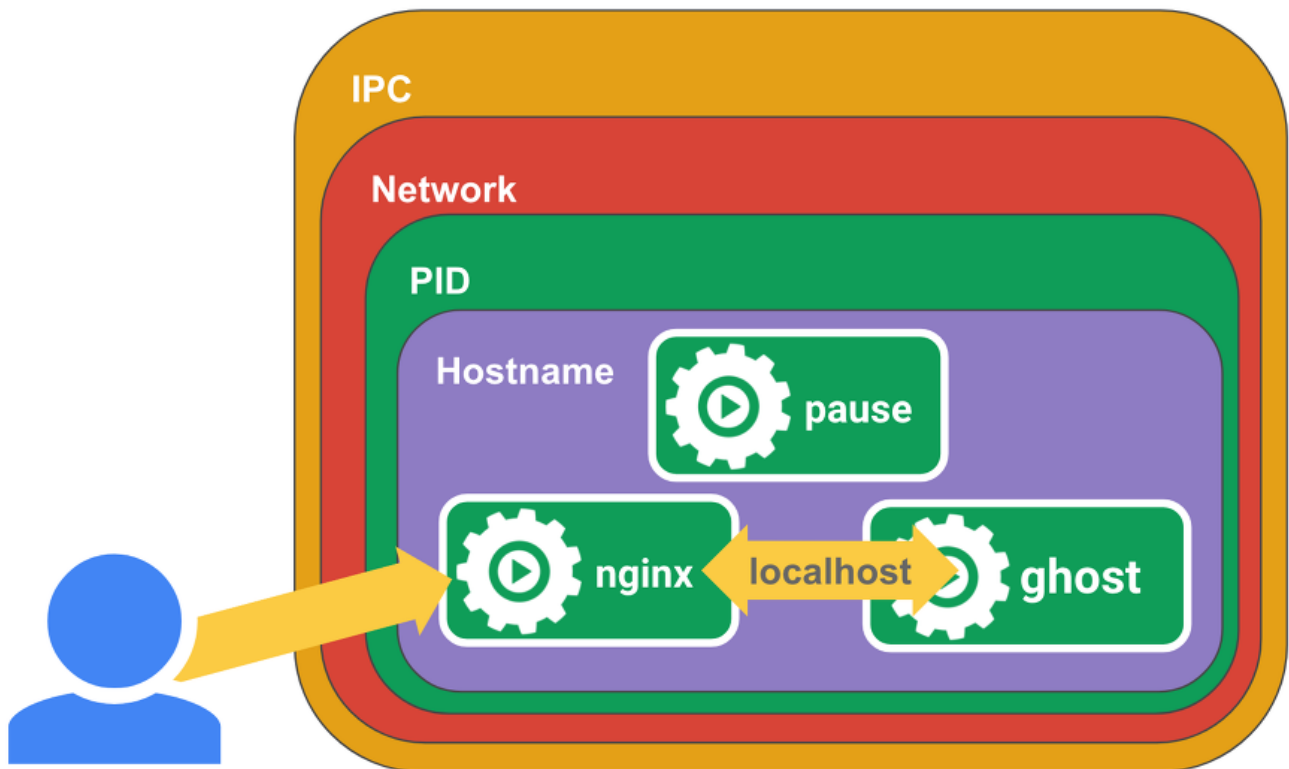
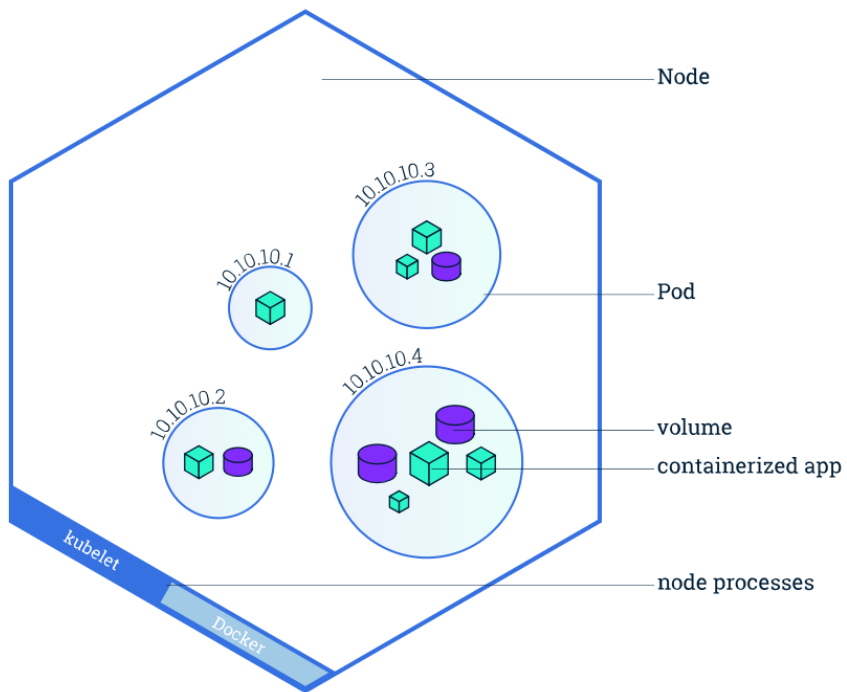
1) Pod

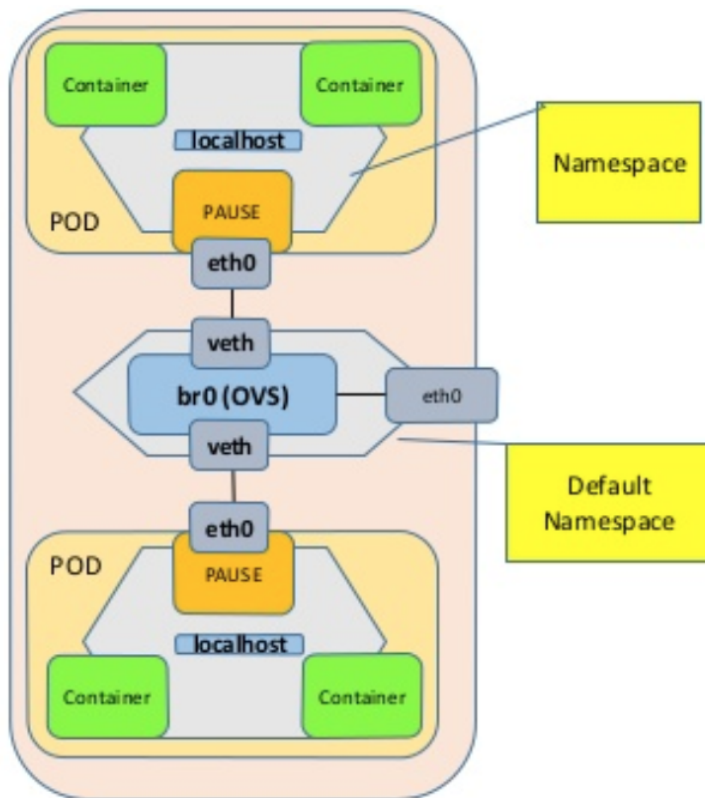
i)

ii) (localhost)

iii) IPC

(: <https://kubernetes.io/docs/tasks/configure-pod-container/share-process-namespace/>)





iv)

2) ReplicaSet

i) ,

ii) ReplicaSet

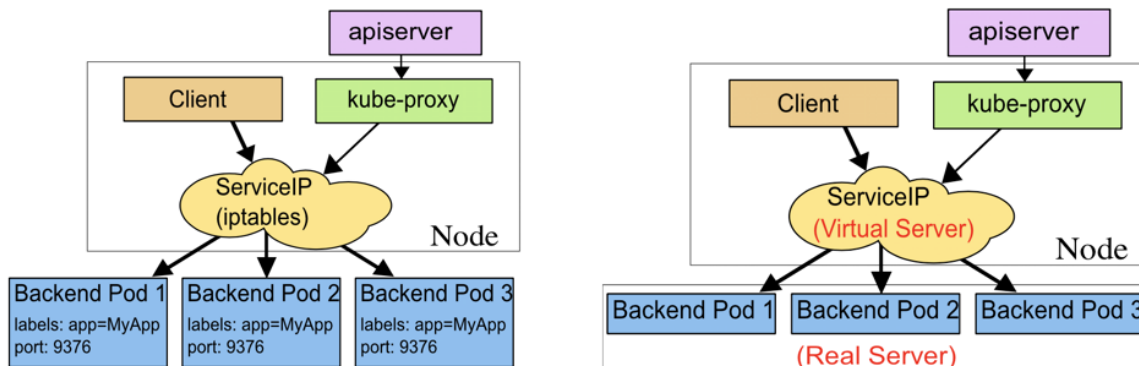
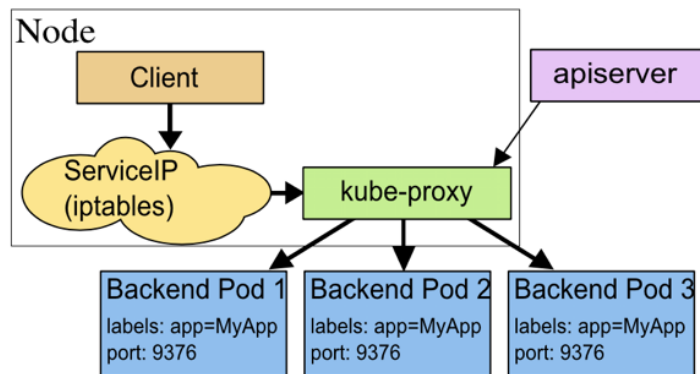
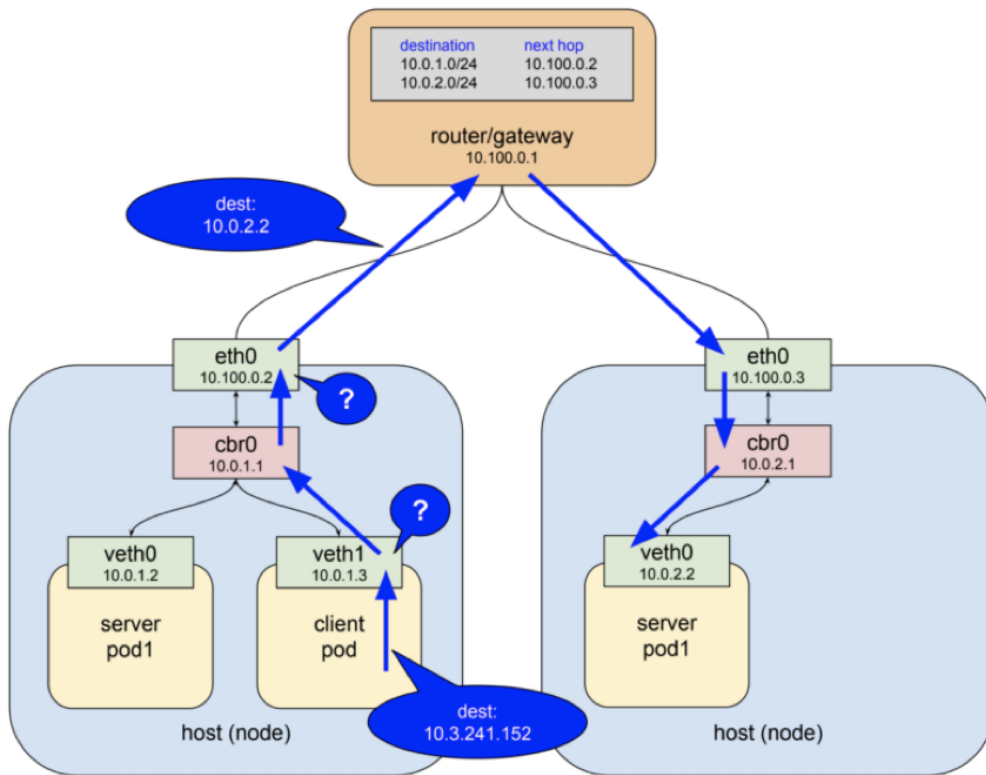
iii) Pod

3) Service

i) ReplicaSet

ii) Service TCP UDP IP DNS Service

iii) Service IP , IP (RR)



iv) IP DNS DNS DNS Service Service Discovery

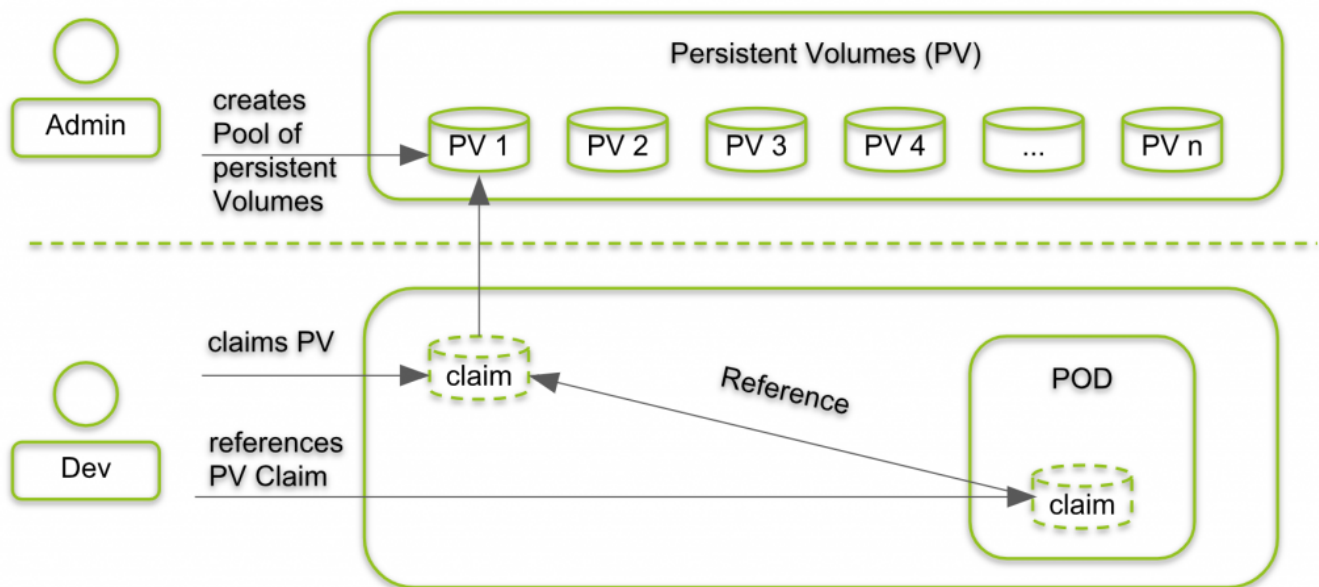
v) Service Service IP

* : , IT I/O, , , , ,

vi) ReplicaSet Service Service IP

4. Storage: Persistent Volume, ConfigMap, Secret

- 1) Volume API
- 2) (: NFS, iSCSI, gitRepo...)
- 3) . CSI(Container Storage Interface)
- 4)
- 5) ConfigMap
 - i) ConfigMap
 - ii) ConfigMap ConfigMap
- 6) Secret
 - i) Secret
 - ii) Secret ConfigMap
- 7)
 - i)
 - ii) ReplicaSet (AWS EBS)
 - iii) PersistentVolumes PersistentVolumesClaims
 - iv) PersistentVolume PersistentVolumeClaim
 - v)



5. : Namespace, label, annotation

API ,

1) Namespce

- i) namespace API
- ii) namespace (RBAC)
- iii) namespace () RBAC)

iv) Namespace DNS DNS , namespace (fully qualified domain names, FQDNs)

my-service.svc.mynamespace.cluster.internal

2) Label, Label Query

i) API key/value

ii) (,

iii)

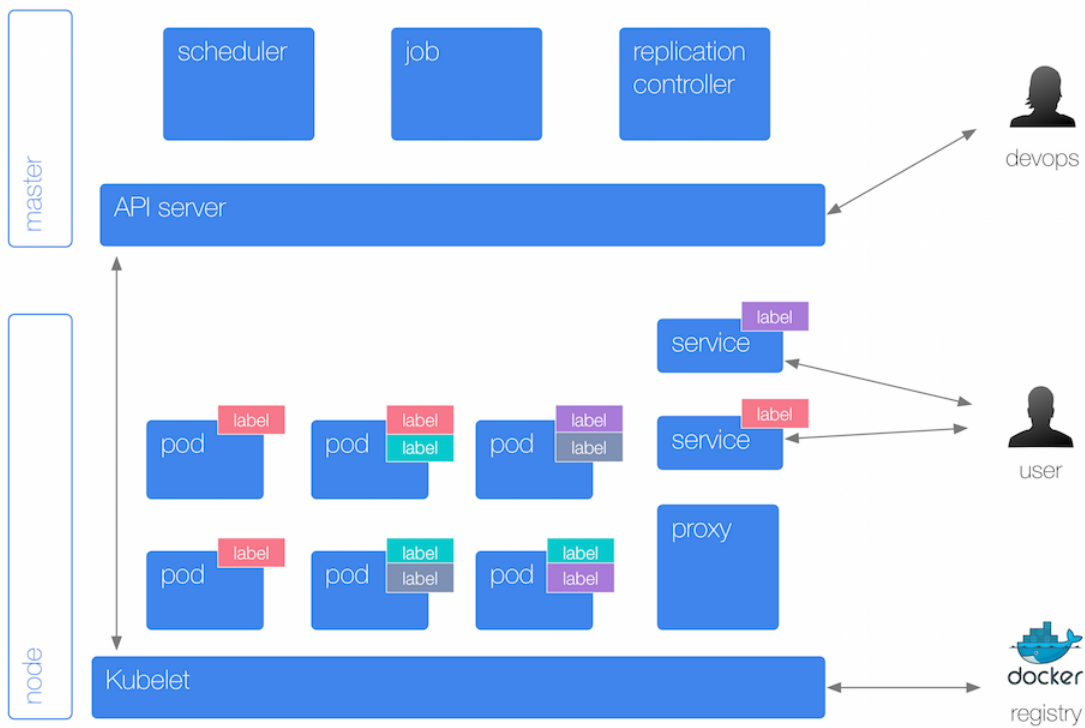
iv)

3) Annotation

i) API

ii) ()

iii) API annotation (, beta.kubernetes.io/active-demo)



6. Advance : Depolymnet, Ingress, StatefulSet

1) Deployment

i)

ii) Deployment (v1, v2) ReplicaSet ReplicaSet

iii) ,

2) Ingress

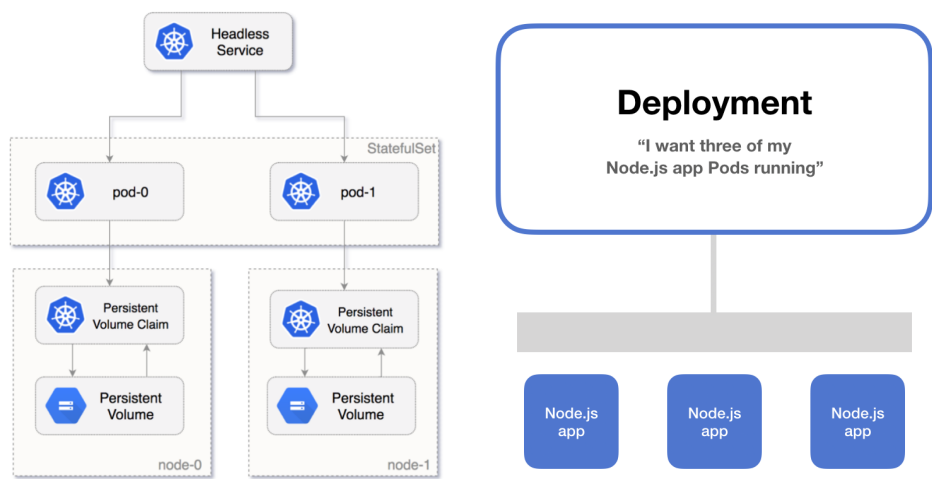
i) TCP HTTP HTTP

ii) Ingress HTTP

iii) Ingress IP ip 11 HTTP

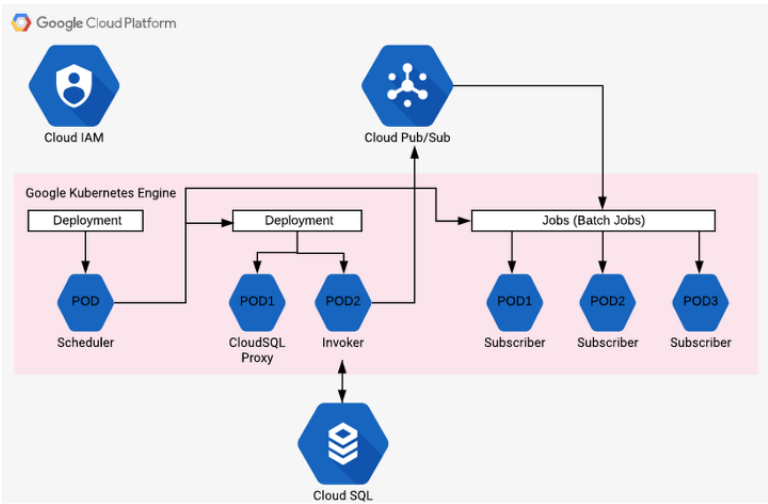
3) StatefulSet

- i) ReplicaSet
- ii) StatefulSet backend-0, backend-1 ()



7. Batch Workload: Job, CronJob

- () .
- 1) Job
 - i) job ReplicaSet StatefulSet
 - ii) job , (100 10 , Job 10 100)
- 2) CronJob
 - i) job job



8. : DaemonSet

- i)
- ii) , ,
- iii)
- iv) (, ,)

