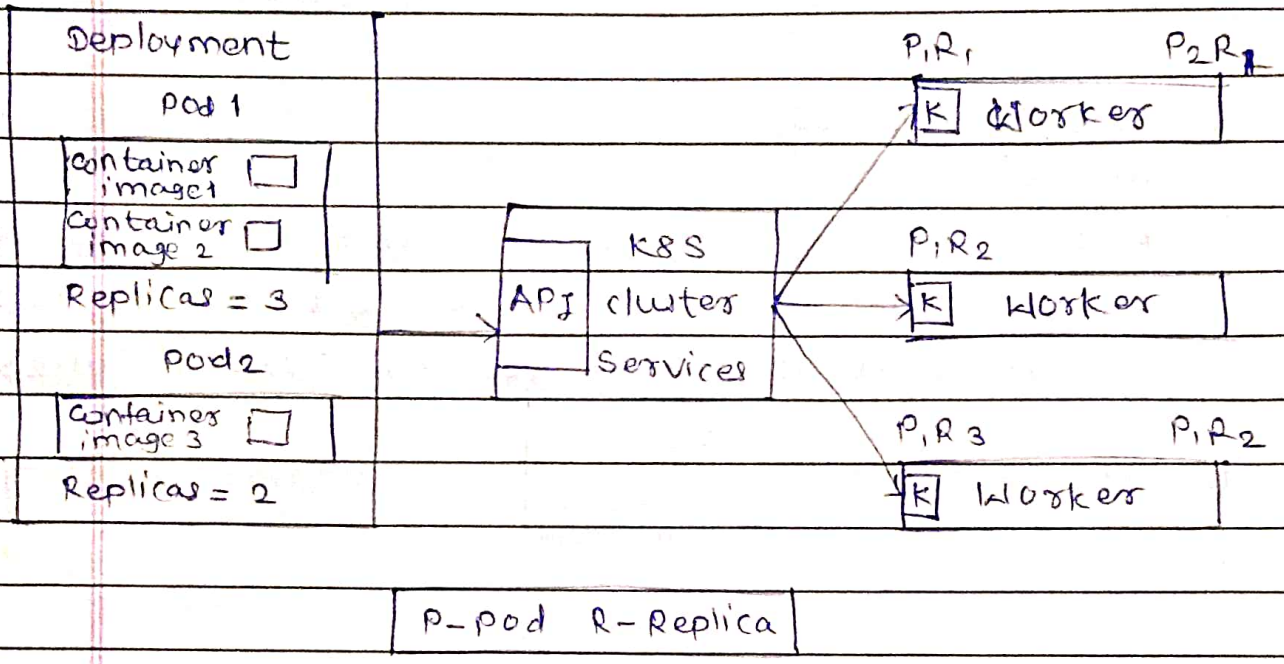
* Kubernetes cluster-

A cluster is a foundation of K8S engine. It has various components such as worker nodes, API's, kubelet processes, deployment files etc.



* Problems to solve -

Container-to-container communication

pod-to-pod communication

pod-to-service communication

External-to-Service Communication

* Requirements of K8S Model -

K8S model has few fundamental requirements for any networking implementation.

① All containers can communicate with all other containers without NAT

② All nodes can communicate with all containers (and vise-versa) without NAT

③ The IP that a container sees itself as is the same IP that others see it as.

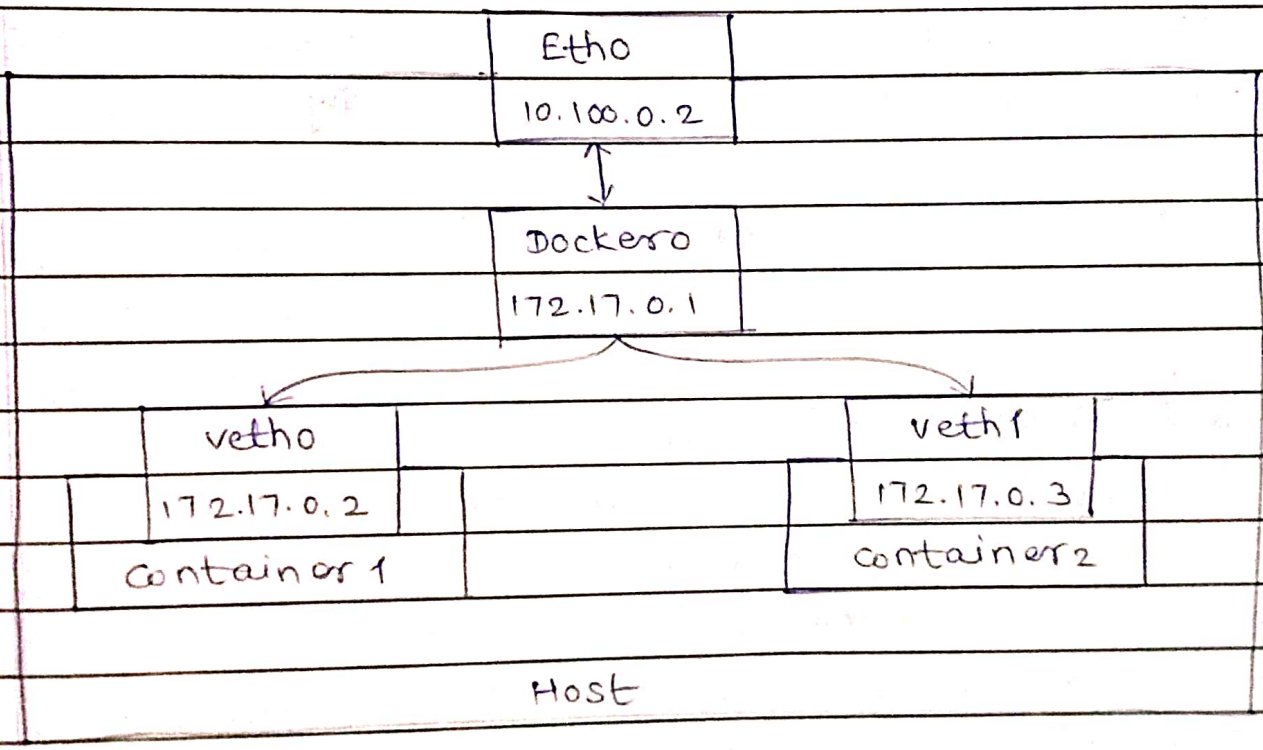
* Kubernetes Networking -

K8S is a powerful platform having many design choices and to understand the networking in kubernetes cluster, you need to understand the communication between pods, services and external world.

① Containers & pods -

What are pods?

A pod consists of one or more containers that are collocated on the same host and are configured to share a network stack and other resources such as units.



pods: virtual Network Interface

Docker can start a container and rather than creating a new virtual interface for it, specify that it shares an existing interface.

pods: Pause

suspends the current process until a signal is received. so, these containers do nothing at all except sleep