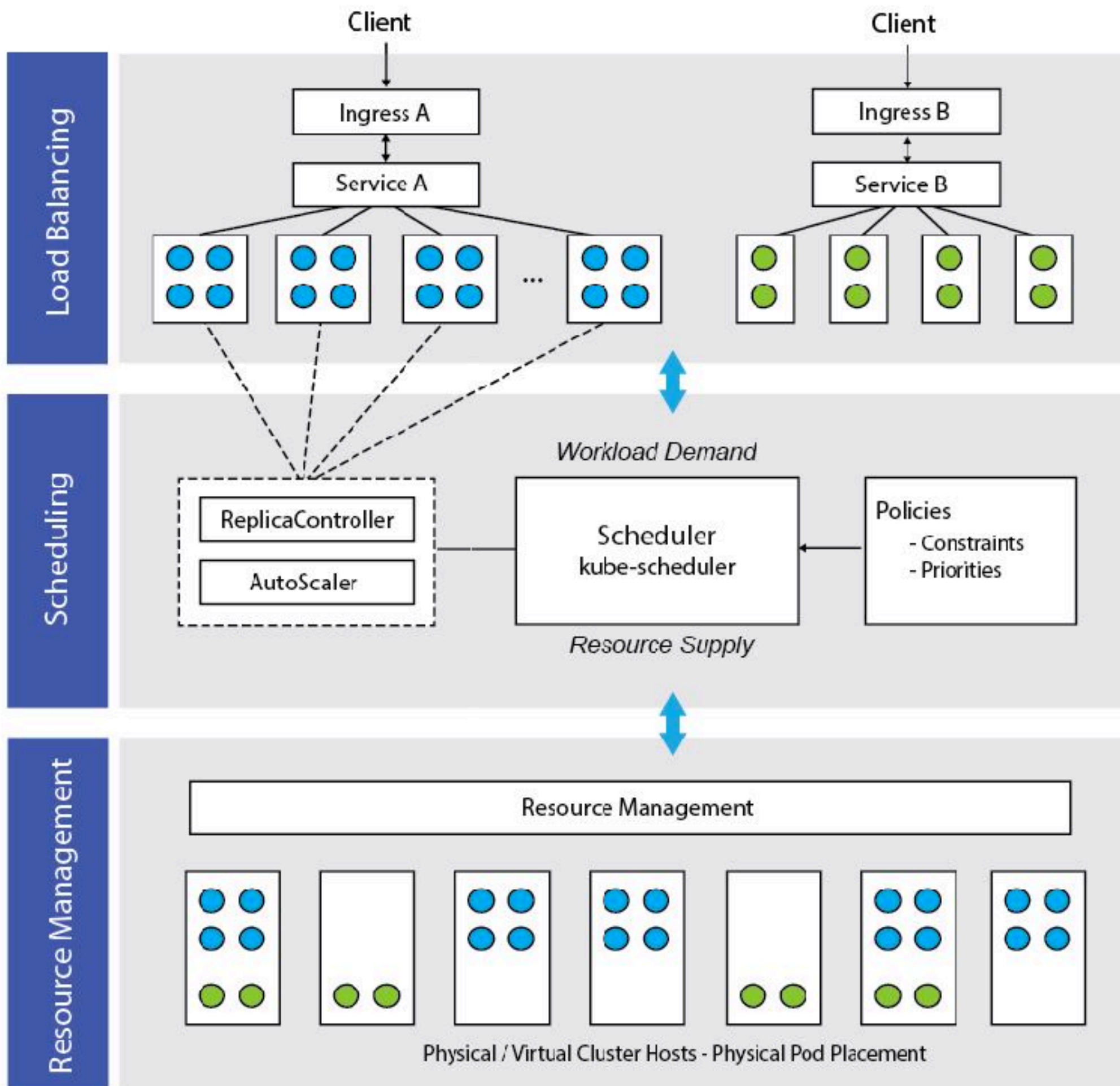


Architecture



Traffic

Ingress

foo.mydomain.com

mydomain.com/bar

Other

Service

Service

Service

Pod

Pod

Pod

Pod

Pod

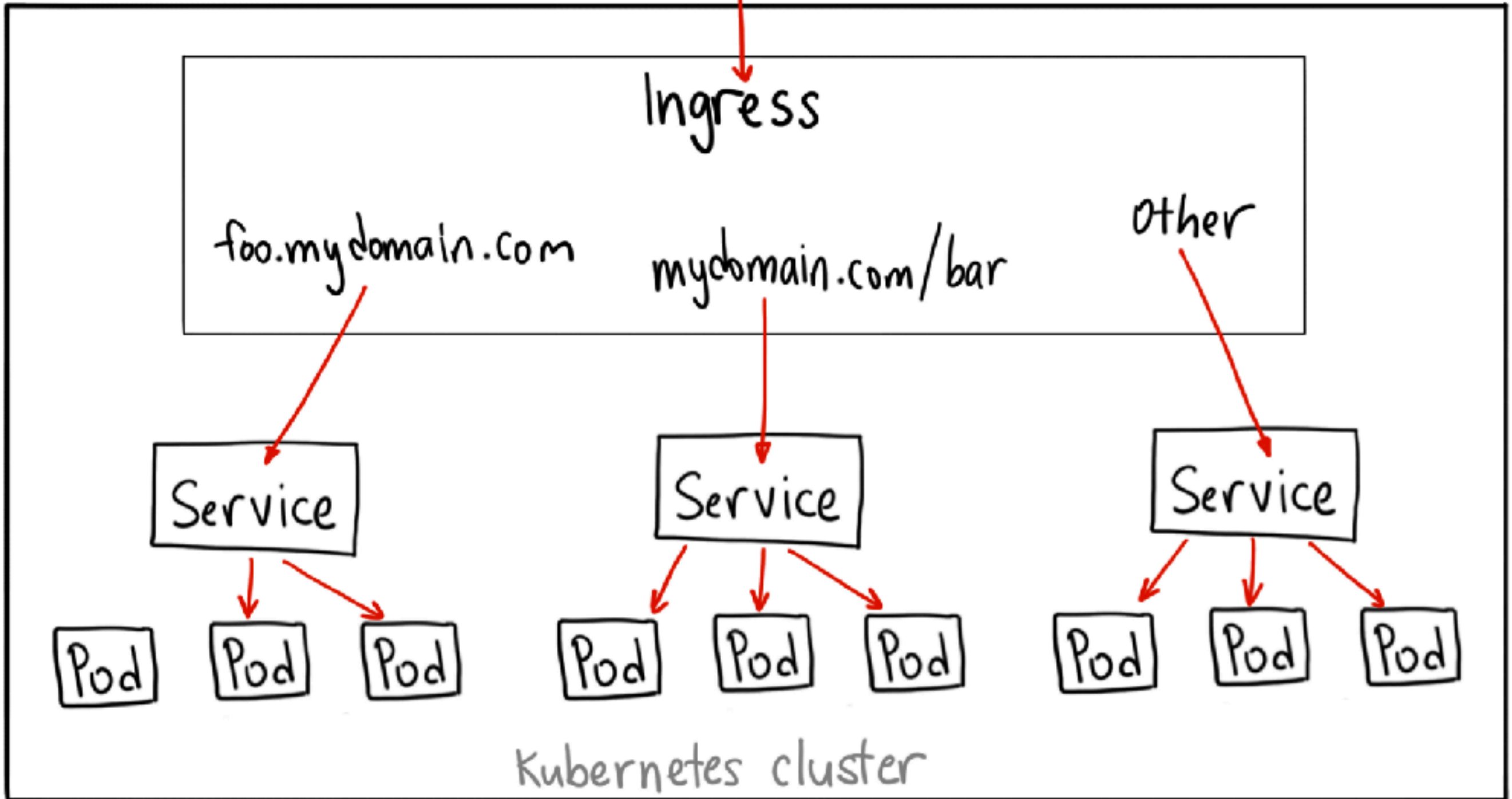
Pod

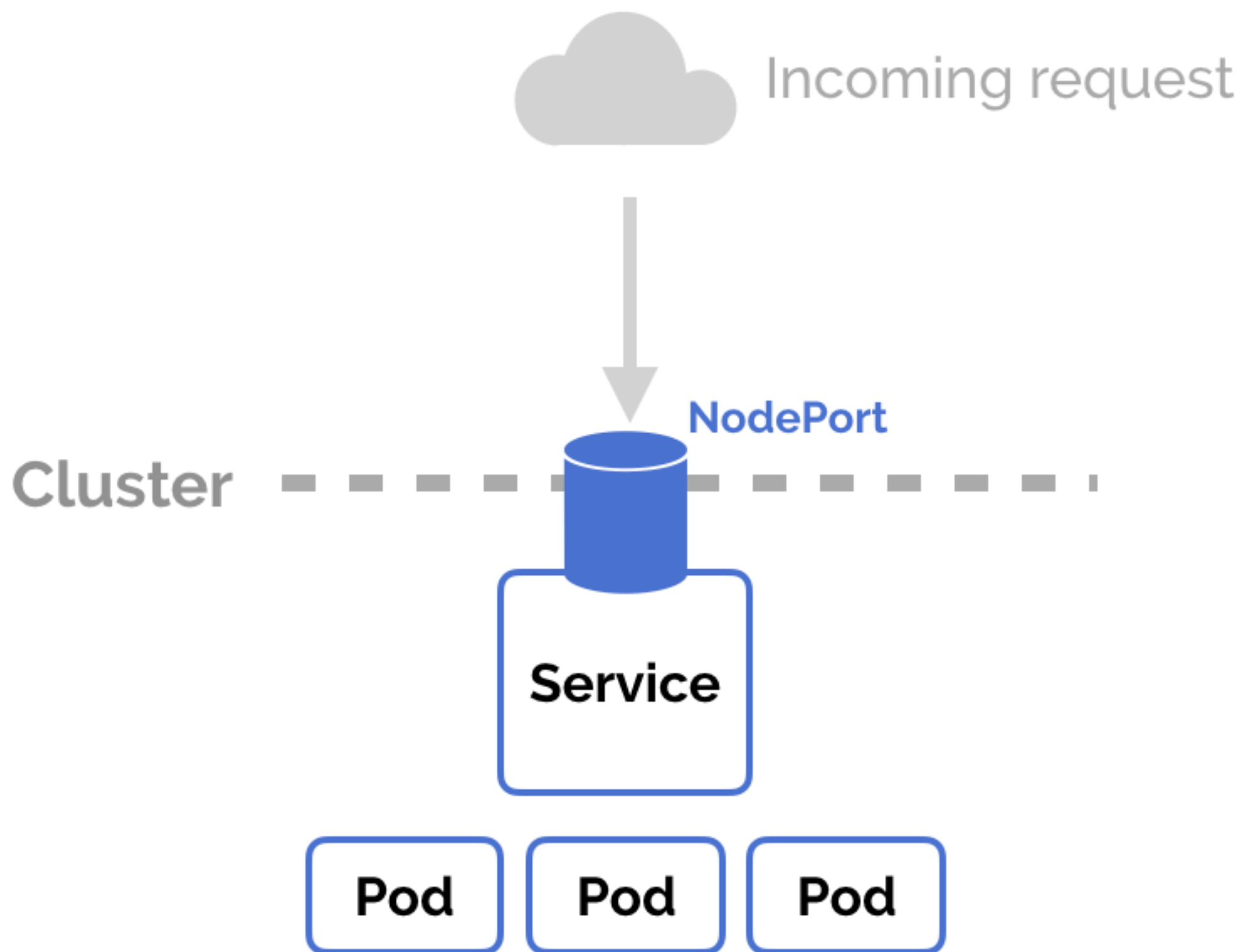
Pod

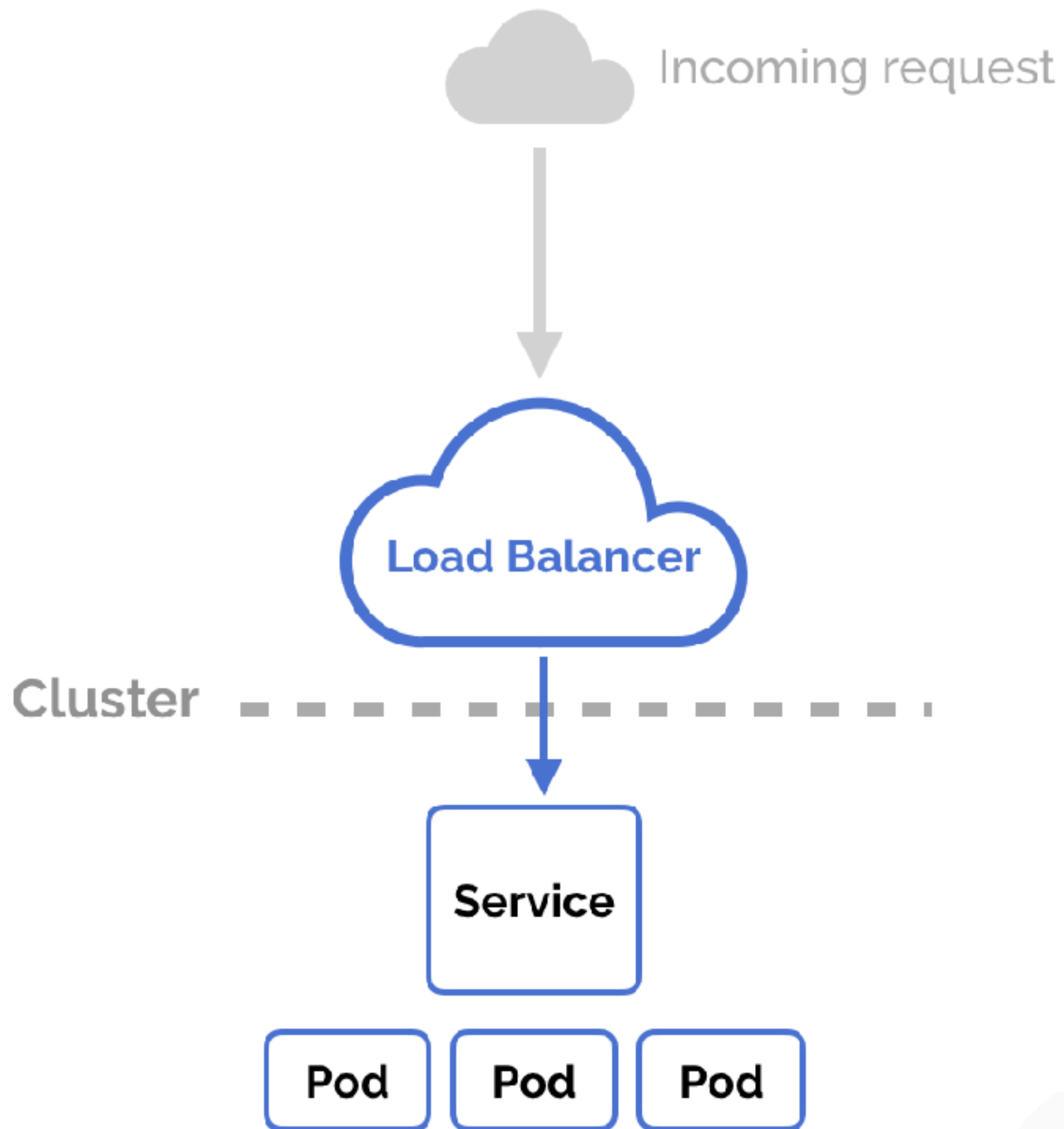
Pod

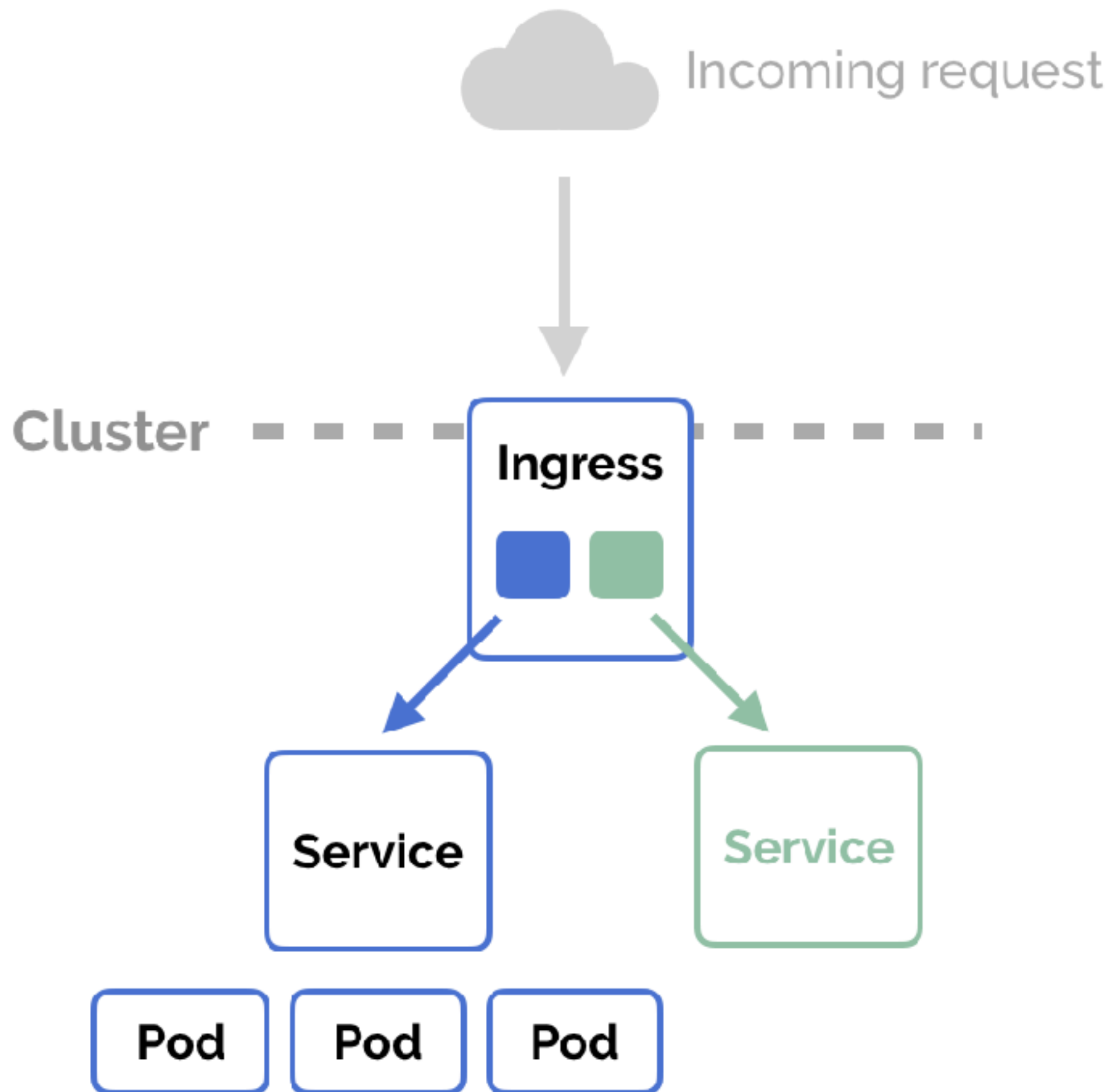
Pod

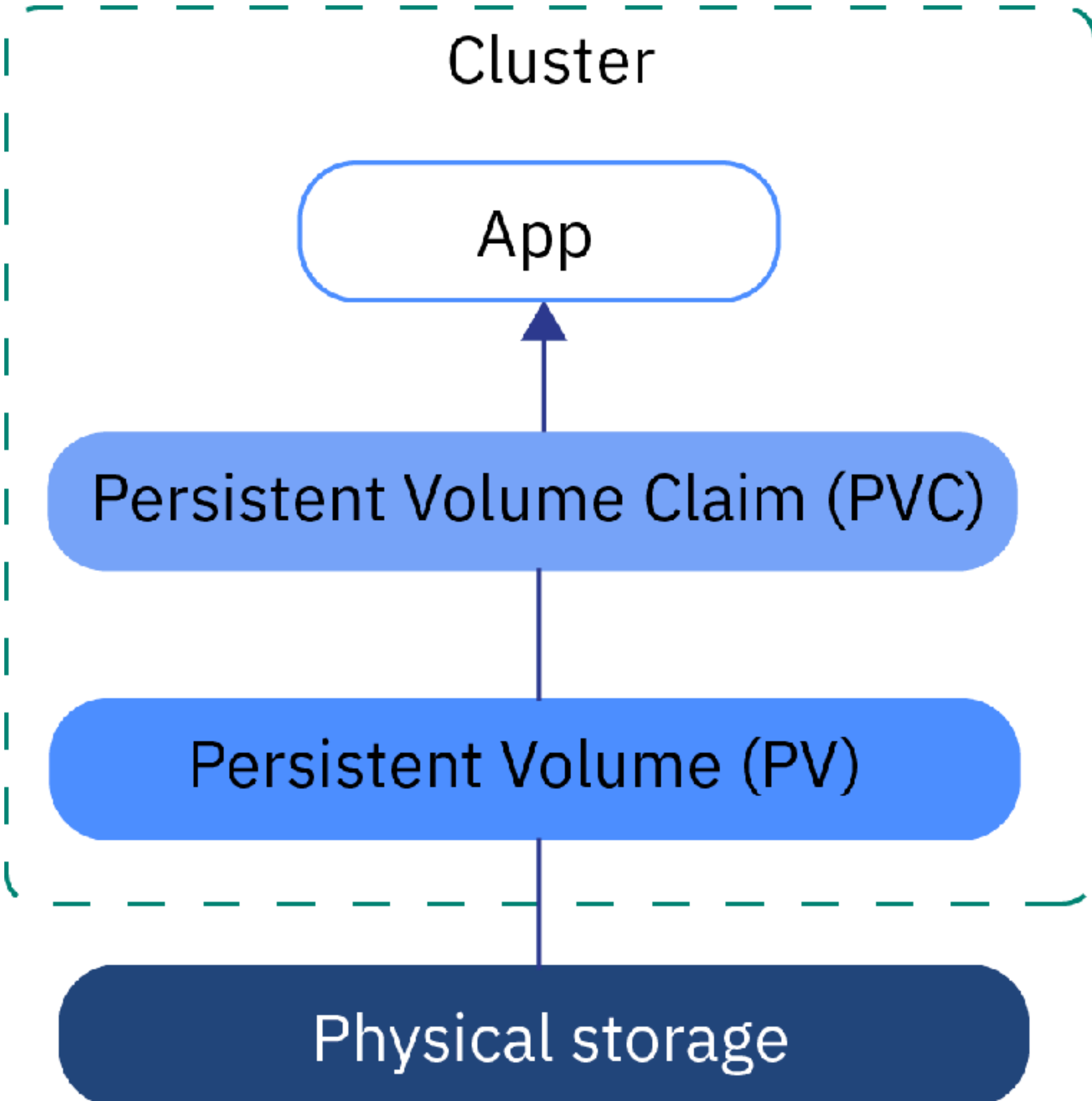
Kubernetes cluster



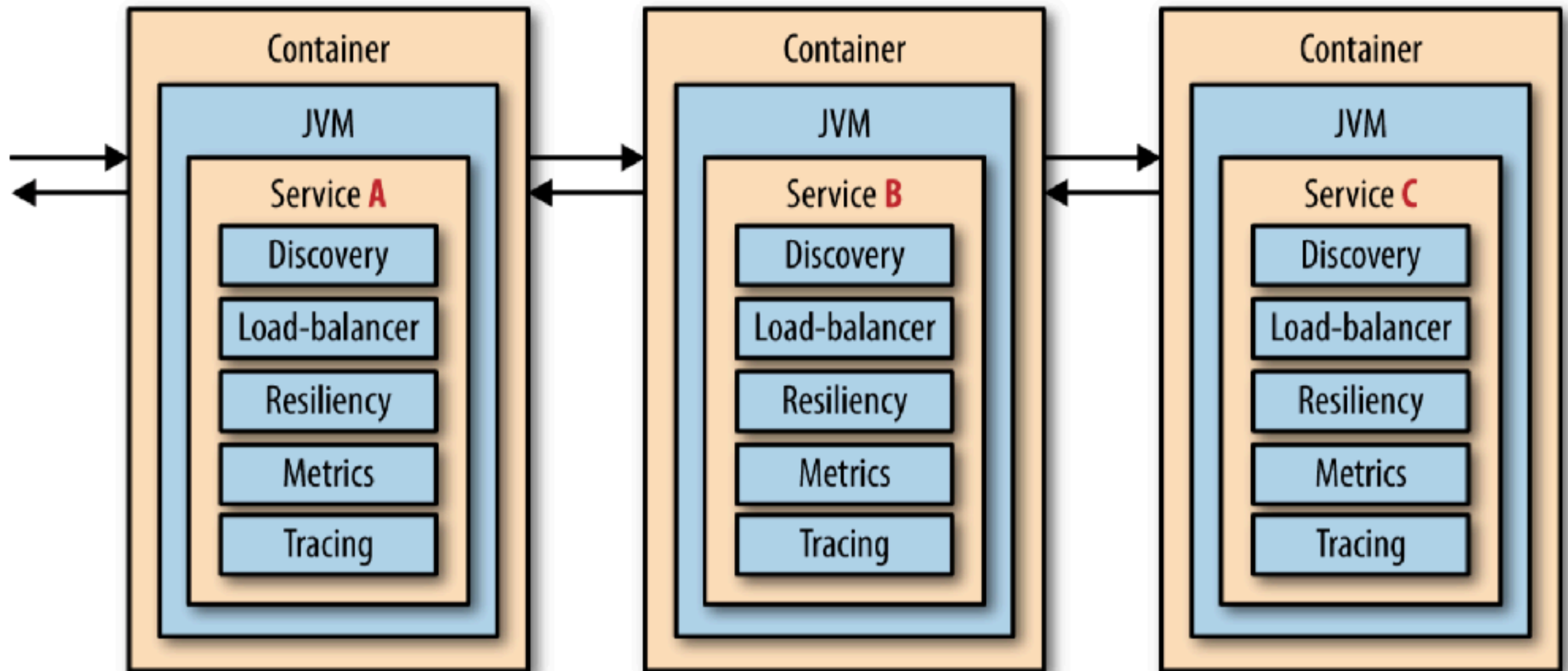




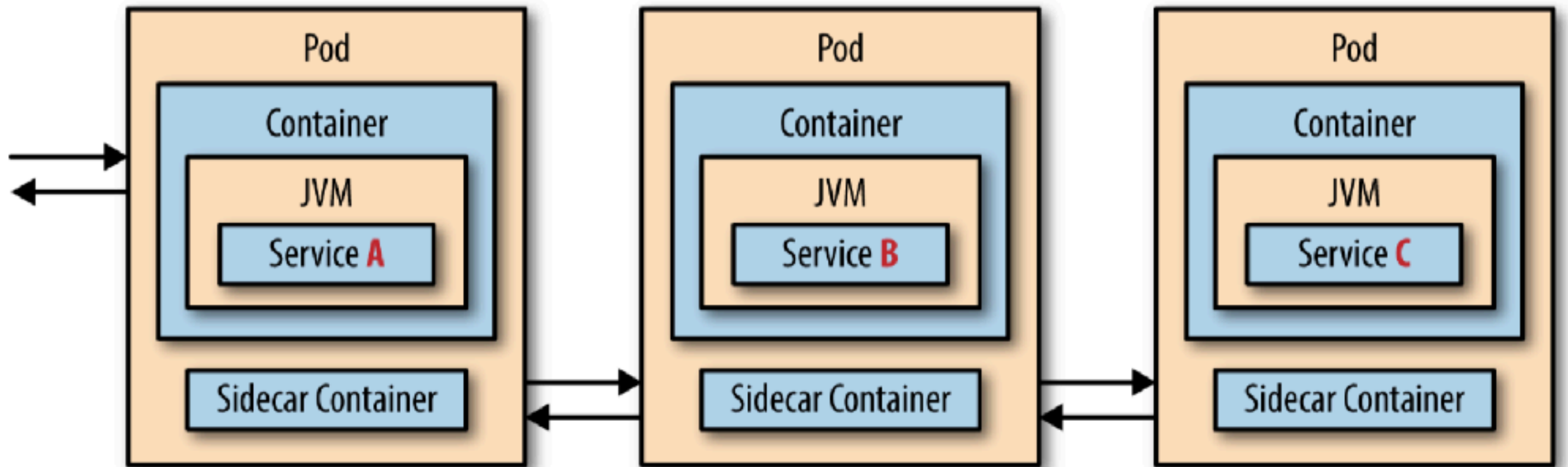




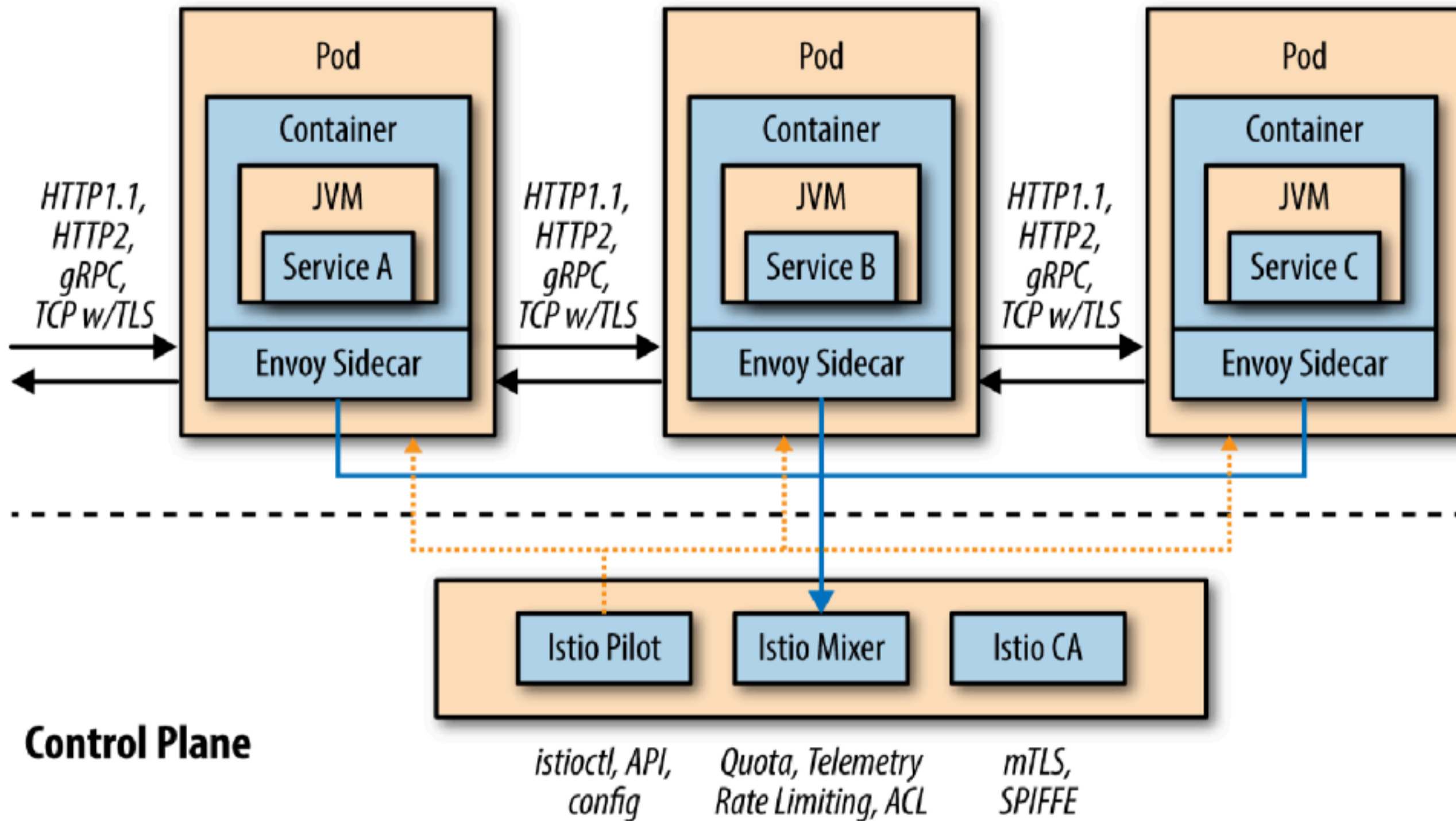
Before Istio

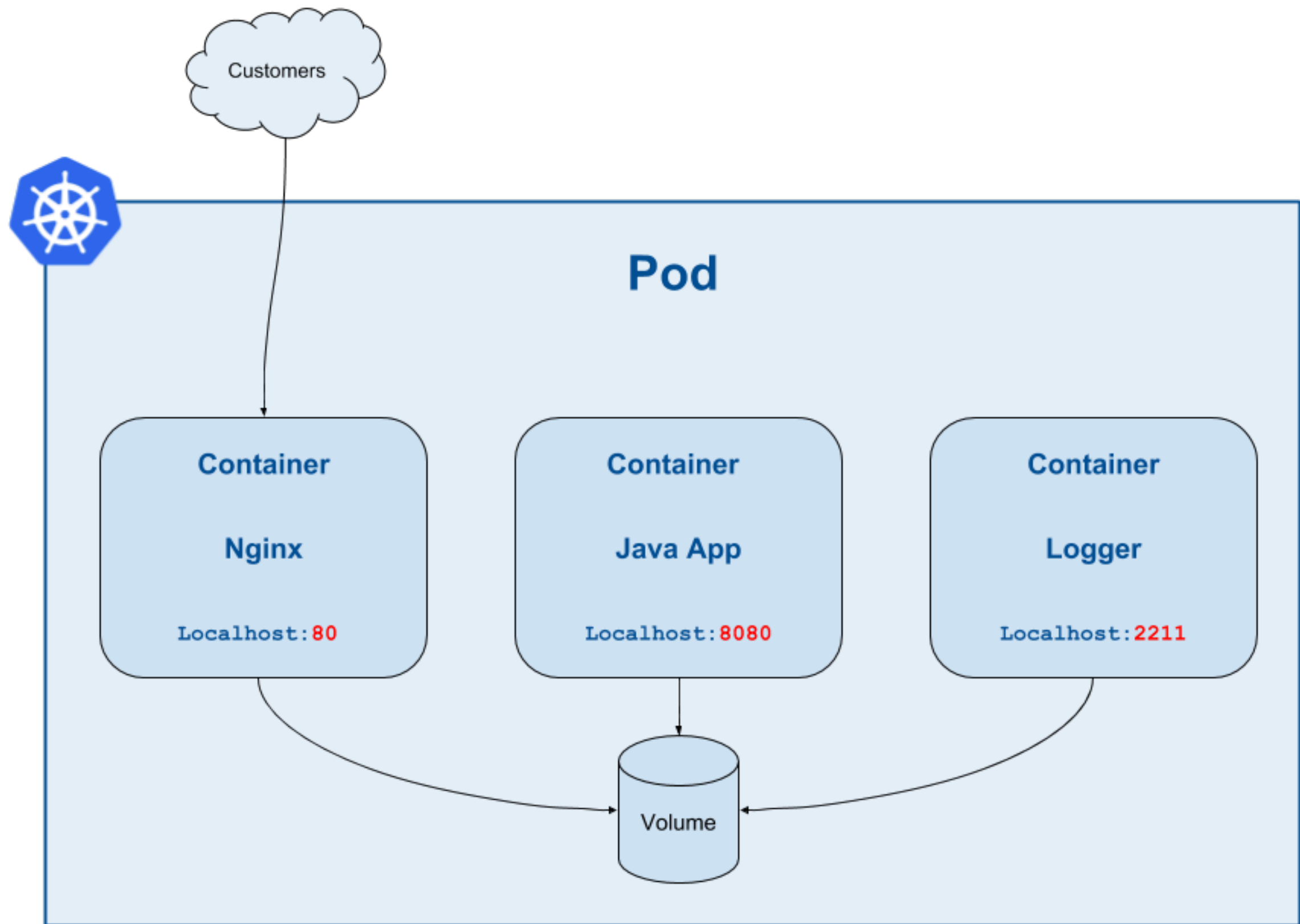


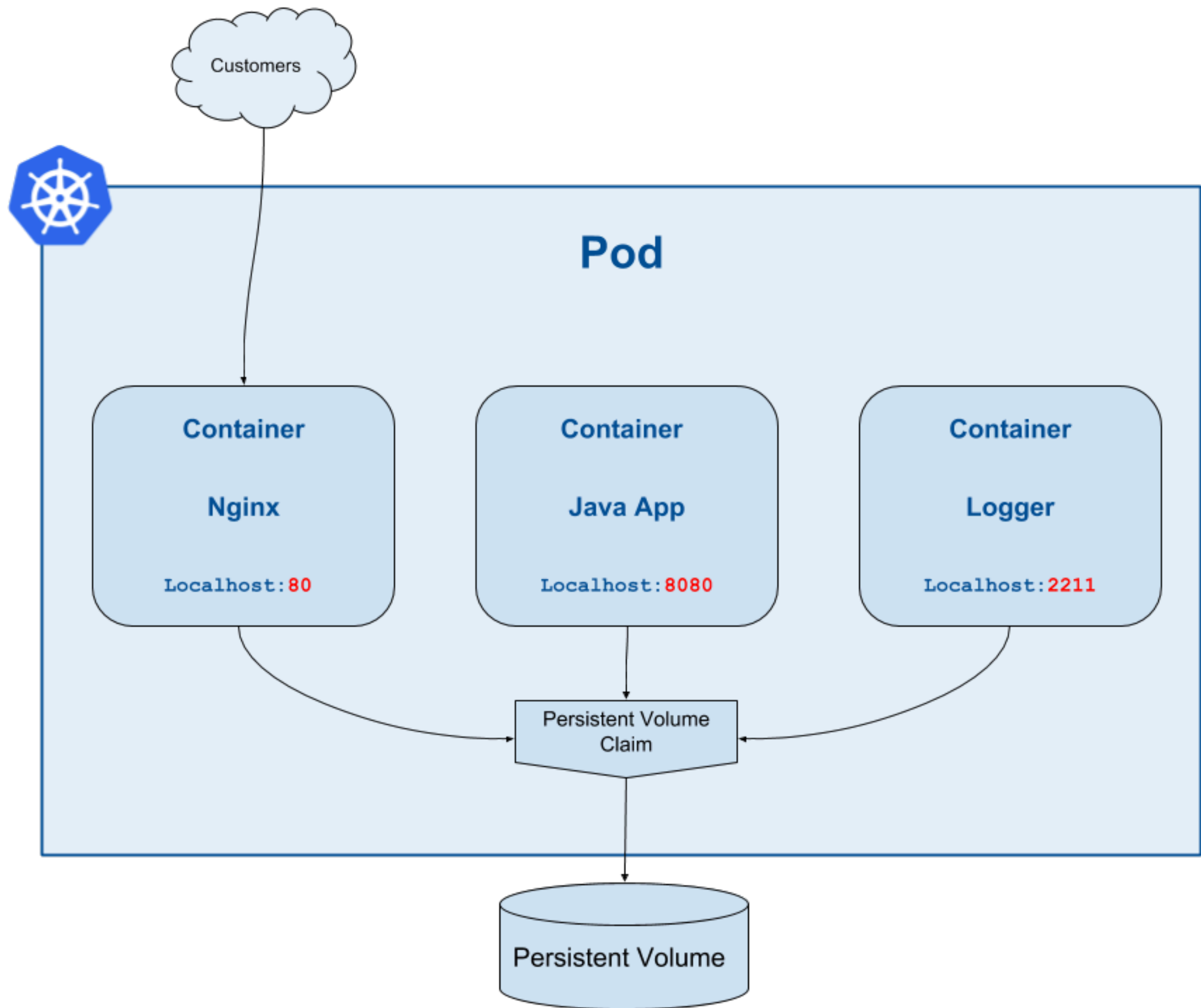
Envoy

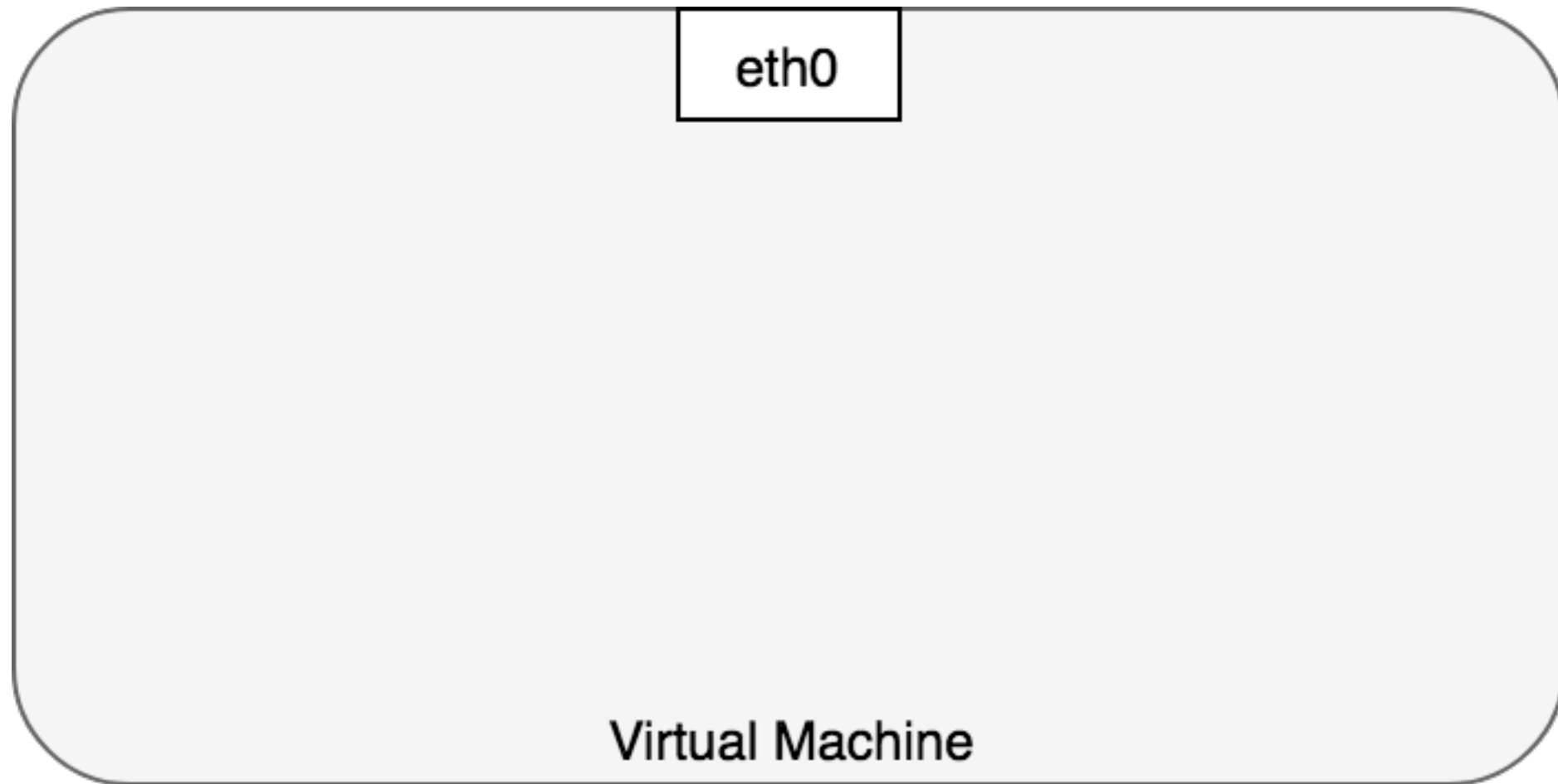


Data Plane

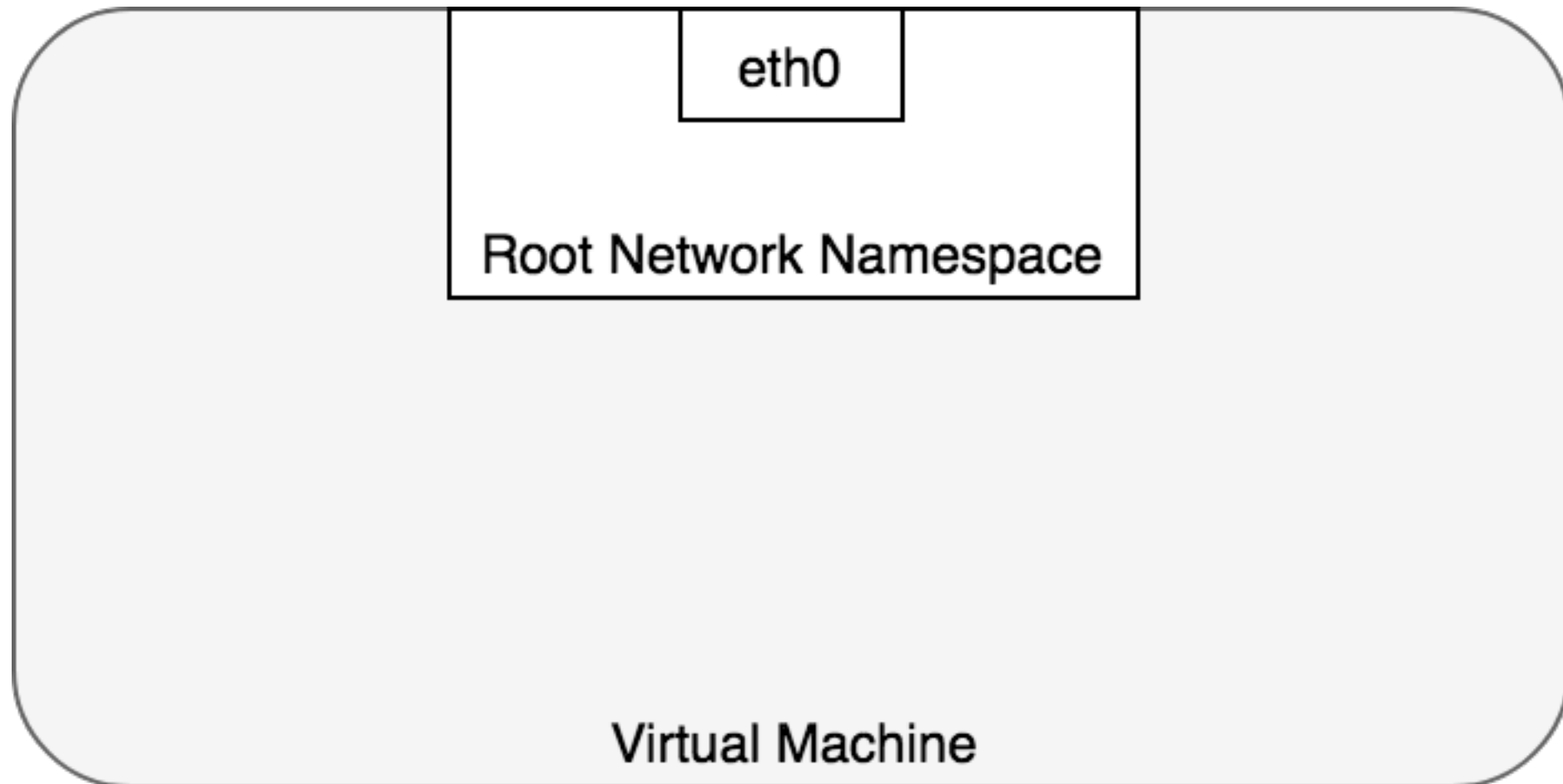






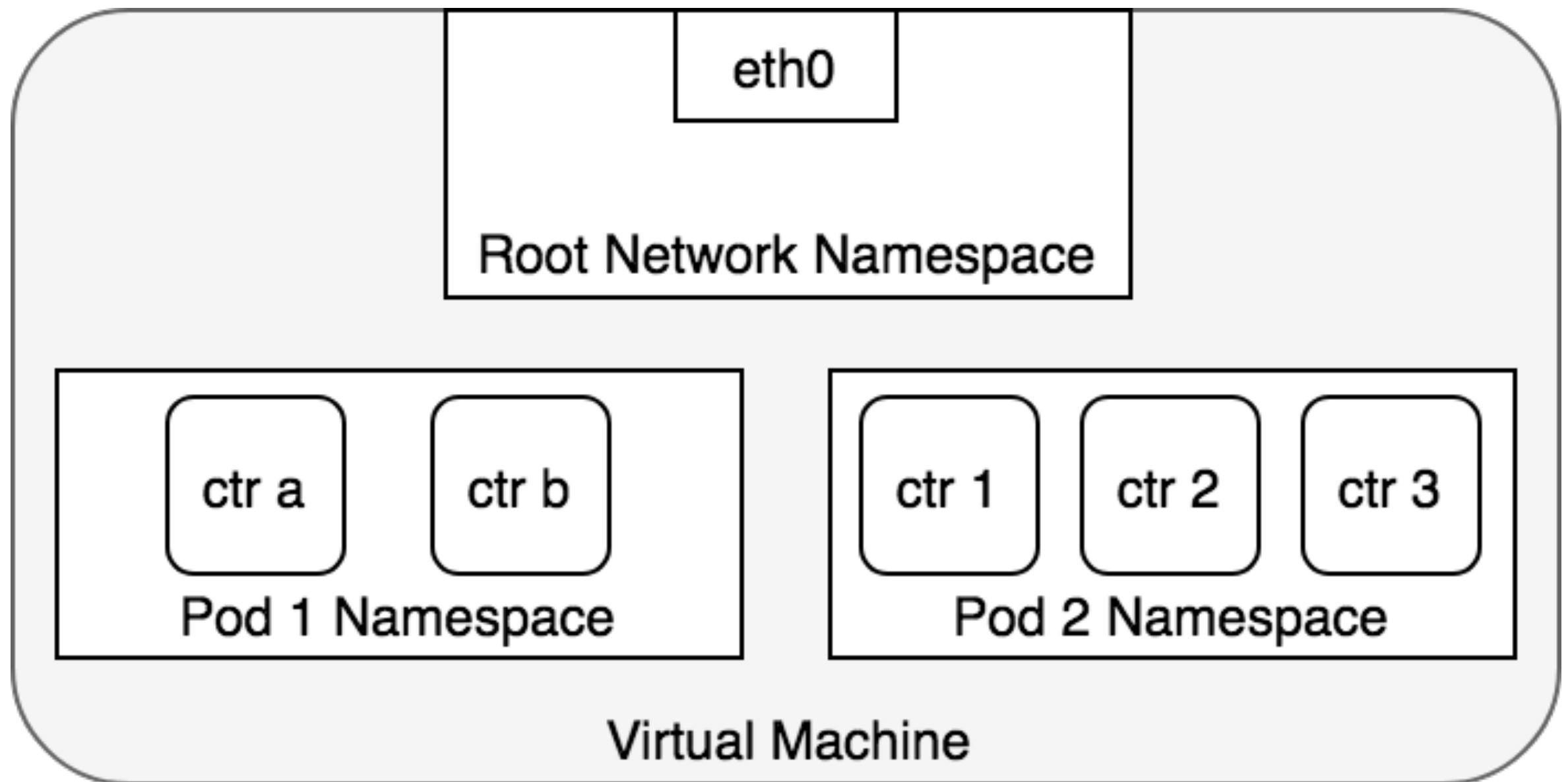


Eth0 : Ethernet device

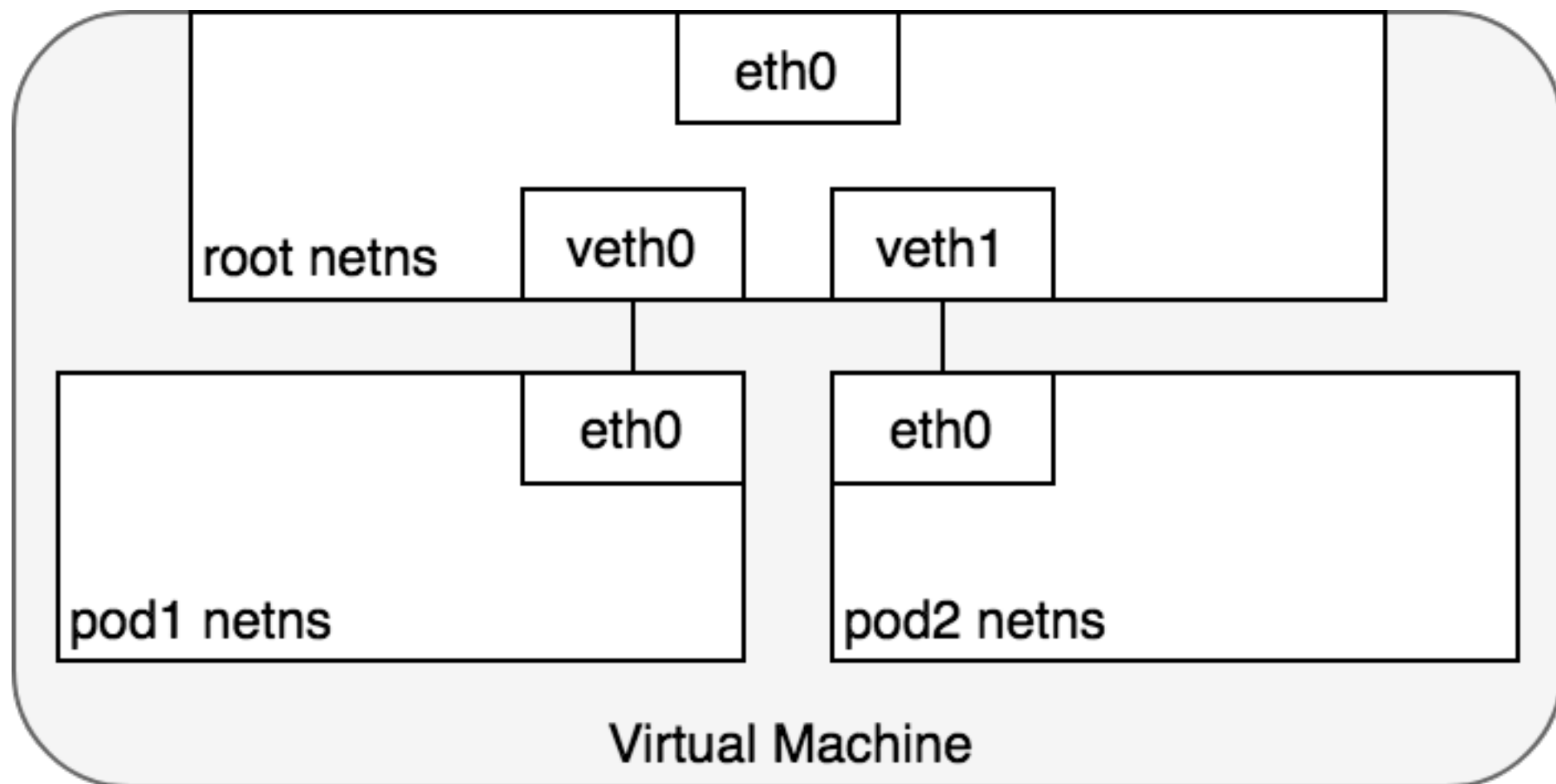


Each running process communicates within a [network namespace](#) that provides a logical networking stack with its own routes, firewall rules, and network devices. In essence, a network namespace provides a brand new network stack for all the processes within the namespace..

By default, Linux assigns every process to the root network namespace to provide access to the external world

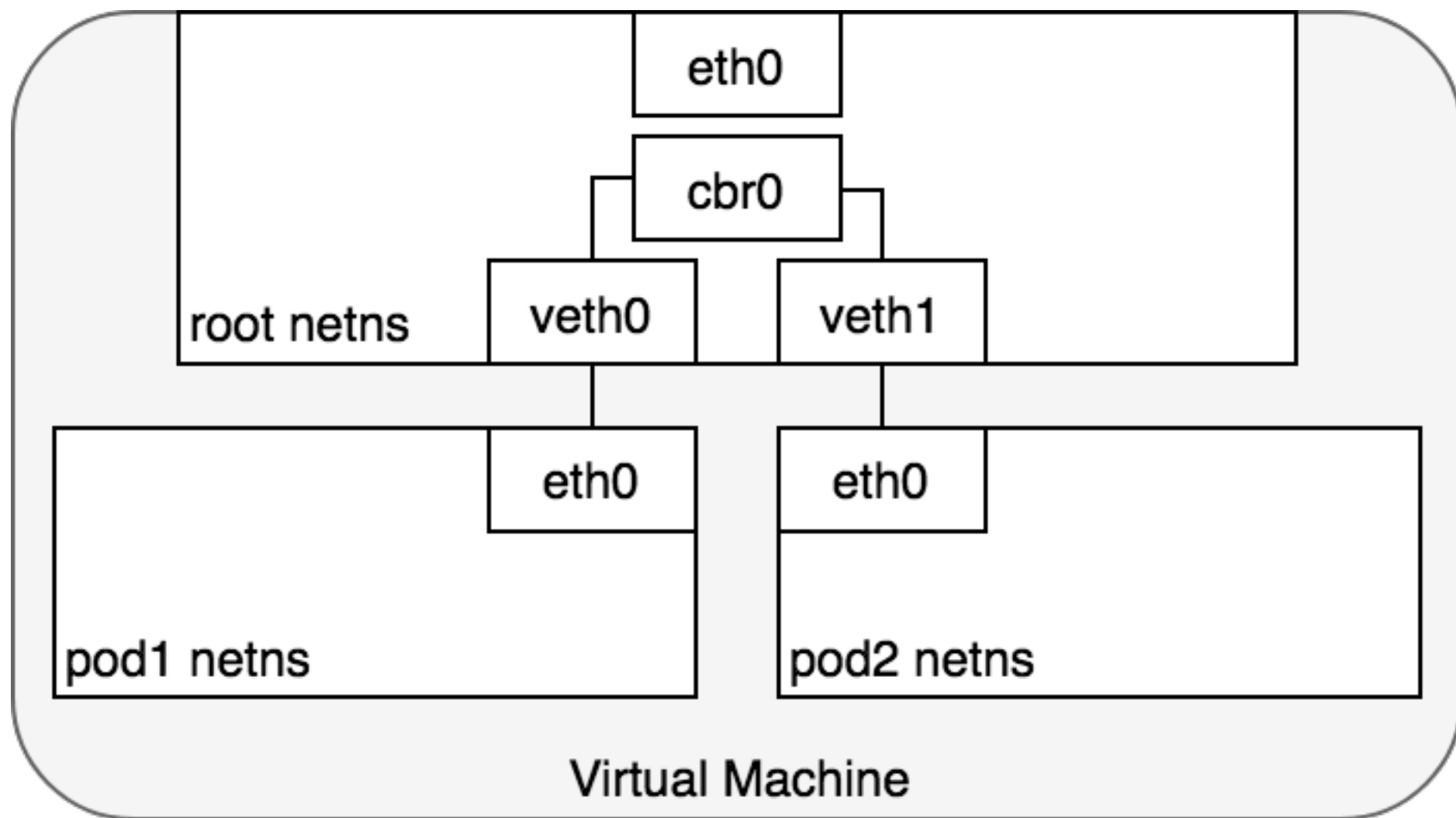


a Pod is modelled as a group of Docker containers(ctr*) that share a network namespace. Containers within a Pod all have the same IP address and port space assigned through the network namespace assigned to the Pod, and can find each other via localhost since they reside in the same namespace.



From the Pod's perspective, it exists in its own Ethernet namespace that needs to communicate with other network namespaces on the same Node.

namespaces can be connected to the root namespace using a Linux [Virtual Ethernet Device](#) or *veth pair*

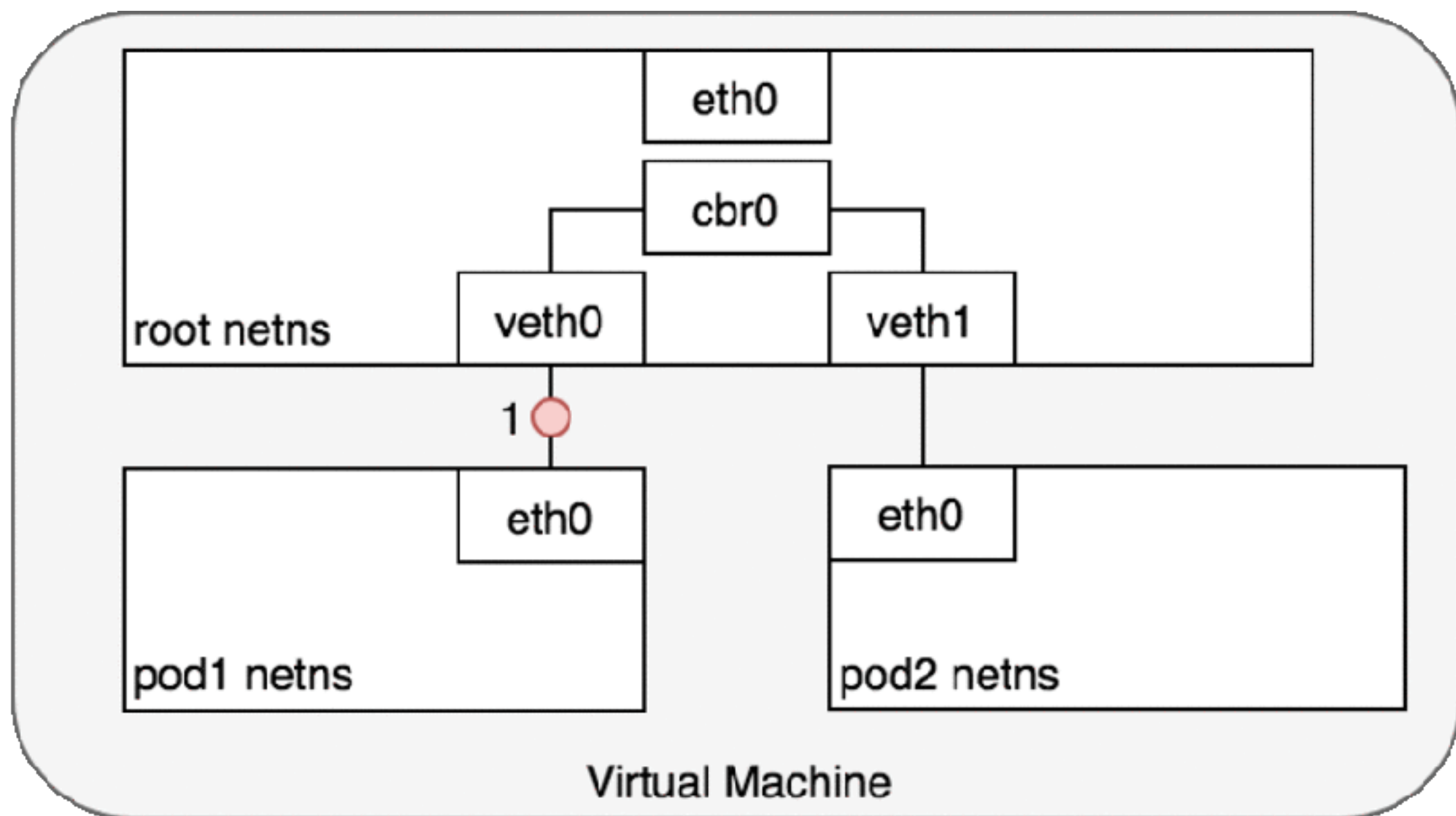


we want the Pods to talk to each other through the root namespace, and for this we use a network *bridge*.

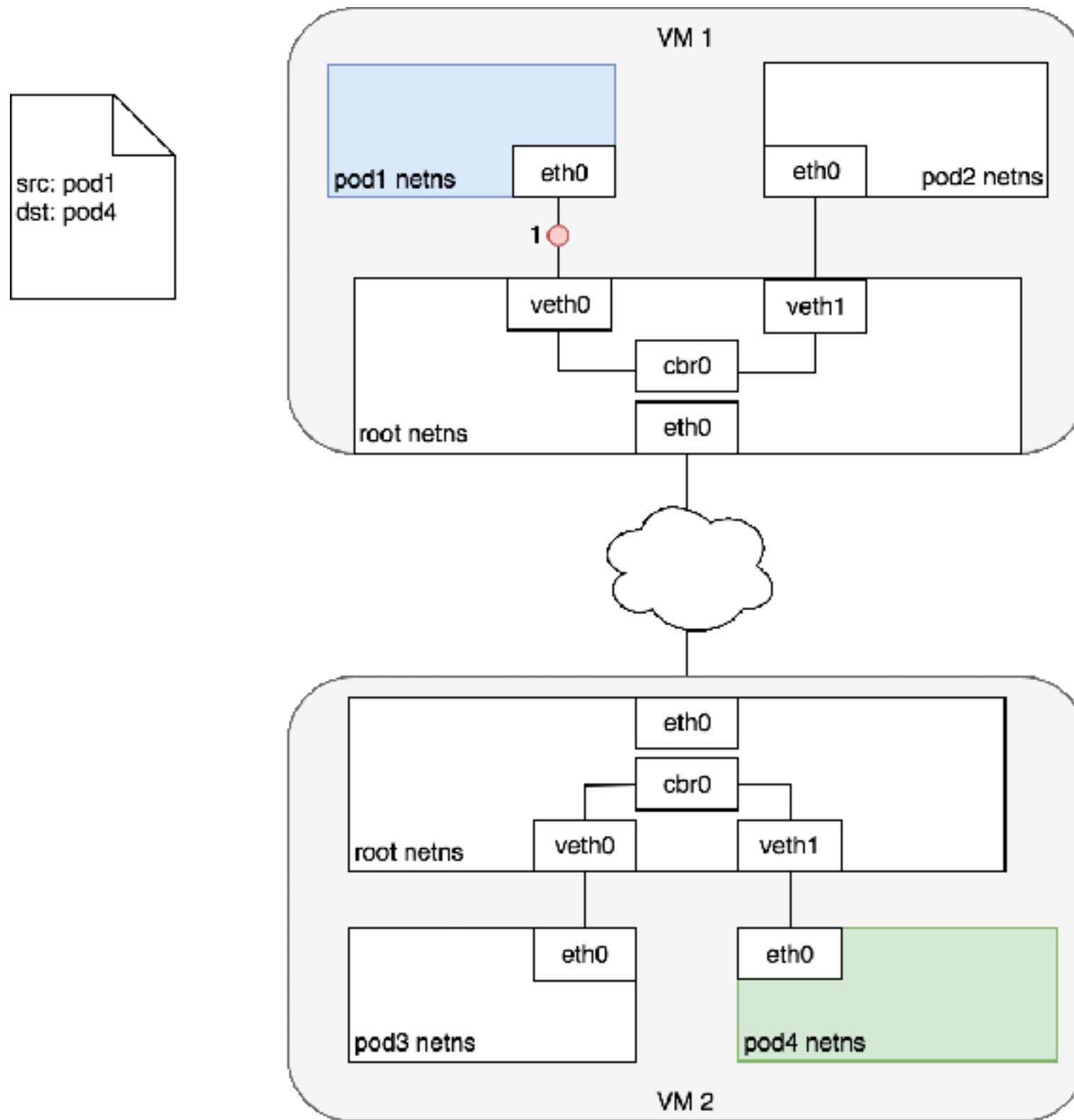
cbr: Custom bridge

The bridge operates by maintaining a forwarding table between sources and destinations by examining the destination of the data packets that travel through it and deciding whether or not to pass the packets to other network segments connected to the bridge.

src: pod1
dst: pod2



<https://sookocheff.com/post/kubernetes/understanding-kubernetes-networking-model/pod-to-pod-same-node.gif>



<https://sookocheff.com/post/kubernetes/understanding-kubernetes-networking-model/pod-to-pod-different-nodes.gif>

