



KUBERNETES FUNDAMENTALS (LFS258)

[SUPPORT](#)

[SIGN OUT](#)

SERVICES

Services

Service Types (Continued)

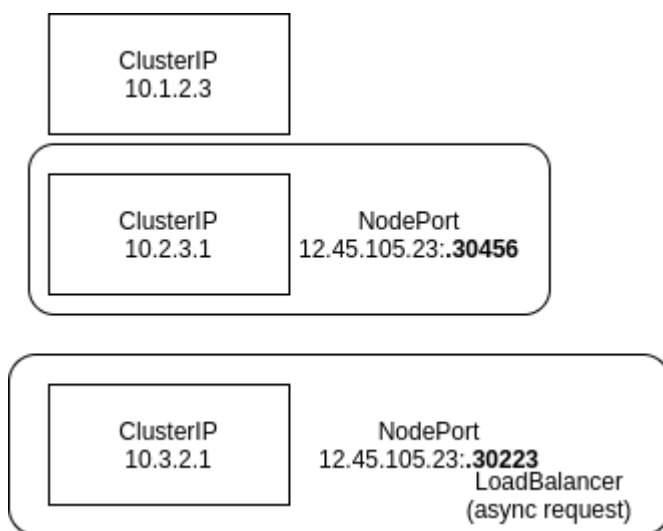
While we have talked about three services, some build upon others. A Service is an operator running inside the kube-controller-manager, which sends API calls via the kube-apiserver to the Network Plugin (such as Calico) and the kube-proxy pods running all nodes. The Service operator also creates an Endpoint operator, which queries for the ephemeral IP addresses of pods with a particular label. These agents work together to manage firewall rules using iptables or ipvs.

Take a look at the image below. The ClusterIP service configures a persistent IP address and directs traffic sent to that address to the existing pod's ephemeral addresses. This only handles inside the cluster traffic.

When a request for a NodePort is made, the operator first creates a ClusterIP. After the ClusterIP has been created, a high numbered port is determined and a firewall rule is sent out so that traffic to the high numbered port on any node will be sent to the persistent IP, which then will be sent to the pod(s).

A LoadBalancer does not create a load balancer. Instead, it creates a NodePort and makes an async request to use a load balancer. If a listener sees the request, as found when using public cloud providers, one would be created. Otherwise, the status will remain *Pending* as no load balancer has responded to the API call.

An ingress controller is a microservice running in a pod, listening to a high port on whichever node the pod may be running, which will send traffic to a Service based on the URL requested. It is not a built-in service, but is often used with services to centralize traffic to services. More on an ingress controller is found in a future chapter.



Built-In Services

