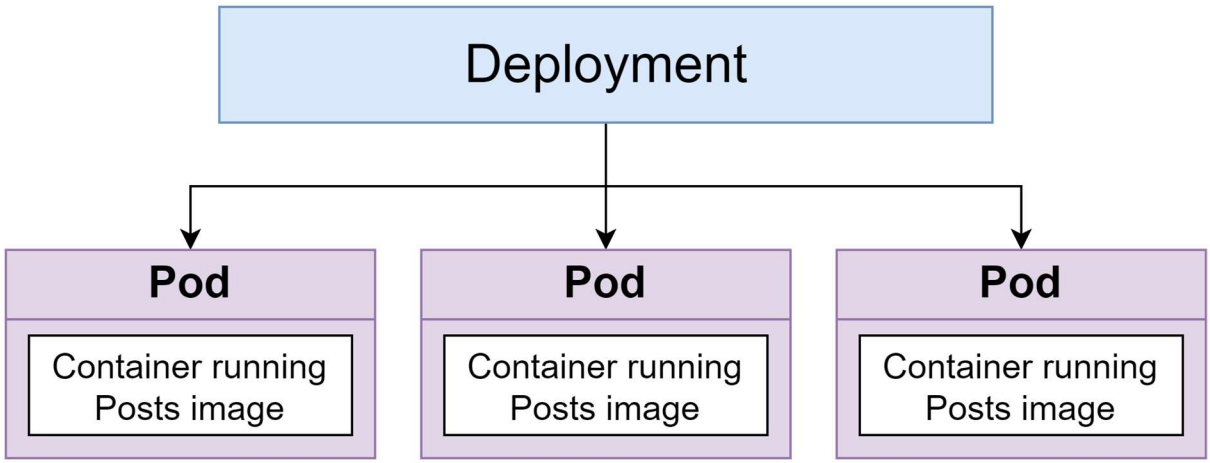
Kubernetes

Kubernetes Cluster	A collections of nodes + a master to manage them
Node	A virtual machine that will run our containers
Pod	*More or less* a running container. Technically, a pod can run multiple containers (we won't do this)
Deployment	Monitors a set of pods, make sure they are running and restarts them if they crash
Service	Provides an easy-to-remember URL to access a running container

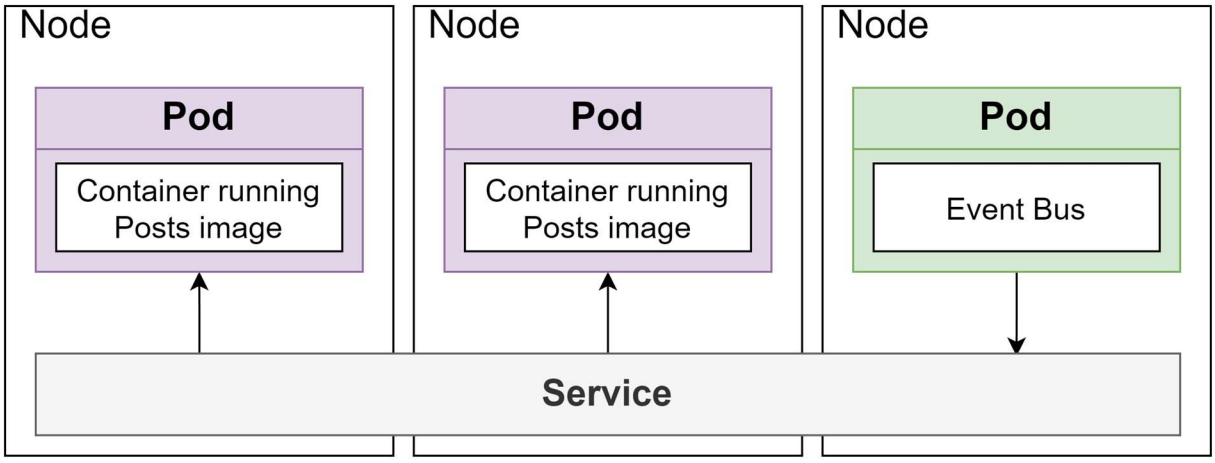
Docker World	K8s World	
docker ps	kubectl get pods	Print out information about all of the running pods
docker exec -it **[container id] [cmd]**	kubectl exec -it **[pod_name] [cmd]**	Execute the given command in a running pod
docker logs **[container id]**	kubectl logs **[pod_name]**	Print out logs from the given pod
	kubectl delete pod **[pod_name]**	Deletes the given pod
	kubectl apply -f **[config file name]**	Tells kubernetes to process the config
	kubectl describe pod **[pod_name]**	Print out some information about the running pod



Deployment Commands

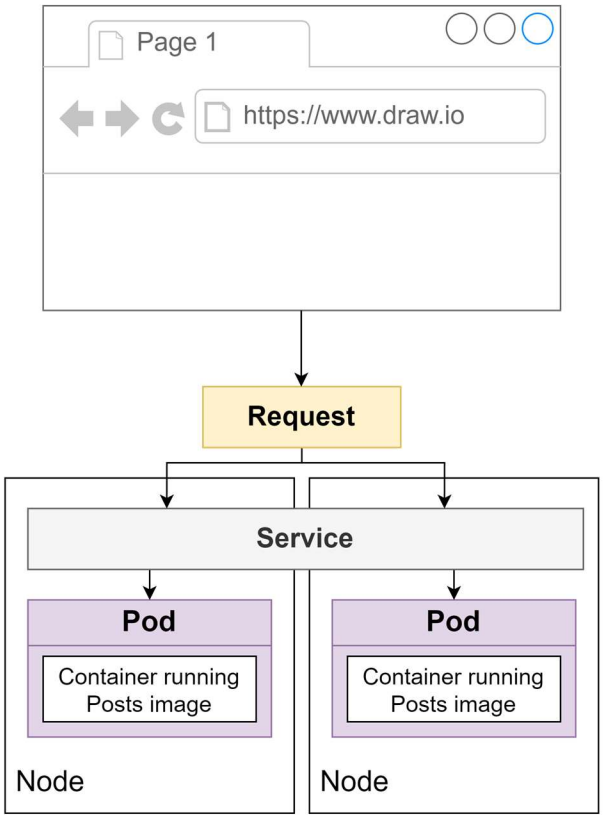
kubectl get deployments	List all the running deployments
kubectl describe deployment **[depl name]**	Print out details about a specific deployment
kubectl apply -f **[config file name]**	Create a deployment out of a config file
kubectl delete deployment **[depl_name]**	Delete a deployment
kubectl rollout restart deployment **[depl_name]**	Get a deployment to restart all pods. Will use latest version of an image *if* the pod spec has a tag of 'latest'

Services

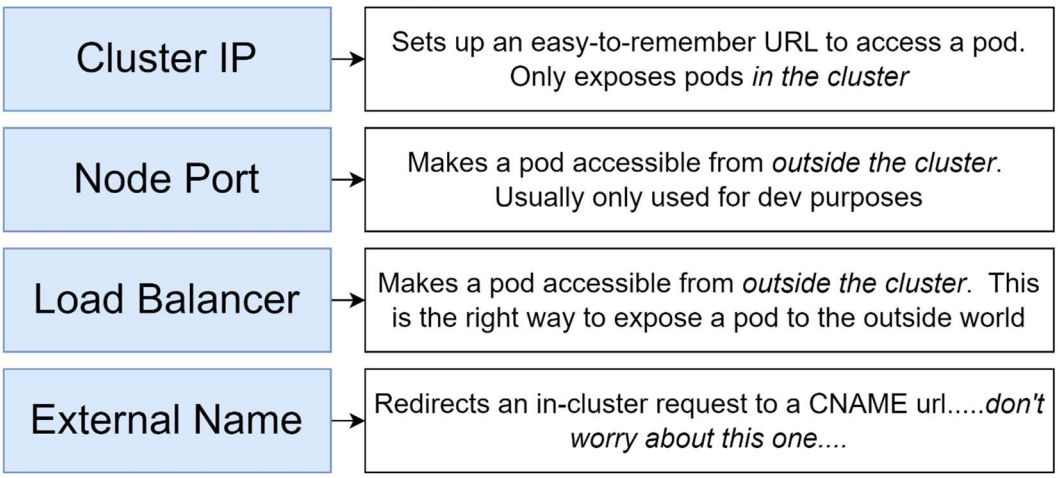


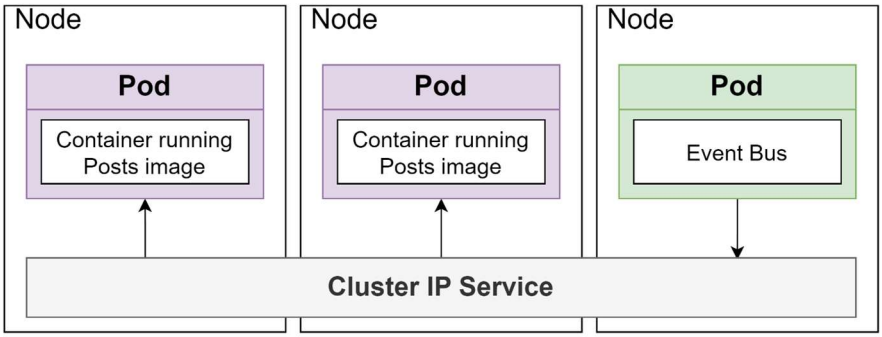
Services provide networking *between* pods....

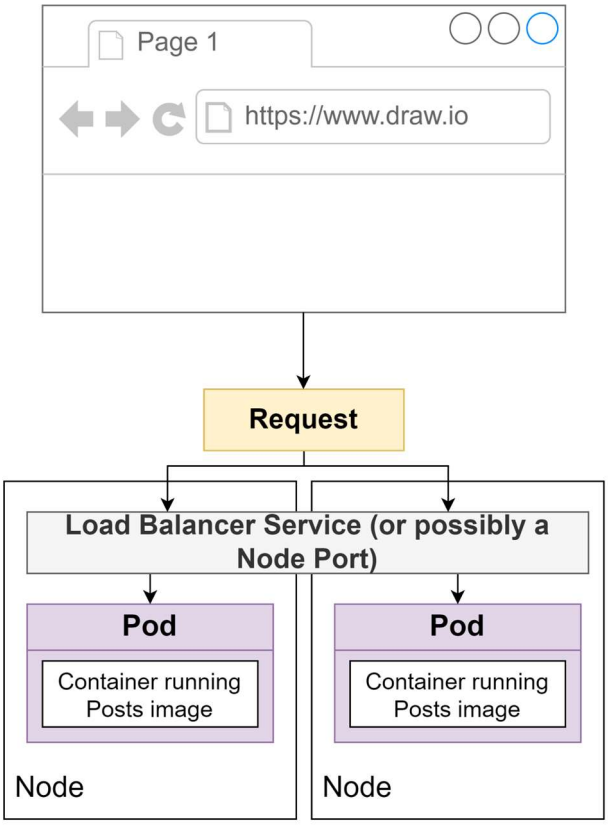
....and from the outside world to a pod

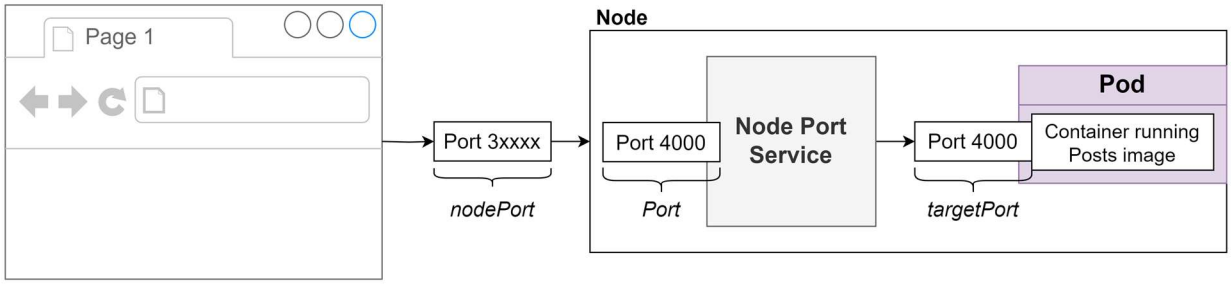


Types of Services

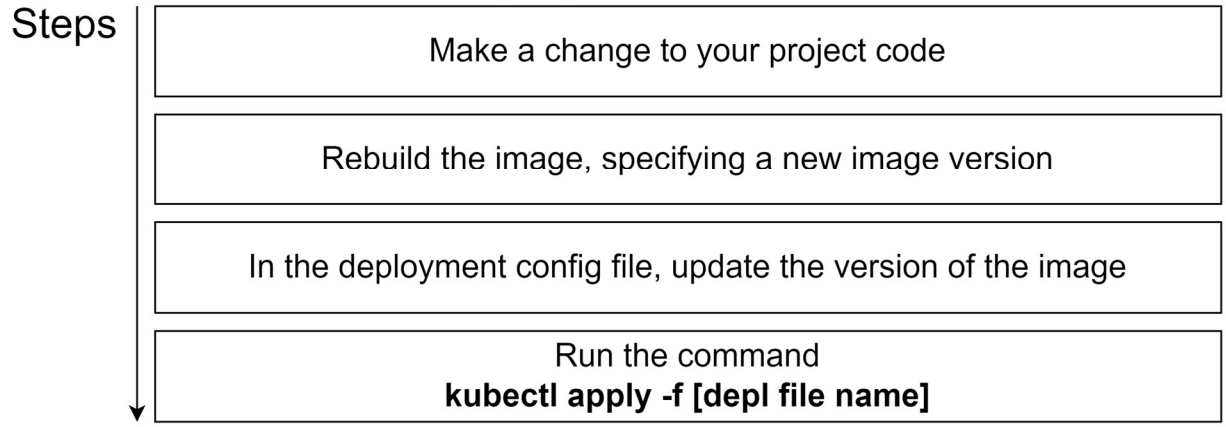



Node
Node
Node
Pod
Container running Posts image
Pod
Container running Posts image
Pod
Event Bus
Cluster IP Service


Page 1
https://www.draw.io
Request
Load Balancer Service (or possibly a Node Port)
Pod
Container running Posts image
Pod
Container running Posts image
Node
Node


Page 1
Port 3xxxx
nodePort
Node
Port 4000
Port
Node Port Service
Port 4000
targetPort
Pod
Container running Posts image

Updating the Image Used By a Deployment - Method #1



Updating the Image Used By a Deployment - Method #2