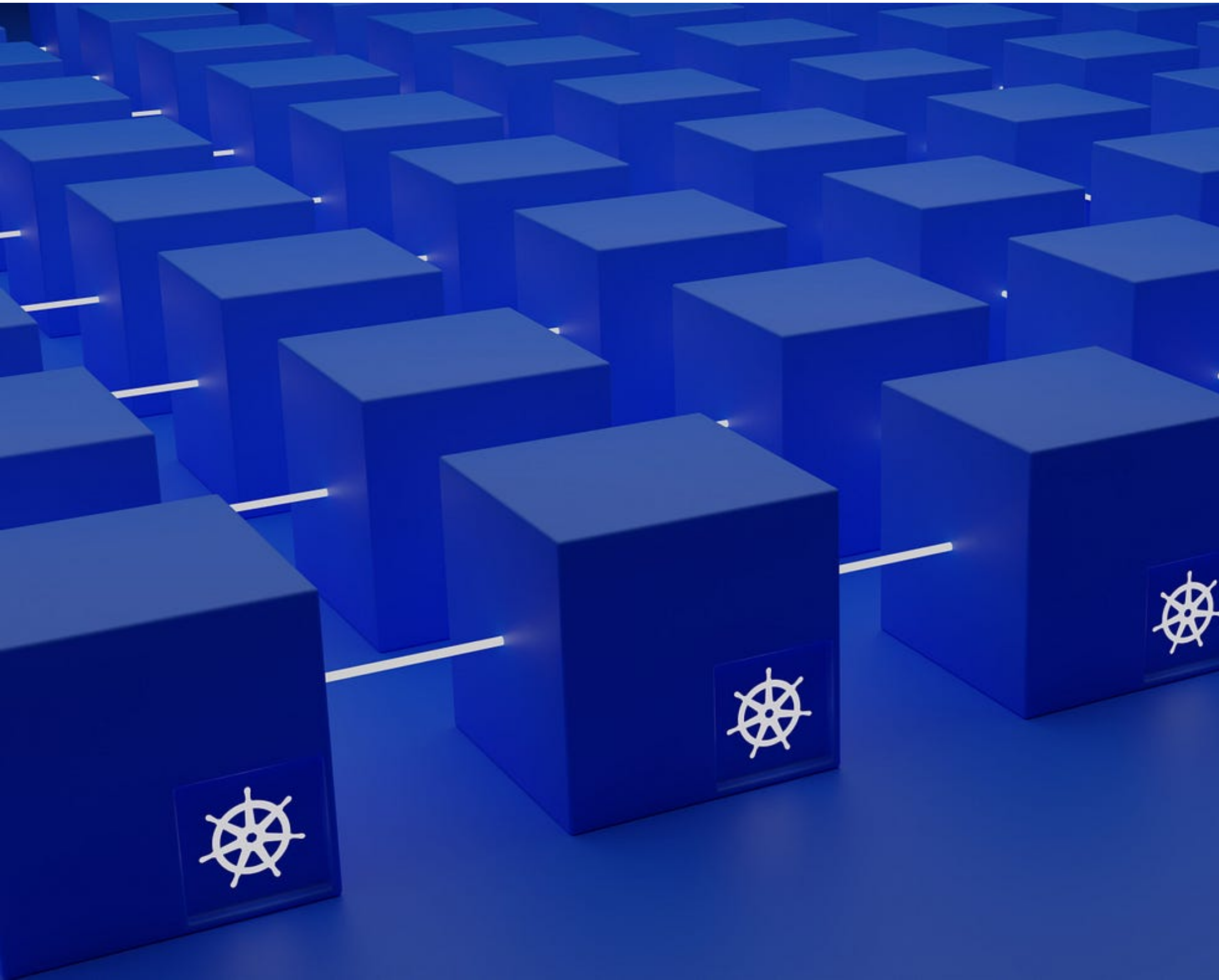


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Kubernetes (K8s)

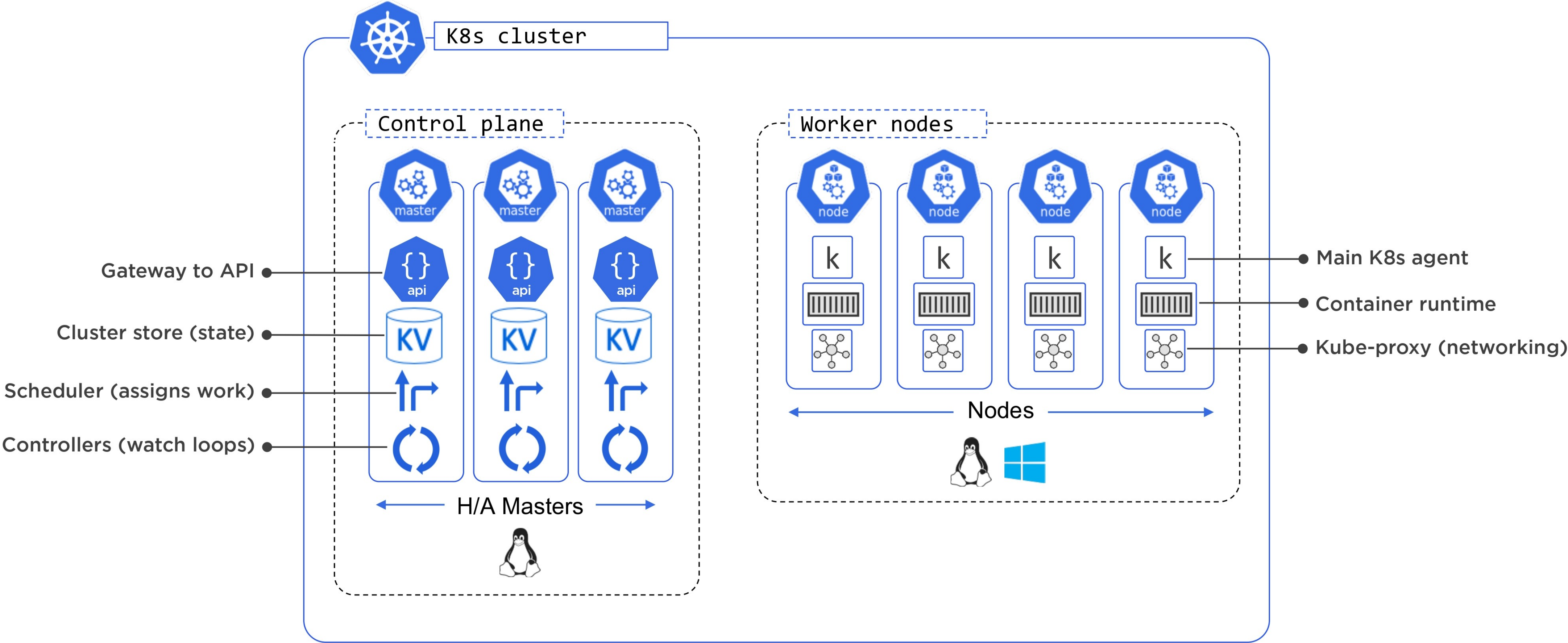
Structure

1. What is Kubernetes
2. Kubernetes Architecture
 1. Master
 2. Nodes & Pods
 3. Services
3. Kubernetes Deployments
4. Difference to Swarm
5. Kubernetes Demo

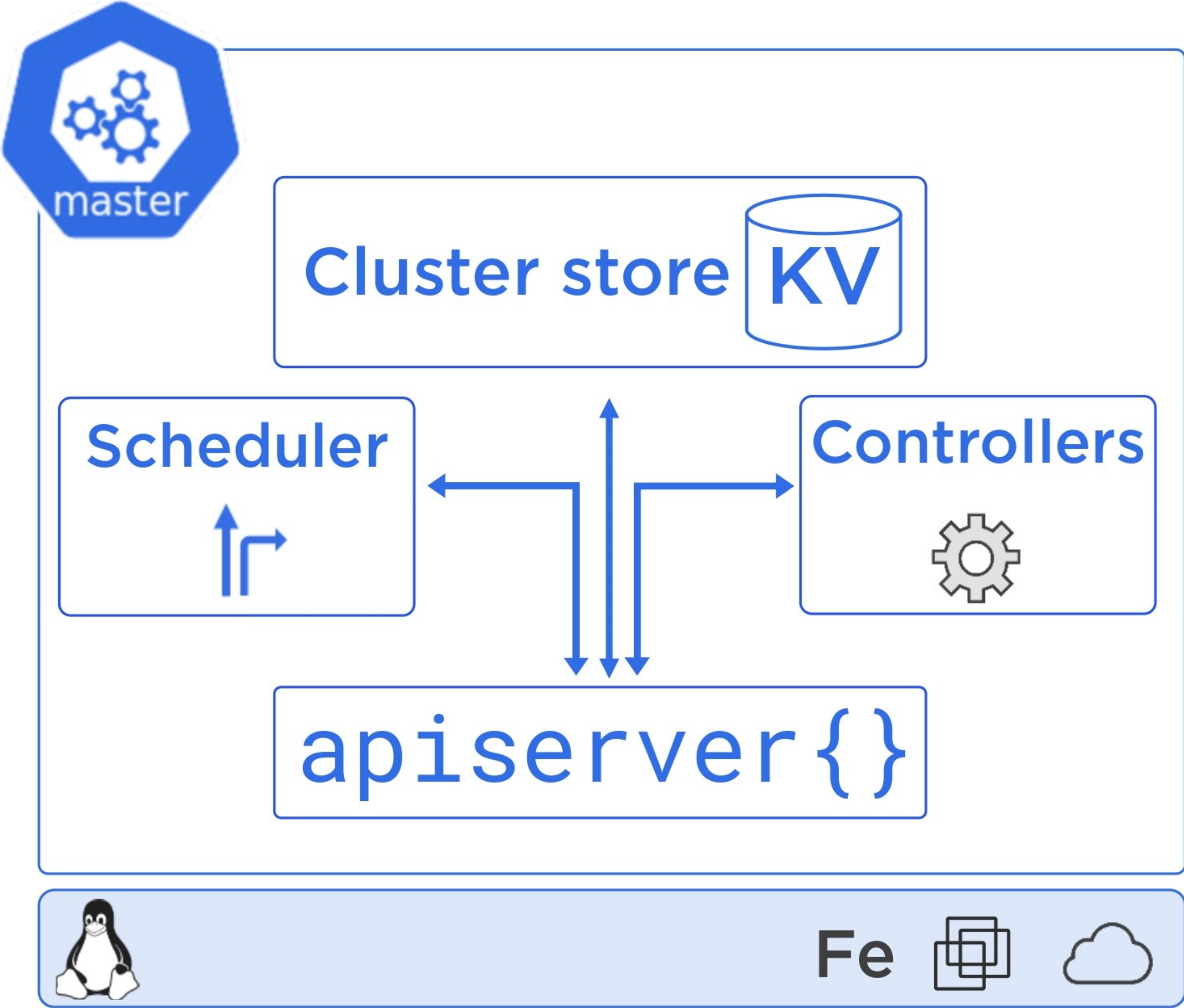
What is Kubernetes

- developed by Google in 2014
- open source project at the beginning
- transition from legacy-virtual based application to containerized application
- handle execution and orchestrating containers

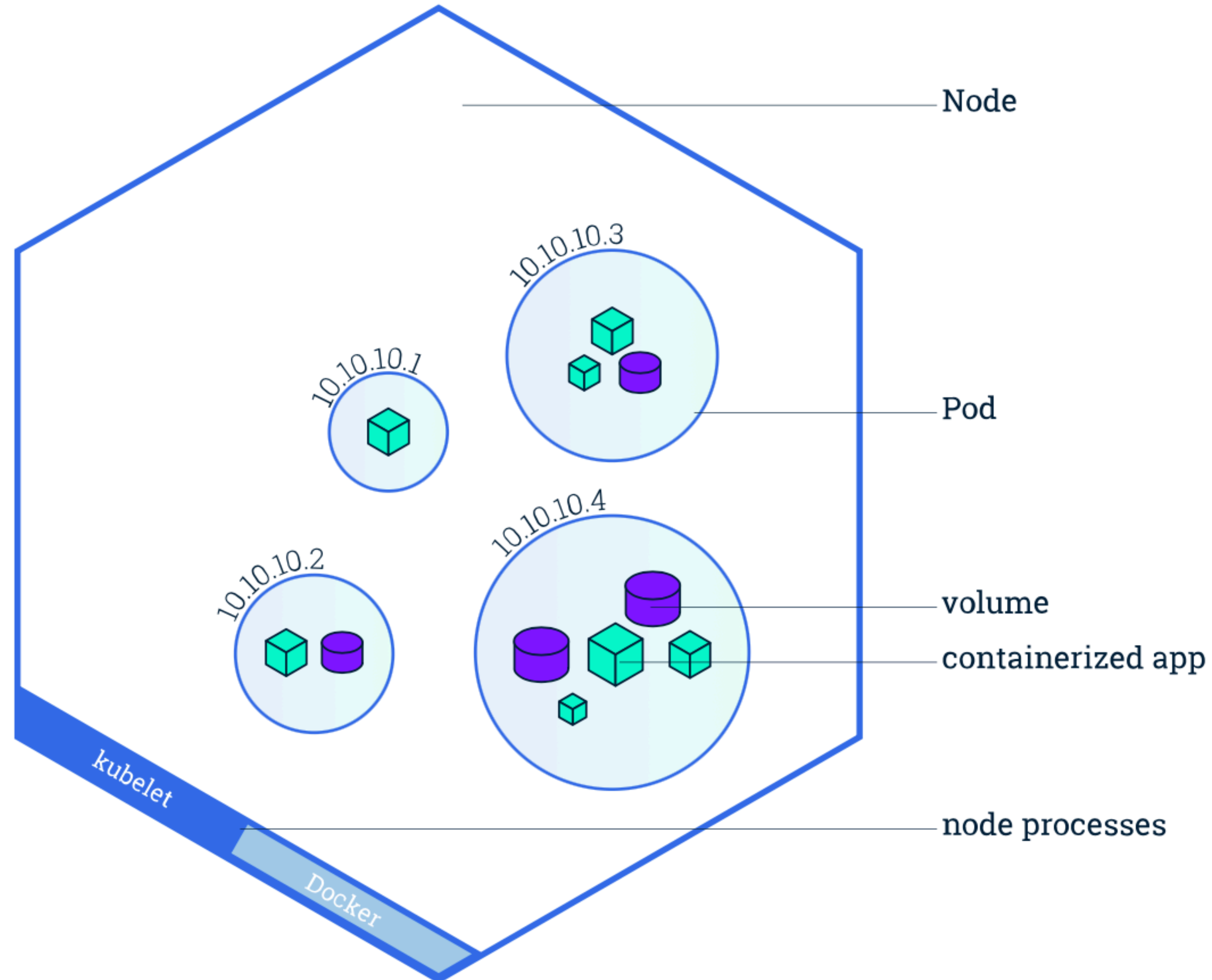
Kubernetes Architecture



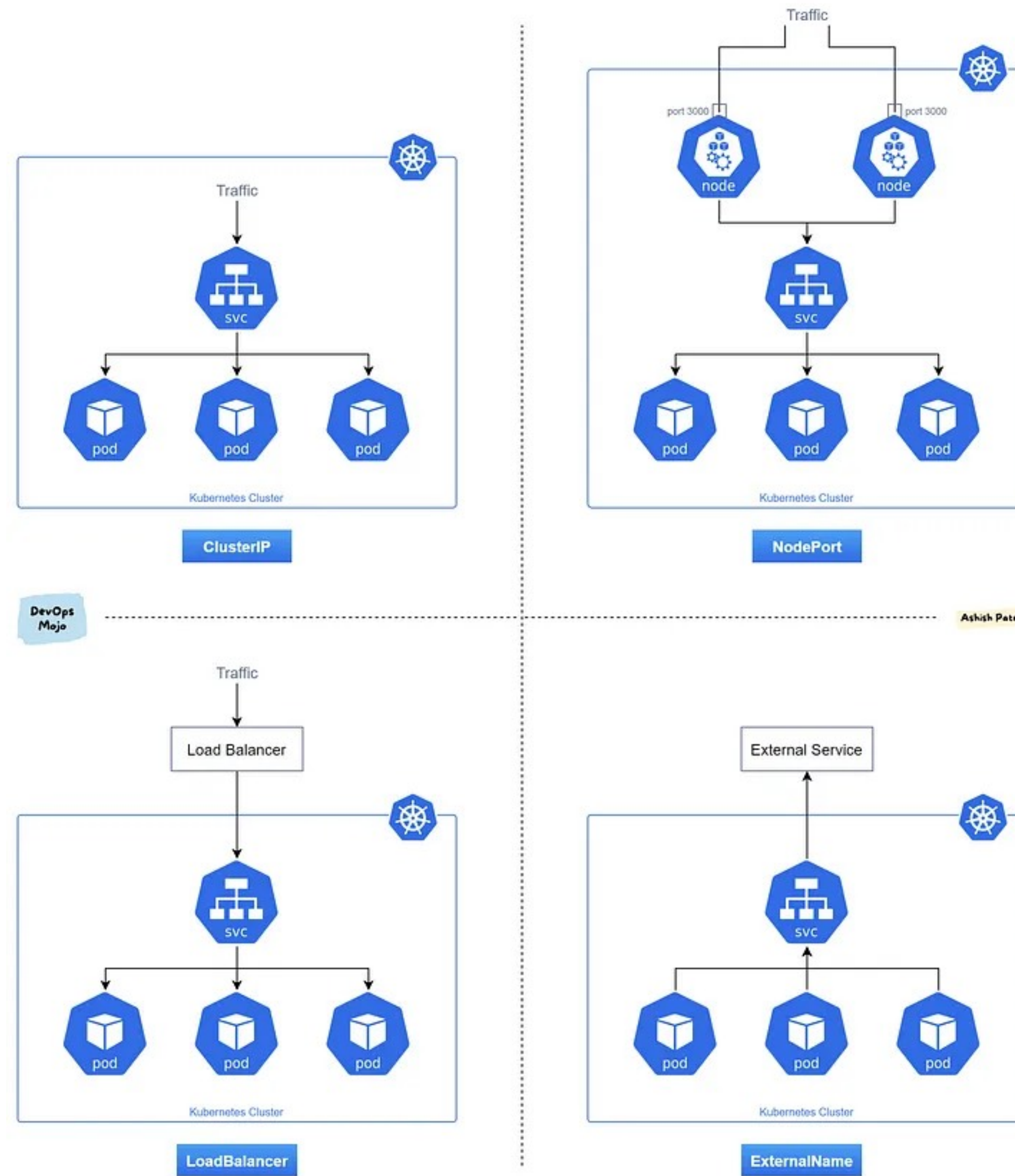
Kubernetes Architecture: Master



Kubernetes Architecture: Node & Pods

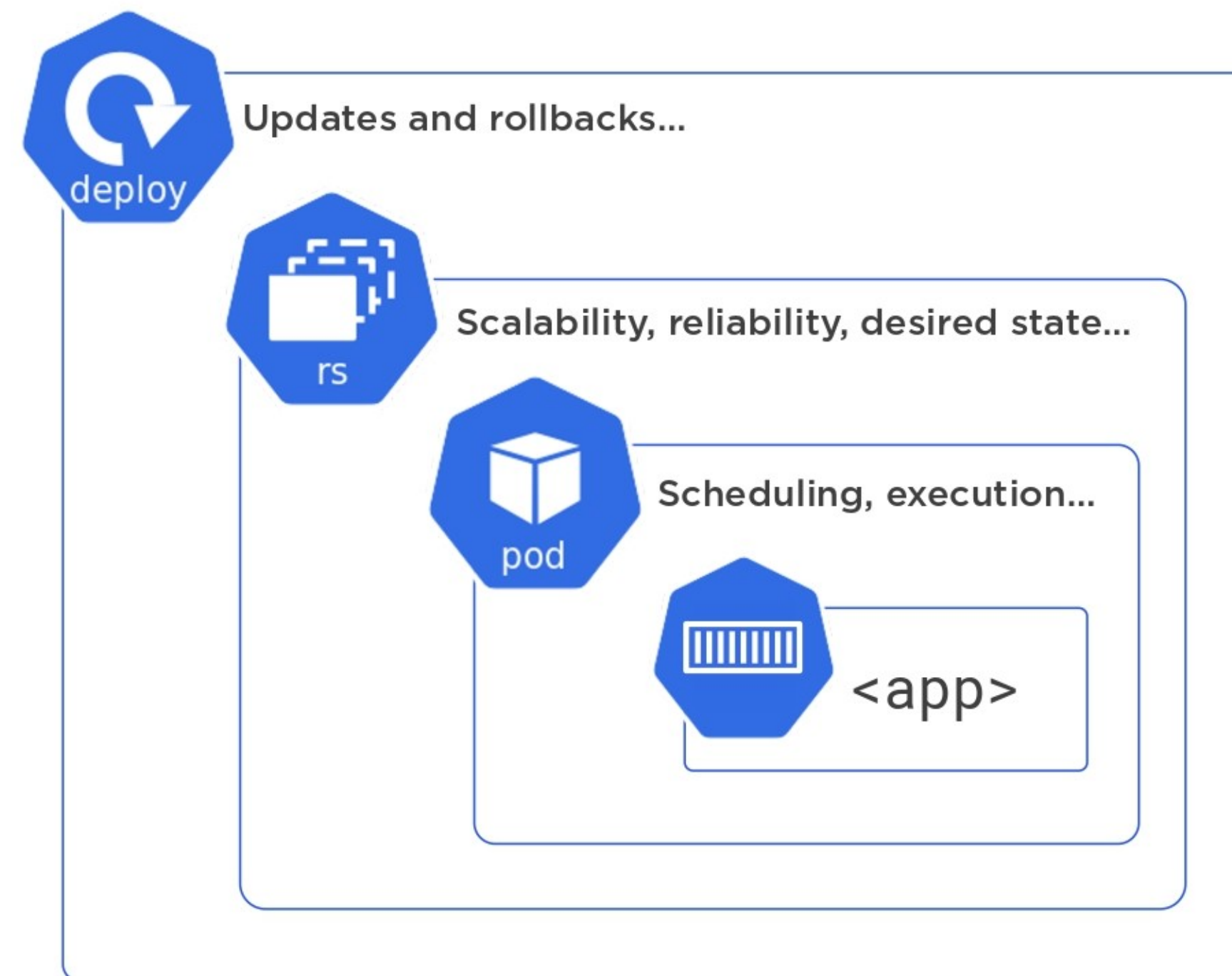


Kubernetes Architecture: Service



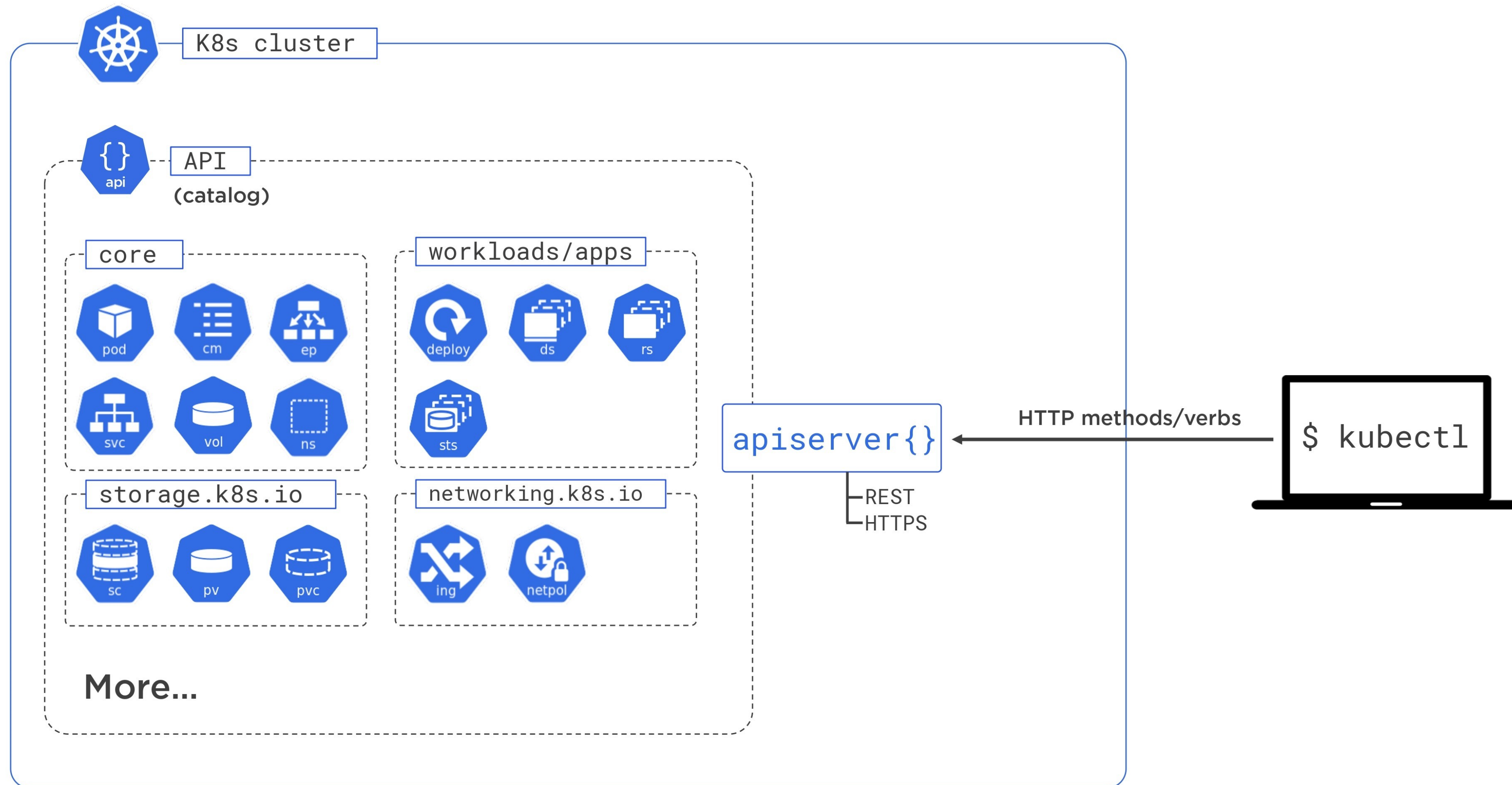
Kubernetes Deployment

- ReplicaSets
- Update and Rollback



Kubernetes Demo

Kubernetes Architecture: API & API Server



Kubernetes Architecture

- master nodes/control plane - scheduling, brain of k8s, key component -> api server (), cluster store, controller manager, scheduler
- worker nodes - running application, core -> kubelet, container runtime, kube-proxy
- pods - shared execution environment, atomic unit
- api & api server

Difference to Swarm

- major difference between the platforms is based on complexity
- Installation process
- Load balancing
- Monitoring
- Scalability

