

01-namespace

Namespace What it is Namespace is a logical isolation boundary inside a cluster. It separates resources, policies, and quotas for teams or environments. When to use Multi-team clusters (team-a, team-b) Environment separation (dev, stage, prod) Applying ResourceQuota, LimitRange, and RBAC per boundary Key fields `metadata.name: namespace name` `metadata.labels: grouping and policy selectors` Common commands `bash` `kubectl get ns` `kubectl create namespace payments` `kubectl label namespace payments owner=platform env=prod` `kubectl config set-context --current --namespace=payments` `kubectl get all -n payments` `kubectl delete namespace payments` YAML example `yaml` `apiVersion: v1` `kind: Namespace` `metadata: name: payments` `labels: owner: platform env: prod` Practical notes Most namespaced objects (Pods, Deployments, Services) must live in a namespace. Cluster-wide objects (Nodes, PVs, StorageClasses) are not namespaced. Namespace deletion is asynchronous and removes all namespaced objects in it.