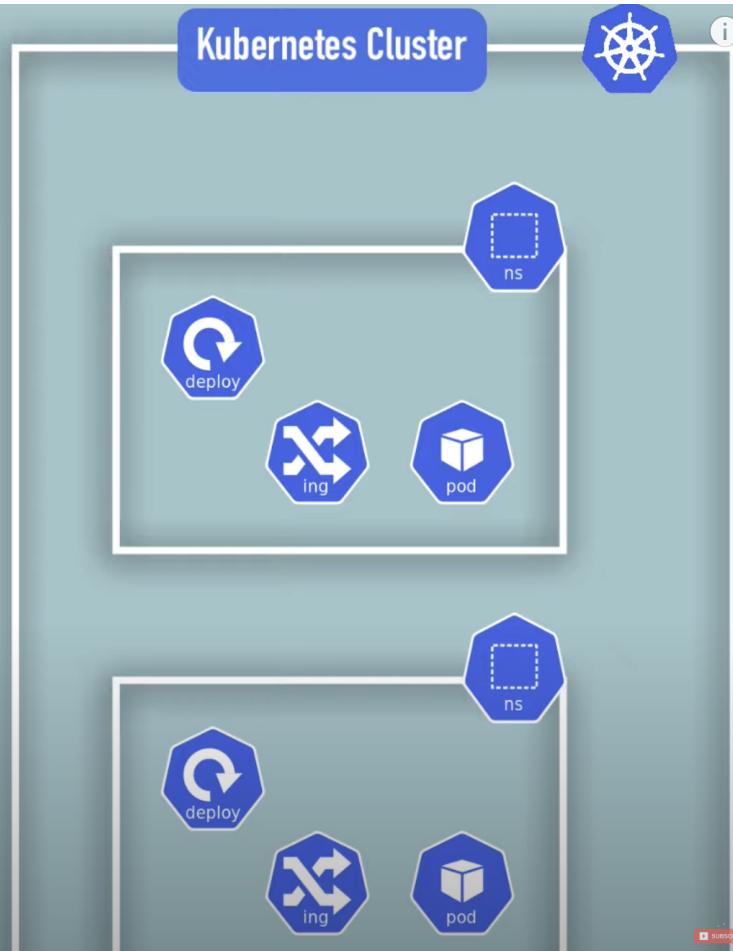


# K8 Namespace



## What is a Namespace?

- Organise resources in namespaces
- Virtual cluster inside a cluster



```
[TEST-k8s-configuration]$ kubectl get namespace
NAME                      STATUS   AGE
default                   Active   6d2h
kube-node-lease           Active   6d2h
kube-public               Active   6d2h
kube-system               Active   6d2h
kubernetes-dashboard     Active   2m20s
[TEST-k8s-configuration]$ █
```



# Everything in one Namespace



Kubernetes Cluster



default

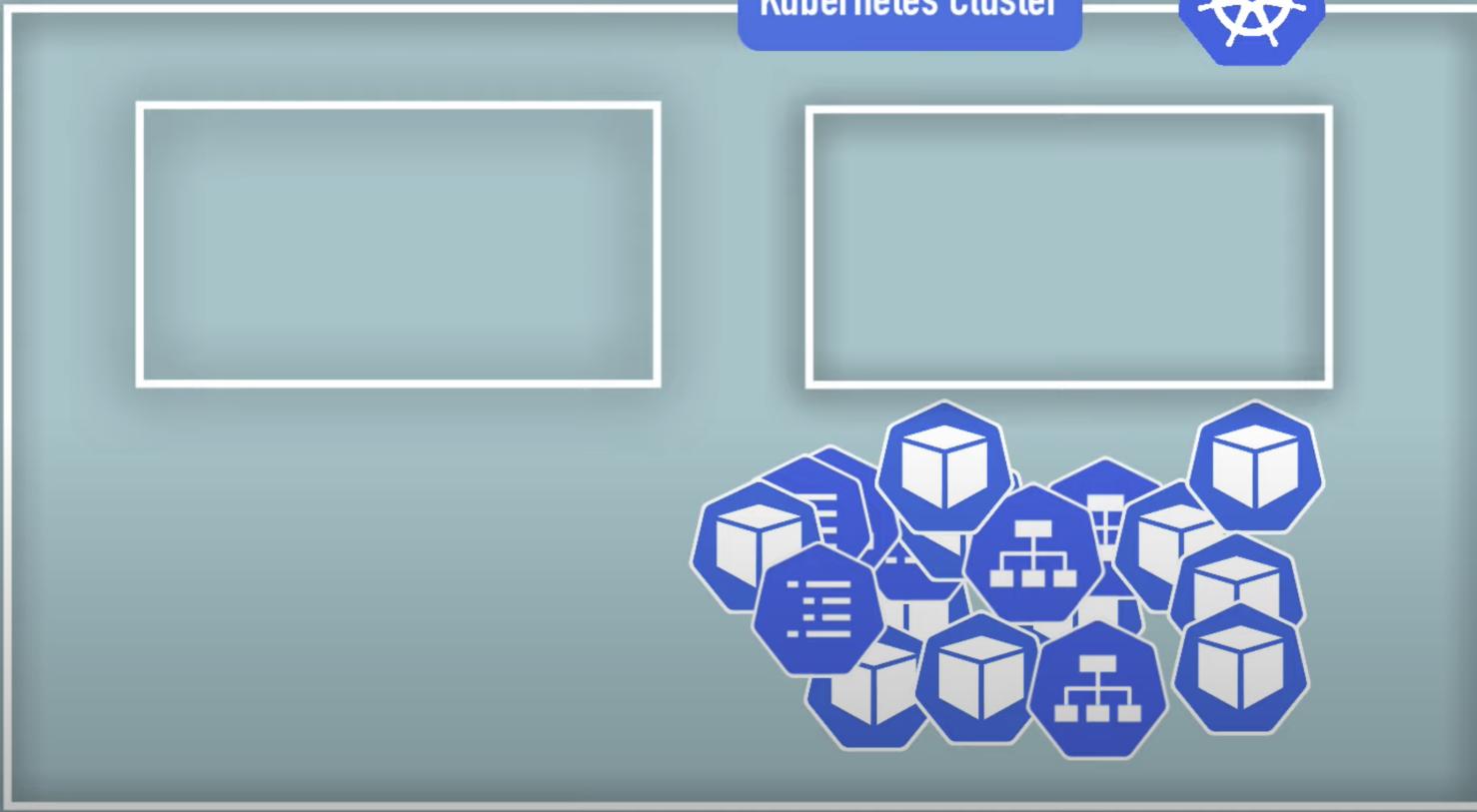


cker

## Resources grouped in Namespaces



Kubernetes Cluster



# Kubernetes Cluster



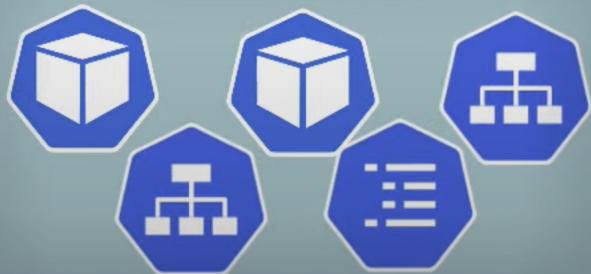
## Database



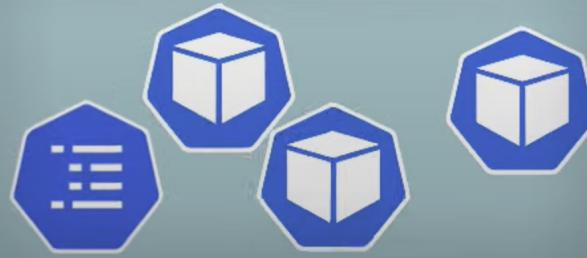
## Monitoring



## Elastic Stack

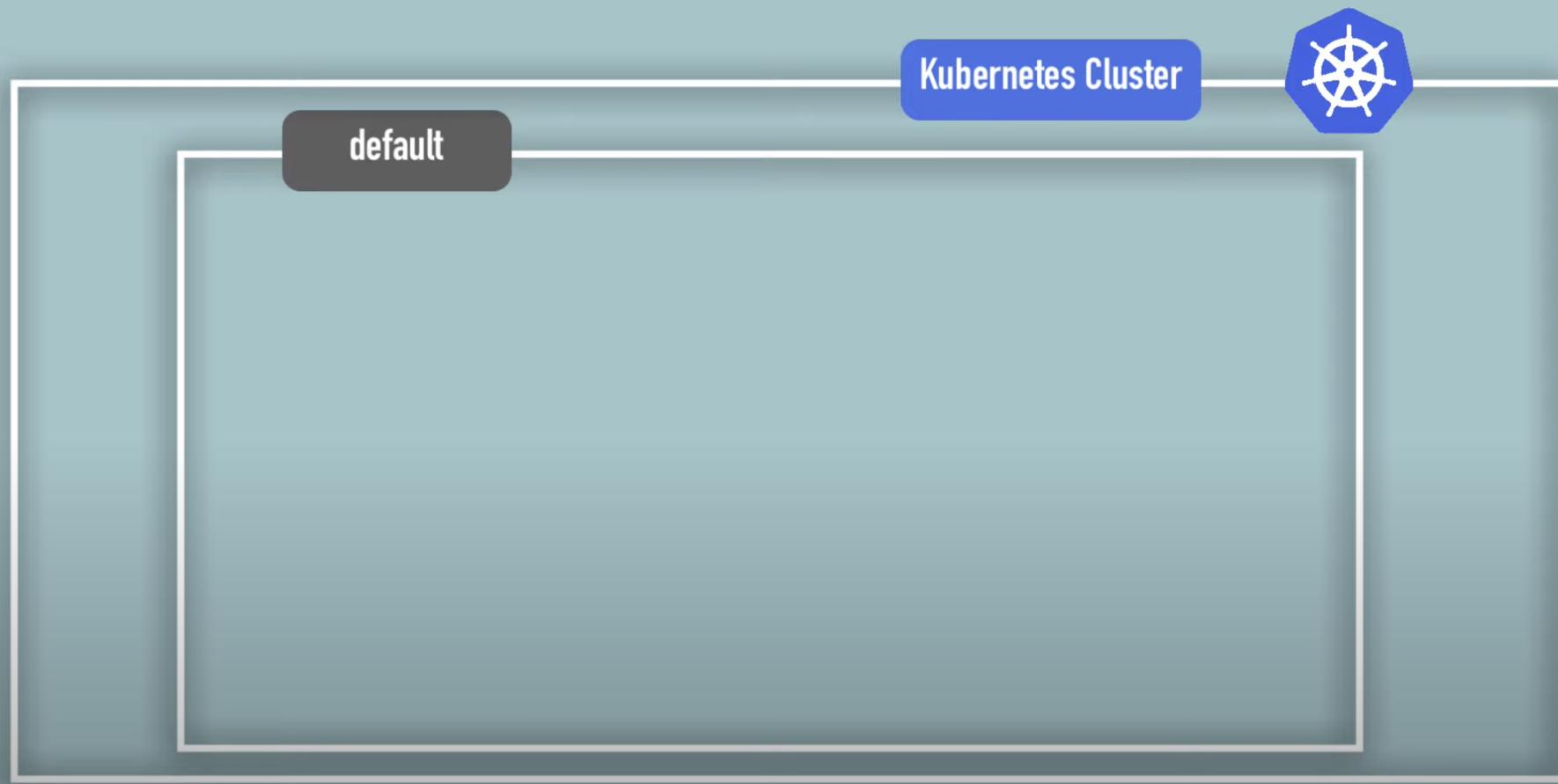


## Nginx-Ingress



2.

## Conflicts: Many teams, same application



2.

## Conflicts: Many teams, same application



Kubernetes Cluster



default



my-app deployment

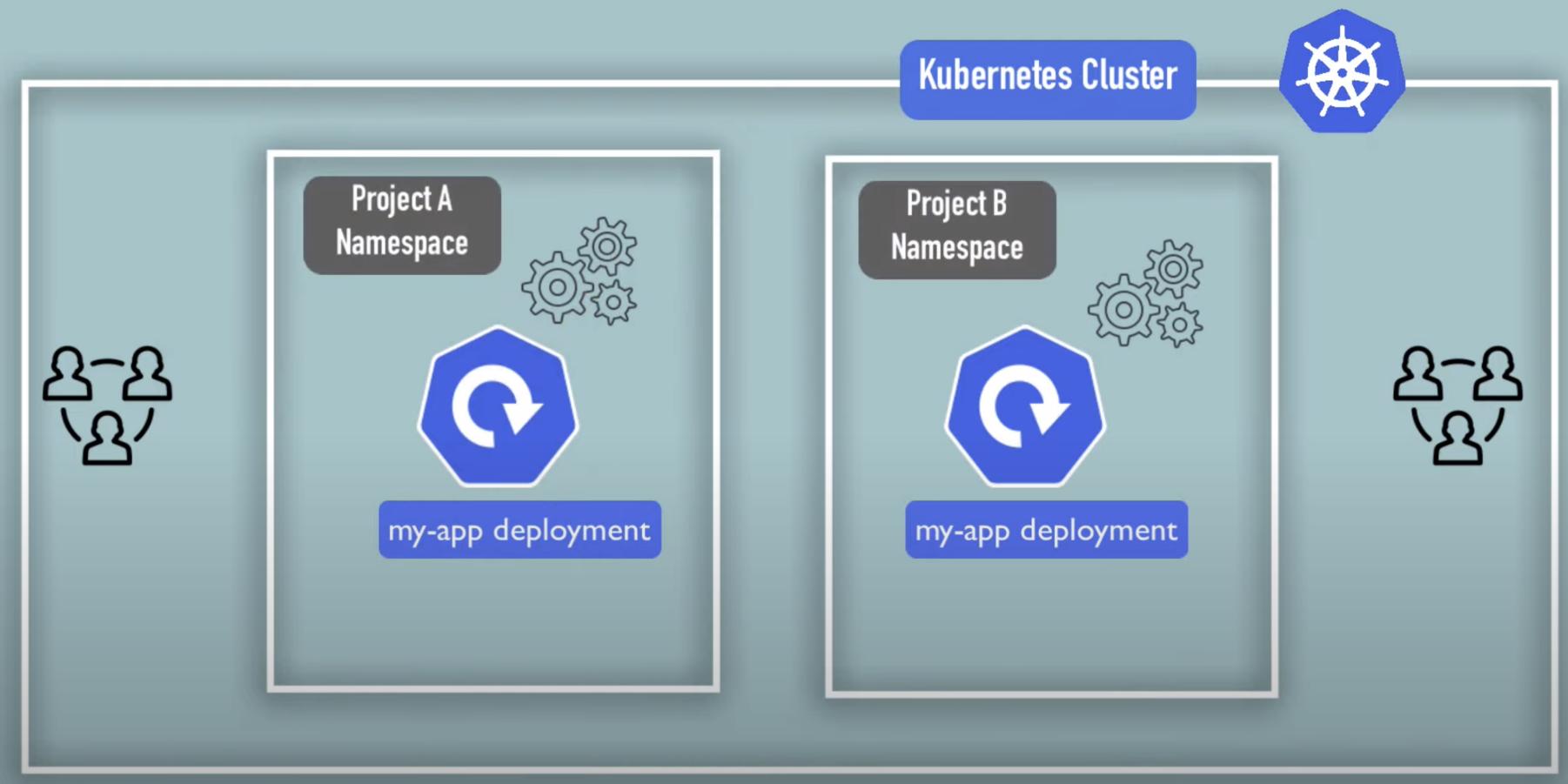


my-app deployment

**same name, but different configuration**

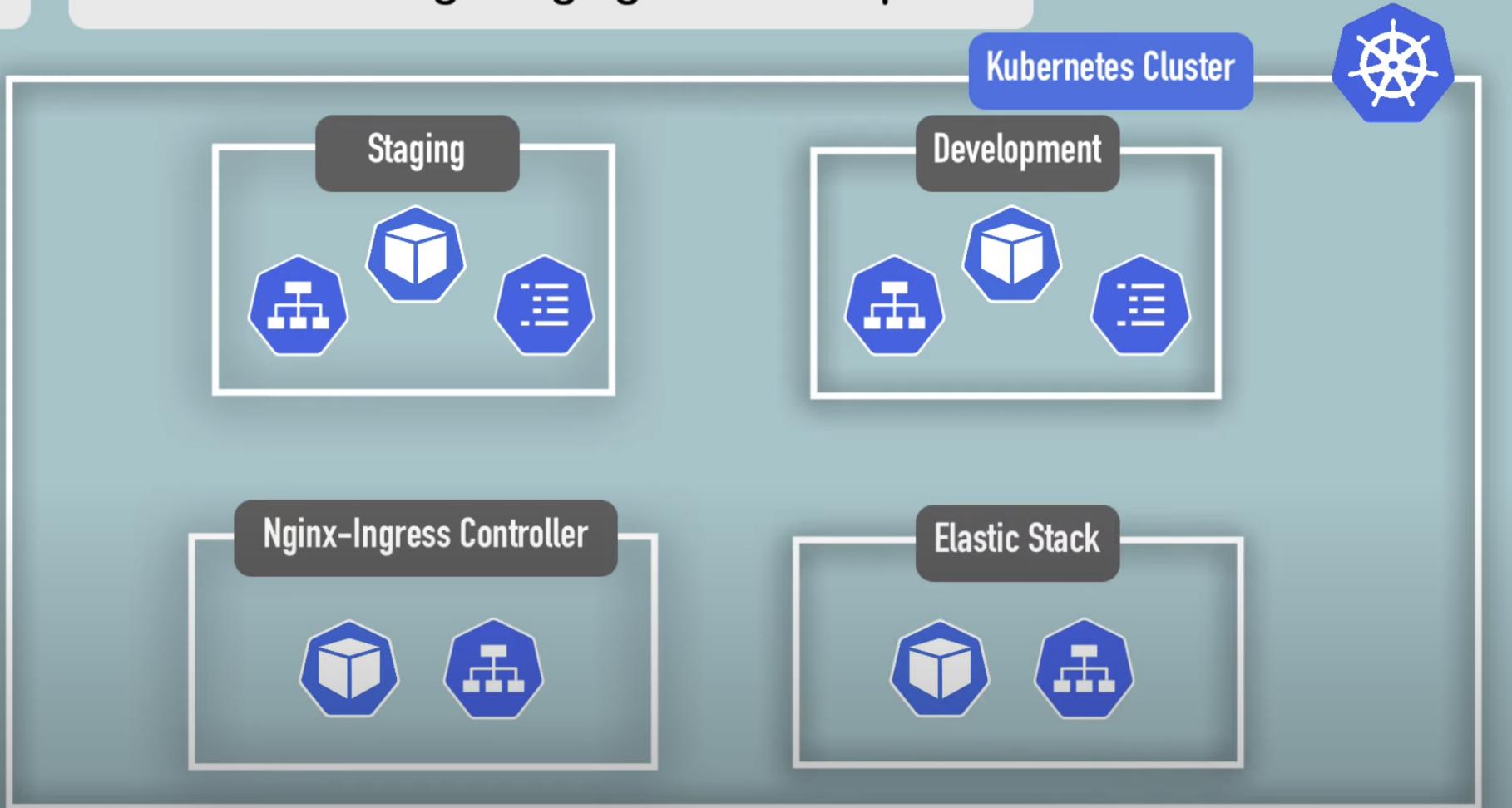
2.

## Conflicts: Many teams, same application



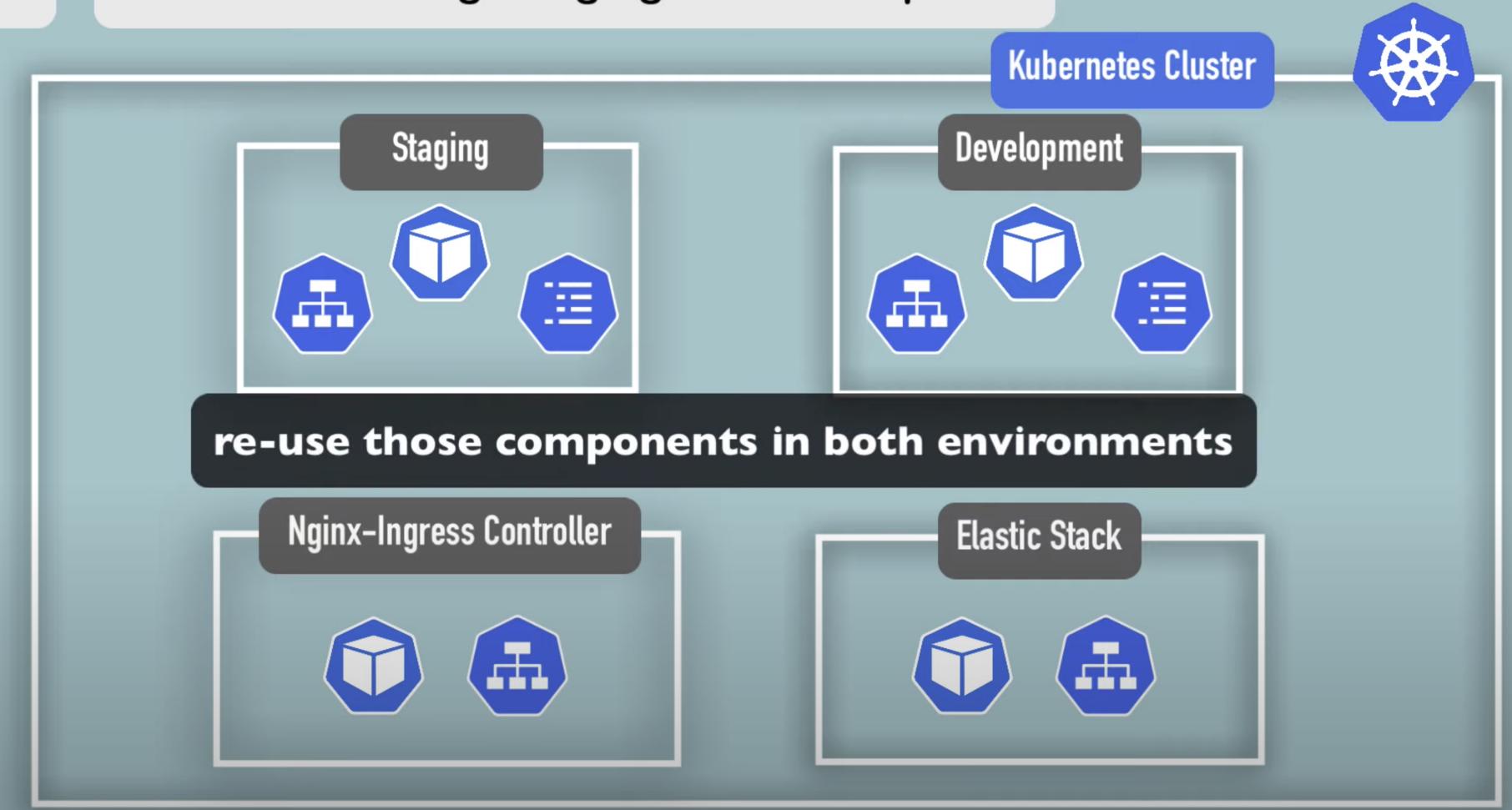
3.

### Resource Sharing: Staging and Development



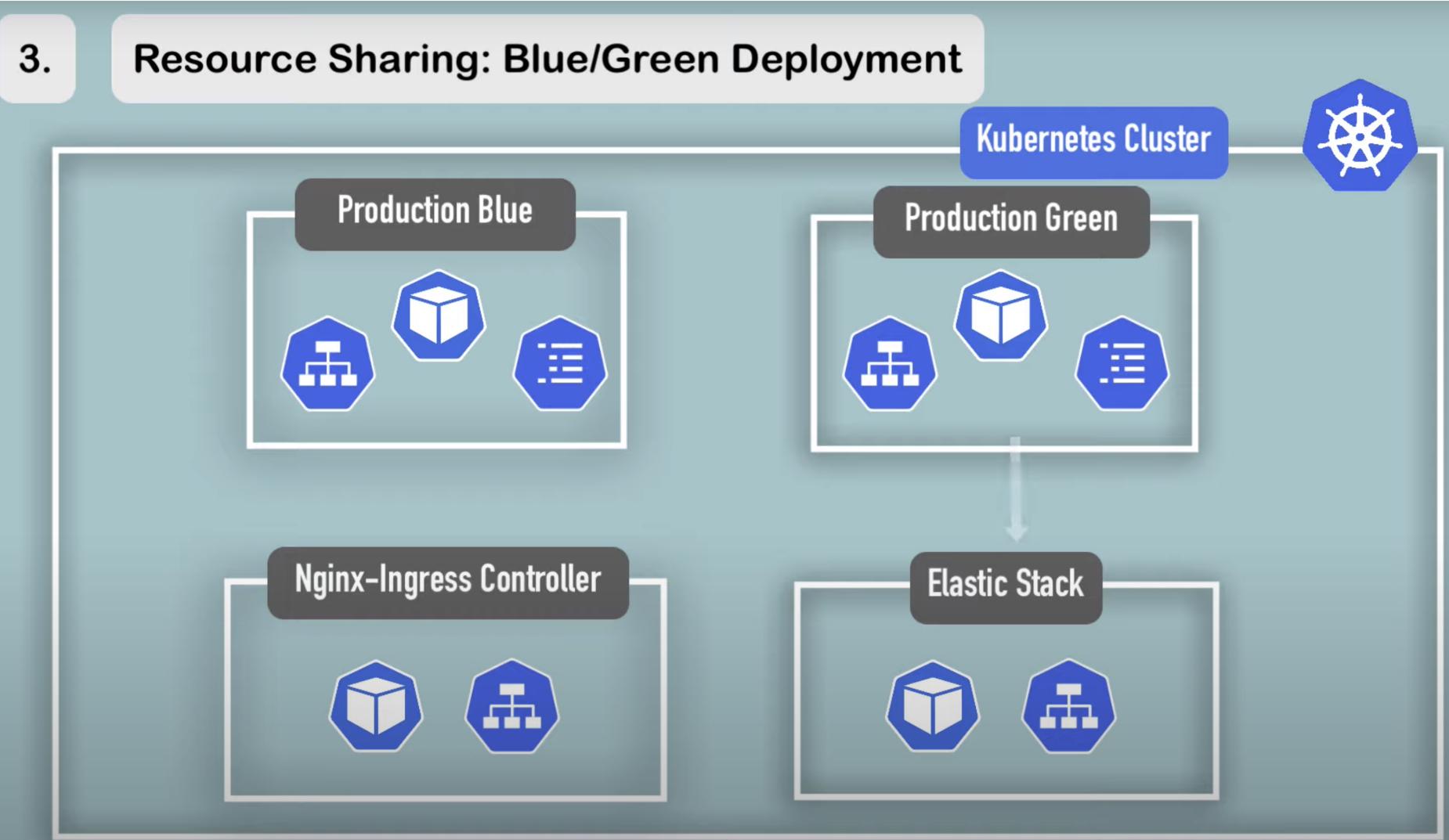
3.

## Resource Sharing: Staging and Development



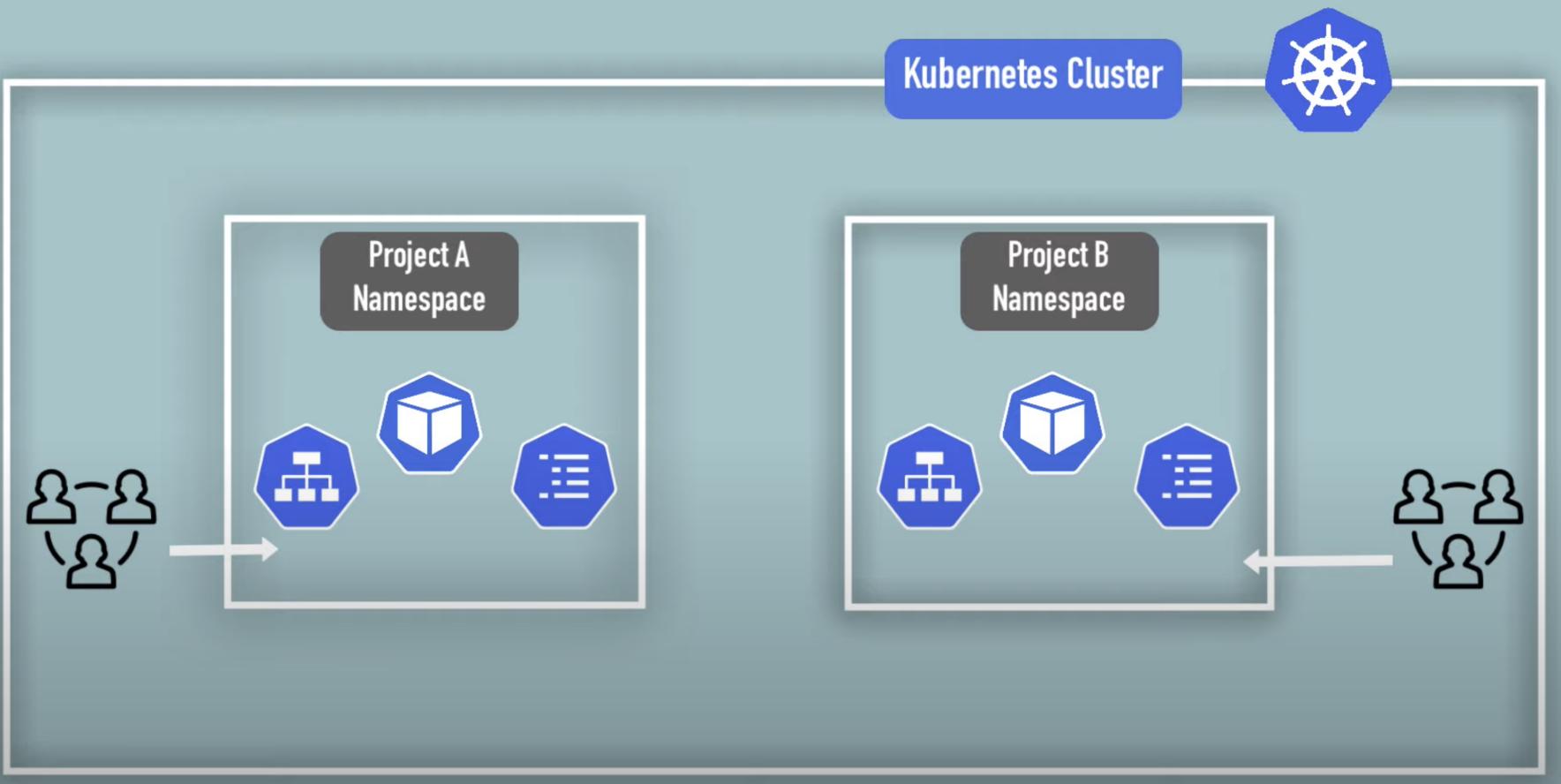
3.

### Resource Sharing: Blue/Green Deployment

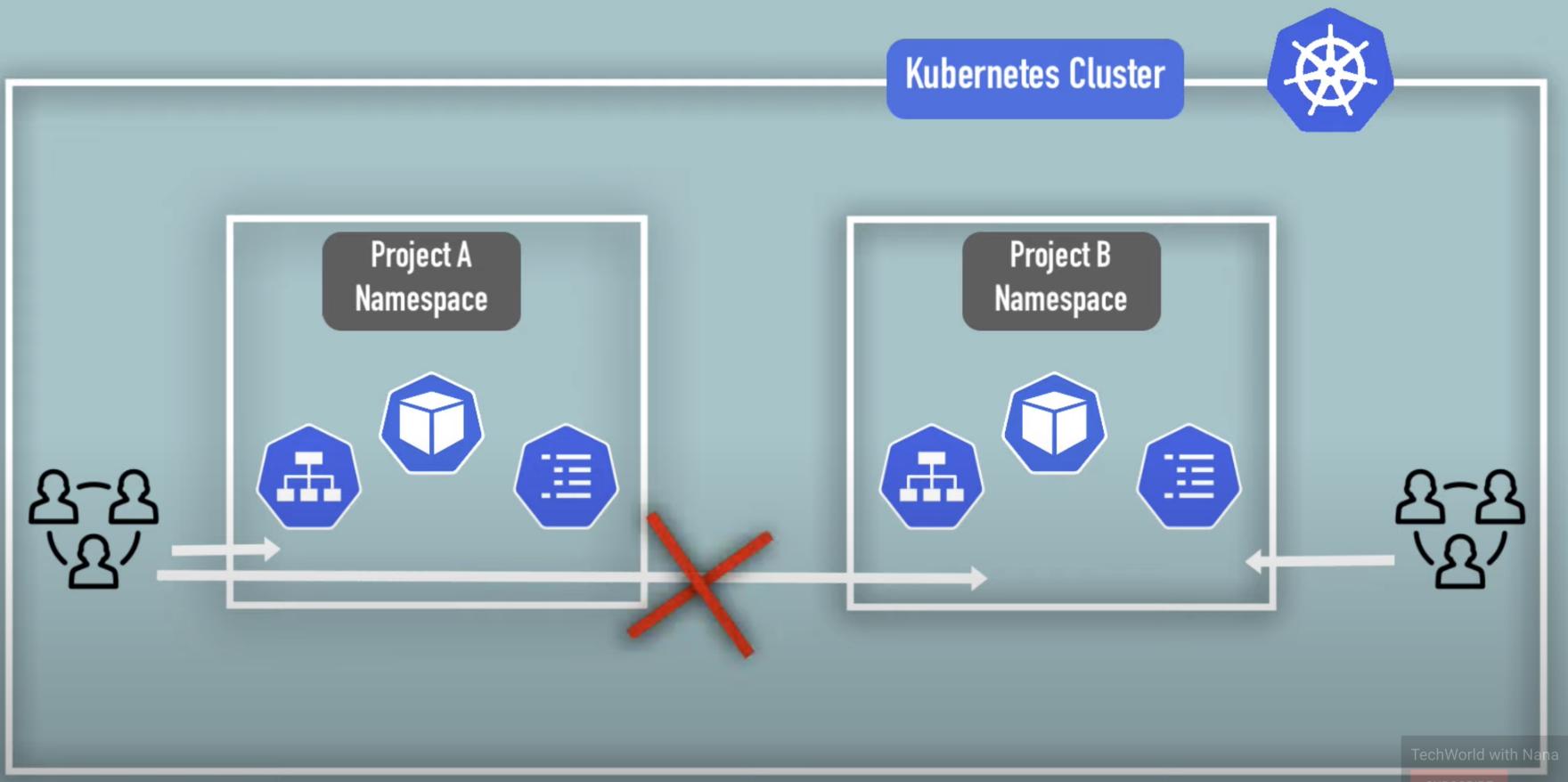


4.

## Access and Resource Limits on Namespaces



#### 4. Access and Resource Limits on Namespaces





## Use Cases when to use Namespaces

- 1. Structure your components**
- 2. Avoid conflicts between teams**
- 3. Share services between different environments**
- 4. Access and Resource Limits on Namespaces Level**

```
sfjbs@vm001 MINGW64 ~/training/containerization/K8/Day2/namespace (main)
$ kubectl create namespace node-namespace
namespace/node-namespace created
```

```
sfjbs@vm001 MINGW64 ~/training/containerization/K8/Day2/namespace (main)
$ kubectl create namespace python-namespace
namespace/python-namespace created
```

```
sfjbs@vm001 MINGW64 ~/training/containerization/K8/Day2/namespace (main)
$ kubectl get namespace
```

NAME	STATUS	AGE
default	Active	7m36s
java-namespace	Active	5m22s
kube-node-lease	Active	7m37s
kube-public	Active	7m37s
kube-system	Active	7m38s
node-namespace	Active	12s
python-namespace	Active	5s



```
sfjbs@vm001 MINGW64 ~/training/containerization/K8/Day2/namespace (main)
$ kubectl get pods -n node-namespace
NAME                  READY   STATUS    RESTARTS   AGE
nodeapp-5bb675478b-c9sq7   1/1     Running   0          3m18s
nodeapp-5bb675478b-nlr46   1/1     Running   0          3m18s
```

```
sfjbs@vm001 MINGW64 ~/training/containerization/K8/Day2/namespace (main)
$ kubectl get pods -n python-namespace
NAME                  READY   STATUS    RESTARTS   AGE
python-deployment-55f54b9f86-mxzbl   1/1     Running   0          2m59s
```



