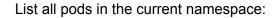
# **Cluster Info and Management**

| Check cluster information:  |
|---|
| kubectl cluster-info  |
|   |
| List nodes in the cluster:  |
| kubectl get nodes   |
|   |
| Get detailed node information:  |
| <pre>kubectl describe node <node-name></node-name></pre>  |
|   |
| Check API server version:   |
| kubectl version   |
|   |
|   |
| Namespace Management  |
| List all namespaces:  |
| kubectl get namespaces  |
|   |
| Switch to a specific namespace:   |
| <pre>kubectl config set-contextcurrentnamespace=<namespace> Create a new namespace:</namespace></pre> |
| kubectl create namespace <namespace-name></namespace-name>  |

## **Pod Management**



kubectl get pods

### List pods across all namespaces:

kubectl get pods --all-namespaces

### Create a pod:

kubectl run <pod-name> --image=<image-name> --restart=Never

## Get detailed pod information:

kubectl describe pod <pod-name>

### Delete a pod:

kubectl delete pod <pod-name>

### Check pod logs:

kubectl logs <pod-name>

### Execute a command inside a pod:

kubectl exec -it <pod-name> -- <command>

### **Deployment Management**

Create a deployment:

kubectl create deployment <deployment-name> --image=<image-name>

List deployments:

kubectl get deployments

Scale a deployment:

kubectl scale deployment <deployment-name> --replicas=<number>

Update a deployment:

kubectl set image deployment/<deployment-name>
<container-name>=<new-image>

Rollback a deployment:

kubectl rollout undo deployment/<deployment-name>

# **Service Management**

List all services:

kubectl get services

Expose a pod or deployment as a service:

kubectl expose pod <pod-name> --type=<ServiceType> --port=<port>
--target-port=<target-port>

#### Delete a service:

kubectl delete service <service-name>

## **ConfigMaps and Secrets**

Create a ConfigMap from a file:

kubectl create configmap <configmap-name> --from-file=<filename>

List ConfigMaps:

kubectl get configmaps
Create a Secret from literal values:

kubectl create secret generic <secret-name>
--from-literal=<key>=<value>

List Secrets:

kubectl get secrets

#### **Persistent Volumes and Claims**

List persistent volumes (PVs):

kubectl get pv

List persistent volume claims (PVCs):

kubectl get pvc

### **Resource Management**

List all resources:

kubectl get all

Get specific resource information:

kubectl get <resource-type>

Delete a resource:

kubectl delete <resource-type> <resource-name>

Apply a configuration file:

kubectl apply -f <file-name>

# **Logs and Debugging**

View logs from a pod:

kubectl logs <pod-name>

View logs for a specific container:

kubectl logs <pod-name> -c <container-name>

Debug a failing pod:

kubectl describe pod <pod-name>

Start an interactive shell in a pod:

```
kubectl exec -it <pod-name> -- /bin/bash
```

## **Rollouts and Updates**

Check rollout status:

kubectl rollout status deployment/<deployment-name>

Undo a rollout:

kubectl rollout undo deployment/<deployment-name>

# **Autoscaling**

Create an autoscaler for a deployment:

```
kubectl autoscale deployment <deployment-name>
--cpu-percent=<percentage> --min=<min-pods> --max=<max-pods>
```

Check autoscaler status:

kubectl get hpa

### **Monitoring and Metrics**

Install metrics server (if not already installed):

kubectl apply -f
https://github.com/kubernetes-sigs/metrics-server/releases/latest/down
load/components.yaml

Check resource usage of nodes:

kubectl top nodes

Check resource usage of pods:

kubectl top pods

# **Helm Commands (Optional)**

If you're using Helm for package management in Kubernetes:

List installed Helm charts:

helm list

Install a chart:

helm install <release-name> <chart-name>

Upgrade a release:

helm upgrade <release-name> <chart-name>