Kubernetes Command Cheat Sheet for Spring Boot on EKS

0 Prerequisites

aws eks --region <region> update-kubeconfig --name <cluster-name> : Configure kubectl to connect to EKS cluster

kubectl get nodes : Verify cluster nodes are ready

1 Namespace

kubectl apply -f namespace.yaml : Create a dedicated namespace for the app

kubectl get ns : List all namespaces

2 ConfigMap

kubectl apply -f configmap.yaml : Apply configuration (placeholders) to cluster

kubectl get configmap -n spring-boot-demo : View ConfigMaps in namespace

kubectl describe configmap spring-config -n spring-boot-demo : View details of a ConfigMap

3 Secret

kubectl apply -f secret.yaml : Apply sensitive data (passwords/API keys)

kubectl get secret -n spring-boot-demo : List secrets

kubectl describe secret db-secret -n spring-boot-demo : View secret metadata (not values)

4 Deployment

kubectl apply -f deployment.yaml : Create the pods and replicas

kubectl get pods -n spring-boot-demo : Verify pods are running

kubectl describe deployment spring-boot-app -n spring-boot-demo : Check deployment details

kubectl rollout status deployment spring-boot-app -n spring-boot-demo : Monitor rollout progress

kubectl set image deployment/spring-boot-app spring-boot-app=<image>:<tag> -n spring-boot-demo : Update deployment image (rolling update)

kubectl rollout restart deployment spring-boot-app -n spring-boot-demo : Restart pods after config change

5 Service

kubectl apply -f service.yaml : Create ClusterIP service

kubectl get svc -n spring-boot-demo : View services in namespace

kubectl describe svc spring-boot-service -n spring-boot-demo : Detailed info about service

6 Ingress

kubectl apply -f ingress.yaml : Create Ingress (ALB/NGINX)

kubectl get ingress -n spring-boot-demo : View ingress resources and hostnames

kubectl describe ingress spring-boot-ingress -n spring-boot-demo : Detailed info about Ingress rules

7 Verification / Troubleshooting

kubectl logs <pod-name> -n spring-boot-demo : Check application logs

kubectl exec -it <pod-name> -n spring-boot-demo -- /bin/sh : Access pod shell for debugging

kubectl get all -n spring-boot-demo : List all resources in namespace