

Detailed Kubernetes Commands from Basic to Advance

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Complete Kubernetes command cheat sheet with one-line explanations for each command:

Cluster & Node Management

kubectl version	# Show client and server Kubernetes version
kubectl cluster-info	# Display cluster information
kubectl get nodes	# List all nodes in the cluster
kubectl describe node <node>	# Show detailed info about a specific node
kubectl cordon <node>	# Mark node as unschedulable (no new pods)
kubectl uncordon <node>	# Make node schedulable again
kubectl drain <node>	# Safely evict all pods from node

Pod Management

kubectl get pods	# List all pods in current namespace
kubectl get pods -A	# List pods in all namespaces
kubectl describe pod <pod>	# Detailed info about a specific pod
kubectl logs <pod>	# Show logs of a pod
kubectl logs -f <pod>	# Stream pod logs live
kubectl exec -it <pod> -- bash	# Access shell inside running pod
kubectl delete pod <pod>	# Delete a specific pod
kubectl run nginx --image=nginx	# Create a pod running nginx

Deployment Management

kubectl get deployments	# List all deployments
kubectl describe deployment <deploy>	# Detailed deployment info
kubectl create deployment nginx --image=nginx	# Create new deployment
kubectl scale deployment nginx --replicas=3	# Scale deployment
kubectl edit deployment nginx	# Edit deployment configuration
kubectl delete deployment nginx	# Delete deployment
kubectl rollout status deployment/nginx	# Check rollout status
kubectl rollout undo deployment/nginx	# Rollback last deployment

ReplicaSet & ReplicationController

kubectl get rs	# List ReplicaSets
kubectl describe rs <rs>	# Detailed info about ReplicaSet
kubectl delete rs <rs>	# Delete ReplicaSet

Service Management

```
kubectl get svc                                # List all services  
kubectl describe svc <service>                # Detailed info about a service  
kubectl expose deployment nginx --port=80 --type=NodePort # Expose deployment  
kubectl delete svc <service>                  # Delete a service
```

Namespace Management

```
kubectl get ns                                 # List all namespaces  
kubectl create ns dev                          # Create a new namespace  
kubectl delete ns dev                         # Delete namespace  
kubectl config set-context --current --namespace=dev # Switch namespace
```

ConfigMap & Secrets

```
kubectl create configmap my-config --from-literal=key=value # Create ConfigMap  
kubectl get configmaps                         # List ConfigMaps  
kubectl describe configmap my-config          # Show ConfigMap details  
kubectl delete configmap my-config            # Delete ConfigMap  
  
kubectl create secret generic my-secret --from-literal=password=12345 # Create Secret  
kubectl get secrets                            # List secrets  
kubectl describe secret my-secret             # Show secret details  
kubectl delete secret my-secret               # Delete secret
```

YAML File Commands

```
kubectl apply -f file.yaml                   # Create or update resource from YAML  
kubectl create -f file.yaml                 # Create resource from YAML  
kubectl delete -f file.yaml                # Delete resource from YAML  
kubectl get -f file.yaml                  # Get resource defined in YAML  
kubectl diff -f file.yaml                 # Show differences before applying
```

Resource Information

```
kubectl api-resources                      # List all supported resource types  
kubectl get all                            # List all resources in namespace  
kubectl explain pods.spec                 # Show documentation for pod fields
```

Kubectl Context & Configuration

```
kubectl config view # View kubeconfig details  
kubectl config get-contexts # List available contexts  
kubectl config use-context <context> # Switch cluster context  
kubectl config current-context # Show current context
```

Debugging & Troubleshooting

```
kubectl describe <resource> <name> # Describe any resource  
kubectl logs <pod> -c <container> # Get container logs in multi-container pod  
kubectl exec -it <pod> -- sh # Open shell in pod  
kubectl top pods # Show pod resource usage  
kubectl top nodes # Show node resource usage  
kubectl get events --sort-by=.metadata.creationTimestamp # Show latest events
```

Cleanup & Maintenance

```
kubectl delete all --all # Delete all resources in namespace  
kubectl delete pod --all -n dev # Delete all pods in a namespace  
kubectl drain <node> --force --ignore-daemonsets # Force drain node
```

Advanced (Admin Level)

```
kubectl taint nodes key=value:NoSchedule # Add taint to node  
kubectl label node <node> env=prod # Add label to node  
kubectl get pods --show-labels # Show pod labels  
kubectl get pods -l app=nginx # Filter by label  
kubectl annotate pod <pod> description='test pod' # Add annotation
```
