

Learn Kubernetes with KK

Here's a **comprehensive Kubernetes `kubectl` cheat sheet**, covering everything from **beginner to advanced** level, organized by topic for easy reference:

BEGINNER COMMANDS

◆ Cluster Info

bash

```
kubectl version           # Show client and server version
kubectl cluster-info      # Show cluster information
kubectl config view       # Show kubeconfig details
kubectl get nodes         # List cluster nodes
```

◆ Get Resources

bash

```
kubectl get pods          # List all pods in current namespace
kubectl get deployments   # List all deployments
kubectl get services      # List all services
kubectl get all           # List all resources
```

◆ Create Resources

bash

```
kubectl create deployment myapp --image=nginx
kubectl expose deployment myapp --type=NodePort --port=80
kubectl scale deployment myapp --replicas=3
```

◆ Delete Resources

bash

```
kubectl delete pod mypod
kubectl delete deployment myapp
kubectl delete service myapp
```

◆ Describe / Inspect

```
bash

kubectl describe pod mypod
kubectl describe service myapp
kubectl logs mypod
```

INTERMEDIATE COMMANDS

◆ Apply YAML

```
bash

kubectl apply -f myfile.yaml
kubectl delete -f myfile.yaml
kubectl diff -f myfile.yaml    # See differences before applying
```

◆ Edit and Debug

```
bash

kubectl edit deployment myapp
kubectl exec -it mypod -- /bin/sh    # Open shell inside container
kubectl port-forward pod/mypod 8080:80
```

◆ Labels & Selectors

```
bash

kubectl get pods --show-labels
kubectl label pod mypod tier=frontend
kubectl get pods -l tier=frontend
```

◆ Namespaces

```
bash

kubectl get namespaces
kubectl create namespace dev
kubectl get pods -n dev
```

◆ Rolling Updates / Rollbacks

```
bash

kubectl rollout status deployment myapp
kubectl rollout history deployment myapp
kubectl rollout undo deployment myapp
```

ADVANCED COMMANDS

◆ Resource Usage

```
bash

kubectl top pod
kubectl top node
```

◆ YAML Generation (dry-run)

```
bash

kubectl create deployment myapp --image=nginx --dry-run=client -o yaml > myapp.yaml
```

◆ Custom Columns & Output

```
bash

kubectl get pods -o wide
kubectl get pods -o json
```

```
kubectl get pods -o yaml
kubectl get pods -o custom-columns="NAME:.metadata.name,STATUS:.status.phase"
```

◆ Patch Resources

```
bash

kubectl patch deployment myapp -p '{"spec":{"replicas":5}}'
```

◆ Taints and Tolerations

```
bash

kubectl taint nodes node1 key=value:NoSchedule
kubectl describe node node1 | grep -i taint
```

BONUS TIPS

◆ Shortcuts (aliases)

```
bash

k get po      # = kubectl get pods
k get svc     # = kubectl get services
k apply -f .   # = apply all YAMLS in current folder
```

◆ Autocomplete

```
bash

source <(kubectl completion bash) # Enable bash completion
```

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