

Kubernetes Cheat Sheet

What is Kubernetes?

Kubernetes is a platform for managing containerized workloads. Kubernetes orchestrates computing, networking and storage to provide a seamless portability across infrastructure providers.

Viewing Resource Information

Nodes

```
$ kubectl get no
$ kubectl get no -o wide
$ kubectl describe no
$ kubectl get no -o yaml
$ kubectl get node --selector=[label_name] $ kubectl get nodes -o json-path='{.items[*].status.addresses[?(@.type=="ExternalIP")].address}'
$ kubectl top node [node_name]
```

Pods

```
$ kubectl get po
$ kubectl get po -o wide
$ kubectl describe po
$ kubectl get po --show-labels
$ kubectl get po -l app=nginx
$ kubectl get po -o yaml
$ kubectl get pod [pod_name] -o yaml --export
$ kubectl get pod [pod_name] -o yaml --export> nameoffile.yaml
$ kubectl get pods --field-selector status.phase=Running
```

Namespaces

```
$ kubectl get ns
$ kubectl get ns -o yaml
$ kubectl describe ns
```

Deployments

```
$ kubectl get deploy
$ kubectl describe deploy
$ kubectl get deploy -o wide
$ kubectl get deploy -o yaml
```

Services

```
$ kubectl get SVC
$ kubectl describe SVC
$ kubectl get SVC -o wide
$ kubectl get SVC -o yaml
$ kubectl get SVC --show-labels
```

DaemonSets

```
$ kubectl get ds
$ kubectl get ds --all-namespaces
$ kubectl describe ds [daemonset_name] -n [namespace_name]
$ kubectl get ds [ds_name] -n [ns_name] -o yaml
```

Events

```
$ kubectl get events
$ kubectl get events -n kube-system
$ kubectl get events -w
```

Logs

```
$ kubectl logs [pod_name]
$ kubectl logs --since=1h [pod_name]
$ kubectl logs --tail=20 [pod_name]
$ kubectl logs -f -c [container_name] [pod_name]
$ kubectl logs [pod_name] > pod.log
```

ServiceAccounts

```
$ kubectl get sa
$ kubectl get sa -o yaml
$ kubectl get serviceaccounts default -o yaml > ./sa.yaml
$ kubectl replace serviceaccount default -f ./sa.yaml
```

ReplicaSets

```
$ kubectl get rs
$ kubectl describe rs
$ kubectl get rs -o wide
$ kubectl get rs -o yaml
```

Roles

```
$ kubectl get roles --all-namespaces
$ kubectl get roles --all-namespaces -o yaml
```

Secrets

```
$ kubectl get secrets
$ kubectl get secrets --all-namespaces
$ kubectl get secrets -o yaml
```

ConfigMaps

```
$ kubectl get cm
$ kubectl get cm --all-namespaces
$ kubectl get cm --all-namespaces -o yaml
```

Ingress

```
$ kubectl get ing
$ kubectl get ing --all-namespaces
```

PersistentVolume

```
$ kubectl get pv
$ kubectl describe pv
```

PersistentVolumeClaim

```
$ kubectl get pvc
$ kubectl describe pvc
```

Viewing Resource Information(cont.)

StorageClass

```
$ kubectl get sc  
$ kubectl get sc -o yaml
```

Multiple Resources

```
$ kubectl get SVC,po  
$ kubectl get deploy, no  
$ kubectl get all  
$ kubectl get all --all-namespaces
```

Changing Resource Attributes

Taint

```
$ kubectl taint [node_name] [taint_name]
```

Labels

```
$ kubectl label [node_name] disktype=ssd  
$ kubectl label [pod_name] env=prod
```

Cordon/Uncordon

```
$ kubectl cordon [node_name]  
$ kubectl uncordon [node_name]
```

Drain

```
$ kubectl drain [node_name]
```

Nodes/Pods

```
$ kubectl delete node [node_name]  
$ kubectl delete pod [pod_name]  
$ kubectl edit node [node_name]  
$ kubectl edit pod [pod_name]
```

Deployments/Namespaces

```
$ kubectl edit deploy [deploy_name]  
$ kubectl delete deploy [deploy_name]  
$ kubectl expose deploy [deploy_name] --port=80 --type=NodePort  
$ kubectl scale deploy [deploy_name] --replicas= S  
$ kubectl delete ns  
$ kubectl edit ns [ns_name]
```

Services

```
$ kubectl edit svc [svc_name]  
$ kubectl delete svc [svc_name]
```

DaemonSets

```
$ kubectl edit ds [ds_name] -n kube-system  
$ kubectl delete ds [ds_name]
```

Services Accounts

```
$ kubectl edit sa [sa_name]  
$ kubectl delete sa [sa_name]
```

Annotate

```
$ kubectl annotate po [pod_name] [annotation]  
$ kubectl annotate no [node_name]
```

Adding Resources

Creating a Pod

```
$ kubectl create -f [name_of_file]  
$ kubectl apply -f [name_of_file]  
$ kubectl run [pod_name] --image=nginx --restart=Never  
$ kubectl run [pod_name] --generator=run-pod/v1 --image=nginx  
$ kubectl run [pod_name] --image=nginx --restart=Never
```

Creating a Service

```
$ kubectl create svc nodeport [svc_name] --tcp=8080:80
```

Creating a Deployment

```
$ kubectl create -f [name_of_file]  
$ kubectl apply -f [name_of_file]  
$ kubectl create deploy [deploy_name] --image=nginx
```

Interactive Pod

```
$ kubectl run [pod_name] --image=busybox --rm -it --restart= Never -- sh
```

Output YAML to a File

```
$ kubectl create deploy [deploy_name] --image=nginx --dry-run -o yaml > deploy.yaml!  
$ kubectl get po [pod_name] -o yaml --export > pod.yaml
```

Getting Help

```
$ kubectl -h  
$ kubectl create -h  
$ kubectl run -h  
$ kubectl explain deploy.spec
```

Requests

API Call

```
$ kubectl get --raw /apis/metrics.k8s.io/
```

Cluster Info

```
$ kubectl config  
$ kubectl cluster-info  
$ kubectl get componentstatuses
```

