

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 jsonpath='{.items[*].status.addresses[?(@.type=="External IP")].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  
$ 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
```

Service Accounts

```
$ 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 $ l-namespaces  
$ kubectl get roles --all $ l-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 $ kubectl get cm --all
```

\$ l-namespaces

\$ l-namespaces -o yaml

Ing re s s

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

PersistentVolume

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

PersistentVolumeClaim

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

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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/Namespace

```
$ 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=5  
$ 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]
```

Service 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
```