# 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=="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 -1 app=nginx

$ kubectl get po -o yaml

$ kubectl get pod [pod_name] -0 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
$ kubrectl 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 > de-ploy.yam!
$ 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