

# Kubernetes Cheatsheet

## What is Kubernetes Kapsule and Kubernetes Kosmos?

Kubernetes is an open-source platform that enables developers to manage their containerized applications. Kapsule and Kosmo both provide a managed environment for creating, configuring, and running clusters of pre-configured machines. Kapsule clusters are composed solely of Scaleway Instances whereas Kosmos is a managed Multi-Cloud Kubernetes Engine that allows you to connect Instances and virtual or dedicated servers from any cloud provider to a single managed Control-Plane.

## Creating resources

```
# Create resource(s) from file  
kubectl apply -f [manifest].yaml
```

## Updating resources

```
# Apply a taint that has a key-value of  
taint=tess with a NoSchedule effect  
kubectl taint nodes [node-name]  
taint=tess:NoSchedule  
  
# Mark node as unschedulable  
kubectl cordon [node-name]  
  
# Mark node as schedulable  
kubectl uncordon [node-name]  
  
# Drain node in preparation for maintenance  
kubectl drain [node-name]
```

## Viewing and finding resources

### NODES

```
# Display all node information  
kubectl get no  
  
# Show more information about all nodes  
kubectl get no -o wide  
  
# Display node details with verbose output  
kubectl describe no  
  
# Filter the node with the specified label  
kubectl get node --selector=[label_name]  
  
# Display node (CPU/memory) usage  
kubectl top node [node_name]
```

### PODS

```
# Display all container group information  
kubectl get po  
  
# Show more information about all pods  
kubectl get po -o wide  
  
# Display pod details with verbose output  
kubectl describe po  
  
# View the labels of the container group  
kubectl get po --show-labels  
  
# Display pod usage (CPU/memory)  
kubectl top pod [pod_name]
```

### NAMESPACE

```
# Display all namespace information  
kubectl get ns  
  
# Display namespace details  
kubectl describe ns
```

### DEPLOYMENTS

```
# Display all deployments information  
kubectl get deploy  
  
# Display deployments details  
kubectl describe deploy  
  
# Show more information about all deployments  
kubectl get deploy -o wide
```

### SERVICES

```
# Display all services information  
kubectl get svc  
  
# Display services details  
kubectl describe svc  
  
# Show more information about all services  
kubectl get svc -o wide  
  
# Display a pod's label  
kubectl get svc --show-labels
```

### DAEMON SETS

```
# Display all daemon sets information  
kubectl get ds  
  
# Display the detailed state of daemonsets within all namespaces  
kubectl describe ds --all-namespaces  
  
# Display the detailed state of daemonsets within a namespace  
kubectl describe ds [daemonset_name] -n [namespace_name]
```

### EVENTS

```
# Display all events information  
kubectl get events  
  
# Display events information within the namespace kube-system  
kubectl get events -n kube-system  
  
# Lists the specific resources' events or the entire cluster  
kubectl get events -w
```

### LOGS

```
# Display all logs information of a specific pod  
kubectl logs [pod_name]  
  
# Display all logs information of a specific pod for the past hour  
kubectl logs --since=1h [pod_name]  
  
# Display all logs information of a specific pod in a specific container  
kubectl logs -f -c [container_name] [pod_name]  
  
# Transfer all logs information of a specific pod in the pod.log file  
kubectl logs [pod_name] > pod.log
```

### SERVICE ACCOUNT

```
# Display all service account information  
kubectl get sa
```

### REPLICA SETS

```
# Display all replica sets information  
kubectl get rs  
  
# Display replicat sets details  
kubectl describe rs  
  
# Show more information about replica sets  
kubectl get rs -o wide
```

### ROLES

```
# Display all roles information within all namespaces  
kubectl get roles --all-namespaces
```

### SECRETS

```
# Display all secrets information  
kubectl get secrets  
  
# Display all secrets information within all namespaces  
kubectl get secrets --all-namespaces
```

### CONFIG MAPS

```
#Display all config maps information  
kubectl get cm  
  
#Display all config maps within all namespaces  
kubectl get cm --all-namespaces
```

### INGRESS

```
#Display all ingress information  
kubectl get ing  
  
#Display all ingress information within all namespaces  
kubectl get ing --all-namespaces
```

### PERSISTENT VOLUMES

```
#Display all persistent volumes information  
kubectl get pv  
  
# Display persistent volumes details  
kubectl describe pv
```

### PERSISTENT VOLUME CLAIM

```
# Display all persistent volume claim information  
kubectl get pvc  
  
# Display all persistent volume claim details  
kubectl describe pvc
```

### STORAGE CLASS

```
# Display all storage class information  
kubectl get sc
```

### MULTIPLE RESOURCES

```
# Display all services and pods information  
kubectl get svc, po  
  
# Display all deploys and nodes information  
kubectl get deploy, no  
  
# Display all the pods, services, statefulsets, etc. in a namespace. Not all the resources are listed using this command.  
kubectl get all  
  
# Display all the pods, services, statefulsets, etc. in all namespaces. Not all the resources are listed using this command.  
kubectl get all --all-namespaces
```