

Kubernetes and Docker Cheat Sheet

Docker

Build a Docker Image

docker build .

List Docker Images

docker image ls

Run a Docker Image in the Background

docker run -p 3000:3000 -d -t 011e536c1d31 *(where 011e536c1d31 is an image id)*

Remove an Image

docker rmi 011e536c1d31 *(where 011e536c1d31 is an image id)*

Show Running and Stopped Containers

docker ps -a

Stop a Docker Container

docker stop e8a7a1f0d1e9 *(where e8a7a1f0d1e9 is an container id)*

Remove a Stopped Container

docker rm e8a7a1f0d1e9

DockerHub

Login to Docker Hub

docker login

Tag a Docker Image to push into DockerHub

```
docker tag 011e536c1d31 <username>/<repository>
    Where 011e536c1d31 is a Docker Image id
    Lack of version sets to version to latest
```

```
docker tag 011e536c1d31 <username>/<repository>:<version>
```

Push an Image to DockerHub

```
docker push <owner>/<repository>
docker push <owner>/<repository>:<version>
```

Pull an Image from DockerHub

```
docker pull <owner>/<repository>           (pulls latest)
docker pull <owner>/<repository>:<version>
```

Kubernetes

Create an Entity from a File

```
kubectl create -f <filename>.yaml
```

Get Entities

```
kubectl get pods
kubectl get deployments
kubectl get services
kubectl get secrets
kubectl get configmaps
kubectl get nodes
kubectl get secrets
```

```
kubectl get <entity> -o wide    (gives more information)
```

Describe Entities

```
kubectl describe pod <name>
kubectl describe deployment <name>
kubectl describe service <name>
kubectl describe secret <name>
kubectl describe configmap <name>
kubectl describe node <name>
```

kubectl describe secret <name>

Expose a Pod for External Access

kubectl expose pod basicapp --type=NodePort --name basicapp
kubectl get services *(will show the exposed port for given service)*

Delete Entities

kubectl describe pod <name>
kubectl describe deployment <name>
kubectl describe service <name>
kubectl describe secret <name>
kubectl describe configmap <name>
kubectl describe secret <name>

Attach to a Container to Execute Commands

kubectl exec -it <pod-name> -- /bin/bash
kubectl exec -it <pod-name> --container docker-demo-101 -- /bin/bash

Create a ConfigMap

kubectl create configmap <configmap-name> --from-file=<properties file>

View Deployment Rollout Status

kubectl rollout status deployment <deployment-name>

View Deployment Rollout History

kubectl rollout history deployment <deployment-name>

Deploy and Record for Rollout History

kubectl set image deployment/<deployment-name> <container-name>=<owner>/<repository>:<version> --record

Rollback a Deployment

kubectl rollout undo deployment basicapp-deployment

Rollback to a Specific Deployment Version

```
kubectl rollout undo deployment <deployment-name> --to-revision=<revision-number>
```

Label a Node

```
kubectl label nodes <node-name> <label-name>=<value> --overwrite=true
```

Remove a Label from a Node

```
kubectl label node <node-name> <label-name>-
```

Show Labels for a Node

```
kubectl get nodes --show-labels
```

Basic VI

VI Help for editing in Kubernetes:

- i to enter edit mode
- <ESC> to leave edit mode
- :wq<ENTER> to save edits
- :qa<ENTER> to exit without any changes