**Creating a Cluster with Minikube**

**Minikube Options**

A cluster can be created with just minikube start but we want to customise the configuration a bit. So let's have a look at the possible options.

minikube start -h

**Starting a Cluster**

For our first cluster we want to use Kubernetes version v1.20.0 and give it 2 cpus with 4GB memory.

minikube start --cpus 2 --memory 4096 --kubernetes-version v1.20.0

This is the latest Kubernetes version available at the moment [link](https://kubernetes.io/docs/setup/release/notes/)

**Status Check**

Once our cluster is created we want to check on its status.

minikube status

**Minikube Addons**

Lets see what Add-Ons are available.

minikube addons list

Let's enable few more addons using:

minikube addons enable ingress

minikube addons enable registry

minikube addons enable metrics-server

minikube addons enable dashboard

**Dashboard**

We can then access the *Dashboard* using:

minikube dashboard

**Services**

We can also see what services are available in the cluster using:

minikube service list

**Minikube logs**

If we want to see the *Minikube* logs we can also do that using

minikube logs

**Minikube Docker Daemon**

To point the terminal to use the docker daemon inside minikube use this:

eval **$(**minikube docker-env**)**

This will show uscontainers inside the minikube:

docker ps

# Task3 - Exploring Cluster

## Dashboard

Let's explore our dashboard in more detail.

minikube dashboard

## Kubectl

We installed Kubectl in the first task, now let's explore it.

### Kubernetes server and client Version

kubectl version

### Available Nodes

kubectl get node

### Node Details

kubectl describe node minikube

### Available Namespace

kubectl get namespace

### Available Pods

kubectl -n kube-system get pod

### Pod's YAML definition

kubectl -n kube-system get po kube-apiserver-minikube -o yaml

### Services Display

kubectl -n kube-system get services