Insrtuctions in :

<https://github.com/Gamal-Mohammad/instructions/blob/main/MiniKube%20Ubuntu_Debian_docker_driver>

**Install Kubernetes on Ubuntu/Debian**

#### Install Docker First if Installed Skip these steps

sudo apt update

sudo apt install curl

sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o /etc/apt/trusted.gpg.d/docker.gpg

sudo add-apt-repository "deb [arch=$(dpkg --print-architecture)] https://download.docker.com/linux/ubuntu $(lsb\_release -cs) stable"

sudo apt update

sudo apt -y install docker-ce docker-ce-cli containerd.io docker-compose-plugin docker-registry

sudo usermod -aG docker $USER

newgrp docker

**######### Install MiniKube (kubernetes platform)**

curl -LO https://storage.googleapis.com/minikube/releases/latest/minikube\_latest\_amd64.deb

sudo dpkg -i minikube\_latest\_amd64.deb

minikube start --driver=docker --nodes=2

sudo snap install kubectl --classic

minikube kubectl -- get pods

kubectl get pods

minikube kubectl -- cluster-info

kubectl cluster-info

minikube addons list

minikube dashboard &

kubectl get nodes

kubectl get pods -A

Kubernates commands :

List pods running and not running in all nodes

**Kubectl get pods** === docker ps -a (in current node only)

List replicasets

**Kubectl get replicasets**

List deployments

**Kubectl get deployment**

List nodes

**kubectl get nodes**

create pod in deployment

**kubectl create deployment senior –image httpd –replicas 3**

**check the status**

**kubectl get pods -o wide**

get pod information

**kubectl describe pod seniordeployment-5dd9fff8bb-6hsvr**

delete running delete (replica ll create another one )

**kubectl delete pod seniordeployment-5dd9fff8bb-6hsvr**

increase no of pods in deployment

**kubectl scale deployment senior replicas 6**

start minikude in each vm start

**minikube start**

start minikube dashboard

**minikube dashboard &**

A screenshot of a computer

Description automatically generated

enable autocomplete in terminal

**kubectl completion -h**

A screenshot of a computer program

Description automatically generated

Create standalone pod (not recommended)

**Kubectl run lab1 –image httpd**

Delete pod

**Kubectl delete pod lab1**list all k8s resources

**Kubectl api-resources**

Get num of resources -> **Kubectl api-resources | wc -l** (word cound – lines) one line table coloms names and num of resources

Note : namespace = true -> created inxide the namespace , false -> created outside the namespace على مستوى الكلاستر نفسها

Note: KIND -configuration file اسم الاوبجكت بالطريقه الى هيتنادي بيها ف ال

Note : appversion appعنى اسم ال

Read information about any resource

**Kubectl explain (resource name)**

Namespaces

Kubernetes object divide the big cluster to mini clusters and I can control each cluster resources

Create namespace:

**Kubectl create namespace dev**

List all namespaces

**Kubectl get namespaces**

Know what inside namespace

**Kubectyl Get pod –namespace dev**

Know which namespace am I in

**Kubectl config get-context**

How to switch to another namespace

**Kubectl config set-context (claster name) --namespace dev**

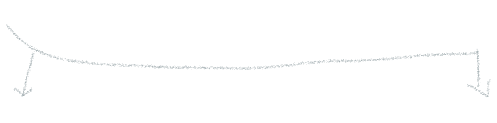
Delete namespace

**Kubectl delete ns dev**

List namespaces

**Kubectl get ns**

**Scaling :**

****

Manual automatic



Cmd yaml cmd yaml

Hpa scale pods automatic usind cmd : but we need to determind the limit

Depends on HW resources