# Container management tools

It **controls** the containers like docker.

# Container type

Kubernetes, D container, Rocket, **Docker swarm,** amazon eks

# Kuberneters

* It helps to automates **container deployment, load balncing, scaling, capability , highly availability**
* It schedule runs, **crons jobs, and** manges isolated conatiners which are running on virtual /physical/cloud
* Written in Golang by google
* Now handled by CNCF

## Online plateform

* Play with K8S
* Play with Kyberneters classroom
* Kubernetes playground

## Cloud based k8s services

* GKE, AKS, Amazon EKS(Elastic KS)

## Kubernetes installation tool

* Minicube
* Kubeadm

## Problems without containers

* Containers **can not communicate**
* Autoscalling and **load balancing not possible**
* Every time more careful about the containers

# Features of K8S

* Orchestration(clusting of any no. of the containers)
* Autoscaling

1. vertically scaling 🡪 2GB to 8 GB, no new hiring only use existing employee for the work
2. horizental scaling(**preferable**) 🡪 create one more containers, hiring new employee

* Autohealing
* Load Balancing
* Plateform independent
* Fault Tolerance (**node/pod failure**)
* Rollback
* Health monitroing
* Batch execution