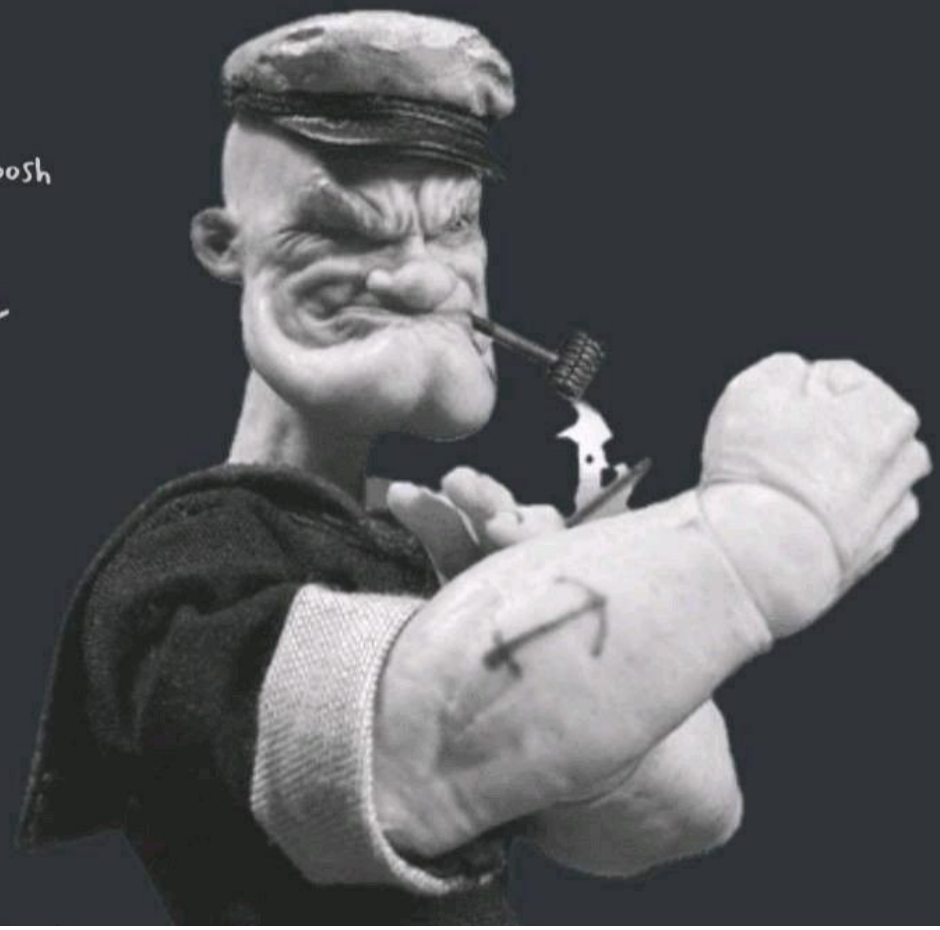
WHAT IS KUBERNETES



Credit : The Fwoosh

APPLICATION

Lets say you have
created an application

DEPLOYED →

Say you have deployed on 3 different servers using Docker

and ...

Your application starts getting massive traffic

DOCKER

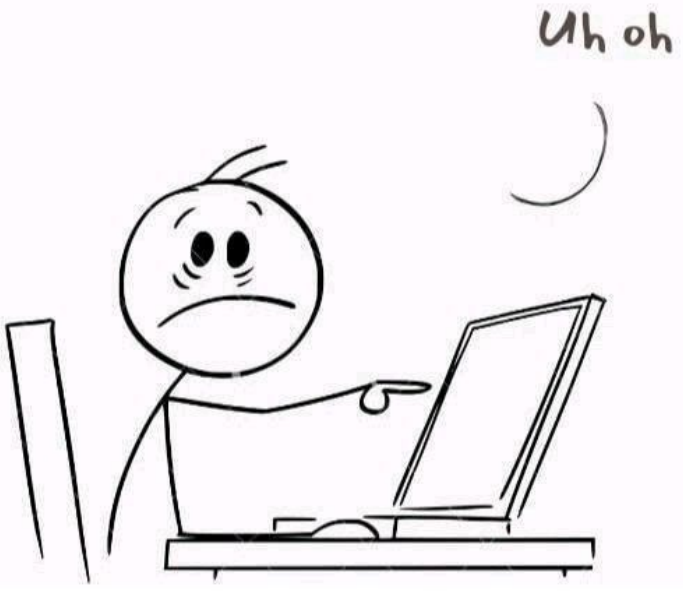
And used Docker containers to package the application

Docker should make my application work the same regardless of the environment

SCALING

Now you need to scale up fast; how will you go from 3 servers to 40 servers that you may require?

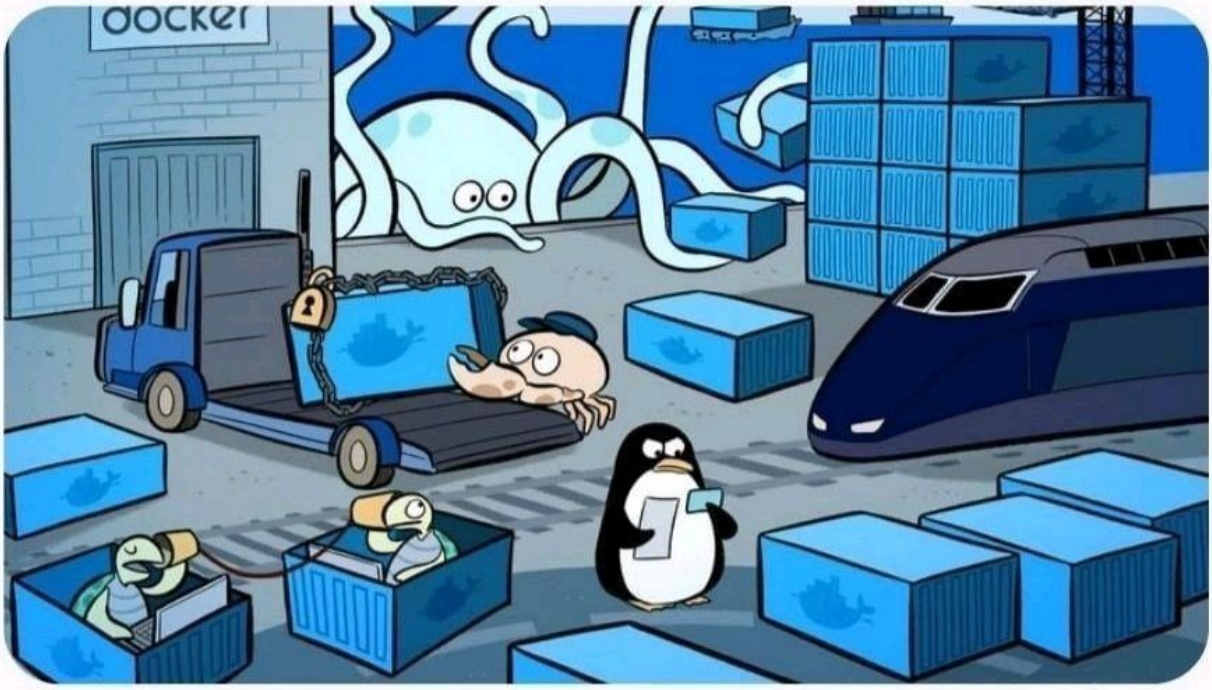
How to decide which container should go where? Monitor all containers ? & make sure they restart if they die?



OUT OF CONTROL

How am I going to manage all this ?

ah I need to restart them



huh I need to create more instances

Wouldn't it be easier if this behavior was handled by a system?

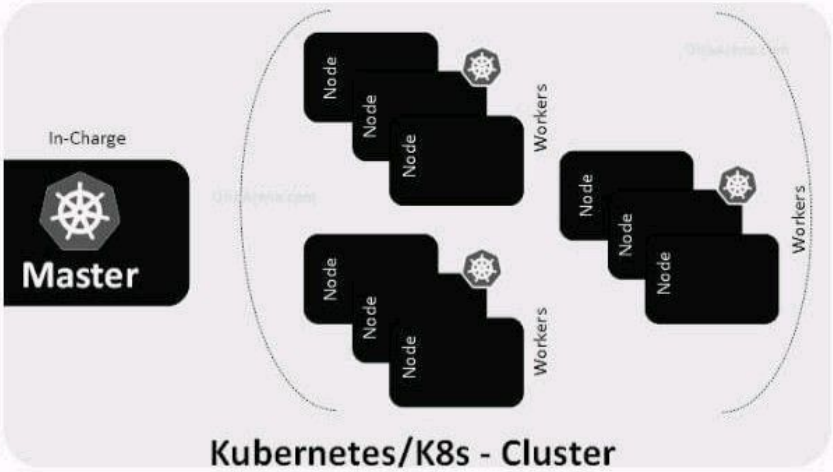
KUBERNETES

This is where Kubernetes comes into play

Kubernetes (aka k8s or “kube”) is an open source **container orchestration** platform that automates deploying, managing, and scaling containerized applications.

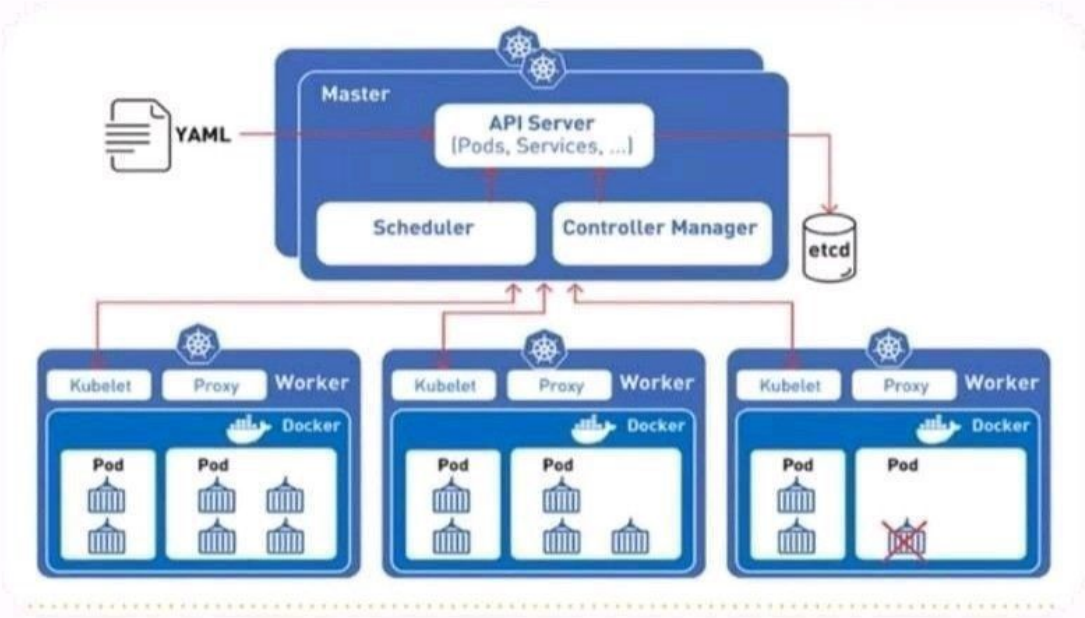
HOW IT WORKS ?

A Kubernetes cluster consists of a set of worker machines, called **nodes**, that run containerized applications



Every cluster has at least one **worker node**. Hence if a node fails, your application will still be accessible from the other nodes as in a cluster, **multiple** nodes are grouped.

ARCHITECTURE



Every node contains a container runtime, **Kubelet** (for starting, stopping, and managing individual containers by requests from the Kubernetes control plane), and **kube-proxy** (for networking and load balancing).