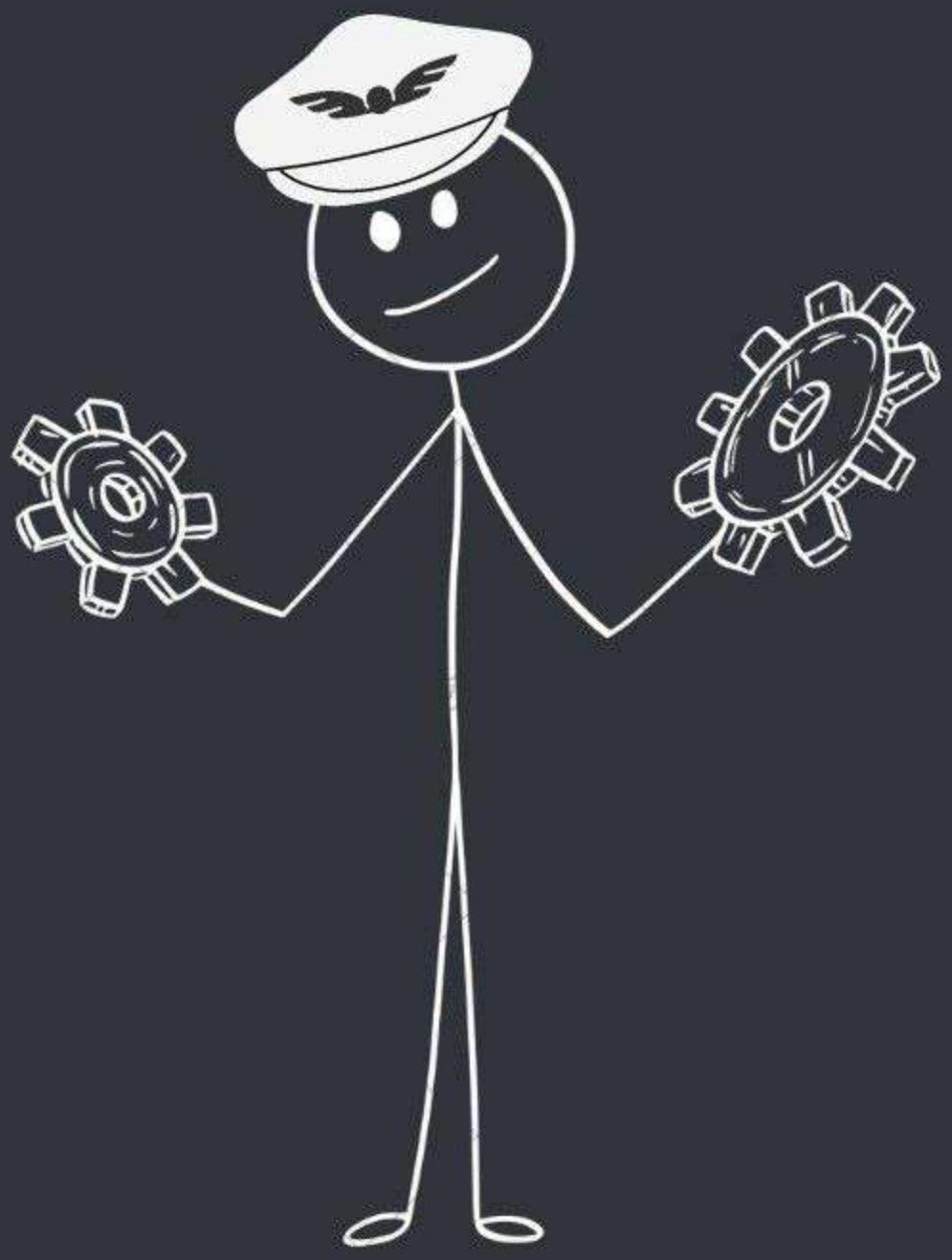
WHAT IS KUBERNETES

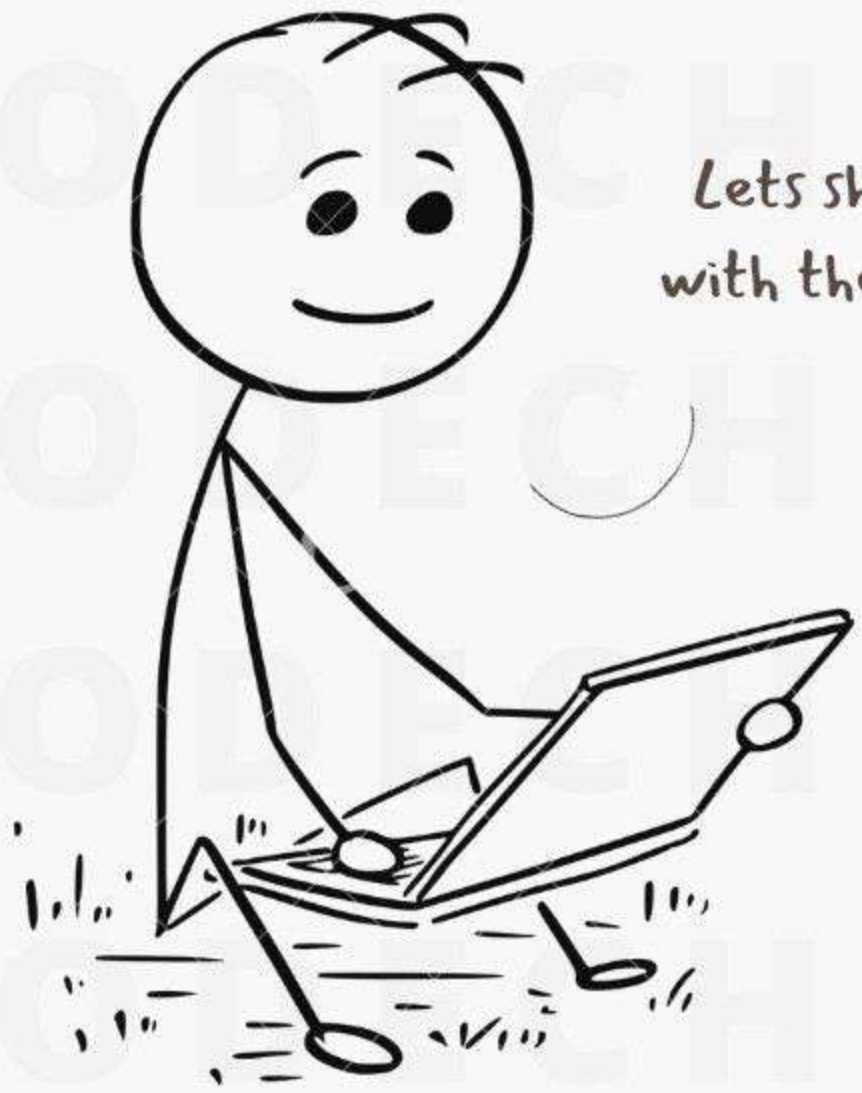


@codechips

Cody Dev

codechipsig@gmail.com

Lets say you have
created an application



And used **Docker containers**
to package the application

My app works the same
regardless of the environment

Say you have deployed on **3** **different** servers using Docker

SCALING

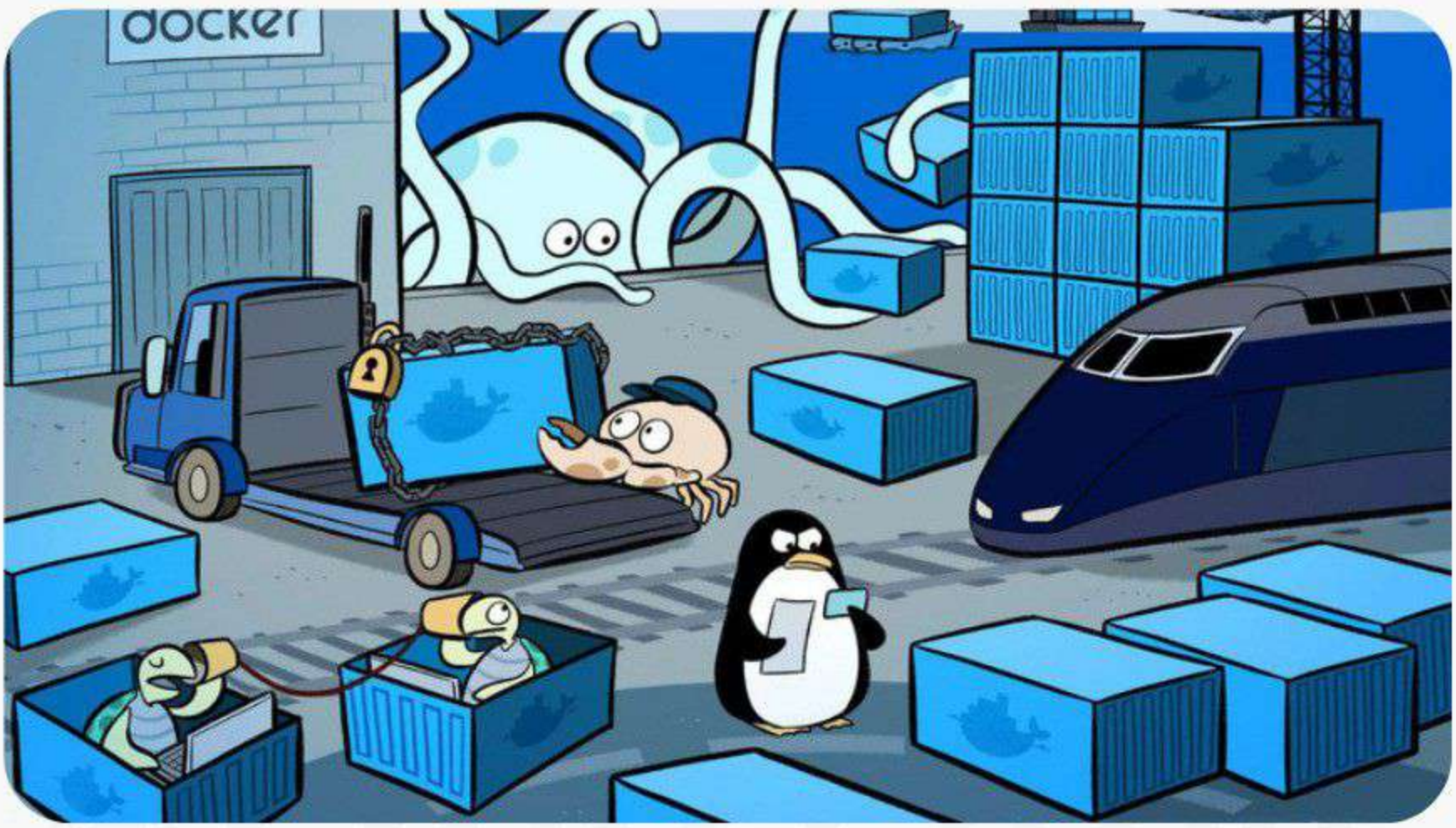
Now you need to scale up fast; how will you go from 3 servers to 40 servers that you may require?

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?

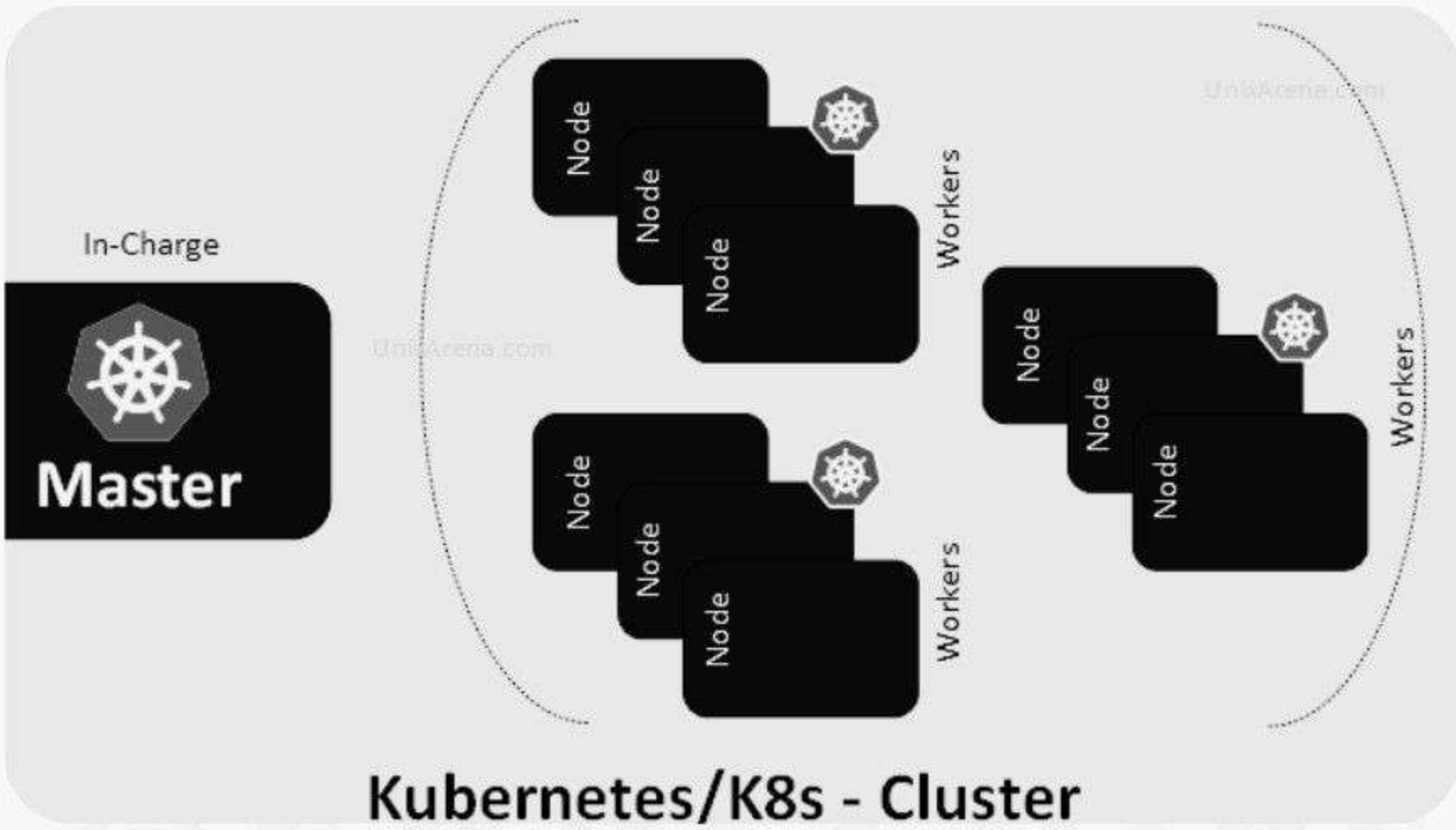
KUBERNETES

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 ?

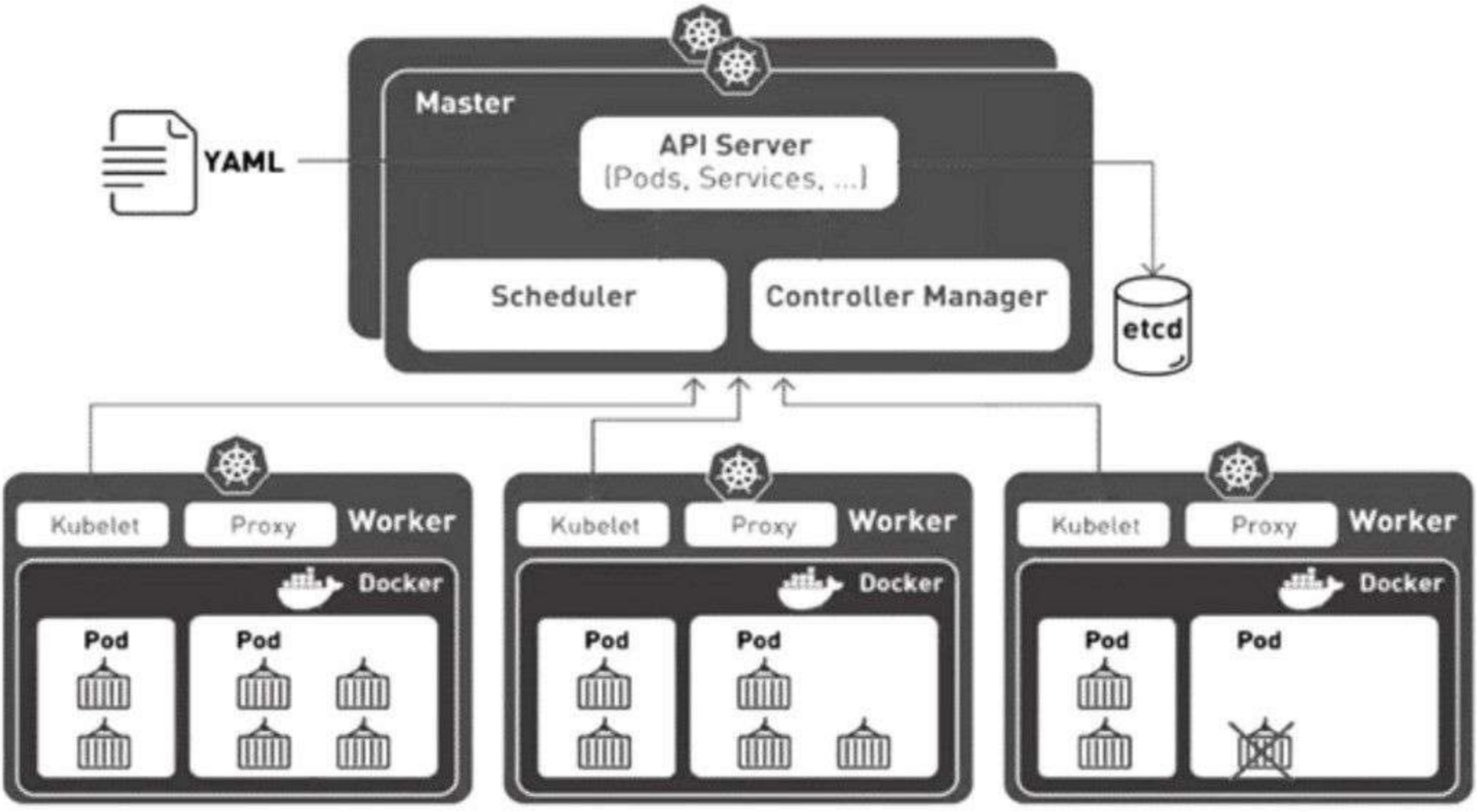
A Kubernetes cluster consists of a set of worker machines, called **nodes**, that run containerized applications



Kubernetes/K8s - Cluster

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).