



# KUBERNETES

## What is the difference between docker and Kubernetes

Docker is a container platform whereas Kubernetes is a container orchestration environment that offers capabilities like Auto healing, Auto Scaling, Clustering and Enterprise level support like Load balancing.

Docker vs Kubernetes		
	 Docker	 Kubernetes
Type	Container platform	Container orchestration
Auto Healing	No	Yes
Auto Scaling	No	Yes
Clustering	No	Yes
Enterprise Support	Limited	Yes

## What are the main components of Kubernetes architecture?

On a broad level, you can divide the Kubernetes components in two parts:

1. Control Plane (API SERVER, SCHEDULER, Controller Manager, C-CM, ETCD)
2. Data Plane (Kubelet, Kube-proxy, Container Runtime)

API – API is responsible for handling all the api,the api to the end user as well

SCHEDULER- SCHEDULER is the one who is responsible for scheduling all the task

Controller Manager- Controller Manager is responsible for

**Node Controller:** Manages nodes (e.g., noticing and responding when nodes go down).

**Replication Controller:** Maintains the desired number of Pods for a given replica set.

**Endpoint Controller:** Populates the Endpoint object (that joins Services and Pods).

**Service Account & Token Controllers:** Creates default service accounts and API access tokens for new namespaces.

CCM – CCM is mainly responsible for load balancing like cloud-based services eks on aws.

ETCD-ETCD is responsible for managing all the data and resources in Kubernetes

Kublet – Kublet is responsible for CLI interface

Kubeproxy- all the networking related such as ip address

Container Runtime- To run the container

### **What are the main differences between the Docker Swarm and Kubernetes?**

Kubernetes is better suited for large organisations as it offers more scalability, networking capabilities like policies and huge third party ecosystem support.

### **What are three different types of services used in Kuberbetes**

There are 3 types of services used in Kubernetes which mainly are

