



kubernetes

Kubernetes vs Docker Swarm

KUBERNETES : Kubernetes vs Docker Swarm

- **Kubernetes and Docker Swarm** are leading container orchestration tools.
- **Installation :**
Setting Up Docker Swarm is very easy. We need just Two CLI Commands to start with Swarm.
Kubernetes Installation is complex and we need to execute few commands to Bring up the Cluster and then define the Environment, Network, and DashBoard.

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➤ **GUI :**

Kubernetes have GUI, user can control the Complete Environment from Browser, No CLI commands required.

Docker Swarm has no GUI, user need to user CLI for swarm management.

➤ **Scalability :**

Both Tools scale the System efficiently. No-one win here, Kubernetes is slightly better at maintaining the Cluster strength, whereas Swarm is slightly faster at scaling up (5x faster than K8s).

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► **Auto-Scaling :**

The clear winner is **Kubernetes**. That is because, K8s are intelligent enough to analyze your server load, and scale up or down as per the requirement.

Docker Swarm doesn't provide Auto-Scaling, When traffic pours manual intervention is the only way out.

► **Load Balancing :**

Load Balancing is challenge with Kubernetes, you need to manually configure your load balancing settings.

Load balancing is simple with **Swarm** because, Swarm does auto load-balancing. There is no concept of Pods, and hence all the containers discover each other with a network IP address.

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➤ **Rolling Upgrade & Roll-Back :**

Kubernetes Supports the Rolling Upgrade and Auto Roll Back if it find something is fizzy with Cluser.

Swarm supports the Rolling Upgrade but no auto Roll Back feature is available.

➤ **Data Volumes :**

Kubernetes allows us to share storage volumes between multiple containers inside the same Pod.

Docker Swarm allows us to share storage volumes with any other container.

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► **Logging & Monitoring :**

Kubernetes provides in-built tools for logging and monitoring.

With Swarm, you need to use third party tools like ELK.

Logging helps in quickly analyzing the logs and understanding where the problem lies in case of a failure.

Monitoring helps the Master to constantly be aware of the health status of nodes and the services Status.

Will see you in Next Lecture...

Thank you!

A close-up photograph of a hand holding a black marker, writing the words 'Thank you!' in a cursive script on a white surface. The hand is positioned on the right side of the frame, with the fingers gripping the marker. The text is written in a fluid, handwritten style.

See you in next lecture ...