



# Container Orchestration



## what is container orchestration

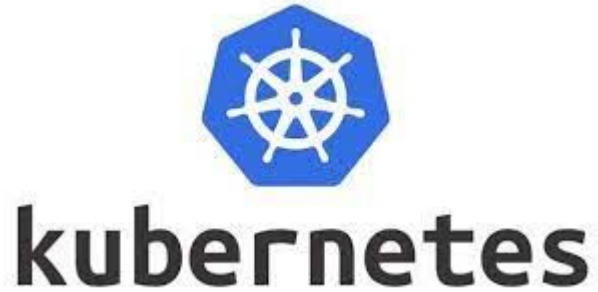
Container orchestration is the automation of much of the operational effort required to run containerized workloads and services. This includes a wide range of things software teams need to manage a container's lifecycle, including provisioning, deployment, scaling (up and down), networking, load balancing and more.



## Why we need container Orchestration?

In small numbers, containers are easy enough to deploy and manage manually. But in most organizations the number of containerized applications is growing rapidly, and managing them at scale - especially as part of a continuous integration/continuous delivery (CI/CD) or DevOps pipeline - is impossible without automation.

# Famous container orchestration tools



## Docker Enterprise Management Plane

App Scheduler

Swarm



OR

Kubernetes



Node



Node



Node



Docker Enterprise Cluster



## Benefits of container orchestration

- Scaling your applications and infrastructure easily
- Service discovery and container networking
- Improved governance and security controls
- Container health monitoring
- Load balancing of containers evenly among hosts
- Optimal resource allocation
- Container lifecycle management