

Container Orchestrators





Module Outline



- Orchestrators
- Kubernetes
- Docker Swarm
- Demos



Large scale deployment challenges



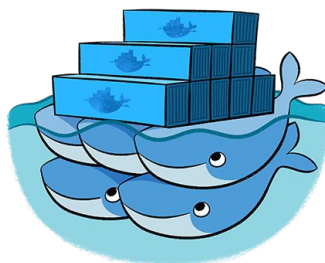
- Access Control
- Networking
- Shared Storage
- Scheduling/Scaling/Healing



MESOSPHERE DC/OS



Amazon Elastic
Container Service



Orchestrators handle scheduling, networking, and storage for applications. Devs don't care where, Devs just want applications to have certain characteristics and capabilities when they run.



Kubernetes (k8s)



Open-source platform for automating deployment, scaling, and management of containerized applications

Greek for 'Captain' or 'Helmsman' (it's driving the container ship!)

Created inside Google and open-sourced, now managed by CNCF



CLOUD NATIVE
COMPUTING FOUNDATION

5

<https://kubernetes.io/>

<https://www.cncf.io/>

<https://github.com/kubernetes/kubernetes>

<https://github.com/kubernetes/kubernetes/blob/master/logo/logo.png>

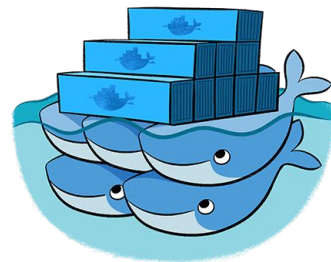
<https://github.com/cncf/artwork>



Docker Swarm

Allows clustering nodes into a single "Docker Engine"

Docker compose support



<https://docs.docker.com/engine/swarm/how-swarm-mode-works>

<https://github.com/kubernetes/kubernetes/blob/master/logo/logo.png>

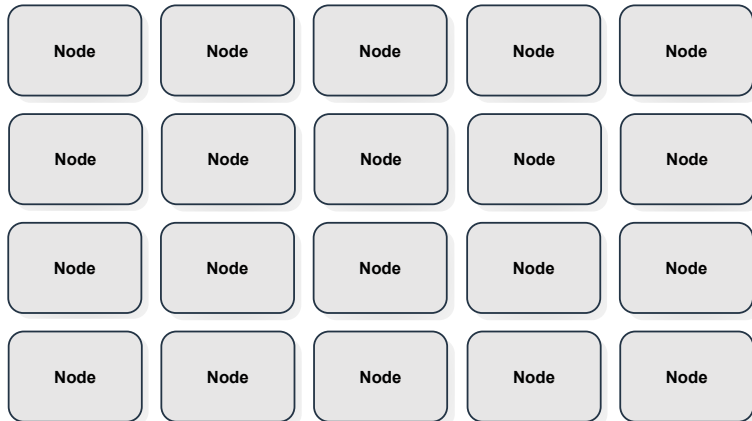
<https://github.com/cncf/artwork>

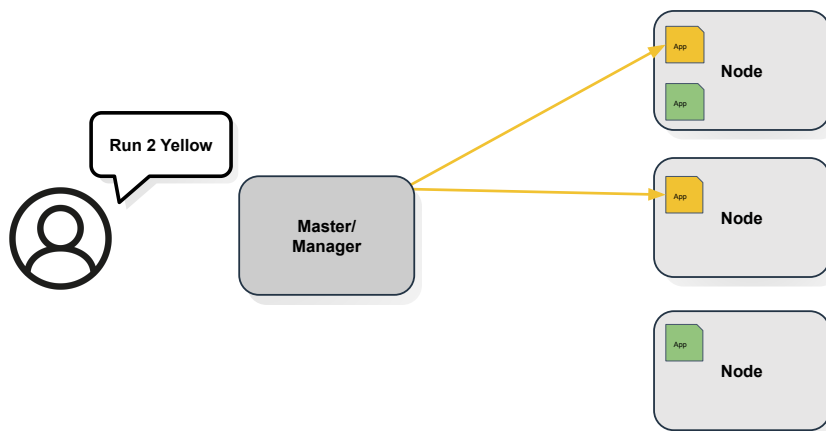


Master/
Manager

Master/
Manager

Master/
Manager







Kubernetes



Docker Swarm



TL;DR:

- K8s is more powerful, flexible and complex
- Docker swarm is simpler and easier



Additional Resources



- [Kubernetes.io](https://kubernetes.io)
- Docker Swarm
<https://docs.docker.com/engine/swarm/>