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BASICS OF KUBERNETES
Basics of Kubernetes

What Is Kubernetes?

Running a container on a laptop is relatively simple. But, connecting containers across multiple hosts, scaling them, deploying applications without downtime, and service discovery among several aspects, can be difficult.

Kubernetes addresses those challenges from the start with a set of primitives and a powerful open and extensible API. The ability to add new objects and controllers allows easy customization for various production needs.

According to the kubernetes.io website, Kubernetes is:

> *"an open-source software for automating deployment, scaling, and management of containerized applications".*

A key aspect of Kubernetes is that it builds on 15 years of experience at Google in a project called borg.

Google's infrastructure started reaching high scale before virtual machines became pervasive in the datacenter, and containers provided a fine-grained solution for packing clusters efficiently. Efficiency in using clusters and managing distributed applications has been at the core of Google challenges.

💡 **In Greek, κνβερνητης means the Helmsman, or pilot of the ship. Keeping with the maritime theme of containers, Kubernetes is the pilot of a ship of containers.**

Due to difficulty in pronouncing the name many will use a nickname, K8s, as Kubernetes has eight letters. The nickname is said like Kate's.