Cloud Native Ninja

Getting started with Kubernetes

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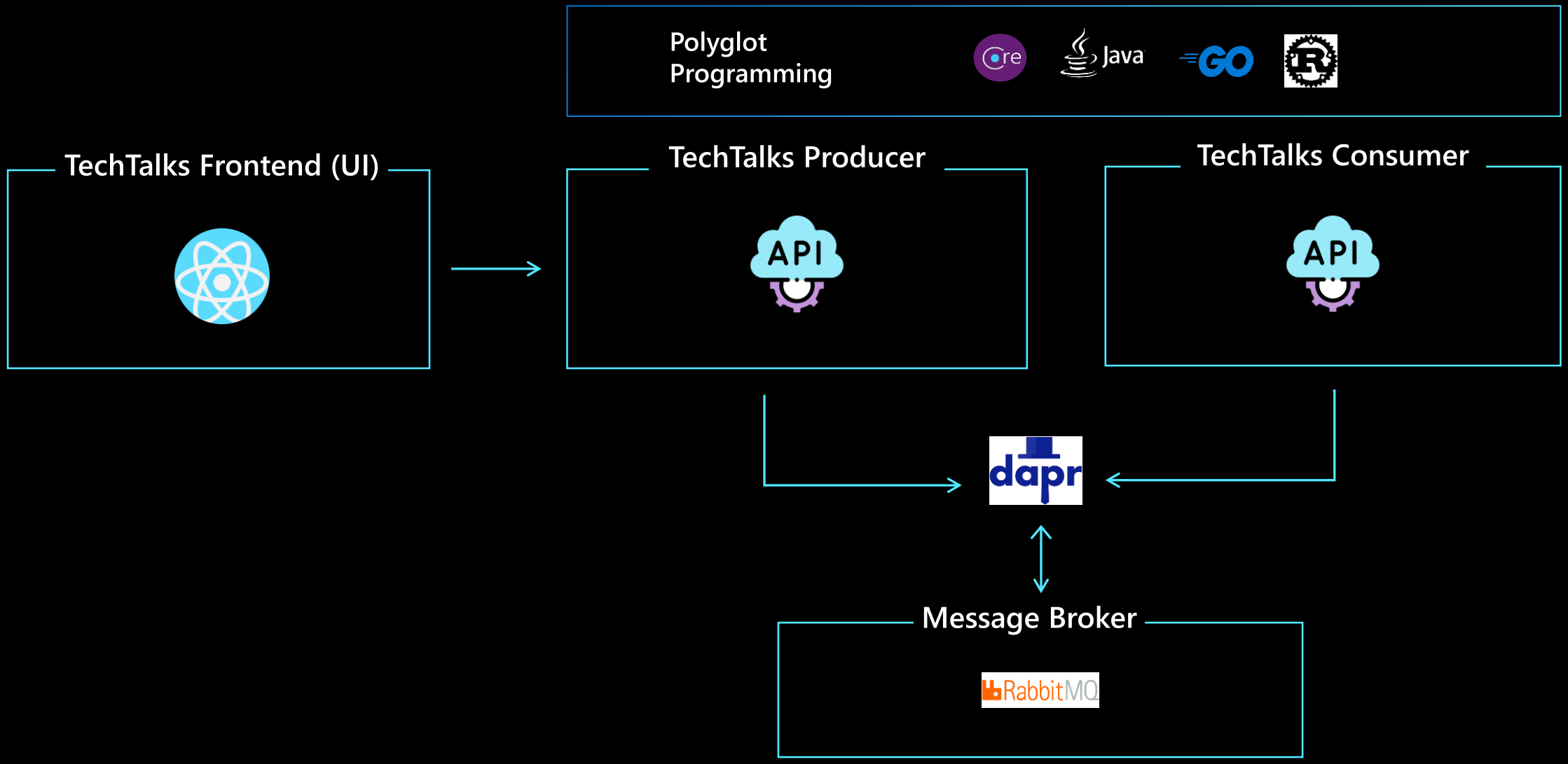
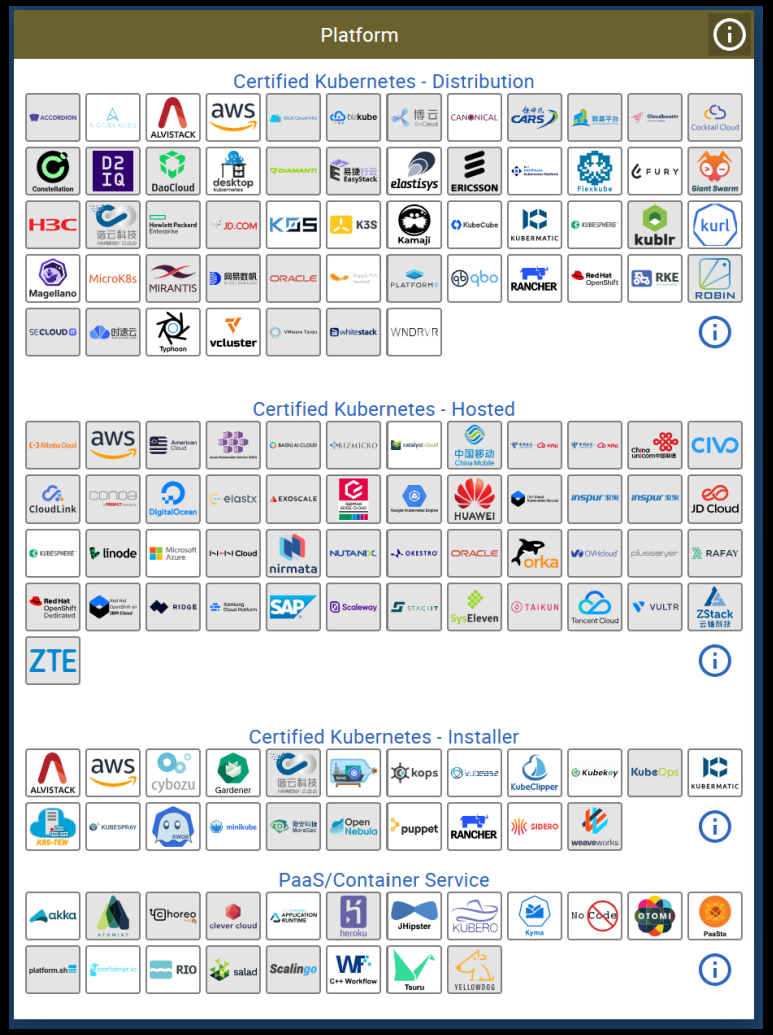
TechTalks Application Architecture



Kubernetes - most popular CNCF project



https://landscape.cncf.io/

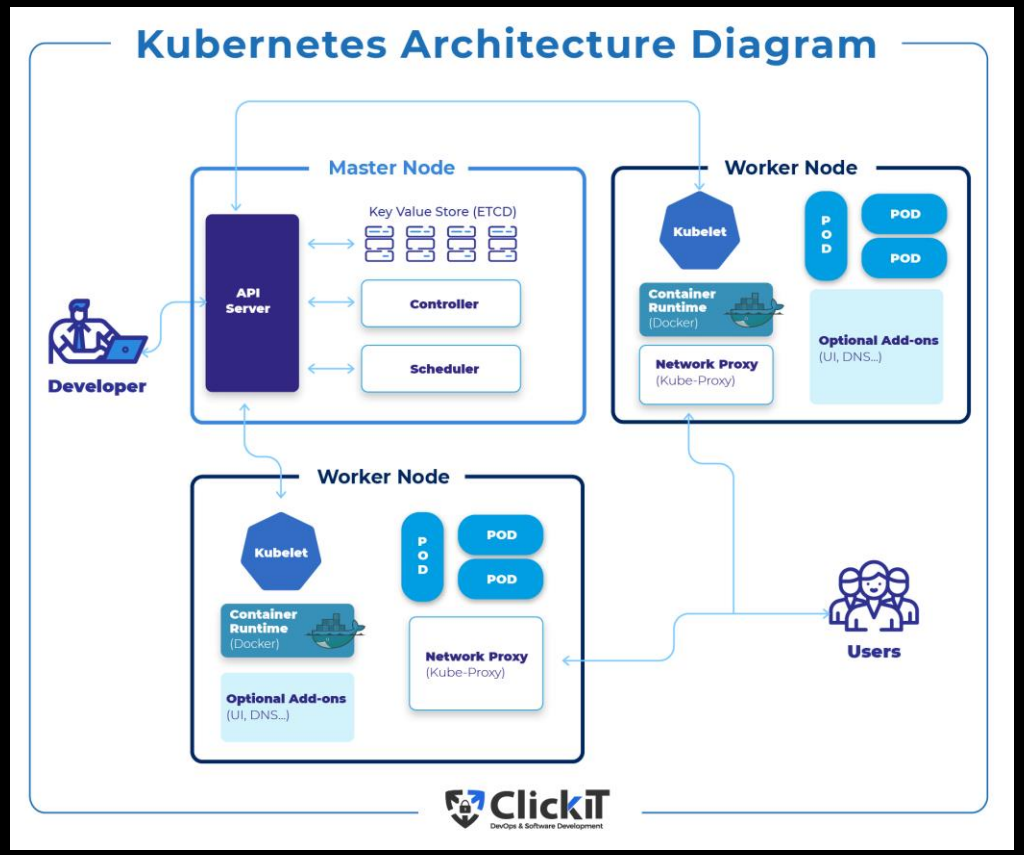
What is Kubernetes?

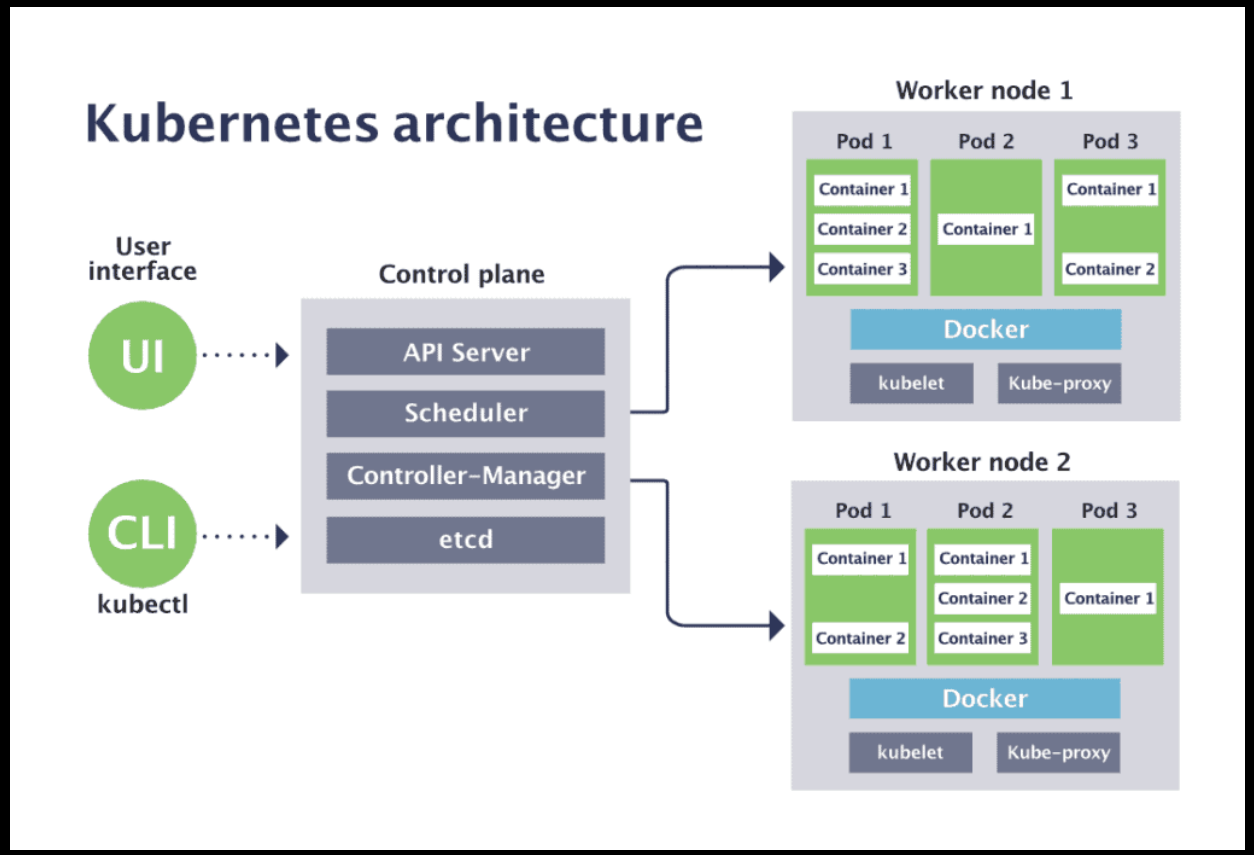
Kubernetes, also known as K8s, is an open-source system for automating deployment, scaling, and management of containerized applications.

It groups containers that make up an application into logical units for easy management and discovery. Kubernetes builds upon 15 years of experience of running production workloads at Google, combined with best-of-breed ideas and practices from the community.

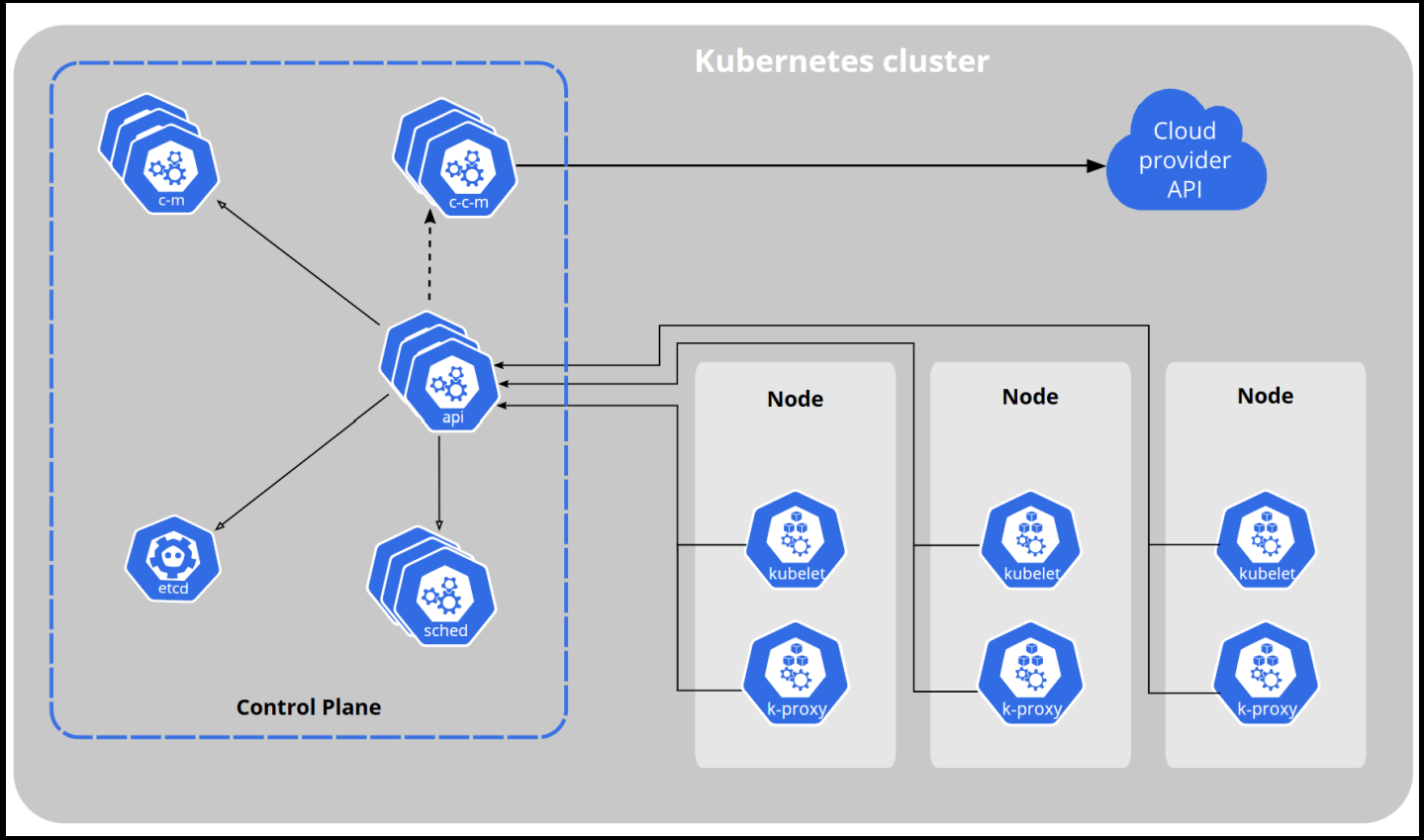
https://kubernetes.io/

Kubernetes Architecture





Kubernetes Architecture



Kubernetes – How to get started?

Microsoft

Kubernetes Learning Path | Version 3.0

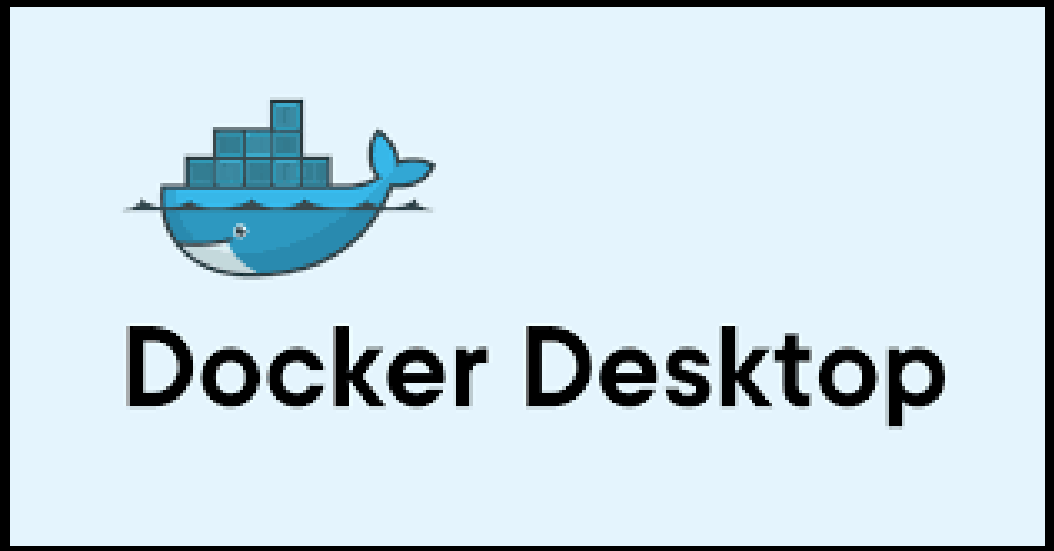
50 days from zero to hero with Kubernetes

Kubernetes is taking the app development world by storm. By 2022, more than 75% of global organizations will be running containerized applications in production.[1] Kubernetes is shaping the future of app development and management—and Microsoft wants to help you get started with it today.

This guide is meant for anyone interested in learning more about Kubernetes. In just 50 days, you'll understand the basics of Kubernetes and get hands-on experience with its various components, capabilities, and solutions, including Azure Kubernetes Service. Go from zero to hero with Kubernetes to set your company up for future app development success.

50 days from zero to hero with Kubernetes

Kubernetes – Single node cluster



What can be done with Kubernetes?

- ✓ **Orchestrate containers:** Provides a platform to schedule & run containers on clusters of physical or virtual machines
- ✓ **Better Hardware utilization**: Maximize resources needed
- ✓ **Application Deployment**: Control & automate application deployment
- ✓ **Stateful Apps**: mount & add storage for running stateful apps
- ✓ **Scale containerized apps**: Dynamically scale application
- ✓ **Declaratively manage services**
- ✓ **Resiliency**: Health-check & self-heal apps with auto-placement, auto restart, auto replication, autoscaling etc.

Summary

- ✓ **Kubernetes:** Orchestration platform
- ✓ **Docker Desktop**: provides Single node Kubernetes cluster
- ✓ **Kubectl** : Kubernetes command line interface
- ✓ **Lens / Octant**: Kubernetes cluster visualizer

Containerize Apps Resources

Cloud Native Ninja GitHub repo: https://github.com/NileshGule/cloud-native-ninja

Slides

Slideshare: https://www.slideshare.net/nileshgule/

Speaker Deck: https://speakerdeck.com/nileshgule/