

Introduction to Google Container Engine

GDG
DevFest
Bangkok



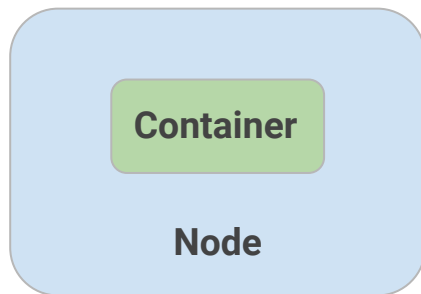
Google Cloud Platform

Jirayut Nimsaeng (Dear)
CEO/Founder Opsta
GDG Cloud Bangkok

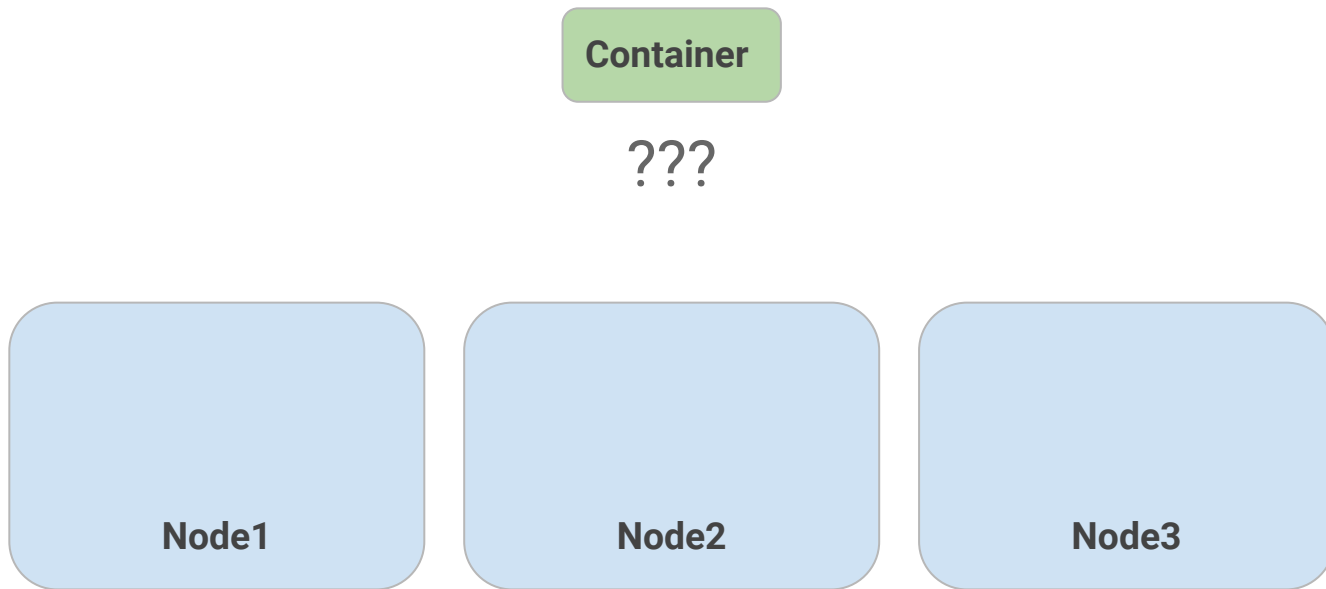


Ananda UrbanTech | FYI Center
October 7, 2017

One server



Multiple servers?



Health

Scheduling

Discovery

There are more!

Monitoring

Scaling

Configuration

Security

Kubernetes

Manage applications, not machines

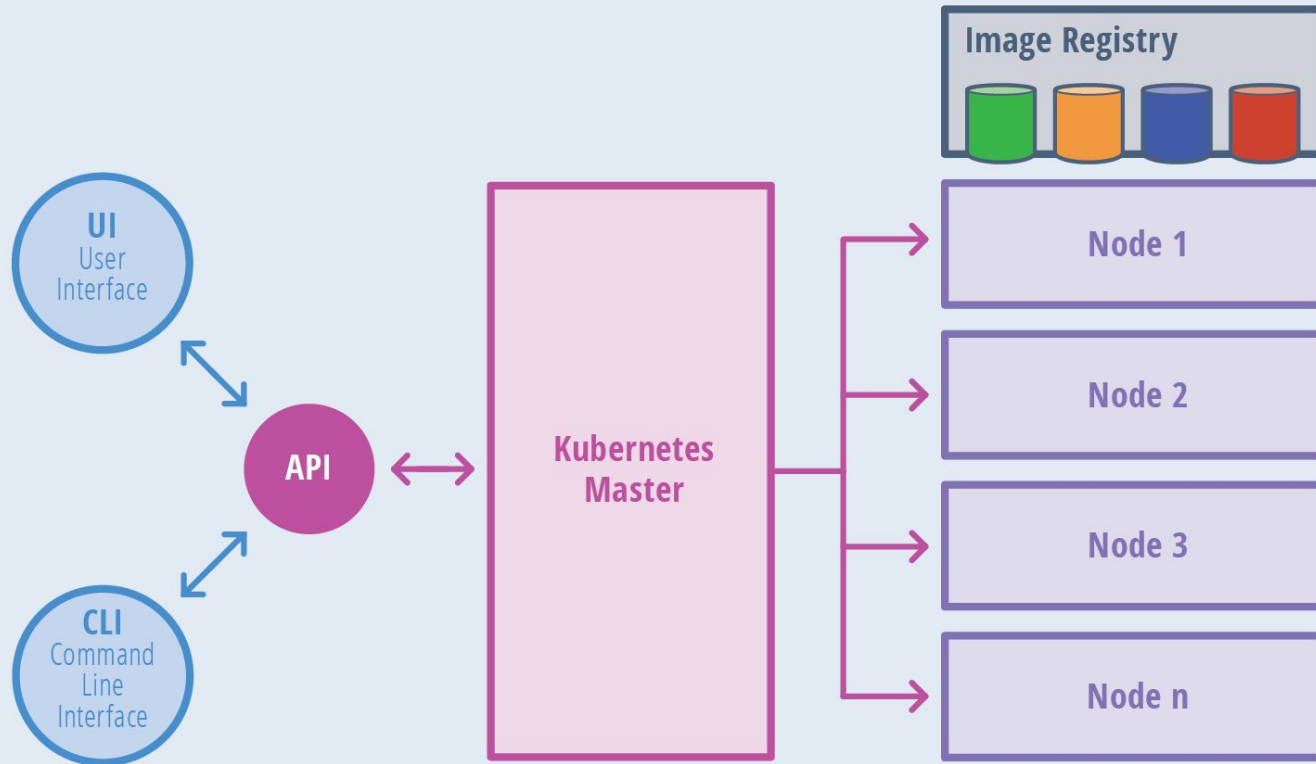
Open source, open API container
orchestrator

Supports **multiple cloud** and **bare-metal**
environments

Inspired and informed by Google's
experiences and internal systems



Kubernetes Architecture



Source: Janakiram MSV

THE NEW STACK

Services

Deployments

Kubernetes Concepts

Pods

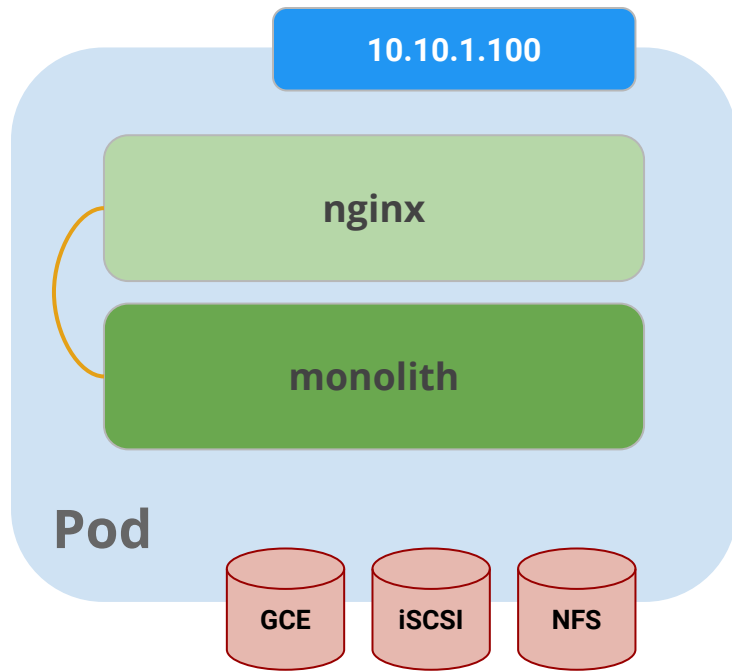
Rolling Updates

Pods

Pods

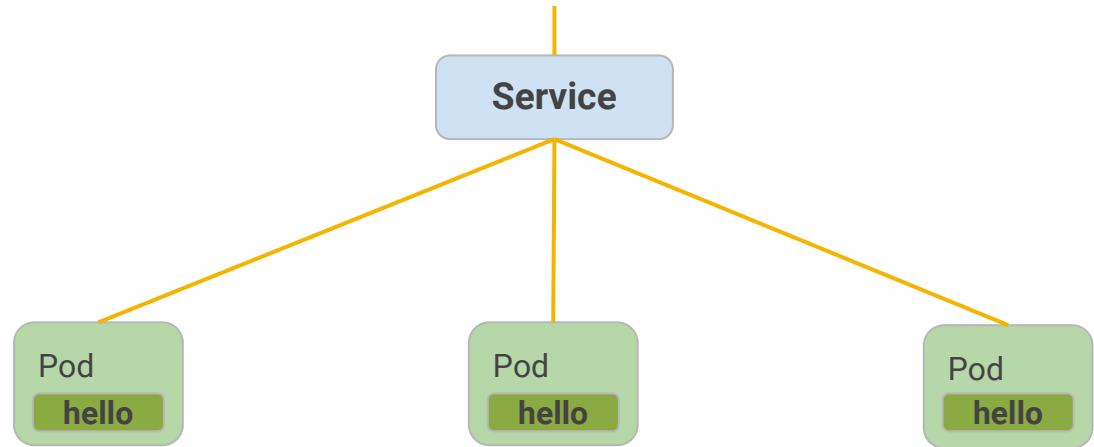
Logical Application

- One or more containers and volumes
- Shared namespaces
- One IP per pod



Services

Services

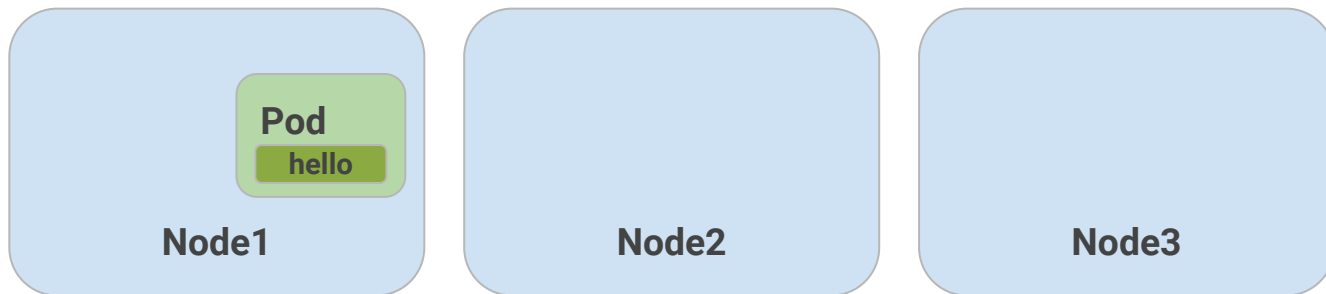


Deployments

Deployments

Drive current state towards desired state

app: hello
replicas: 1

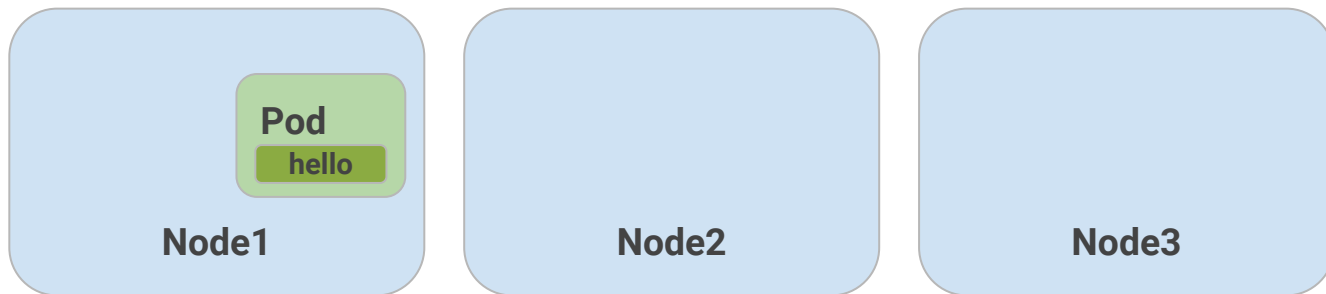


Deployments

Drive current state towards desired state

app: hello

replicas: 3

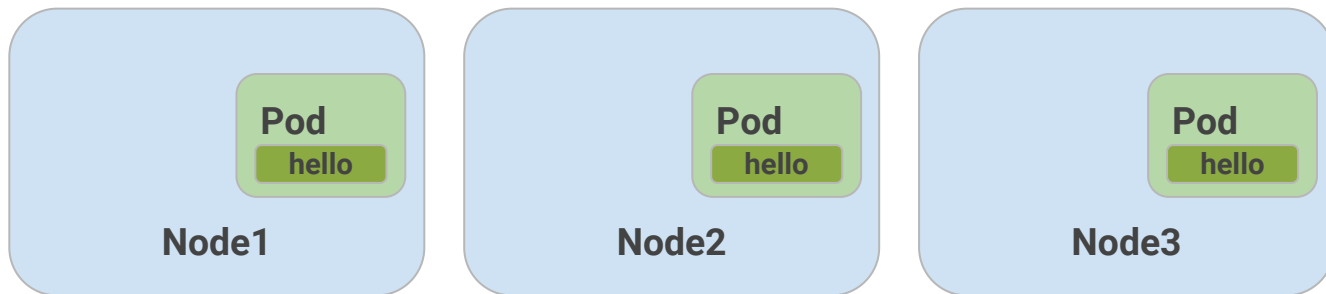


Deployments

Drive current state towards desired state

app: hello

replicas: 3

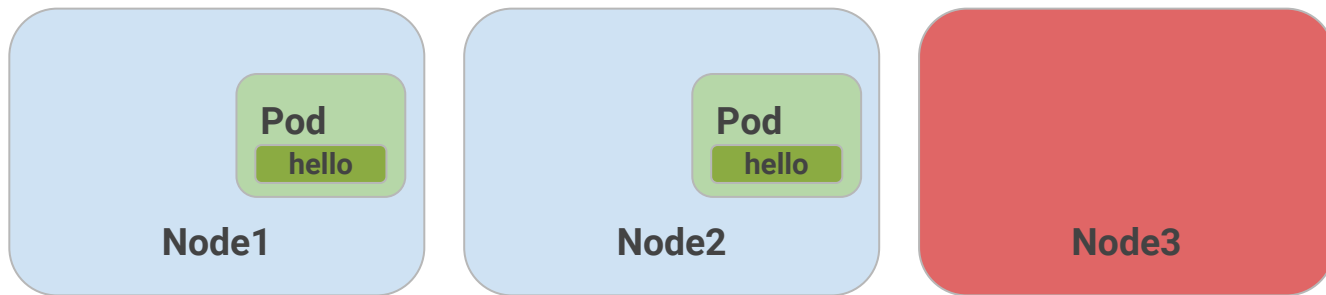


Deployments

Drive current state towards desired state

app: hello

replicas: 3

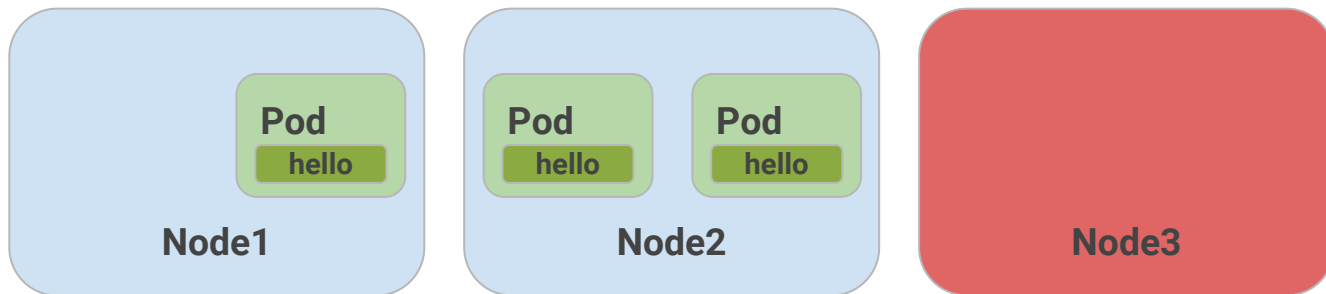


Deployments

Drive current state towards desired state

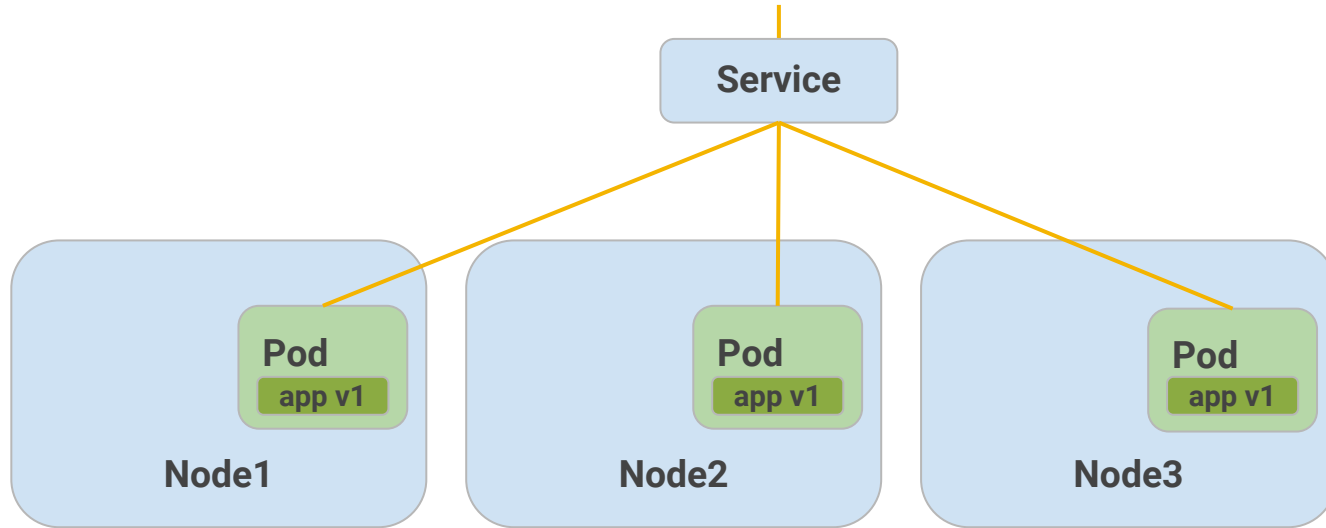
app: hello

replicas: 3

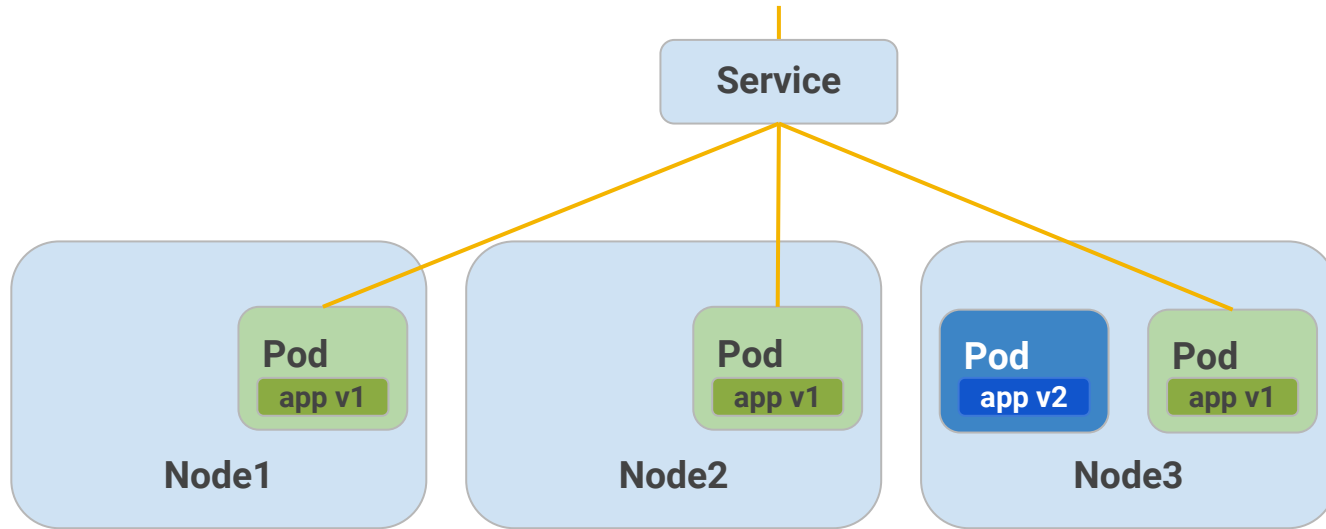


Rolling Updates

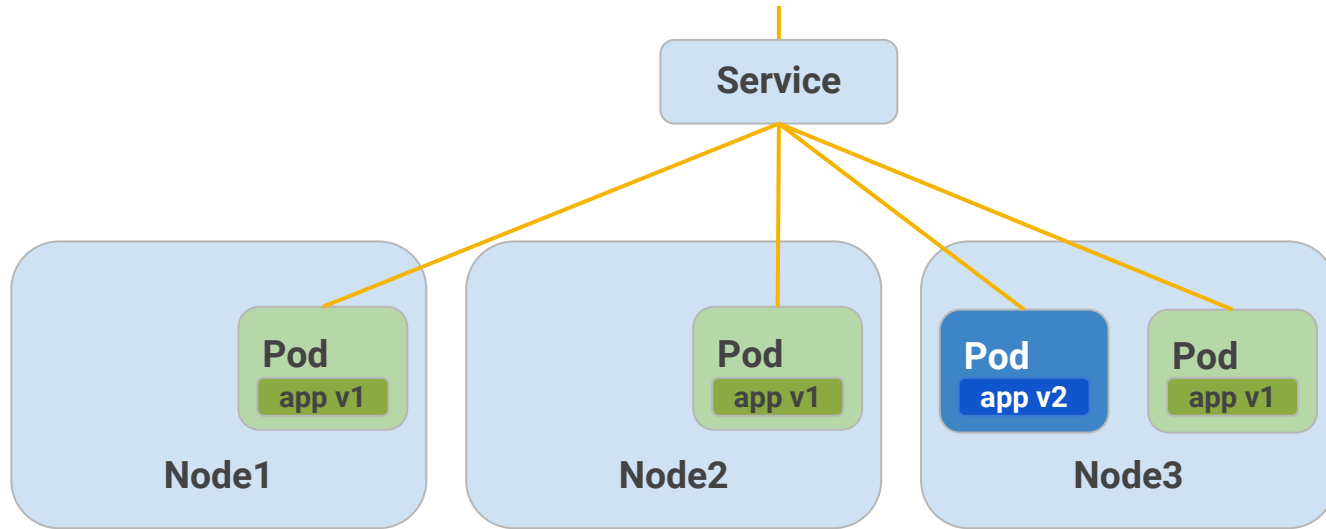
Rolling Update



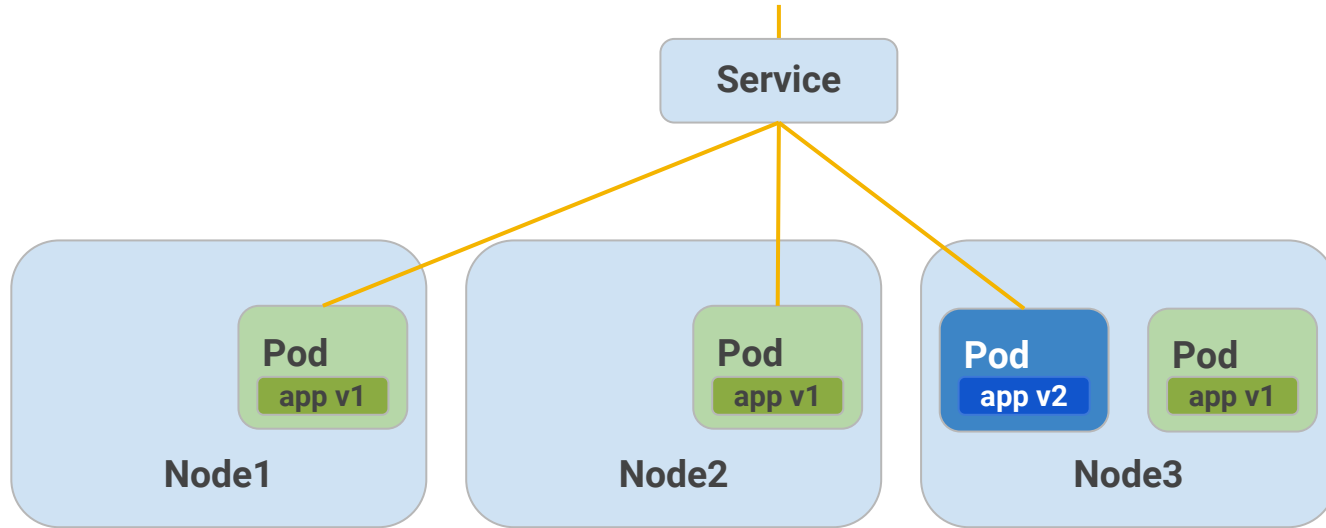
Rolling Update



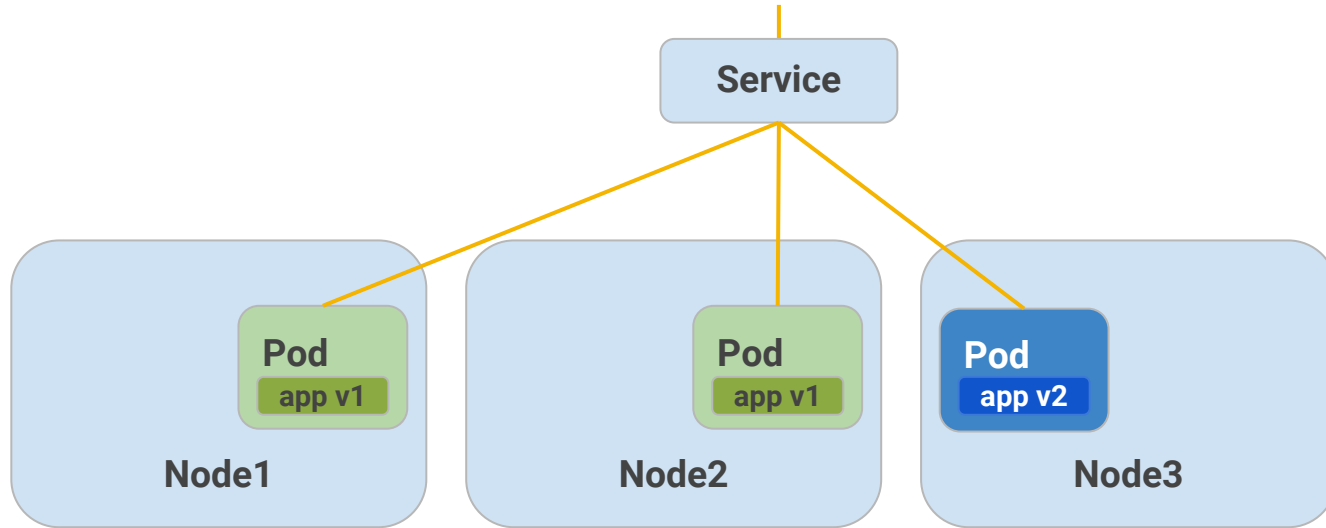
Rolling Update



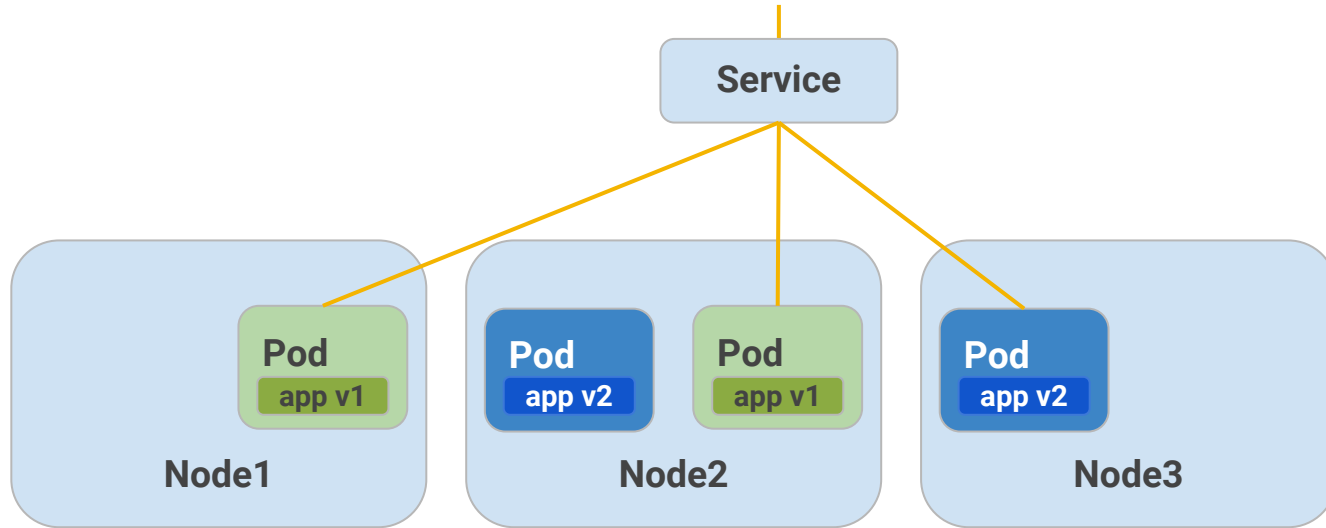
Rolling Update



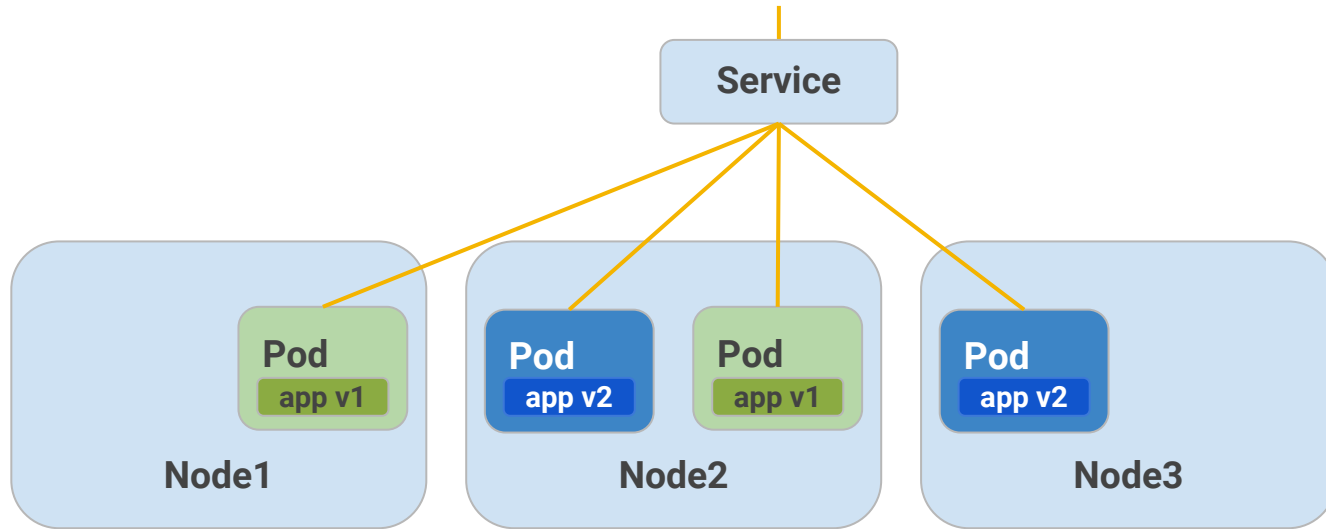
Rolling Update



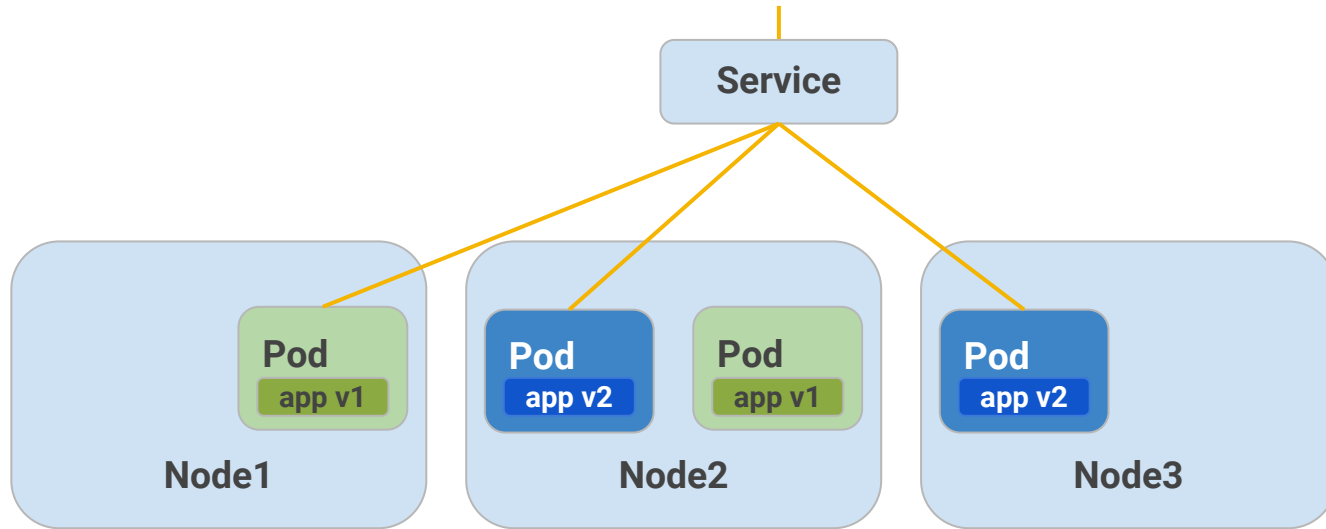
Rolling Update



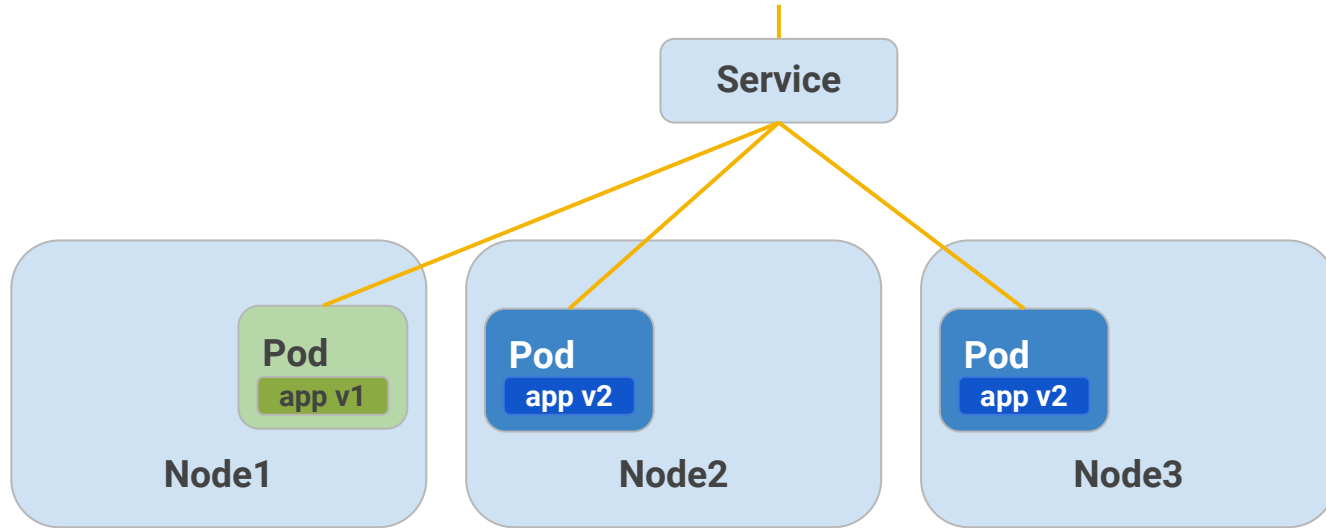
Rolling Update



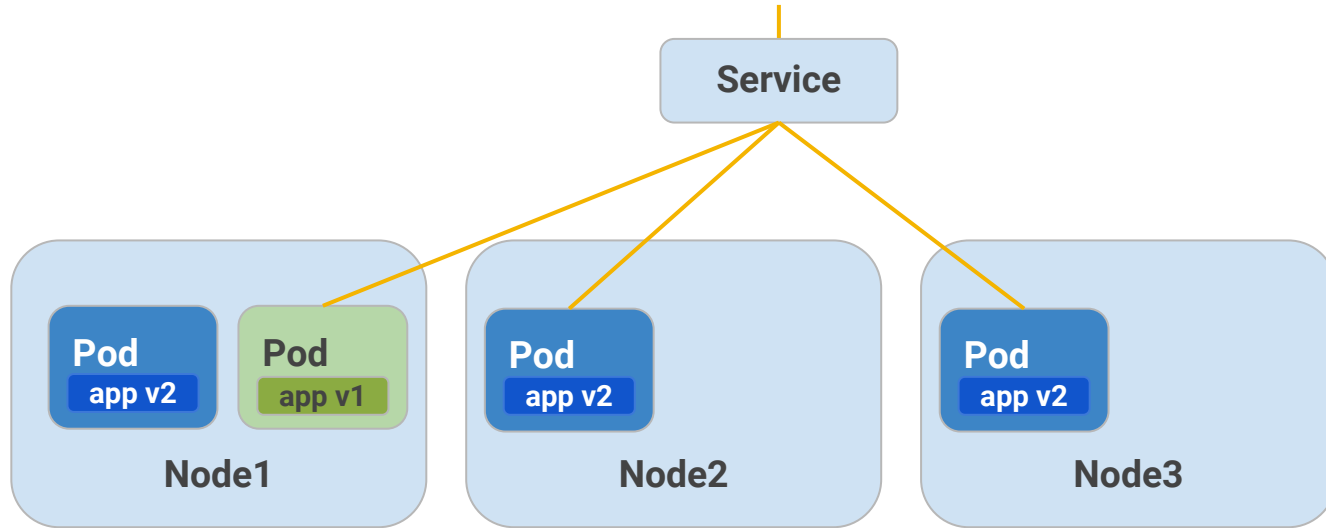
Rolling Update



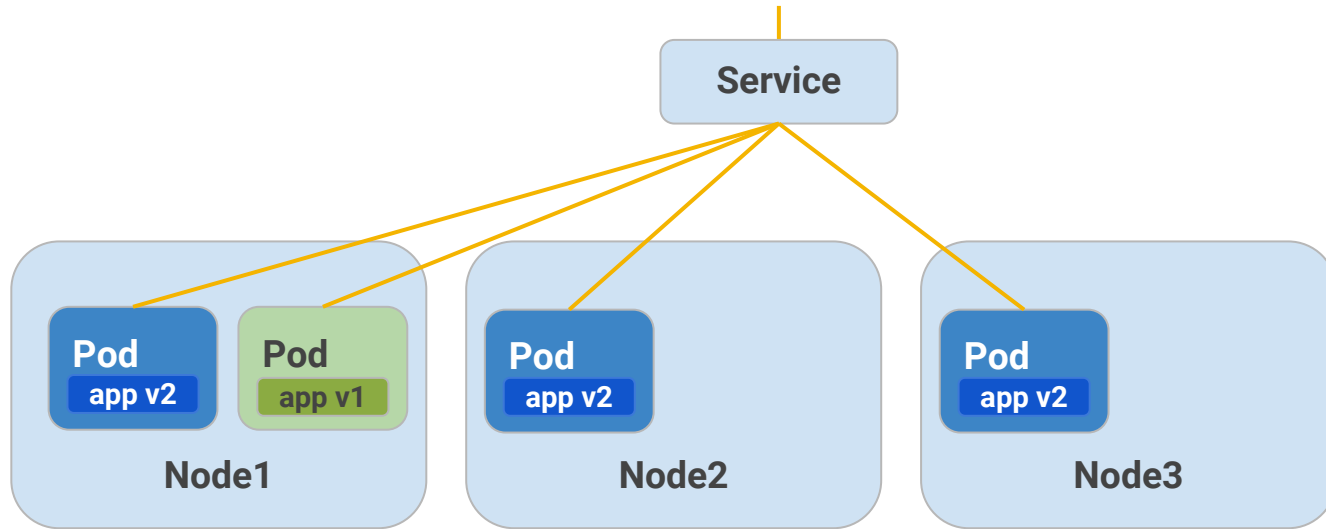
Rolling Update



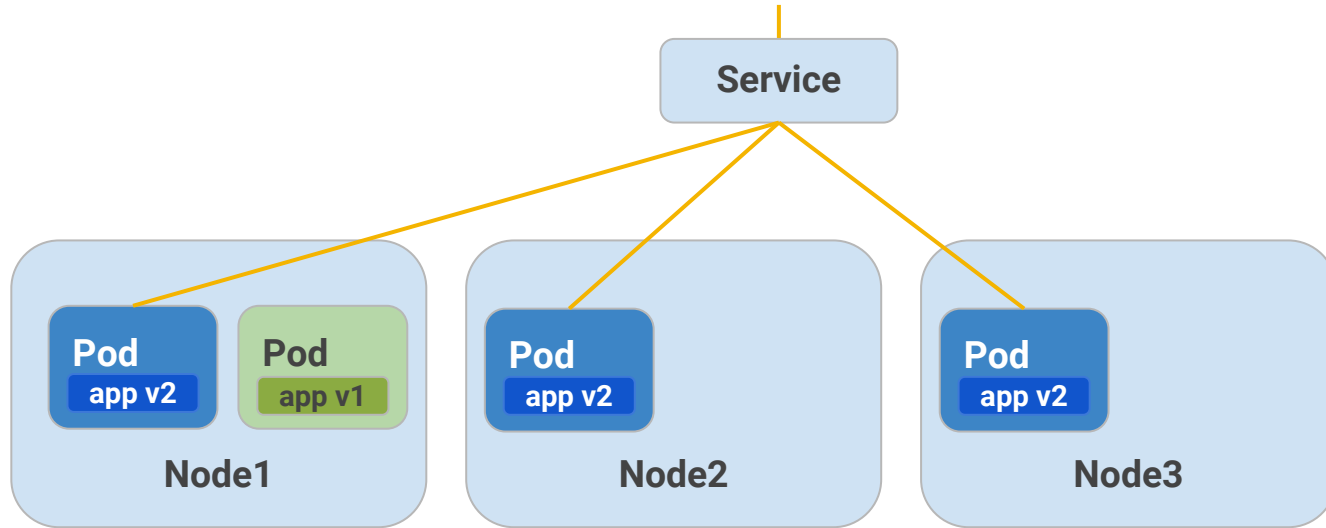
Rolling Update



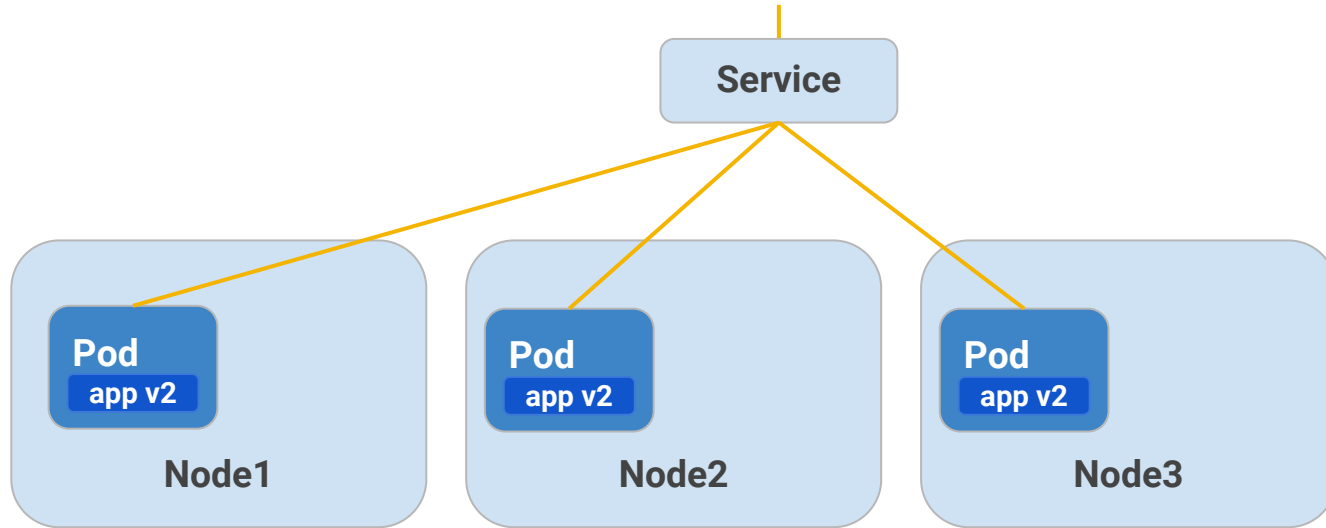
Rolling Update



Rolling Update



Rolling Update



But wait there's more.

- Persistent disks
- Logging & Monitoring
- Node & Pod Autoscaling
- Web UI
- Jobs & Daemon Sets
- Cluster Federation
- Ingress





Why Kubernetes & Container Engine?

Kubernetes

Open source, No locked in.

Insulate from infrastructure

Enables high utilization

== cost savings

Abstraction sweet spot for many

Choose tools for logging, monitoring...

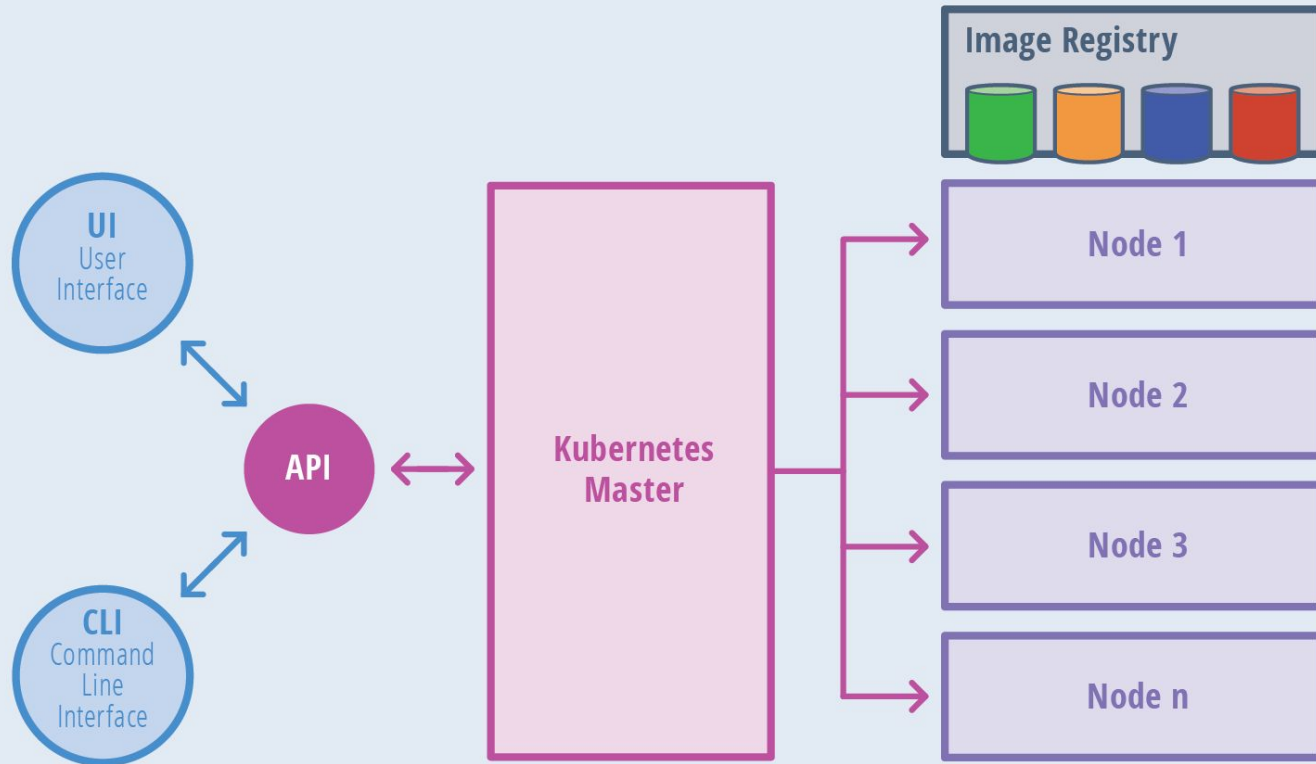
Container Engine

Managed cluster

- Focus on your applications
- Quick start
- Automatic updates

Backup Slides

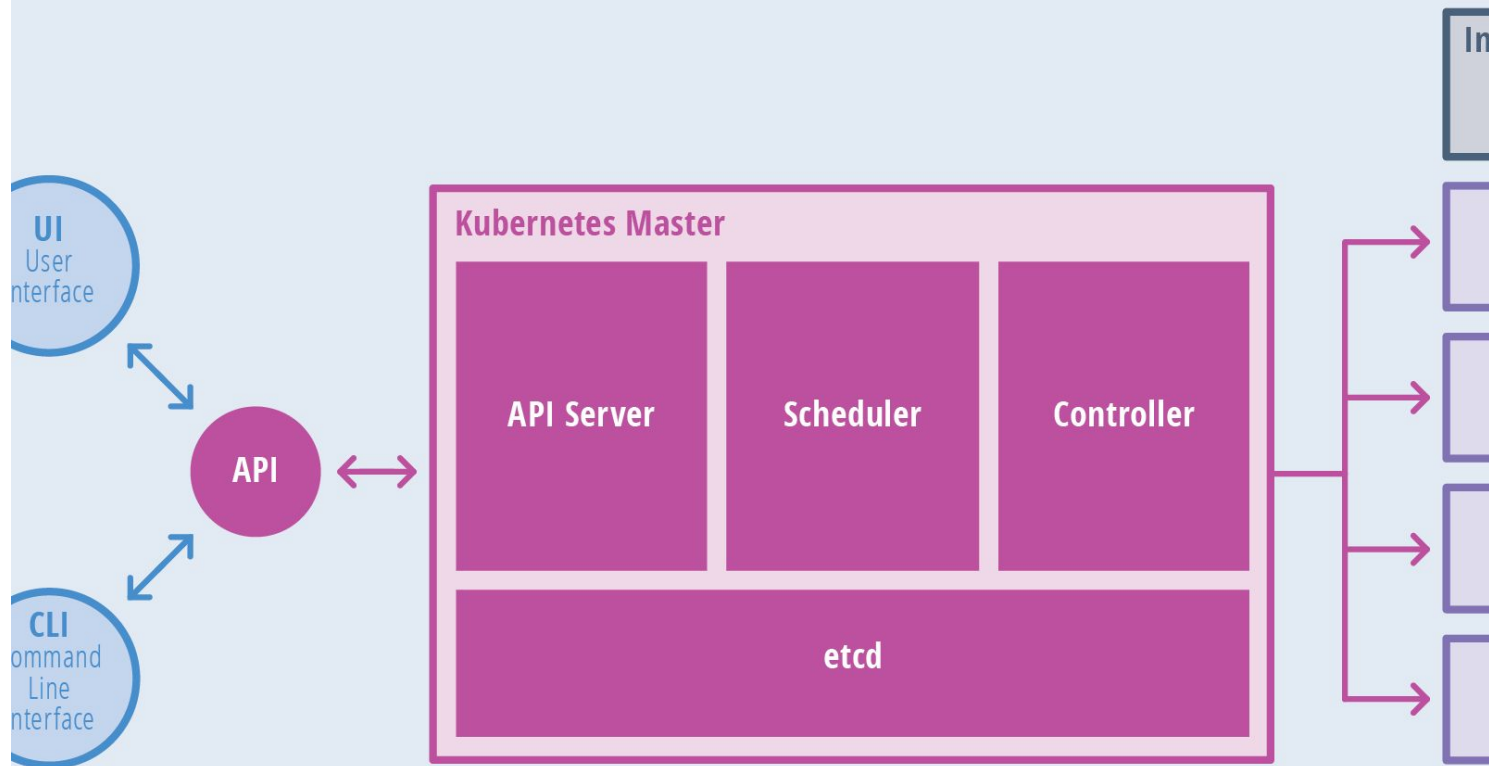
Kubernetes Architecture



Source: Janakiram MSV

THE NEW STACK

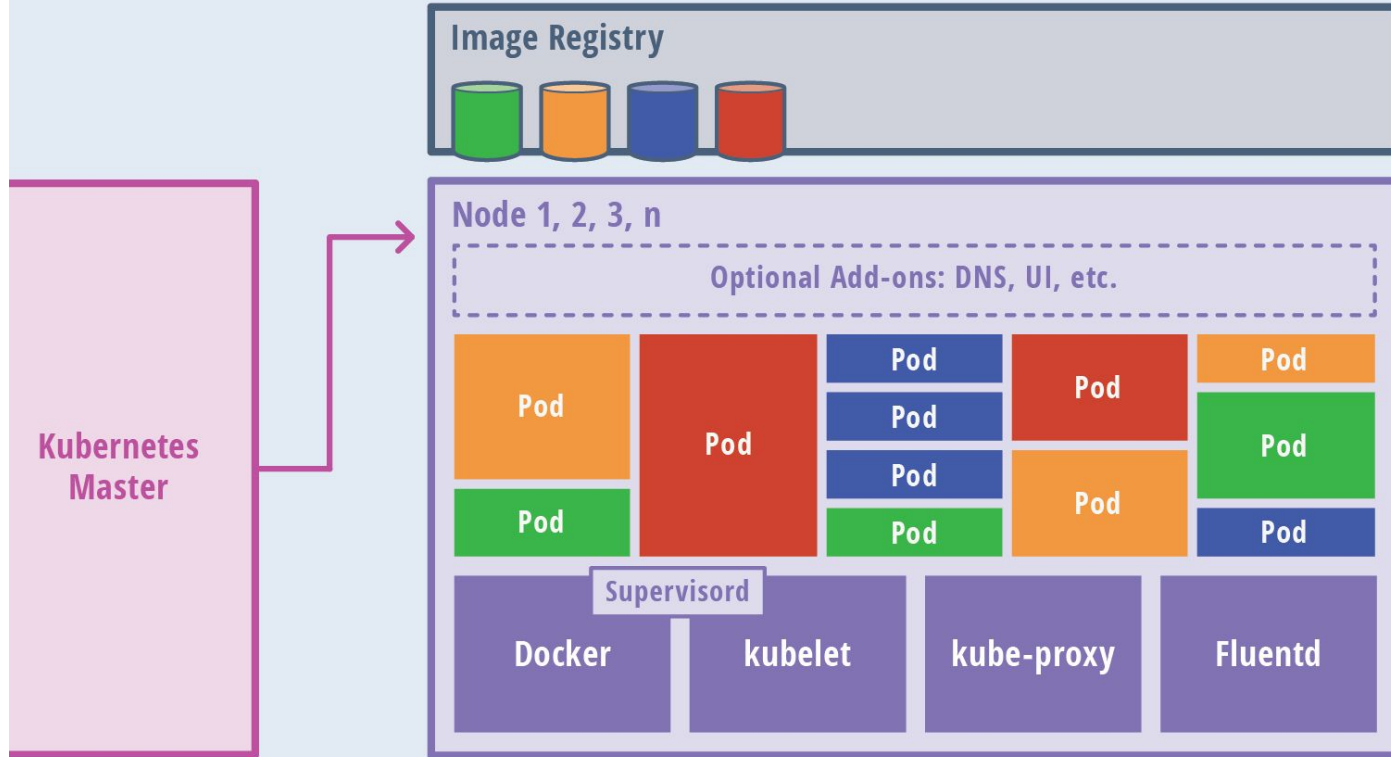
Kubernetes Master



Source: Janakiram MSV

THE NEW STACK

Kubernetes Node



Source: Janakiram MSV

THE NEW STACK