



# Building from scratch a managed Kubernetes service

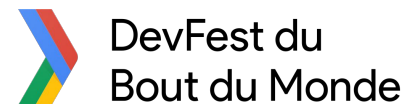
Horacio Gonzalez  
@LostInBrittany

# Horacio Gonzalez

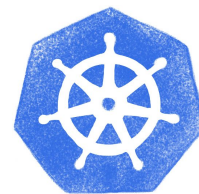


@LostInBrittany

Spaniard lost in Brittany,  
developer, dreamer and  
all-around geek



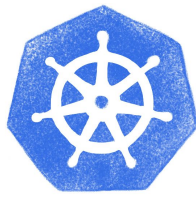
# Summary



What I would like to speak about:

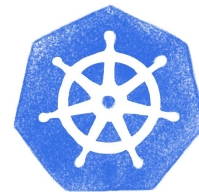
- Orchestrating containers
- Kubernetes: some concepts
- I have deployed on Minikube, woah!
- From Minikube to prod
- Building a managed Kubernetes service

# Orchestrating containers



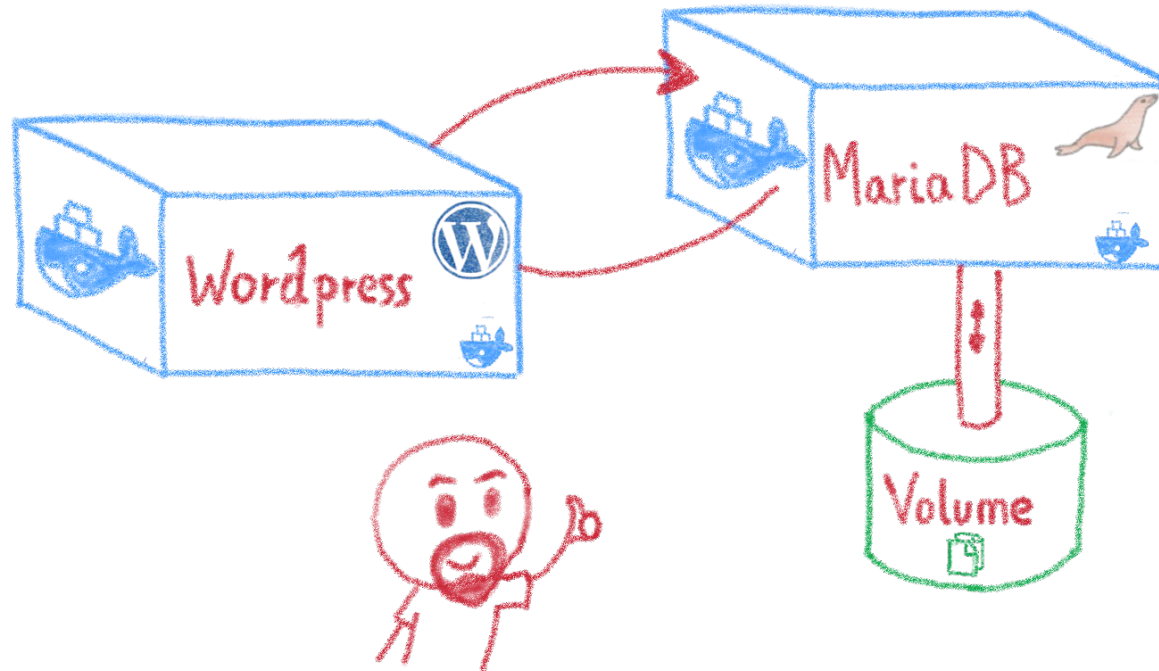
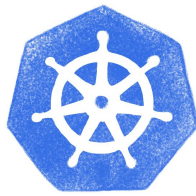
Like herding cats... but in hard mode!

# From bare metal to containers

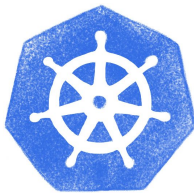


Another paradigm shift

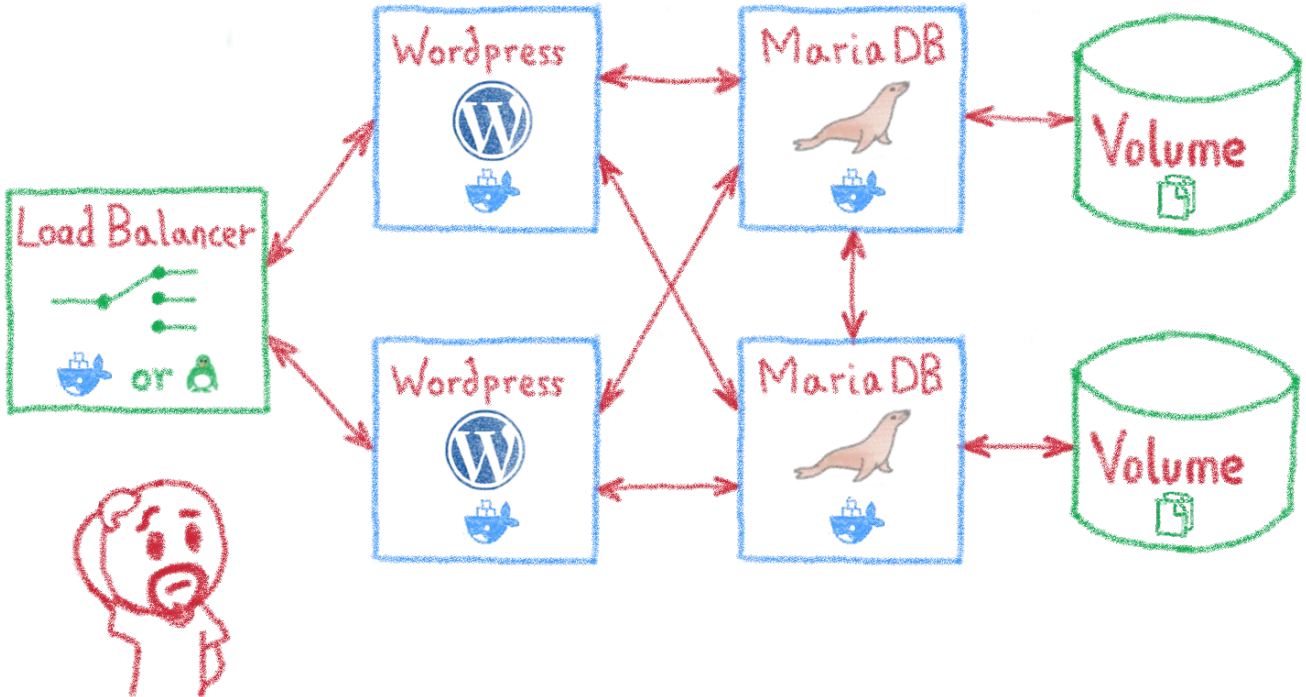
# Containers are easy...



For developers

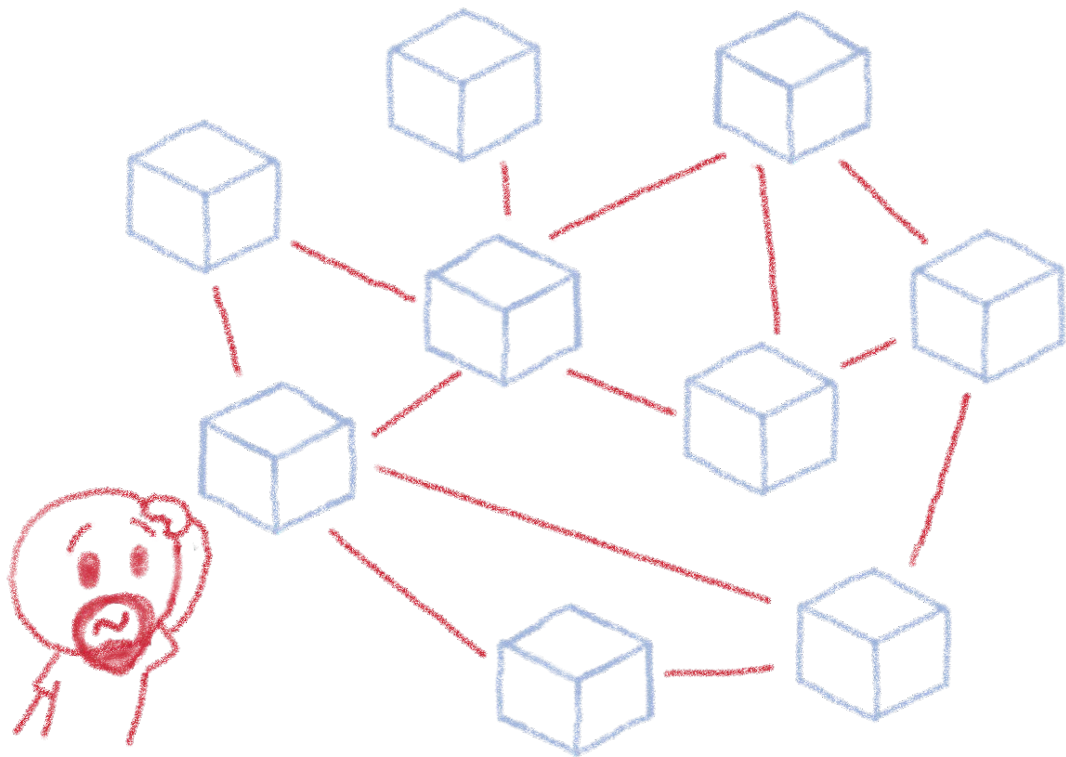
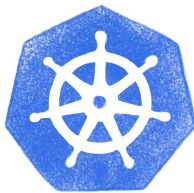


# Less simple if you must operate them



Like in a production context

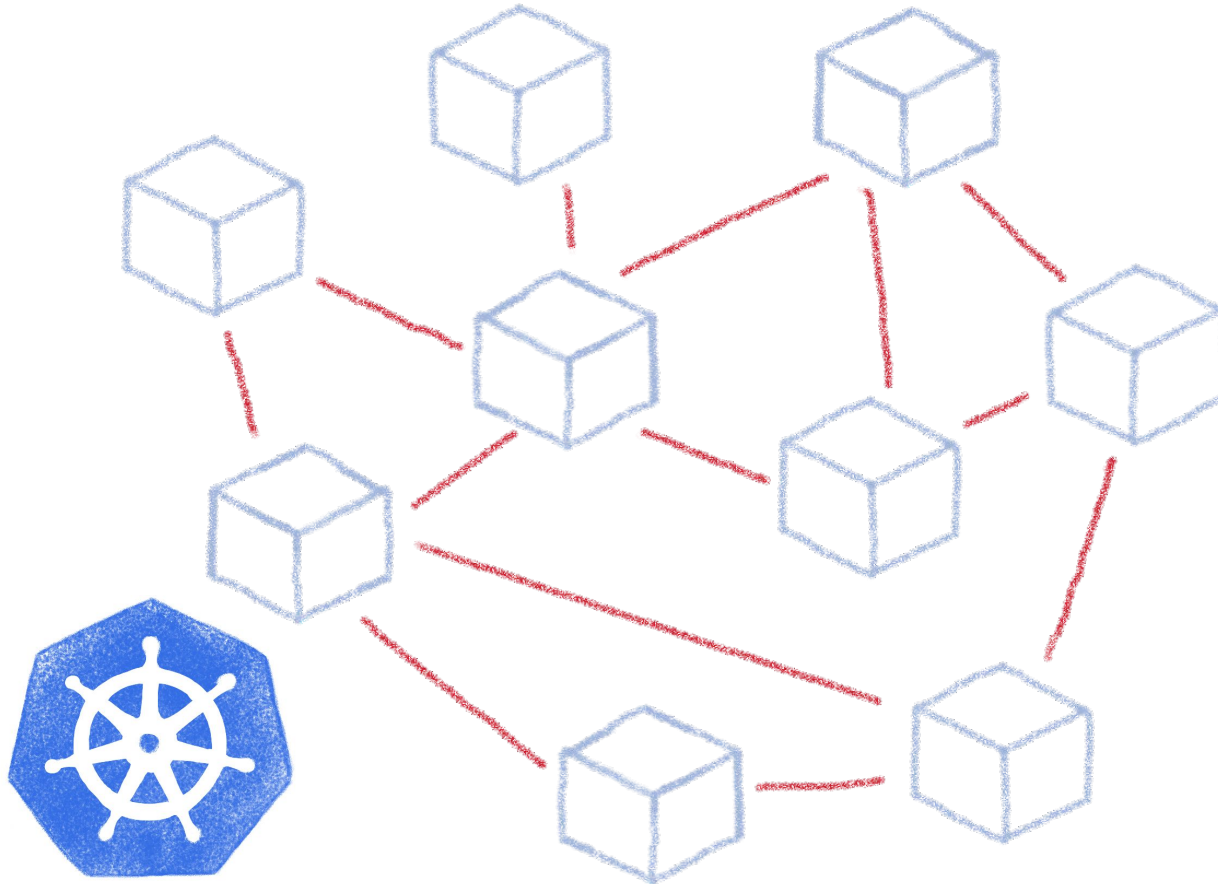
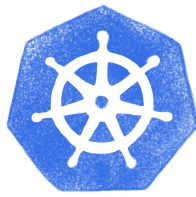
# And what about microservices?

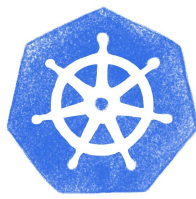


Are you sure you want to operate them by hand?



# Taming microservices with Kubernetes

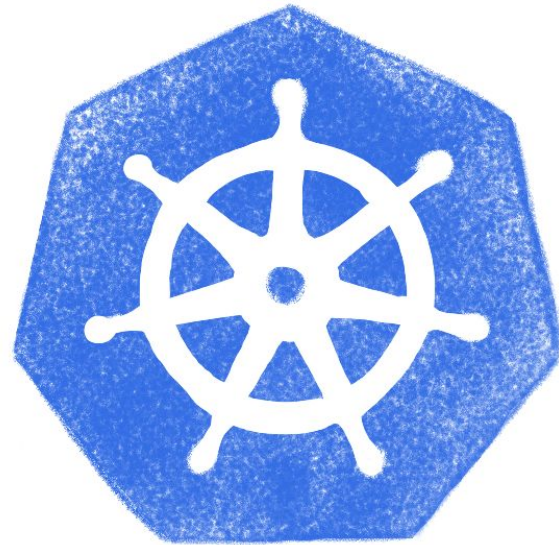




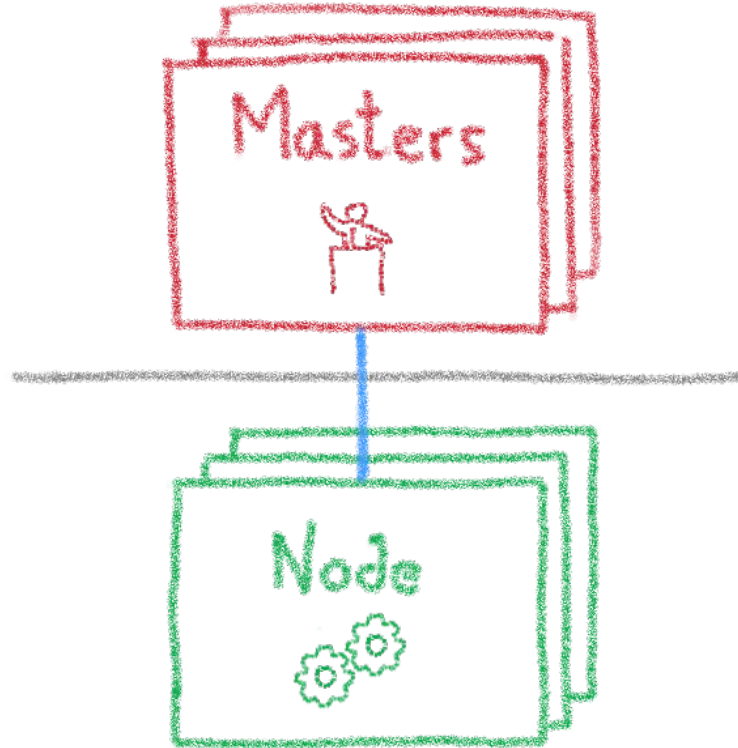
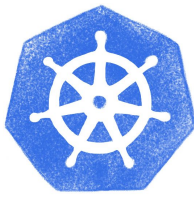
# Kubernetes

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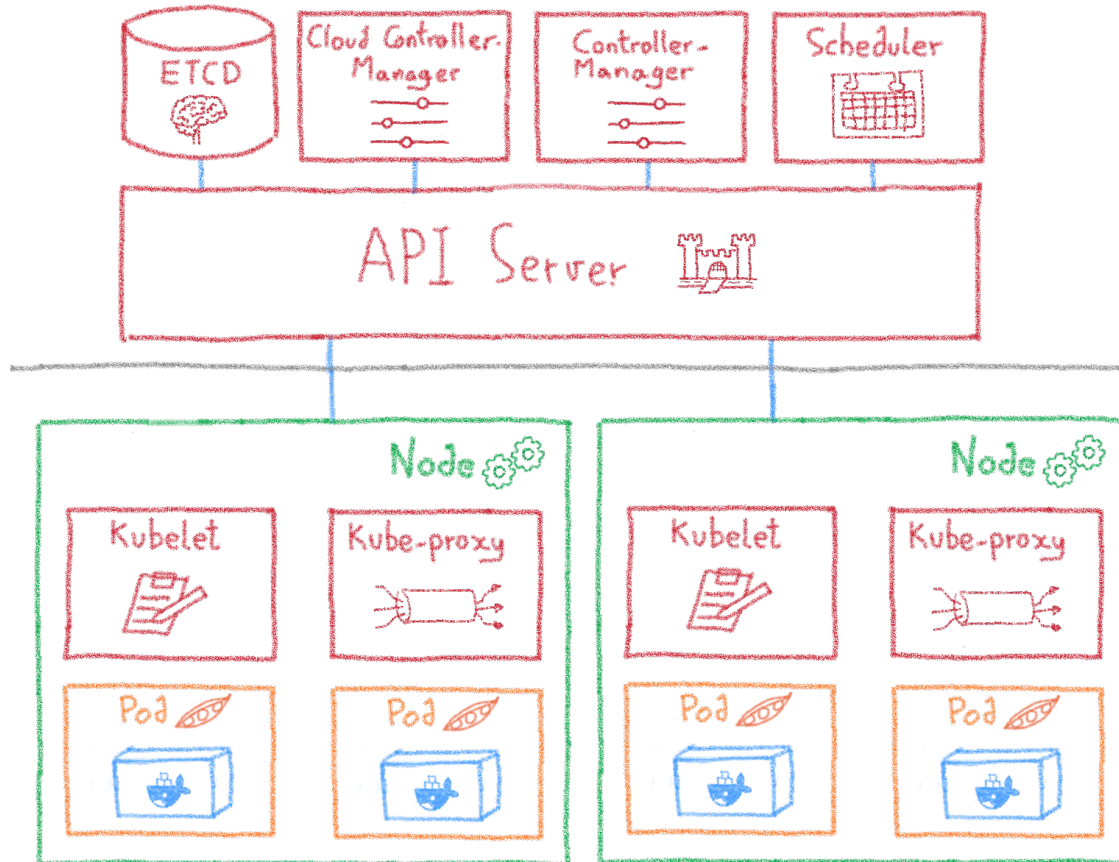
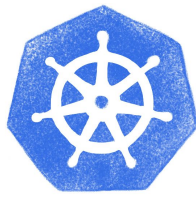
Way more than a buzzword!

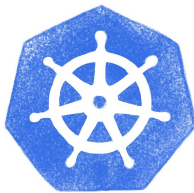


# Masters and nodes

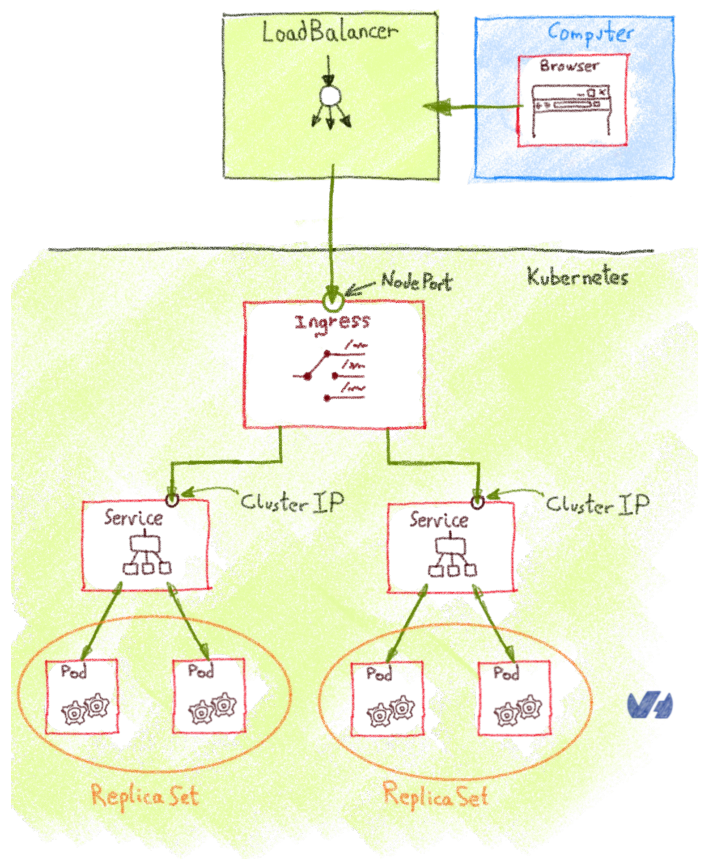


# Some more details



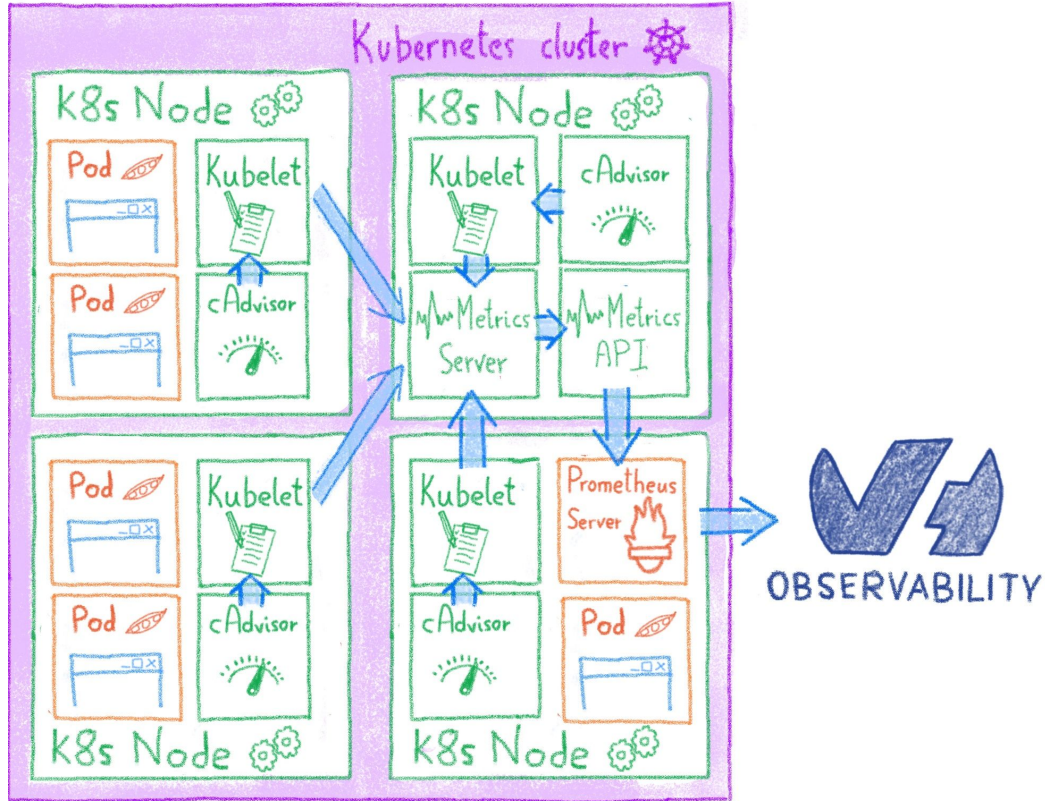
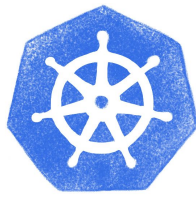


# Services and deployments

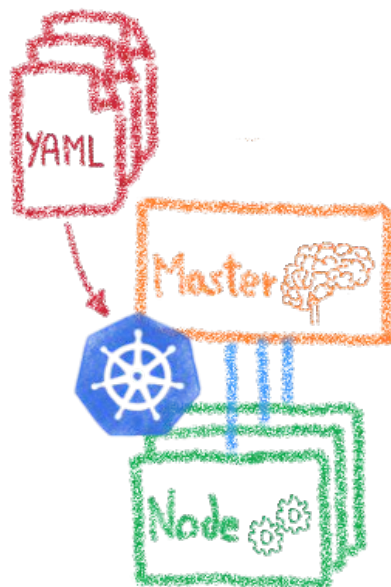
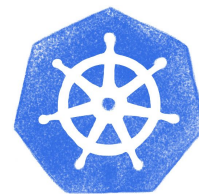


- Ingress
- Services
- Deployments
- Pods
- Sidecars
- Replica Sets

# Extending Kubernetes

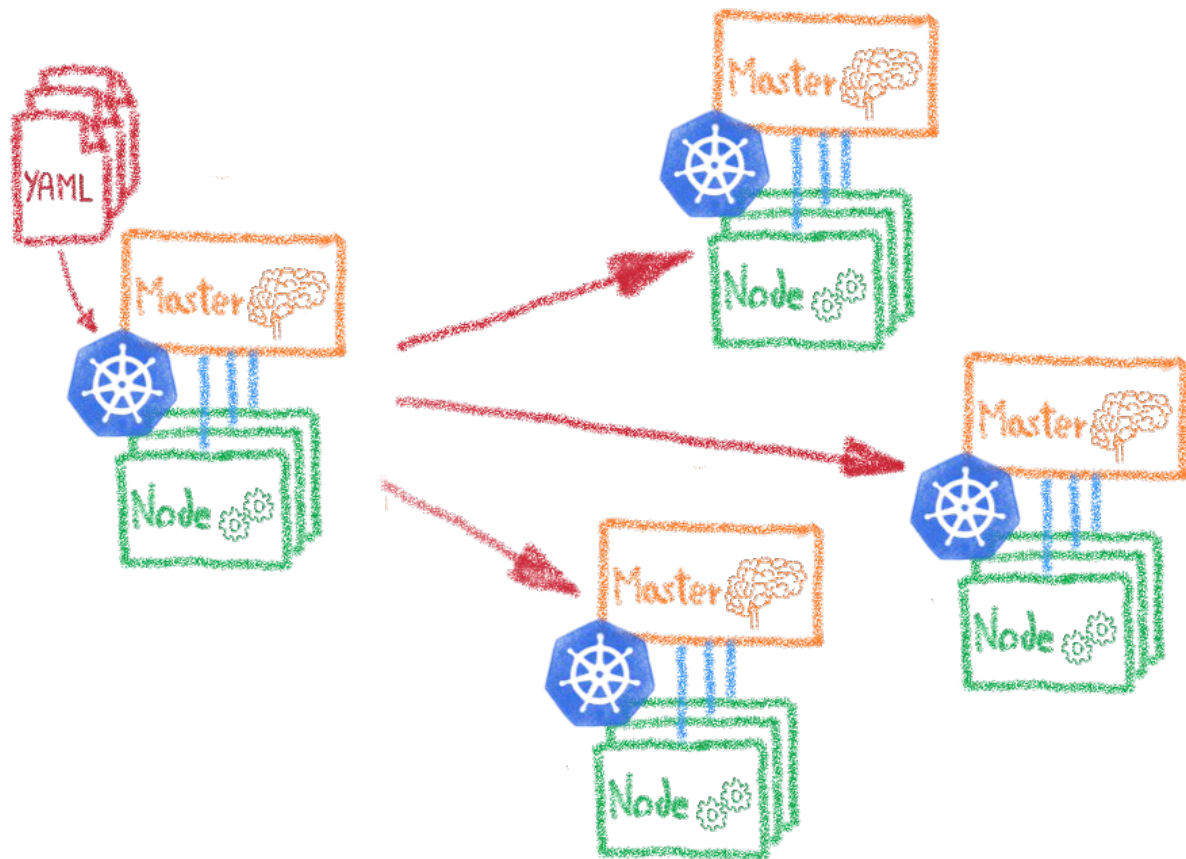
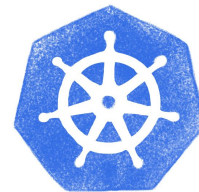


# Declarative infrastructure



Multi-environment made easy

# Having identical, software defined envs



Dev envs

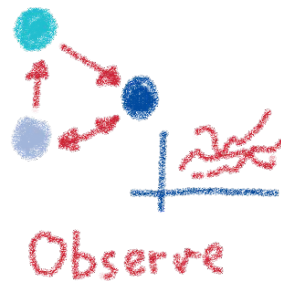
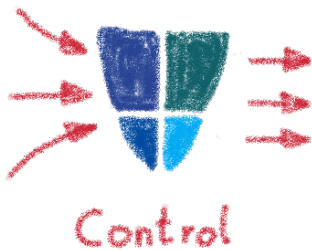
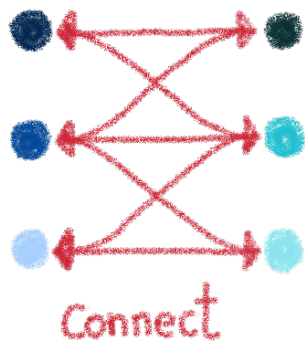
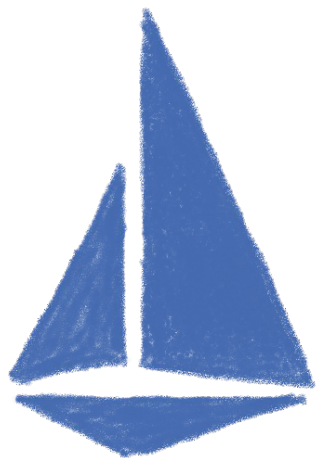
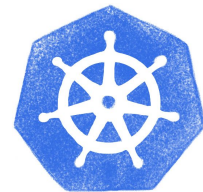
Staging

Multi-cluster

Multi-cloud



# Istio, a Service Mesh for Kubernetes



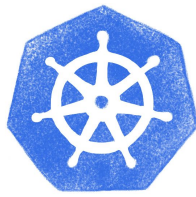
Rolling upgrades

A/B Testing

Canary Testing

Edge traffic management

Multicloud service mesh



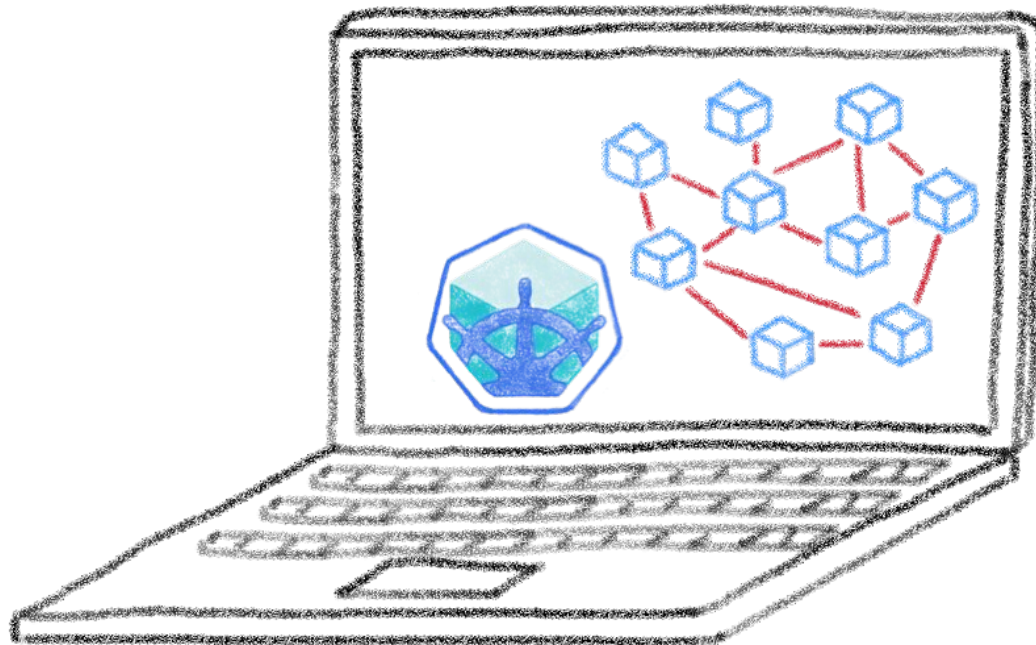
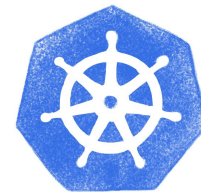
# I have deployed on Minikube, woah!

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## A great fastlane into Kubernetes

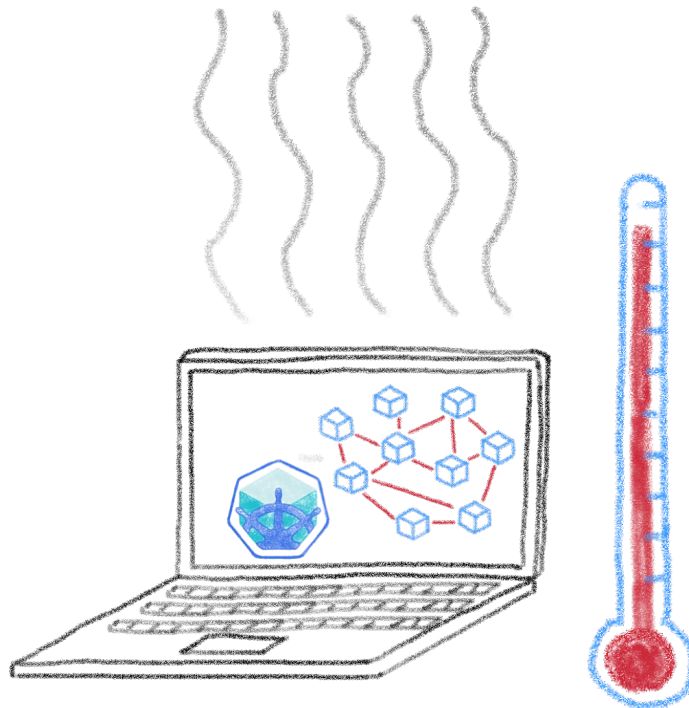
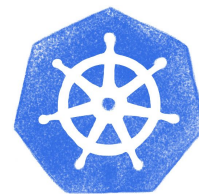


# Running a full K8s in your laptop

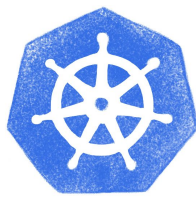


A great learning tool

# Your laptop isn't a true cluster



Don't expect real performances

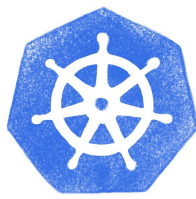


# From Minikube to prod

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A journey not for the faint of heart

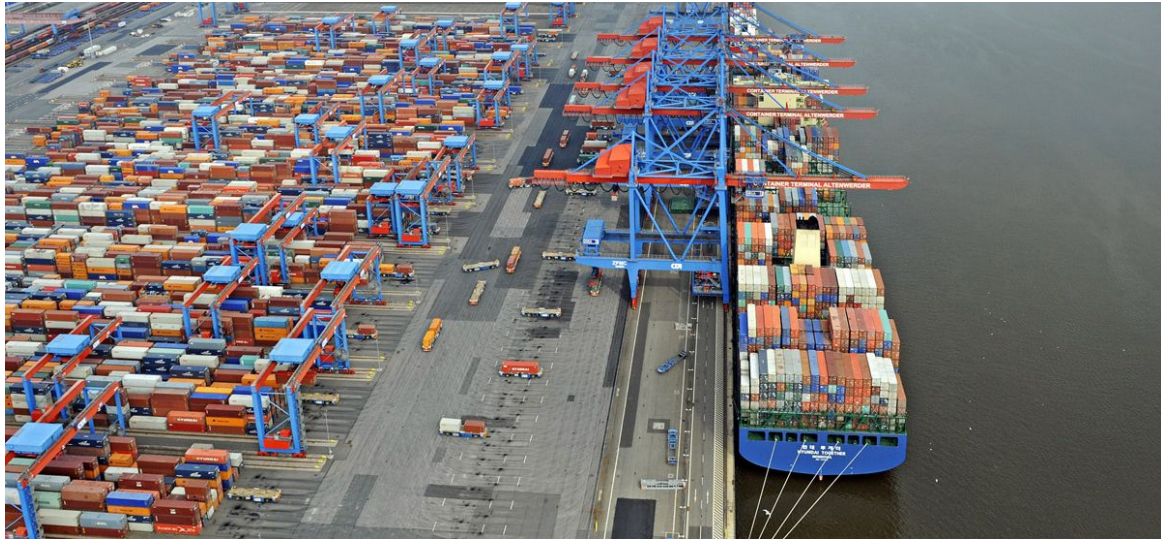


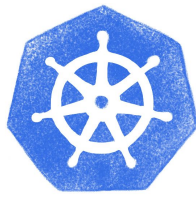


# Managed Kubernetes

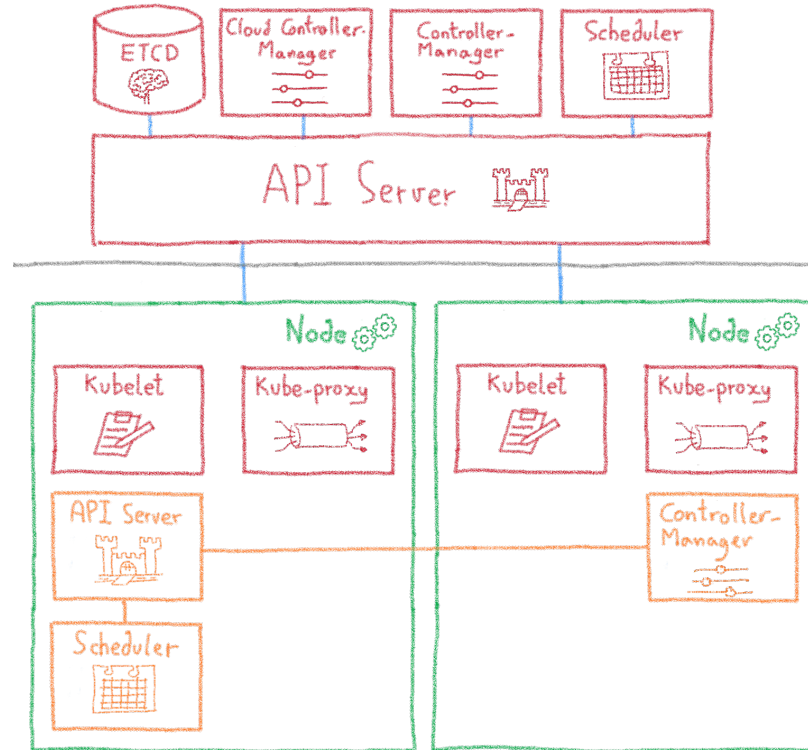
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Don't try it at home, folks!

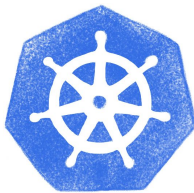




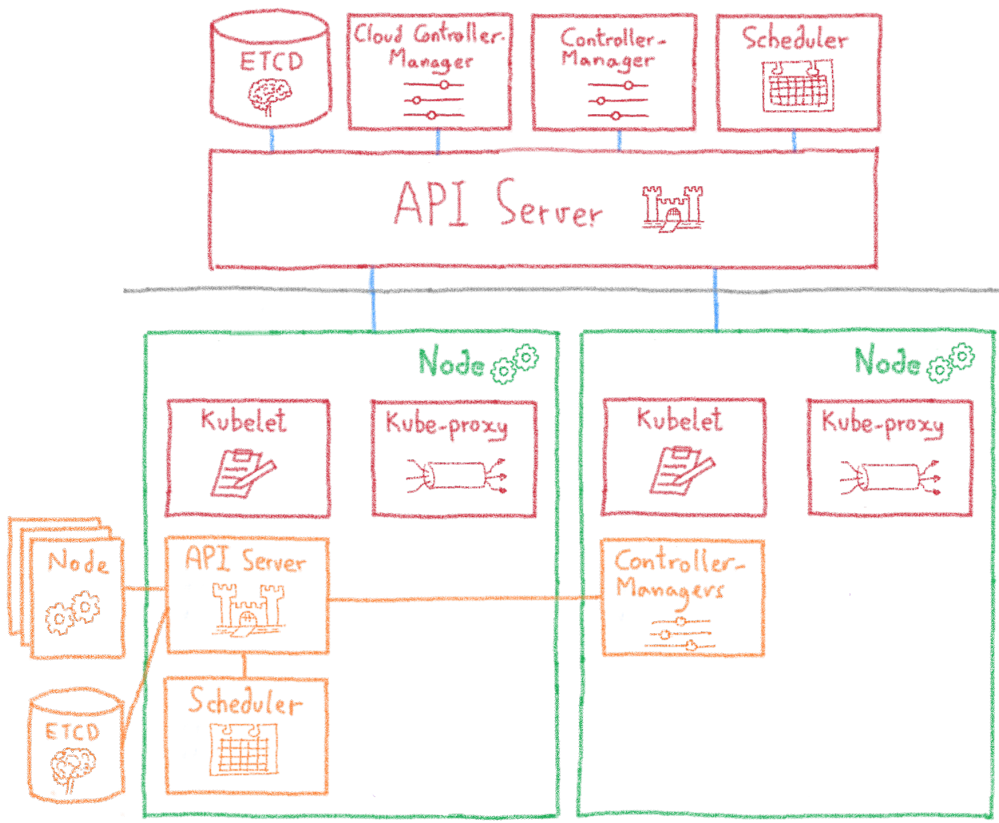
# Kubinception: running K8s on K8s



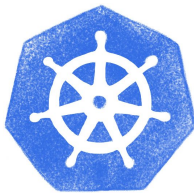
Using Kubernetes to run Kubernetes



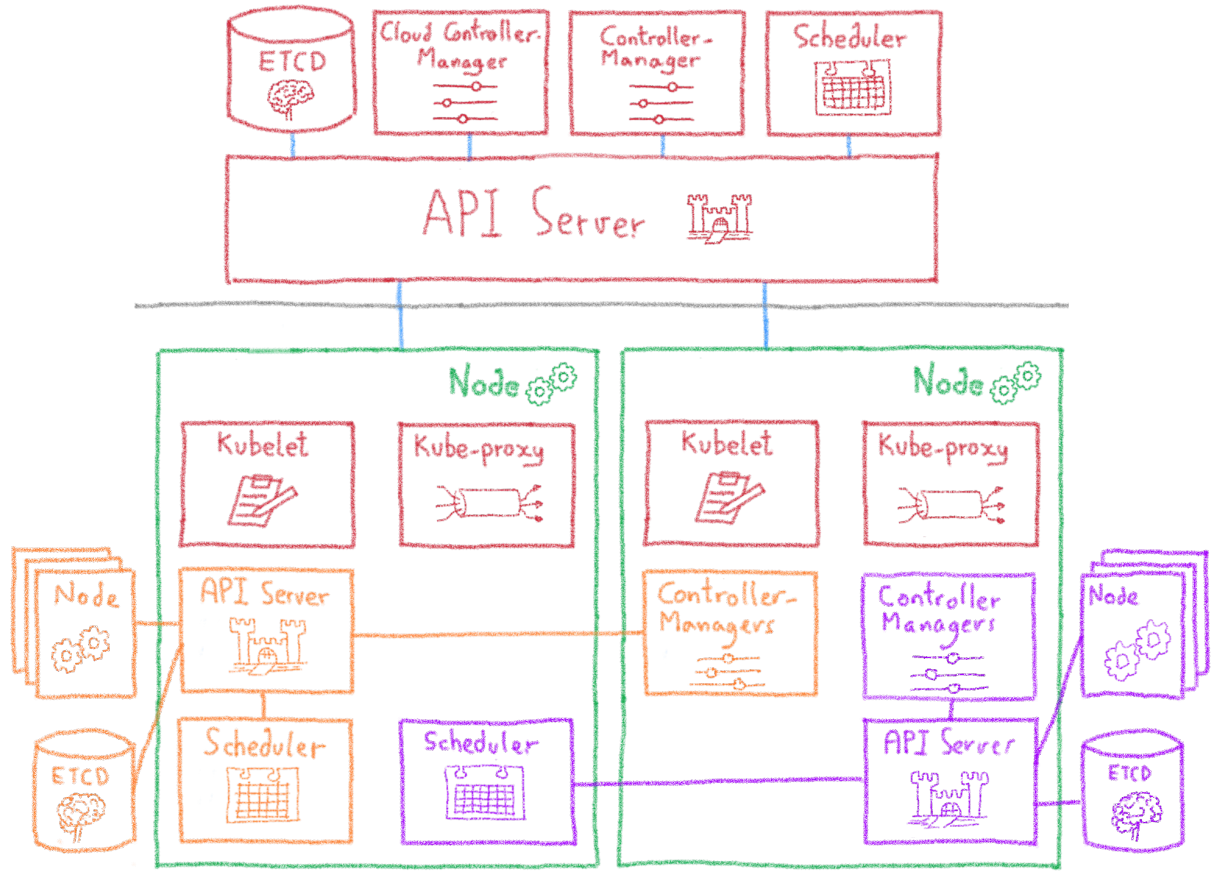
# Kubinception: where are the nodes?







# Kubinception with several customers



# And the ETCD?

