



KubeCon



CloudNativeCon

Europe 2023





KubeCon



CloudNativeCon

Europe 2023

Is K8s delivering on its promise?

A platform engineering perspective

Aparna Subramanian

Director of Production Engineering, Infrastructure @  shopify

KubeCon Program co-chair

End User DevX SIG co-chair

- Why do we need platforms?
- K8s and Platform Engineering- the perfect match!
- Did K8s deliver on its promise?

Key stakeholders of a platform & their expectations



Application Developer

Simple building blocks
for deployment

Golden path to prod

Integration with my
dev workflows

Key stakeholders of a platform & their expectations



Application Developer

Simple building blocks
for deployment

Golden path to prod

Integration with my
dev workflows



Business/Product

Fast time to market

Avoid costly
production issues

Enforce security &
compliance

Key stakeholders of a platform & their expectations



Application Developer

Simple building blocks
for deployment

Golden path to prod

Integration with my
dev workflows



Business/Product

Fast time to market

Avoid costly
production issues

Enforce security &
compliance



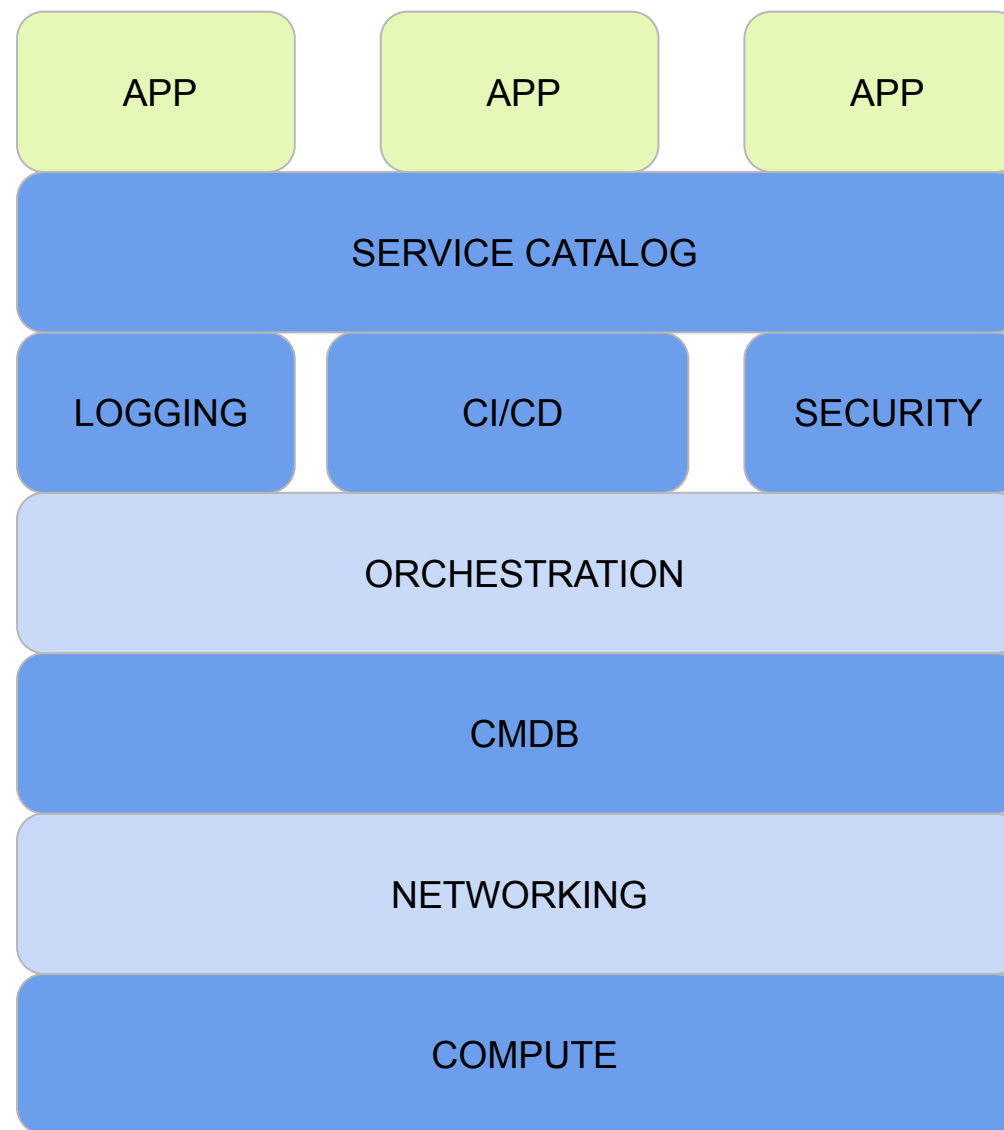
Platform Engineer

Scalability

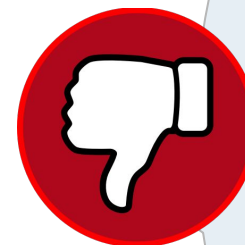
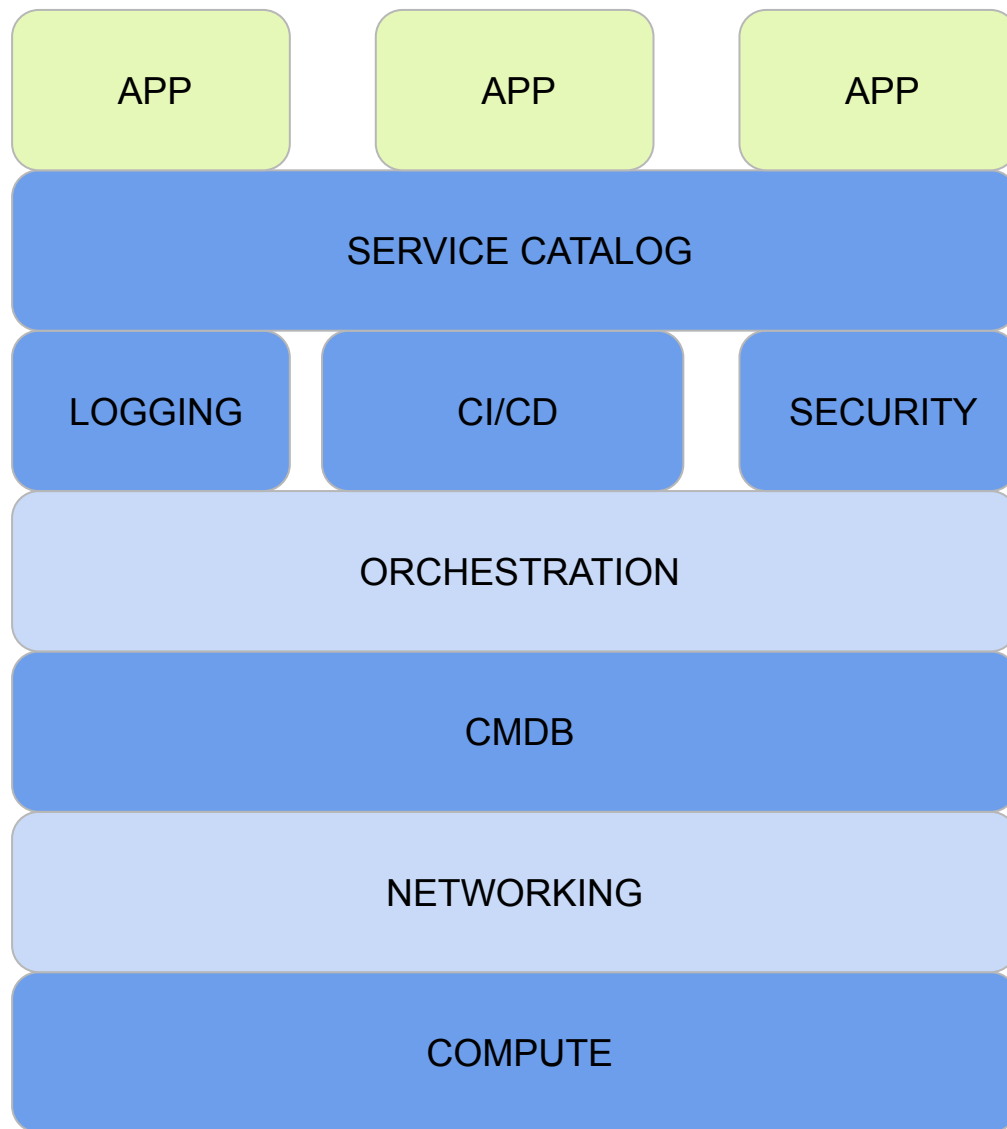
Extensibility &
Flexibility

Reliability & Resiliency

Building a platform using a DIY orchestrator



What it takes to build everything DIY





- **Extensive resourcing**
- **Many many months to build this out**
- **IaaS + tools + best practices**


Scalable container management platform
that is **infrastructure agnostic** enabling **easy
deployment** and **management** of containers
anywhere.


K8s gives us a huge head start in platform building


Application Platform


Service Proxy



DNS


Config



IDP



Security



Policy


CD


Observability Platform

Logging


Metrics


Tracing




Database Platform

KV DB


Vitess


DB


Network Platform



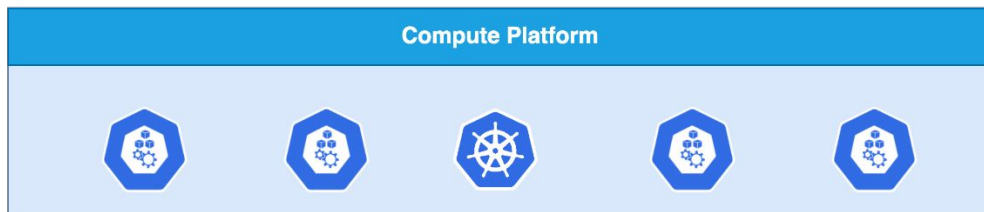
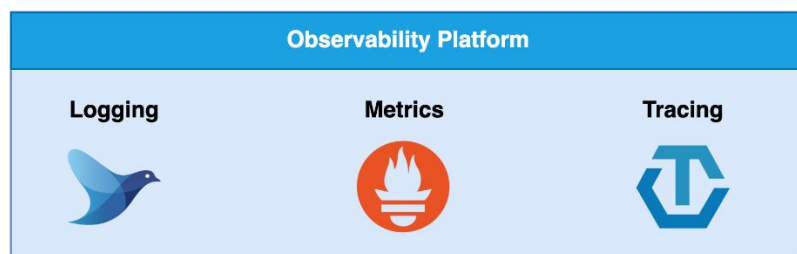
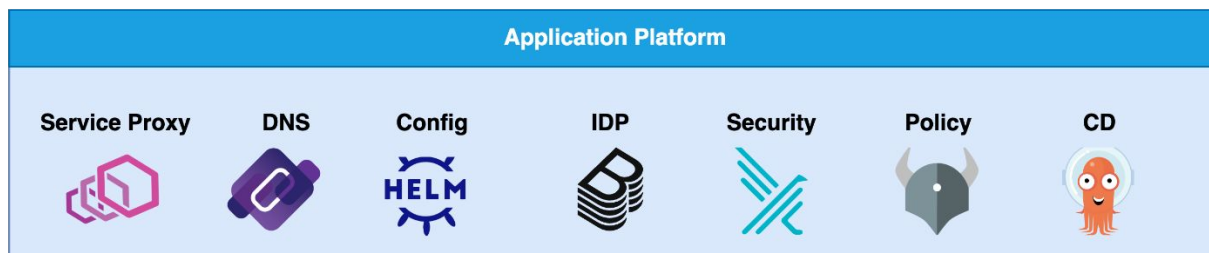
Compute Platform



Storage Platform



K8s gives us a huge head start in platform building



- Ready to assemble building blocks
- Weeks to get started
- Improved usability for application developers

Evaluating K8s through the lens of the platform team

Portability



Skills are portable regardless of underlying infrastructure

Evaluating K8s through the lens of the platform team

Portability



Skills are portable regardless of underlying infrastructure

Reliability



Architecturally designed for reliability

Evaluating K8s through the lens of the platform team

Portability



Skills are portable regardless of underlying infrastructure

Reliability



Architecturally designed for reliability

Extensibility



Custom resources, plugins, etc

Evaluating K8s through the lens of the platform team

Portability



Skills are portable regardless of underlying infrastructure

Reliability



Architecturally designed for reliability

Extensibility



Custom resources, plugins, etc

Scalability



Good at scale but limits/other constraints apply

Evaluating K8s through the lens of the platform team

Portability



Skills are portable regardless of underlying infrastructure

Reliability



Architecturally designed for reliability

Extensibility



Custom resources, plugins, etc

Scalability



Good at scale but limits/other constraints apply

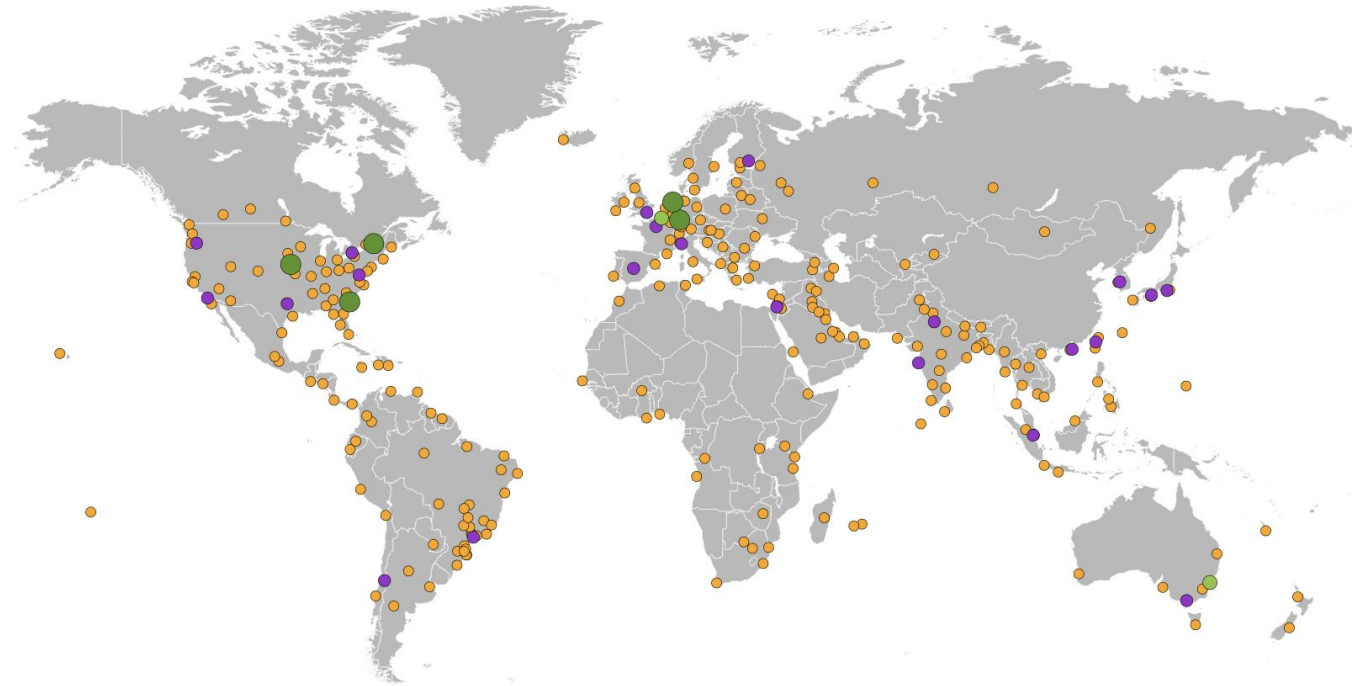
Simplicity



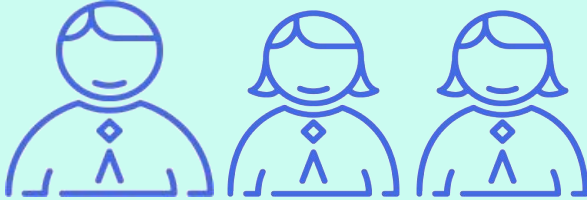
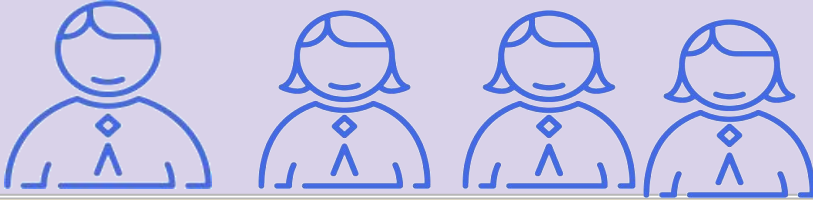
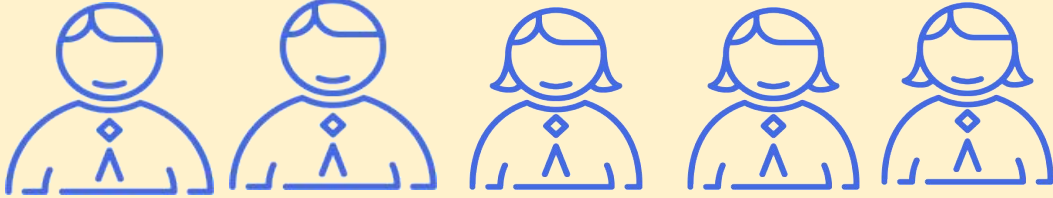

Powerful but complex system

Complexities that needs to be mitigated



- Managing configuration complexity at a global platform scale
- Painful K8s upgrades
- Multi-cluster management



Options to deal with complexity



Option	Effort
Cloud + Managed Service	
Platform on Cloud	
Vendor Platform	
Build your own K8s Platform	

Simplicity vs Flexibility

	Build your own K8s Platform	Vendor Platform	Cloud Platform	Cloud + Managed Service
Simplicity				
Flexibility				

Where can you add differentiated value to your business?

Simplicity vs Flexibility

	Build your own K8s Platform	Vendor Platform	Cloud Platform	Cloud + Managed Service
Simplicity				
Flexibility				

Where can you add differentiated value to your business?

Platform teams



Kubernetes!!



Join a community of learners



Share your Kubernetes journey!

Sign up for CNCF End User DevX SIG

1st and 3rd Thursday of every month

18:00 CET / 09:00 PT / 15:00 UTC

Next meeting on May 4th



KubeCon



CloudNativeCon

Europe 2023

Cloud Computing's first economic recession? Let's talk platform efficiency!

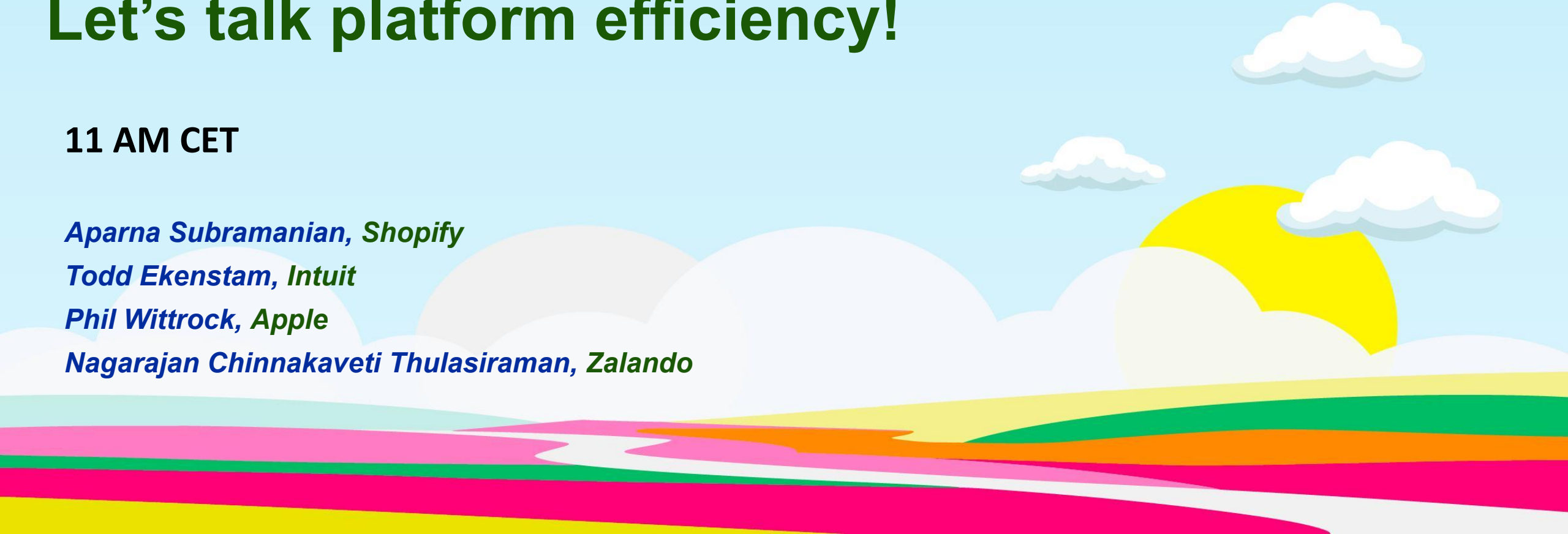
11 AM CET

Aparna Subramanian, Shopify

Todd Ekenstam, Intuit

Phil Wittrock, Apple

Nagarajan Chinnakaveti Thulasiraman, Zalando



QR Codes



**Join CNCF
DevX
SIG**



Feedback