GITOPS AT ADOBE

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Cloud Engineer

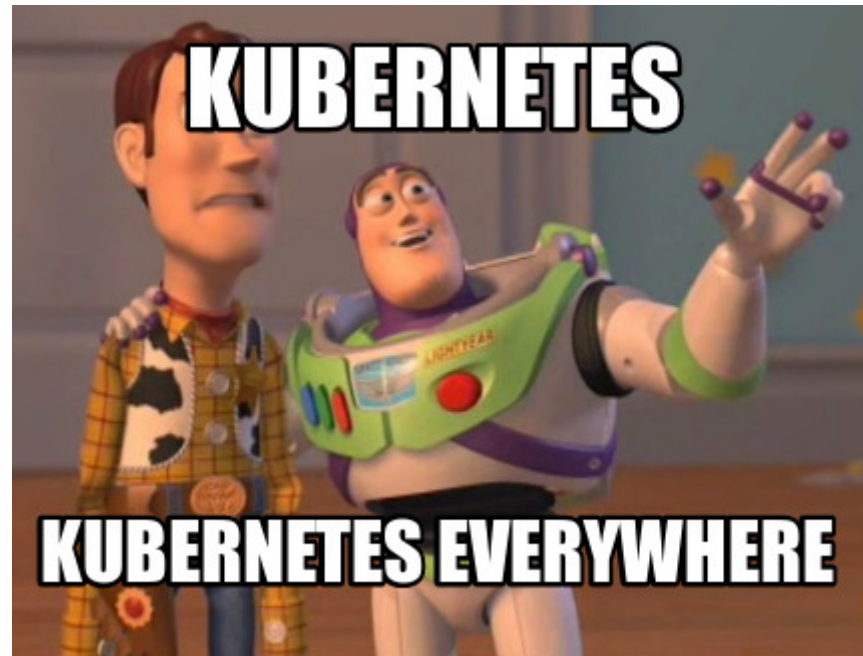@ Adobe Experience Manager Cloud Service

Author of Jenkins Kubernetes plugin

Long time OSS contributor at Apache Maven, Eclipse, Puppet,…

WHY GITOPS?

KUBERNETES
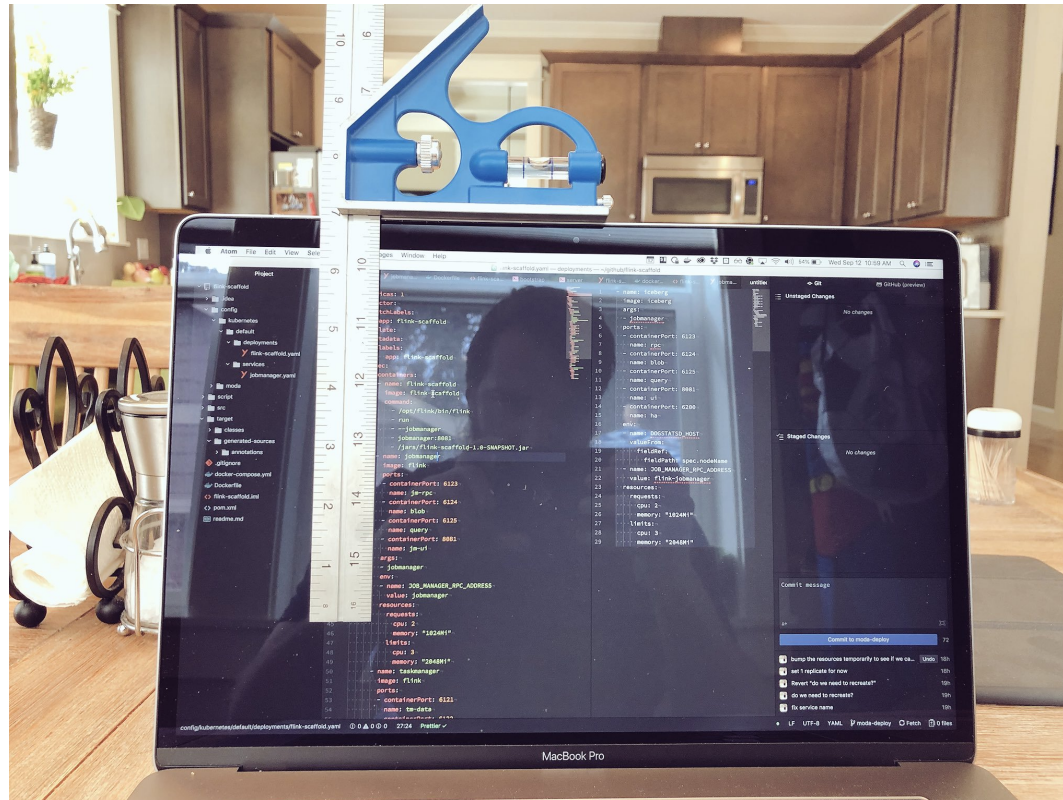
Many clusters

Many regions

Many related services and infrastructure

BENEFITS

FULL VIEW ACROSS ALL SYTEMS

For developers, SREs, on-call,...

DECLARATIVE CONFIGURATION

Using standard YAML

ie. Kubernetes, Kustomize, Helm

and

custom defined

RECONCILIATION

We keep the desired state in git

and it is automatically reconciled against what is running

TRACEABILITY

Using git logs

PULL REQUESTS

PRs can be deployed to different environments too

CONTINUOUS DELIVERY

Changes in git trigger Jenkins pipelines that test and deploy the definitions

WHAT FOR?

APPLICATIONS

Changes in git are automatically deployed across clusters and namespaces

pull vs push when possible

INFRASTRUCTURE

Can use

- Terraform
- AWS CloudFormation
- Azure ARM
- Google Cloud Deployment Manager

Then react on git changes deploying and updating the infrastructure

IS THIS THE REAL GITOPS

or just Infrastructure As Code?

DNS

DNS configuration is stored in git

Using Jenkins and templates we continuously reconcile changes with the DNS API

CDN

CDN configuration is also stored in git

Same Jenkins and templating mechanism to deploy and update CDN configuration

AND MORE!

Grafana

Prometheus

...

IS IT JUST FOR HUMANS?

NO!

Integrate changes coming from

- UI
- APIs
- Humans (devs, SREs, on-call,...)

to keep a consistent always up to date view

DECOUPLING SYSTEMS AND GIT

Providing services with APIs or using queues

that transform actions into git commits

Yes, you can trigger Jenkins pipelines from message queues

GITOPS SO FAR...

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