

Building a Jenkins pipeline for automated K8s cluster creation

- Why?
- How?
- Demo
- But...

Why?

- **Early feedback**
 - Working with a production like environment
 - Testing different setups
 - Observing cluster-wide implications
 - No surprises on production rollout

- **Autonomous teams**
 - Destructiv testing
 - Dedicated setups under full control
 - Knowledge about the cluster for the teams

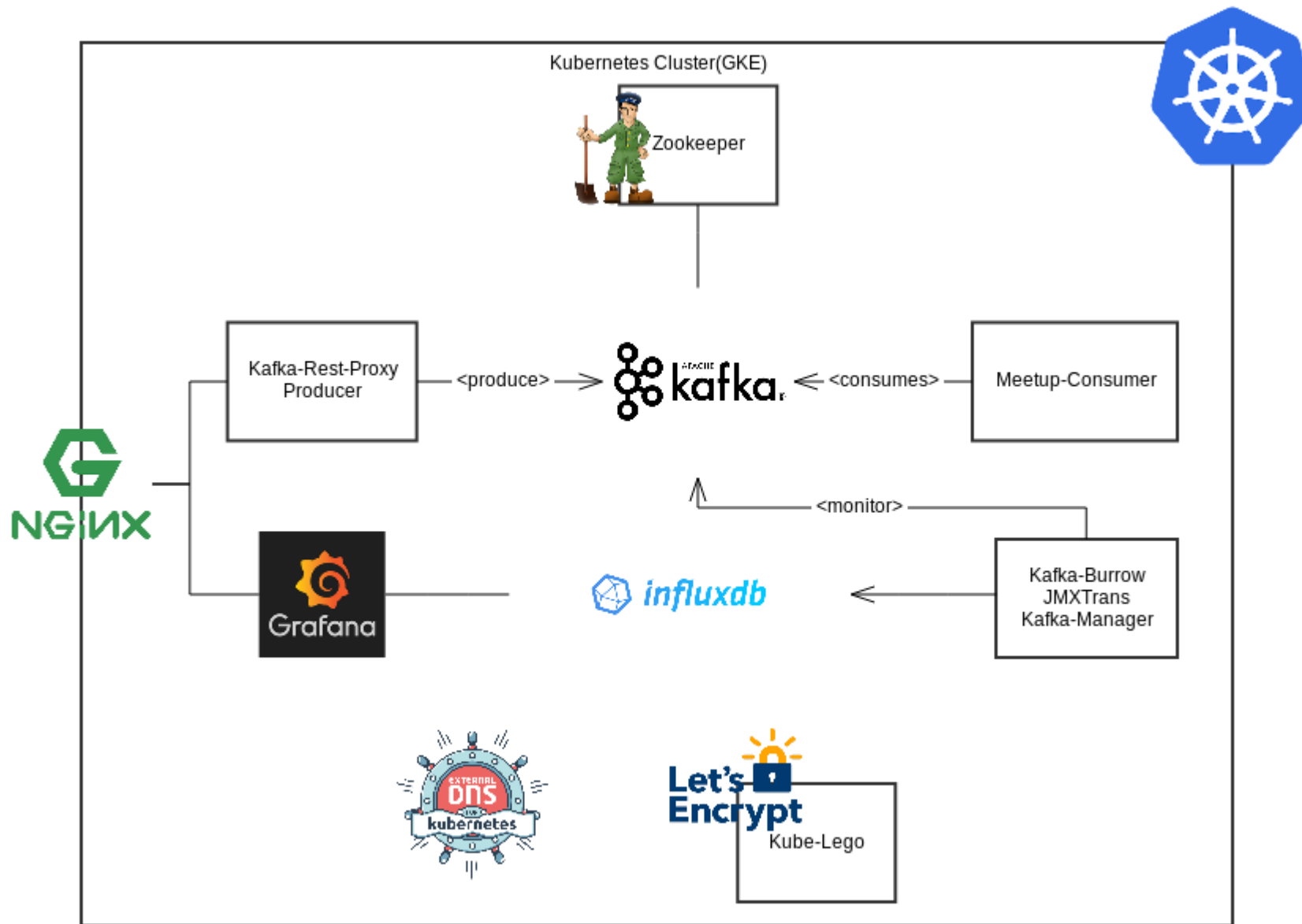
- Less work
 - „Ops“ team does not have to maintain a central dev cluster
 - No „Blocking the cluster for testing“

How?

- Automate everything
 - Quick and easy cluster provisioning in the public cloud
 - Deployment definition via helm
 - Cluster creation and deployments via pipeline

- In Kiwigrid:
 - Jenkins as ci-server
 - Groovy library for pipelines
 - GCloud
 - Domains via GCloud DNS, (staging)-certificates via Let's encrypt

Demo



But...

- Isn't that expensive?
 - Cluster runs only as required
 - Less cluster maintenance
 - Cluster can be configured exactly as required
 - Less „idle-time“ for the development teams
 - Cost transparency allow teams to optimize
 - Improved quality → less maintenance time

- We are no „Ops“.
 - Helps to enable DevOps
 - Requires cross-functional teams
 - Allows teams to gain knowledge and responsibility on there clusters
 - „Infrastructure as Code“
 - Shared knowledge through teams