Building and Scaling Cloud Native Nordics Tips, Tricks, and Lessons Learned

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www.cloudnativenordics.com

CloudNativeCon+KubeCon NA 2019

WHO ARE WE?

Lucas Käldström

@kubernetesonarm

Kasper Nissen

@phennex

CLOUD NATIVE
NORDICS

LUCAS KÄLDSTRÖM (@kubernetesonarm)

CNCF Ambassador / now Freshman at Aalto University in Finland

Running the Finnish CNCF meetups

Certified Kubernetes Administrator

Former SIG Cluster Lifecycle & WG Component Standard chair

Running *luxas labs*, Contractor for Weaveworks

Kubernetes on ARM (+more) / kubeadm / Weave Ignite creator

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KASPER NISSEN (@phennex)

Cloud Architect / Site Reliability Engineer at Lunar

CNCF Ambassador

Certified Kubernetes Administrator
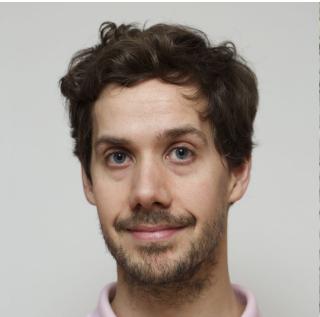
Cloud Native Aarhus (Cloud Native Copenhagen)

Cloud Native Nordics

Blog: kubecloud.io

CLOUD NATIVE
NORDICS

Foto: Torstein Lund Eik

AGENDA

- Running a meetup? Easy, right?

- Experiences running meetups standalone (Helsinki/Aarhus)

- Introducing Cloud Native Nordics

- Our toolbox

  - *meetup-kit*

  - *workshopctl*

  - Community website (frontend, backend, infrastructure)

- Questions?

Running a meetup? Easy, right?

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RUNNING A MEETUP

- Find sponsors / speakers (ALL THE TIME!)

- Once the meetup's done, you gotta start planning the next one

- Recordings? Recordings!

- Visibility? Graphical Profile (gotta look solid)

- Building a community (inclusiveness, etc.)

Our stories

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CLOUD NATIVE & KUBERNETES FINLAND

- Summer of 2016: I started thinking about running a meetup

- Summer of 2017: Found two co-organizers: Annie and Teemu

- October 2017: First meetup in Helsinki

  - … Running meetups bimonthly

- December 2018: Started planning Cloud Native Nordics with Kasper

- January 2019: Expanded to Tampere (with local co-organizers)

- October 2019: Expanded to Turku (with local co-organizers)

- Fall 2019: Working on reusable tools for communities

CLOUD NATIVE & KUBERNETES FINLAND

- Helsinki (870 members, 25 months)

  - Meetups: 11

  - Speakers: 26

  - Sponsors / Speaker Providers: 15 / 12

  - Total / Unique / Average RSVPs: 888 / 452 / 80

- Tampere (193 members, 10 months)

  - Meetups: 5

  - Speakers: 14

  - Sponsors / Speaker Providers: 9 / 5

  - Total / Unique / Average RSVPs: 200 / 114 / 40

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CLOUD NATIVE & KUBERNETES FINLAND

- Lessons learned

  - Finding speakers (especially in the beginning) is a lot of work

  - Creating a graphical profile is very useful, but can be challenging to get right

  - Creating some structure / boilerplate is truly helpful

  - Livestreaming / recording has many pitfalls

  - Hard to balance content for also newcomers => "standard intros" & workshops

  - Networking in the middle of the agenda

CLOUD NATIVE AARHUS

- Started in May 2017

- Aarhus

  - Population: ~350k people

  - 2nd largest city in Denmark

- So far

  - 24 meetups

  - 933 members

  - Avg. 56 RSVPs

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NORDICS

#CloudNativeNordics

CLOUD NATIVE AARHUS

- Spring 2016: I wrote my master thesis; "KubeCloud - A Small Scale Tangible Cloud Computing Environment"
  - Presented in the local Google Developer Group
- December 2016: Got hired at Lunar Way (now Lunar)
  - How do we managed microservices? We need to redo the infrastructure...
- December 2016: CloudNative-dk Slack Community
- May 2017: First Cloud Native Aarhus
  - ... running a lot of meetups, we actually did 3 meetups in a month.
- December 2018: We set sail to the Cloud Native Nordics journey

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NORDICS
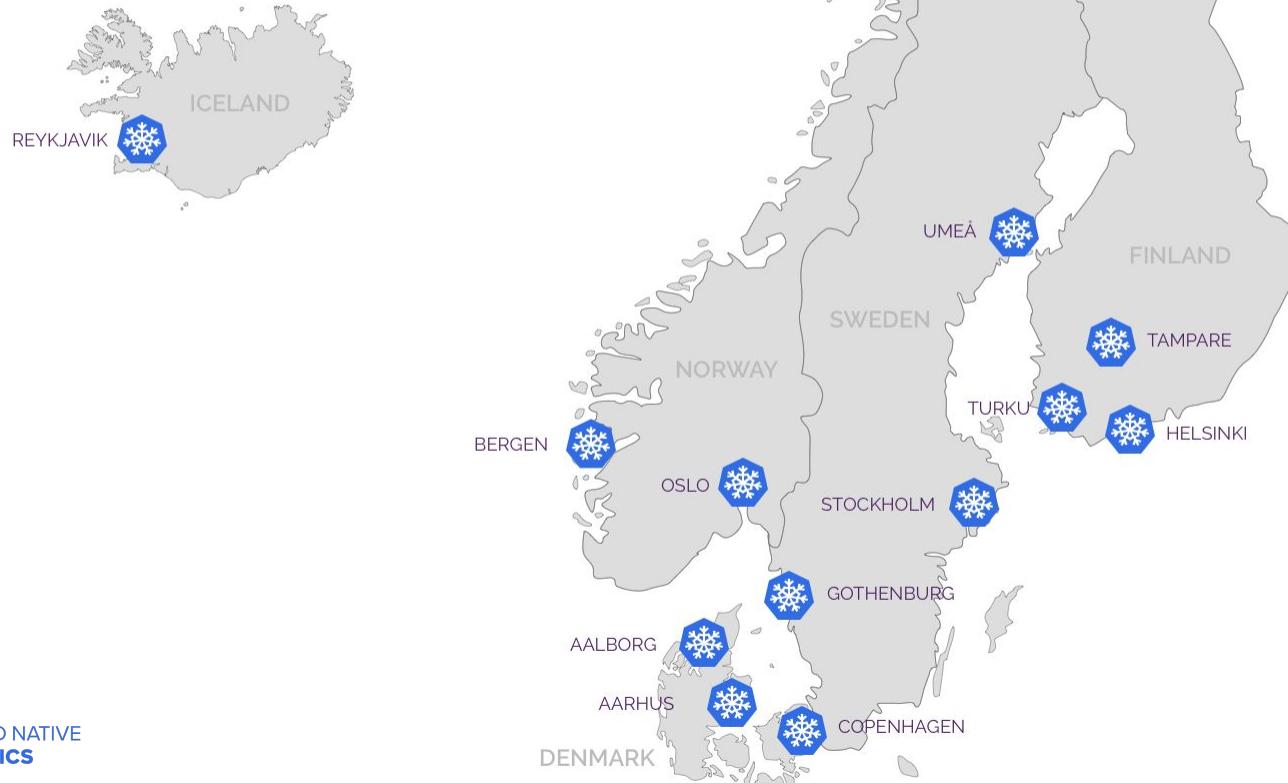
CLOUD NATIVE AARHUS

- Lessons learned
  - The need for different tracks
    - Started out with 101's and kept digging deeper
    - But new members joined continuously
    - We call them; Cloud Native Aarhus Hack Nights
  - Focus on organizers from multiple companies
   - The need for more hands to keep the momentum going
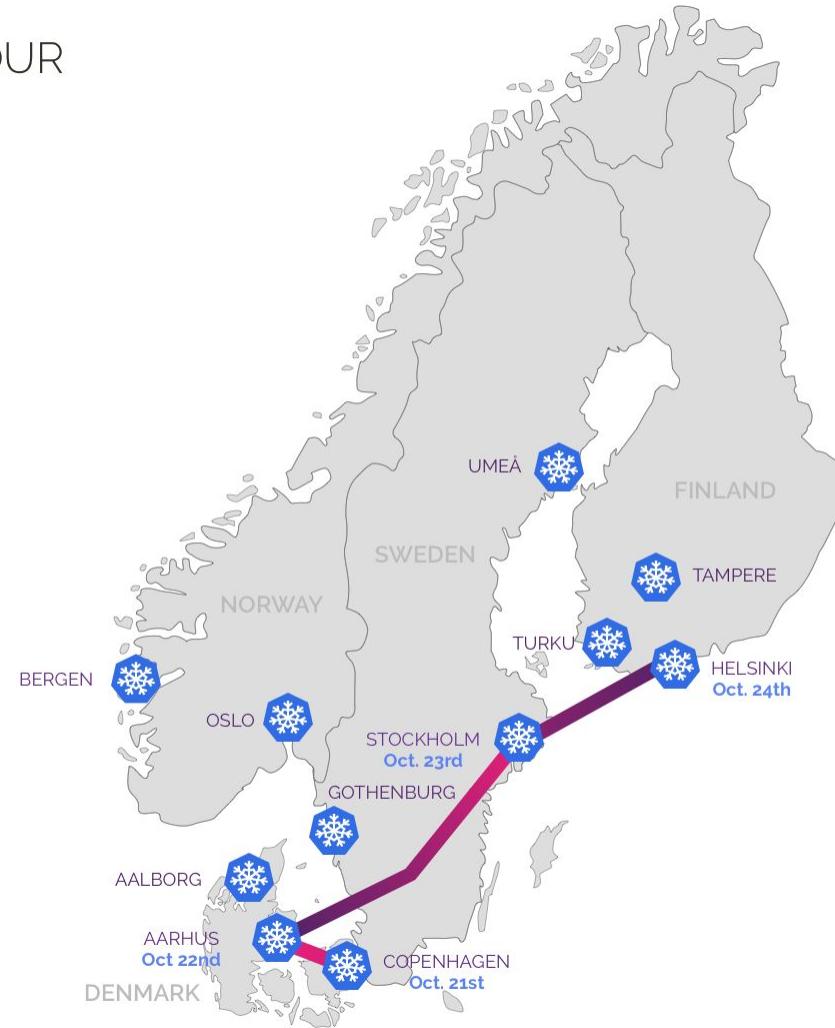
CLOUD NATIVE **NORDICS**

Introducing Cloud Native Nordics

MAP

ICELAND

REYKJAVIK

NORWAY

SWEDEN

FINLAND

UMEÅ

TAMPARE

BERGEN

OSLO

STOCKHOLM

TURKU

HELSINKI

GOTHENBURG

AALBORG

AARHUS

COPENHAGEN

DENMARK

CLOUD NATIVE
NORDICS

STATS

12

Groups

92

Total number of meetups

4774

Total RSVPs

51

Average RSVPs

5631

Members

2658

unique attendees

HOW ARE WE HELPING EACH OTHER?

- Monthly Community Calls (public, recorded)

- Unified Brand (slides, t-shirts, colors, etc.)

- A lot of common tooling, and guidelines

- Slack Community

- Website (discoverability)

- Speakers (roadshows, collaborative networks)

- Possibly (future) Kubernetes Community Day

    - **Reach out if interested!**

Learnings, Tips, and Tricks

TOOLBOX INTRODUCTION

- meetup-kit

- workshopctl

- Community website

  - Open infrastructure

  - Reference stack

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MEETUP-KIT

- **MeetOps** — Meetups by Pull Request!

- https://github.com/cloud-native-nordics/meetups

  - Yet to-be-refactored into meetup-kit

- YAML engineering

  - We haven't found the optimal developer experience yet... for now check in YAML

- Automatically fetches information from the meetup.com API

- Generates README files & aggregates data for the website

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```
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  presentations:
  - duration: 10m0s
    slides: ""
    speakers: null
    title: Arrive at the venue, sit down and network with others
  - duration: 5m0s
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    speakers: null
    title: Introductionary words from the venue sponsor for this time, Nokia
  - duration: 15m0s
    slides: ""
    speakers:
    - luxas
    title: Updates from the Cloud Native Nordics Community
  - duration: 30m0s
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    speakers:
    - russmiles
    title: How to be (successful at being) wrong
  - duration: 30m0s
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    speakers: null
    title: Networking, food, drinks
  - duration: 30m0s
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    speakers:
    - alexandersowitzki
    title: 'Building KubeOne: yet another Kubernetes cluster management tool'
  - delay: 10m0s
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    slides: https://drive.google.com/open?id=1C9BMsO0-lngcSHSAc219HWBdNHZmeucG
    speakers:
    - gergelycsatari
    title: How to make Kubernetes Real Time for Telcos
  - delay: 5m0s
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    speakers: null
    title: Networking
  recording: ""
  sponsors:
  - company: nokia
    role: Venue
  - company: luxaslabs
    role: Other
  - company: cncf
    role: Other
```

⌘ October: Chaos Engineering & KubeOne

- Date: 24 October, 2019 at 18:00 - 21:00
- Meetup link: https://www.meetup.com/Kubernetes-Finland/events/264646130
- Attendees (according to meetup.com): 103
- Venue sponsor: Nokia
- Other sponsor: luxas labs
- Other sponsor: Cloud Native Computing Foundation (CNCF)
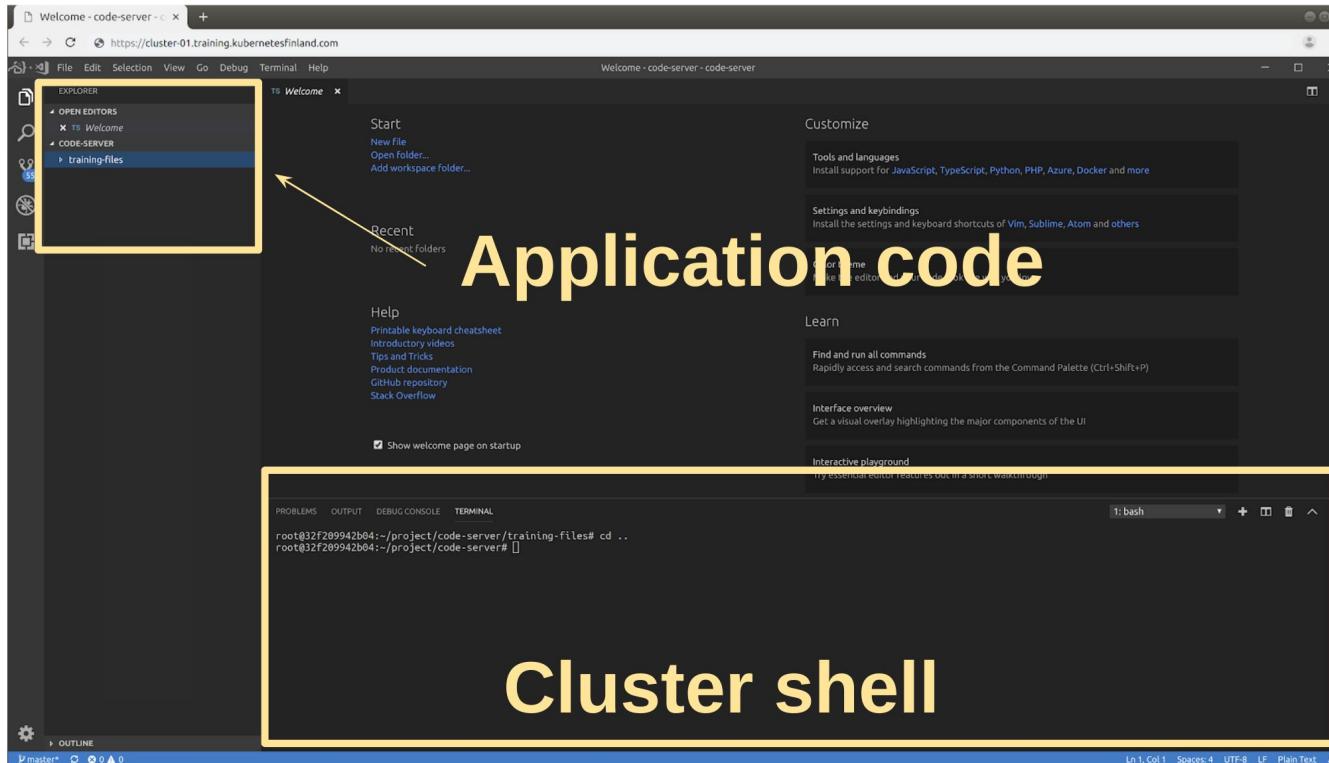
⌘ Agenda

- 18:00 - 18:10: Arrive at the venue, sit down and network with others
- 18:10 - 18:15: Introductionary words from the venue sponsor for this time, Nokia
- 18:15 - 18:30: Updates from the Cloud Native Nordics Community
  - Lucas Käldström @luxas, CNCF Ambassador, luxas labs, Contact
- 18:30 - 19:00: How to be (successful at being) wrong
  - Russ Miles @russmiles, CEO, ChaosIQ
- 19:00 - 19:30: Networking, food, drinks
- 19:30 - 20:00: Building KubeOne: yet another Kubernetes cluster management tool
  - Alexander Sowitzki @eqrx, Loodse
- 20:10 - 20:40: How to make Kubernetes Real Time for Telcos
  - Gergely Csatári @CsatariGergely, Nokia
  - Slides: https://drive.google.com/open?id=1C9BMsO0-lngcSHSAc219HWBdNHZmeucG
- 20:45 - 21:00: Networking

WORKSHOPCTL

- Standardized, user-friendly and reproducible way of running workshops
- **workshopctl init --clusters 40 --provider digitalocean my-workshop**
  - *my-workshop.yaml* created, with relevant info
- **workshopctl gen my-workshop**
  - Manifests generated => git push
- **workshopctl apply my-workshop**
  - 40 clusters created using DigitalOcean's managed k8s
  - All environments set up with VS Code accessible on a public domain
- **workshopctl delete my-workshop**

WORKSHOPCTL ENVIRONMENT

- Password-protected
- Unique per attendee
- Running in a Pod

- *kubectl* access
- *docker access*
- *helm* installed
- k8s syntax highlight
- Exercise READMEs
- Solutions on-demand
- Full Ingress support

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WORKSHOPCTL

TODO: Add diagram

COMMUNITY WEBSITE

- Centralized place for all relevant Cloud Native Nordics activities

- Make it more attractive to contribute with speakers, sponsorships, etc.

- Discover closeby events

- Keep track of speakers, venues

- Build a reference architecture, to use in workshops as a simple getting
  started guide

WEBSITE

https://cloudnativenordics.com

WEBSITE: SETUP

website

stats-api
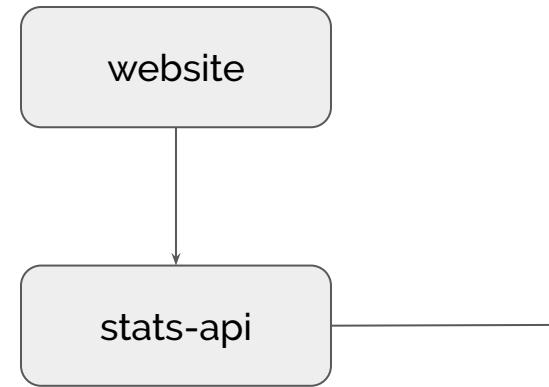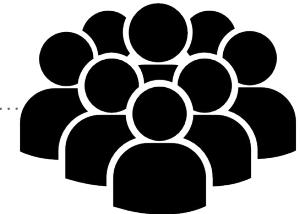
Vue.js

GraphQL

GO
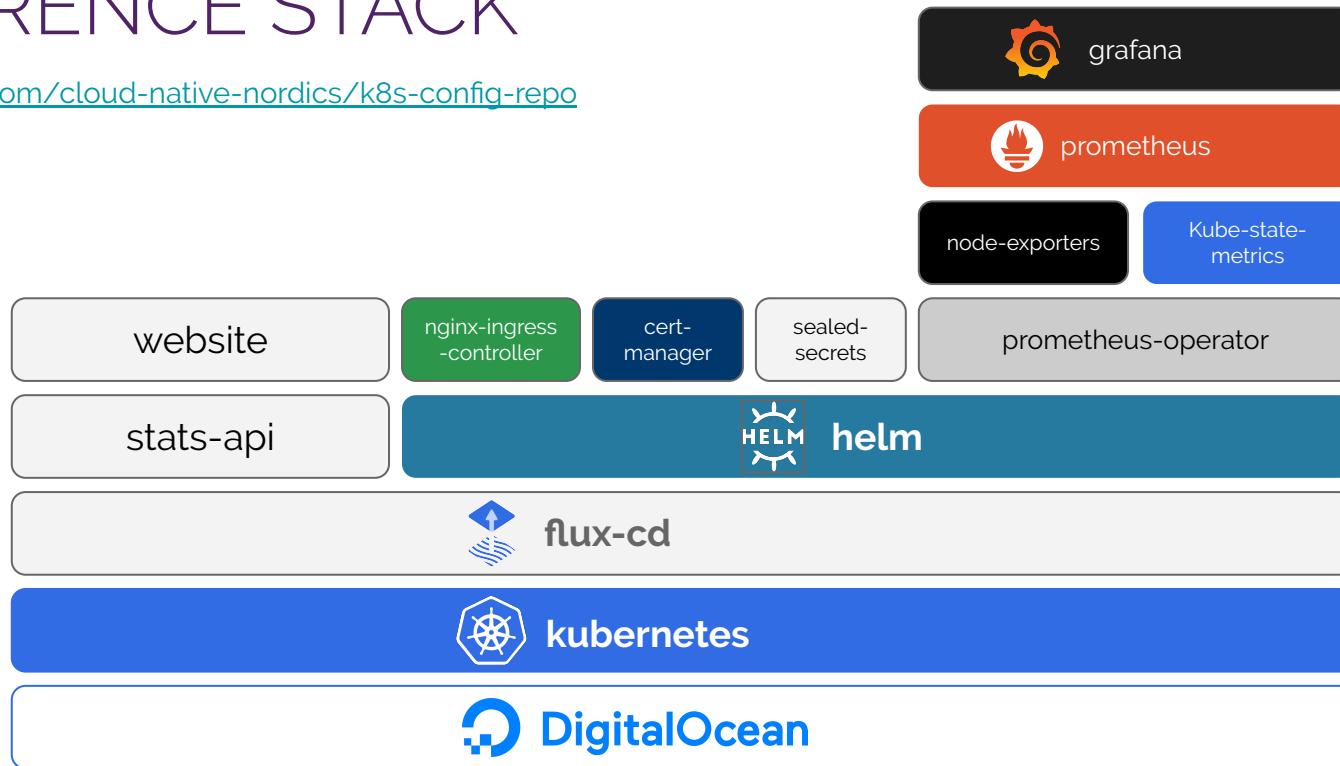
Meetup

cloud-native-nordics/meetups
config.json

Organizers

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REFERENCE STACK

https://github.com/cloud-native-nordics/k8s-config-repo

grafana

prometheus

node-exporters | Kube-state-metrics

website | nginx-ingress-controller | cert-manager | sealed-secrets | prometheus-operator

stats-api | **helm**

flux-cd

kubernetes

DigitalOcean
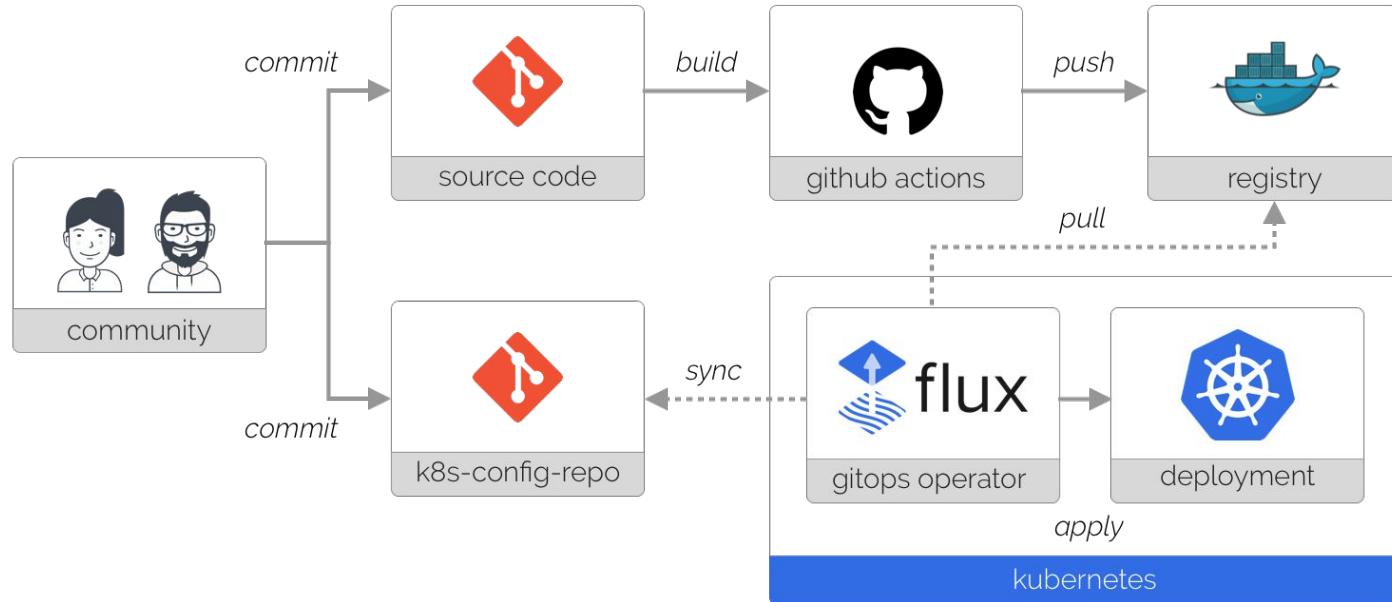
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Kubernetes -based Infrastructure for Static Sites (KISS)

https://twitter.com/changelog/status/986084630280404992

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COMMUNITY INFRASTRUCTURE

QUESTIONS?

Thank you!