

# Exploring GitOps on Azure

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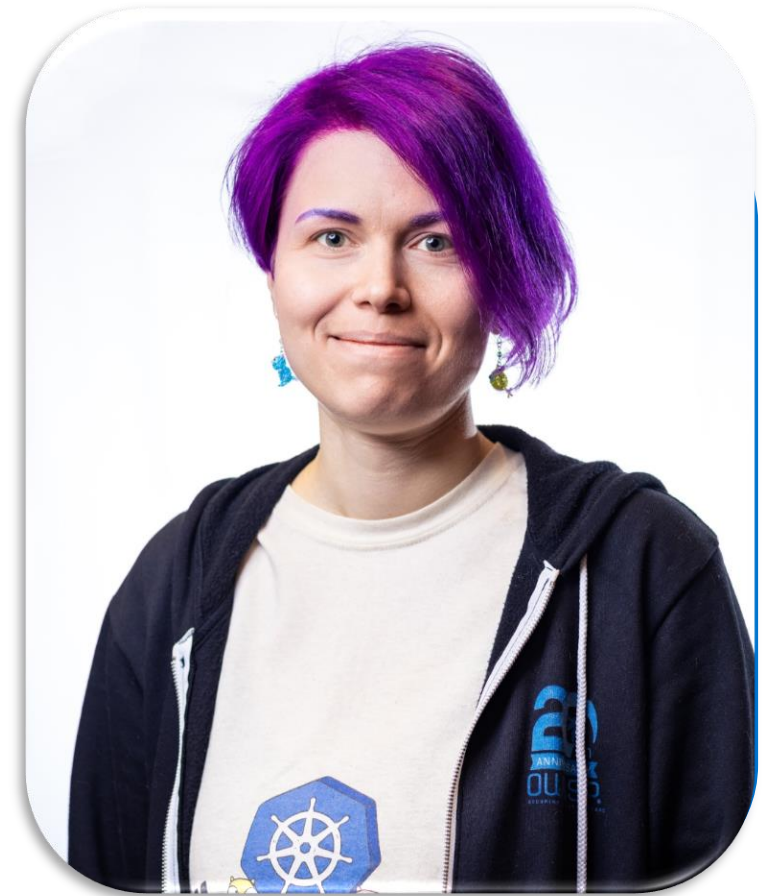
Amesto Fortytwo

**MVP**  
Dagen

# Kristina Devochko

## Amesto Fortytwo

- Microsoft Azure MVP
- CNCF Ambassador
- Green Software Foundation Oslo meetup group founder

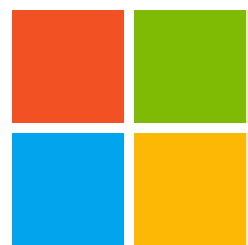


# Roberth Strand

## Amesto Fortytwo

- Microsoft MVP
- CNCF Ambassador
- HashiCorp Ambassador





Microsoft

Evidi



# GitOps

More than just Git + Operations

# GitOps – What?

- Started at Weaveworks (2017)
- Flux joins CNCF as a sandbox project (2019)
- Argo joins CNCF as an incubating project (2020)
- Flux and Argo become CNCF graduated projects (2022)
- Evolving ecosystem & community around GitOps (2020+)





# GitOps – What?

- **Not** replacement for DevOps
- **Not** restricted to Kubernetes
- **Not** a single tool
- **Is** a framework, set of principles
- Declarative specification
- Continuous reconciliation

## 1 Declarative

A system managed by GitOps must have its desired state expressed **declaratively**.

## 2 Versioned and Immutable

Desired state is **stored** in a way that enforces immutability, versioning and retains a complete version history.

## 3 Pulled Automatically

Software agents automatically pull the desired state declarations from the source.

## 4 Continuously Reconciled

Software agents **continuously** observe actual system state and **attempt to apply** the desired state.



# GitOps - Why?

- ∞ Scalability && Reliability
- ∞ Separation of concerns
- ∞ Consistency && Transparency
- ∞ Developer-centricity
- ∞ Security
- ▲ Culture && Mindset
- ▲ Development processes
- ▲ Application readiness
- ▲ Manual changes
- ▲ Deployment frequency
- ▲ Repository structuring

# GitOps standards && best practices

- CNCF TAG App Delivery
- CNCF GitOps Working Group
- OpenGitOps
  - GitOps Principles
  - GitOps Glossary



# GitOps tools: Argo CD vs FluxCD

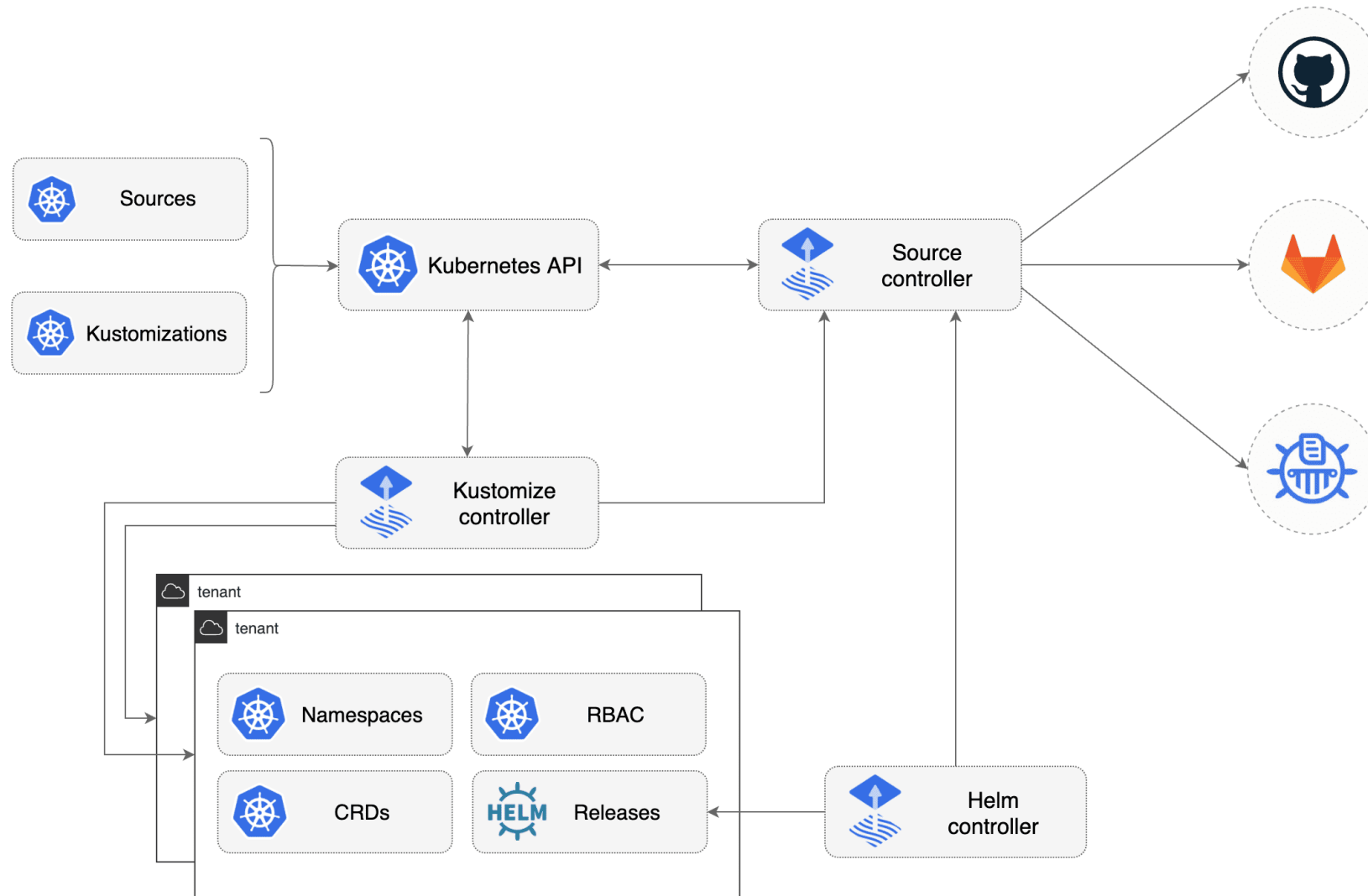
- Target user groups
  - Developers, Platform Engineers
- User interface
- Installation/Bootstrapping
- User management and access control



vs



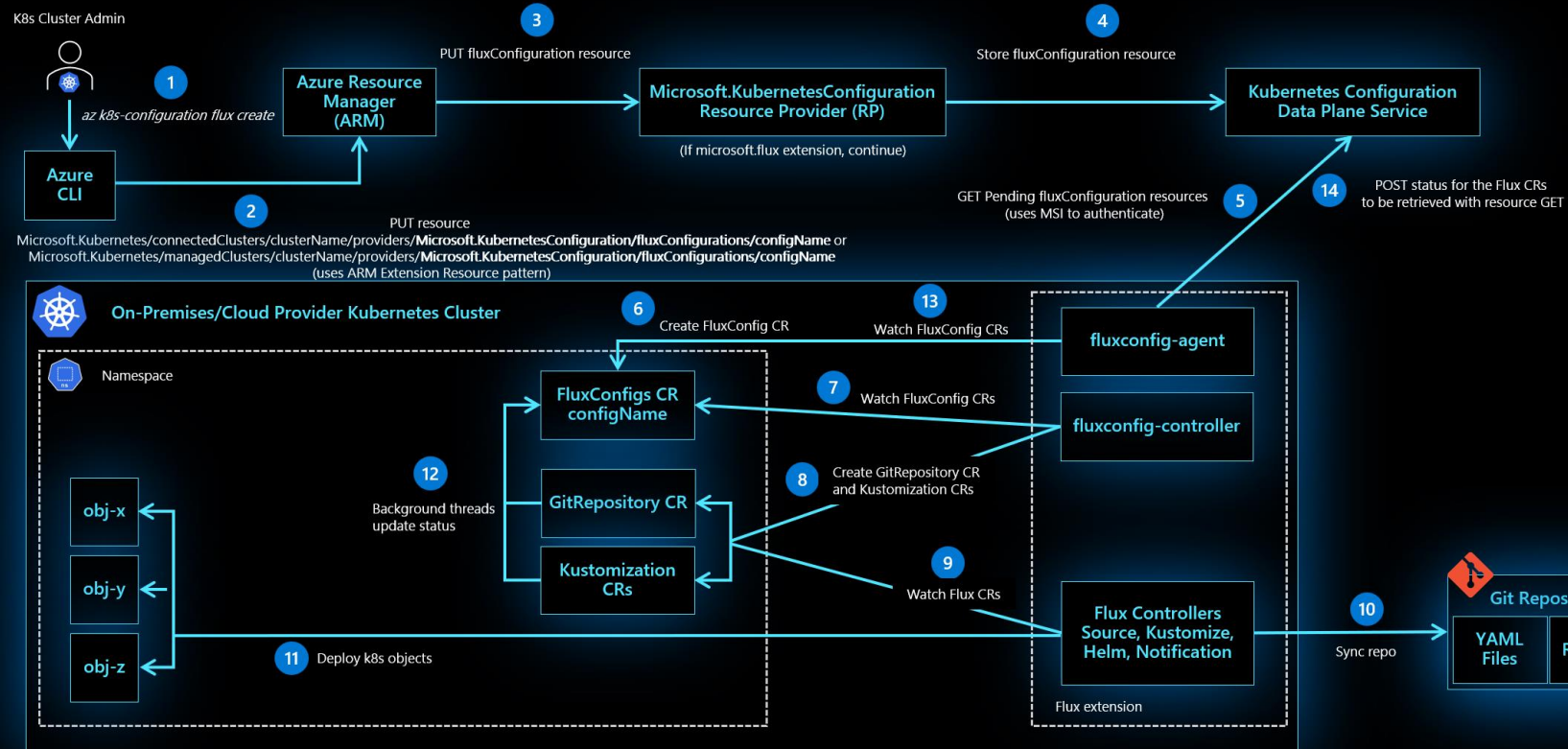
# FluxCD



# FluxCD for AKS/Azure Arc-enabled Kubernetes

## Azure Arc-enabled Kubernetes and AKS

### GitOps Configuration - Flux v2





DEMO

# FluxCD for AKS/Azure Arc-enabled Kubernetes





???



# MVP-Dagen 2023





Tusen takk!

**MVP**-Dagen