

Using GitOps for Continuous Delivery to Multiple Kubernetes Clusters

About Me



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I'm a Senior Technical Evangelist at SUSE. I specialize in cloud and DevOps engineering and cloud-native technologies.

I'm passionate about sharing knowledge through various mediums and engaging with the developer community at large.

Main Topics

1. What is GitOps?
2. GitOps Benefits and Challenges
3. How Fleet works as a GitOps tool
4. Workflow of CI Build and CD deployments to different Kubernetes clusters.



What is GitOps?

GitOps is a model that requires you to describe and observe systems with declarative configurations that will form the basis of continuous integration, continuous delivery, and continuous deployment of your infrastructure.



GitOps Characteristics

- Infrastructure as Code
- Immutable Infrastructure
- Declarative Deployment Model

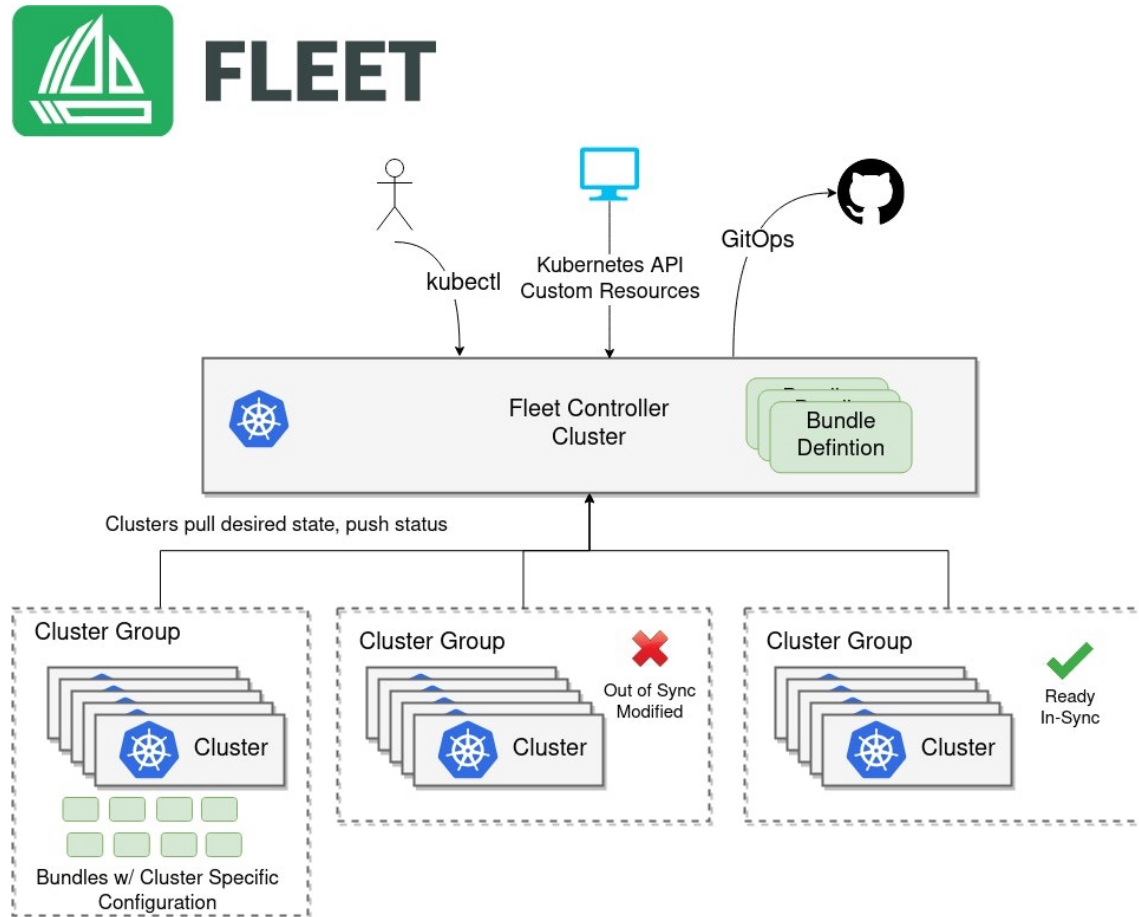
Benefits of GitOps

- Infrastructure as Code
- Code Reviews
- Declarative Paradigm

Challenges with GitOps

- Collaboration Requirements
- No Universal Best Practices

How Fleet Works



How Fleet Works

- Fleet Manager – This is the central component that governs the deployments of K8s resources from the Git repository.
- Fleet Controller – The Fleet controllers run on the Fleet manager that performs the GitOps actions.
- Fleet Agent – Each downstream cluster being managed by Fleet runs an agent that communicates with the Fleet manager.
- GitRepo – Git repositories being watched by Fleet are represented by the type GitRepo.



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