

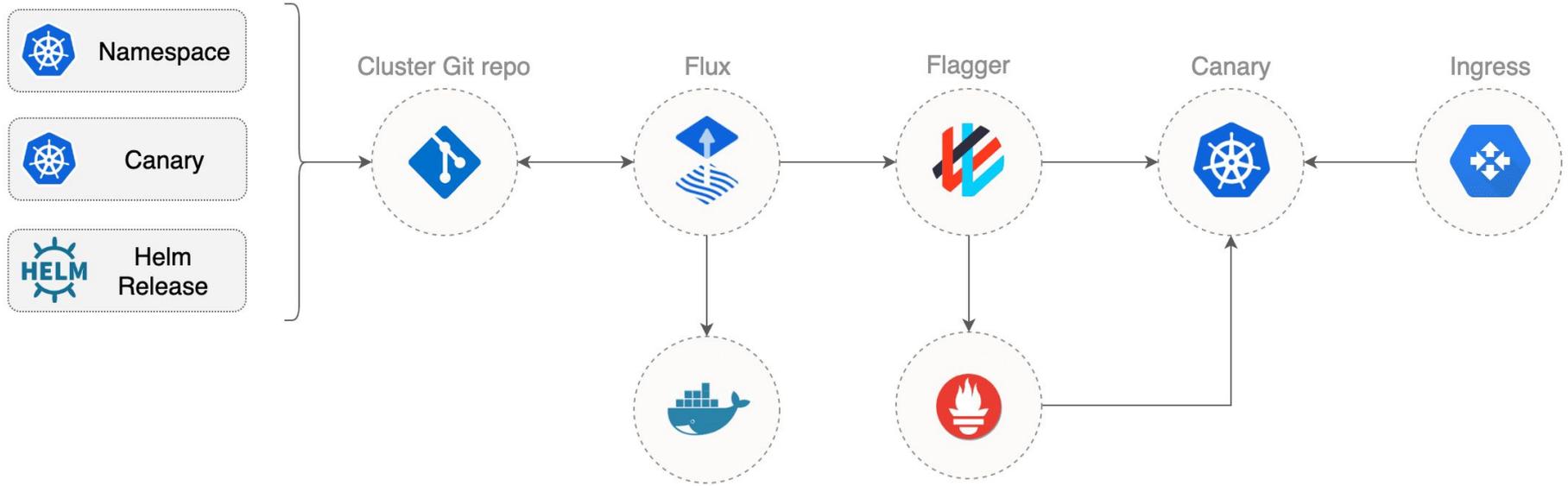
GitOps User Stories

KubeCon 2019

GitOps User Stories

- What is GitOps?
- Tamao Nakahara (Weaveworks, Head of Developer Experience)
- Stefan Prodan (Weaveworks, Developer Experience Engineer)
- Edward Lee (Intuit, Distinguished Engineer)
- Hubert Chen (Branch, Infrastructure Manager)
- Javeria Khan (Palo Alto Networks, Senior Site Reliability Engineer)
- Q&A

GitOps at Weaveworks



<https://github.com/fluxcd/flux>

<https://flagger.app/>

GitOps at Intuit

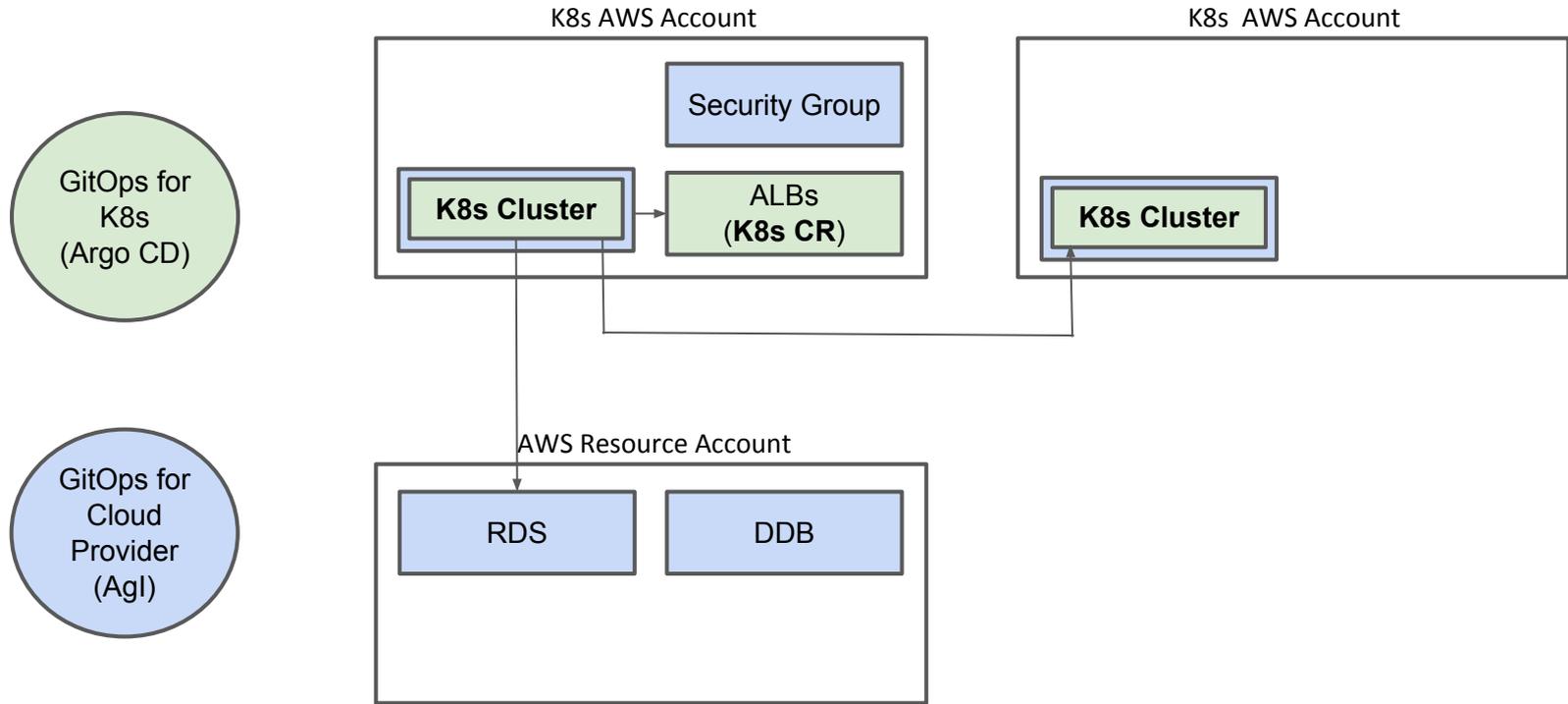
Kubernetes is the default platform for new applications

- 160+ clusters, 4500+ applications

Requirements

- Applications span multiple cloud accounts and clusters
 - Isolation for security, performance and administrative domains
- Multi-tenant Kubernetes clusters
 - Efficiency and manageability
- Simple, low-friction developer experience
 - Commit code, deploy service
- Separate CI and CD pipelines
 - CI should NOT have access to production resources
- RBAC and auditability

GitOps at Intuit



GitOps at Branch

- Used at the end of deployment pipeline for pushing from github yaml to Kubernetes clusters
 - CI systems(circleci + gitlab) push yaml changes to github
 - Flux picks up changes and applies to running Kubernetes clusters
- Used for Prometheus config changes
 - promtool validates config, CI pushes to git. Client agent picks up config and applies
- Planning to pilot infrastructure layer changes
 - Terraform built to detect and apply states
 - Challenges:
 - how to unwind partial failures

GitOps at Palo Alto Networks

- K8s Infra:
 - 40+ clusters (on-prem, bare metal), managed through Jenkins/GitLab pipelines
 - New platforms use GKE clusters with Gitlab pipelines, running in GCP
 - Cluster states maintained in version controlled ansible
 - CD pipelines use vault, helm, FMS to pull in secret/certs and server information
- K8s apps + manifests released as helm charts
- Others:
 - All gcp infra (projects, vpc, compute etc) built on-demand through version controlled terraform + atlantis pipelines
 - On-prem provisioning/orchestration/CM done through version controlled salt (scheduled states) & terraform pipelines
 - Prometheus alert manager rules + runbooks repo; Fluentd config

GitOps User Stories

Questions?

Next Steps

Try our GitOps Hands-On for a prize!

Argo Flux office hours:

4:30 - 5:30pm after this session at the
Starbucks in Lobby E
(San Diego Convention Center)