Leveraging Git for Seamless Continuous Delivery

<https://docs.akuity.io/tutorials/intro-to-argo-cd-github-actions/>

Nicholas Morey - Akuity

Continuous Delivery - get changes into production or into hands of users safely and quickly - Jez Himble, https://continuousdelivery.com

https://opengitops.dev - CNCF sandbox project run by GitOps Working Group under CNCF App Delivery SIG

GitOps Principles

* Declarative - static declaration of state - Kubernetes provides this
* Versioned and Immutable - Git provides this
* Pulled Automatically
* Continuously Reconciled

Argo CD is a GitOps agent - reads from git and runs kubctl

Benefits of GitOps

* Increased Developer and Operational Productivity
* Impoved Stability
* Consistency and Standardization
* Stronger Security Guarantees
* Enjanced Developer Experience

"GitOps meets developers where they are"

Why GitOps for FinTech?

* Compliance: clear audit log of state changes
* Security: Read-only access to state
* Control: All interactions through Git
* Collaboration: Proposed changes in PRs
* Rollbacks: Forget backing up manifests before making changes
* Disaster Recovery: Bootstrap clusters with GitOps agent

Helm Charts: https://helm.sh/

GitHub Codespace: hosting environment (Azure under the hood)

"App of Apps Pattern"