GitOps

As specified by the CNCF

What is GitOps?

GitOps is a set of principles for operating and managing software systems. Under GitOps, the infrastructure and application state are fully represented by the contents of a Git repository. Thus, any changes to the Git repository are reflected in the corresponding state of the associated infrastructure and applications through automation. The desired state of a GitOps managed system must be:

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

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

- **Pulled Automatically**
  Software agents automatically pull the desired state declarations from the source.

- **Continuously Reconciled**
  Software agents continuously observe actual system state and attempt to apply the desired state.
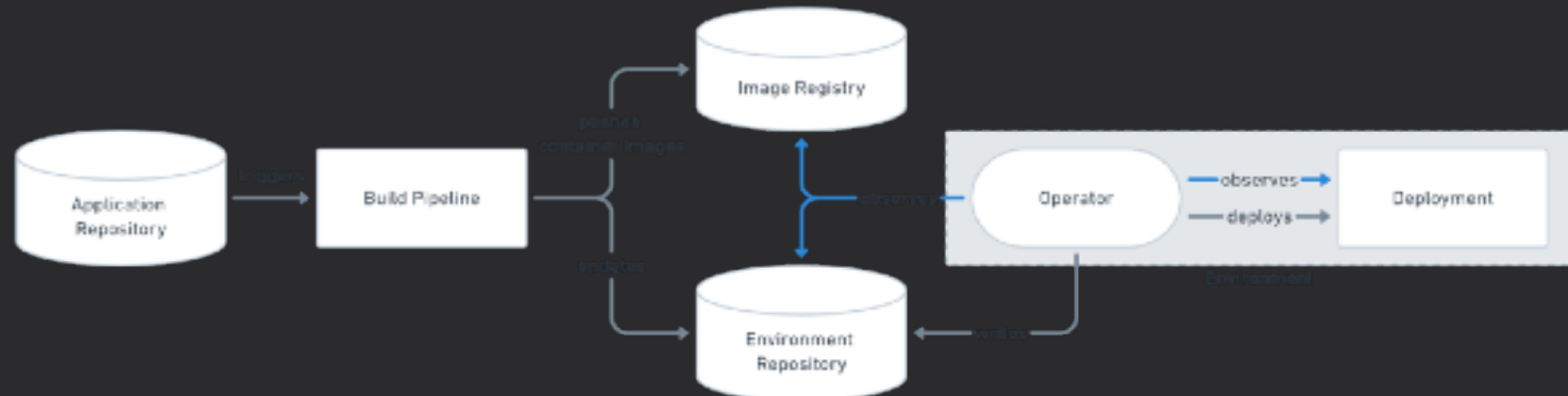
We for one, welcome our Robot overlords!

Our build automation approach

We have normalized our automation approach across all of our team's projects. This enables newcomers to jump into a project and make contributions quickly, as they only need to learn the automation entry points.

We prefer language native task runners

- Java - maven, gradle
- JavaScript - npm, yarn
- Python - poetry, setup-tools

We fallback to platform native tools

- make, bash, task, powershell, cmd, etc.

LEVEL UP

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