

Adopting CDEvents and Embracing Interoperability

Andrea Frittoli

Developer Advocate @ IBM

andrea.frittoli@uk.ibm.com

 [@blackchip76](https://twitter.com/blackchip76) |  [afrittoli](https://github.com/afrittoli)

Session: sched.co/1KUH8



Andrea Frittoli

⌚ afrittoli | 💬 andreafrittoli | 🐦 @blackchip76

- › Open Source Advocate @ IBM
- › Lives in Wales, enjoys the wind
- › CDEvents maintainer, Events SIG co-chair
- › Chair of CDF Technical Oversight Committee Governing Board





Contents

CDEvents

What's New

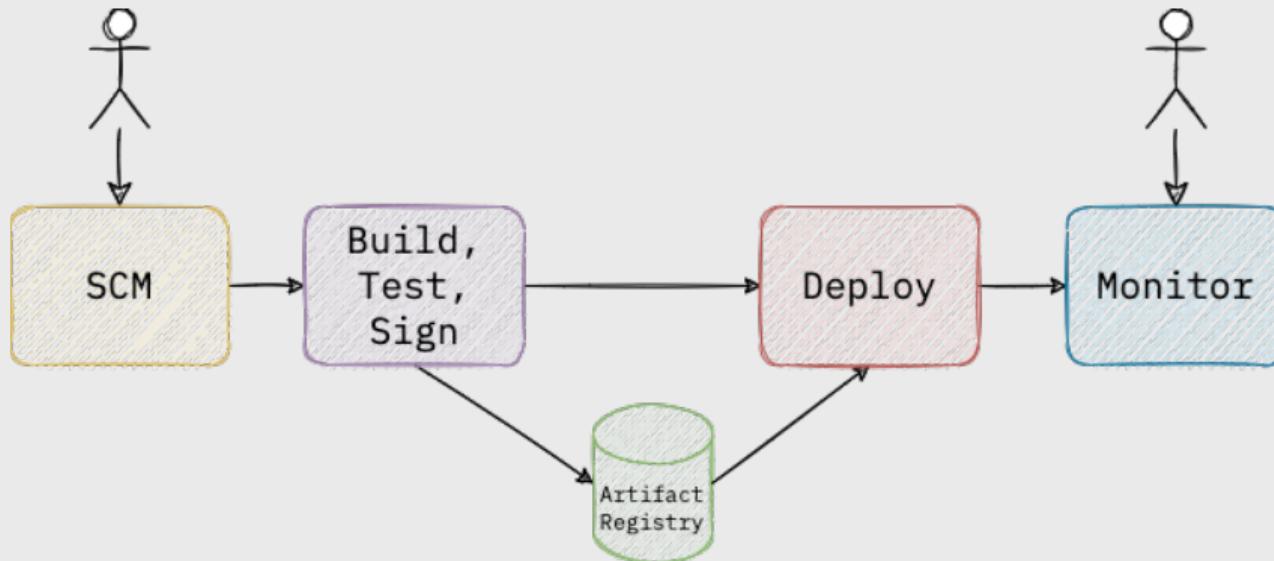
Tools Adoption

Roadmap

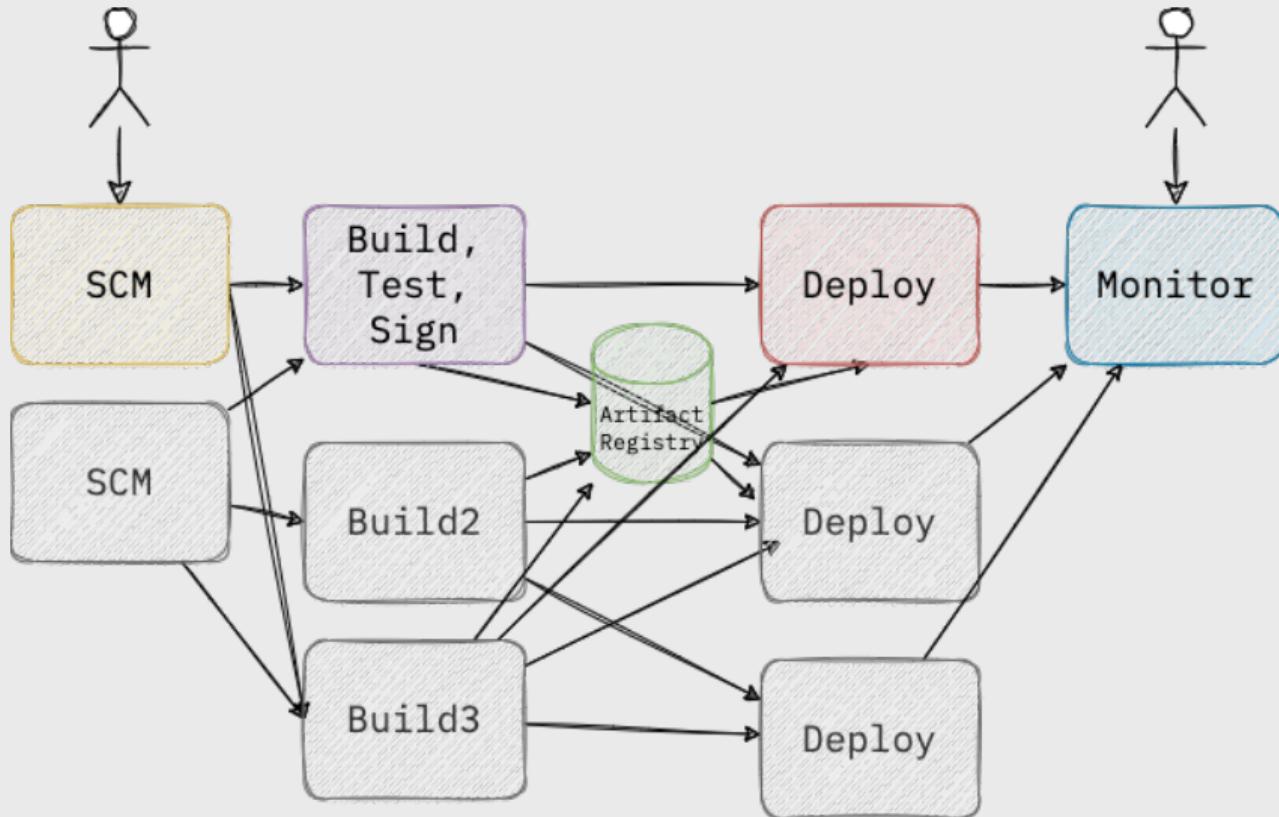
Thank You



Continuous Delivery Pipeline



Integrations



Orchestration



Choreography

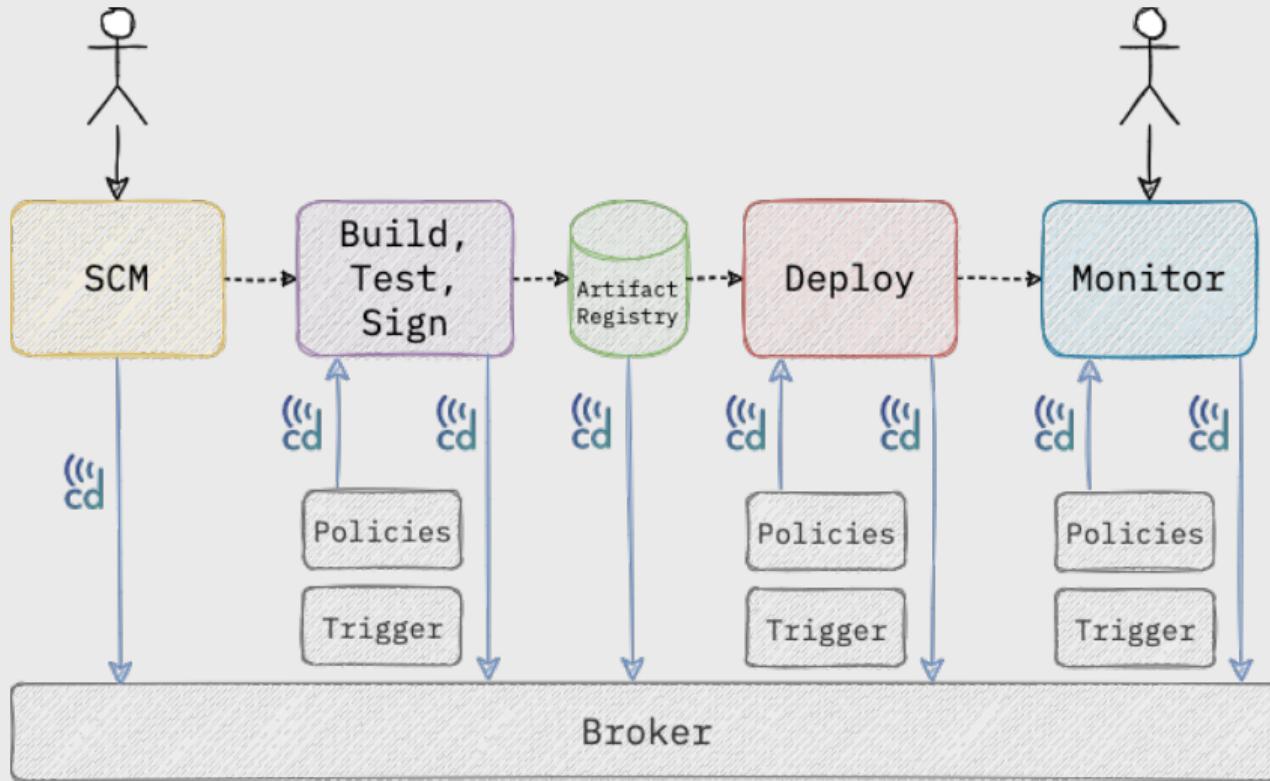




A common specification
for Continuous Delivery
events



Interoperability

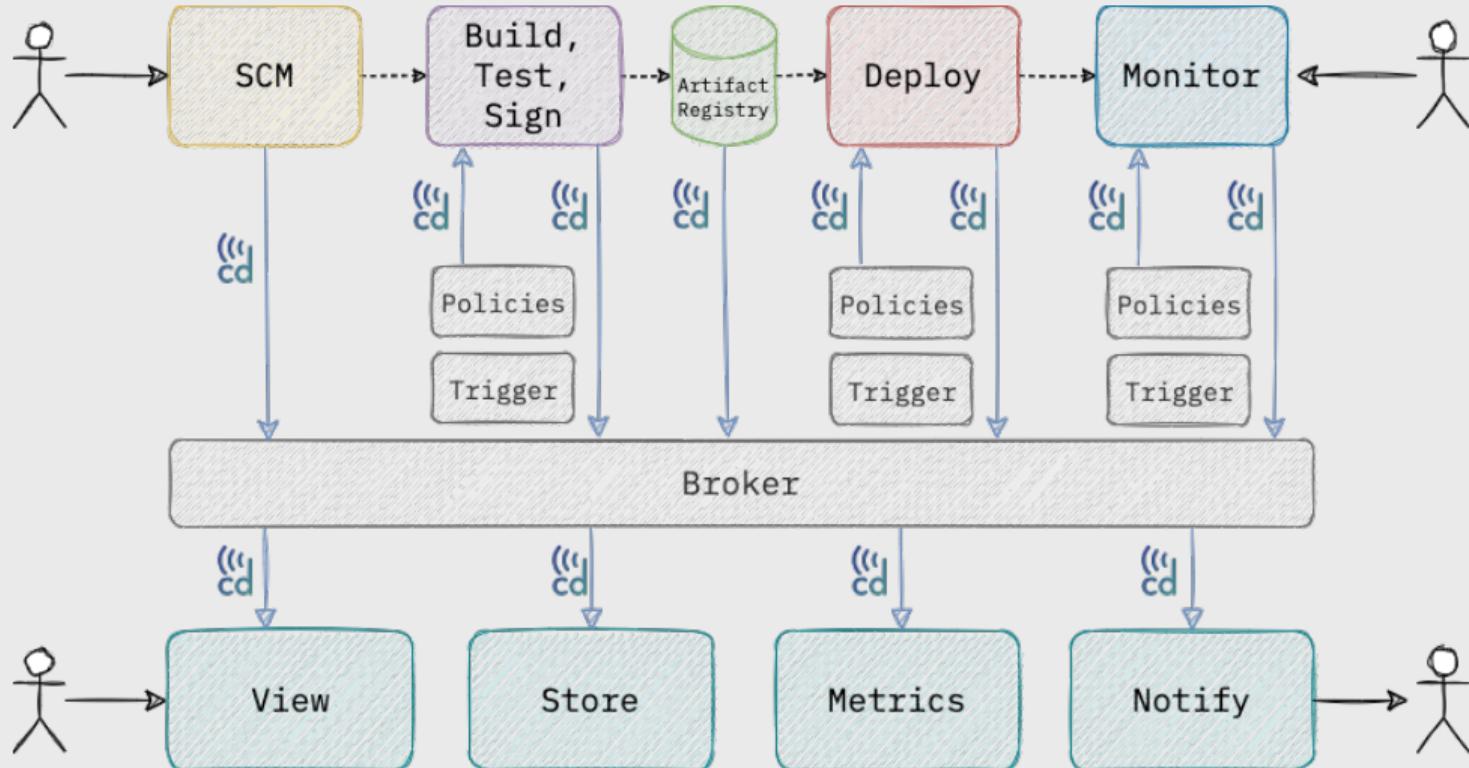


Observability

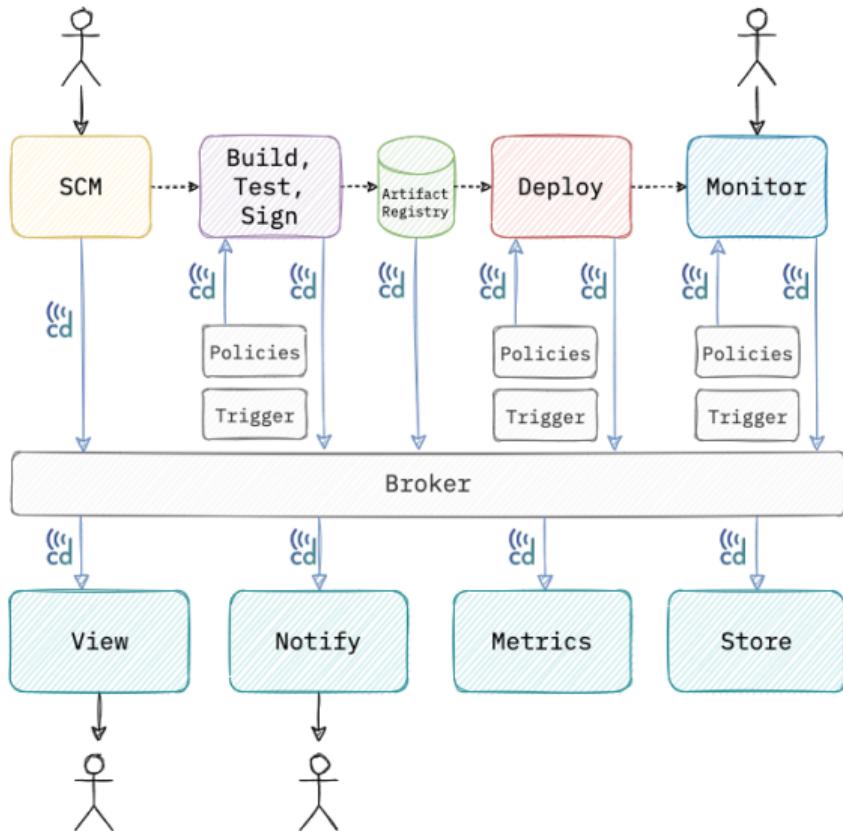
- › What's running right now?
- › What steps were executed?
- › Where did things go wrong?
- › How long did it take?



Interoperability & Observability



Why CDEvents



- Event driven workflows
 - Scalable, Decoupled
 - Flexible
 - Policy Driven
- Observability
 - Metrics
 - Notifications
 - Single View

Interoperability!



History of CDEvents

- › Interoperability and Events Special Interest Groups
- › First Commit Oct 2020
- › Incubated at the CDF since 2022

- › Release v0.1 announced at the CDSummit in Detroit
 - Orchestration
 - Software Configuration Management
 - Continuous Integration & Deployment
 - CloudEvents Binding
 - Golang SDK
 - DevOps Metrics



What's New



Photo by [Josh Sorenson](#), CCO



((c)) cdevents 0.3

Incident Events:

- › Continuous Operations
- › Modeled after DORA
- › Remediation Automation

Test Events:

- › Notifications
- › Test Driven Automation
- › Metrics

Software Supply Chain Security

- › Artifact Signed event
- › Build & Deployment Automation

Quality of life improvements

- › Improved readability
- › Examples for each event
- › Refreshed web site



SDKs

Features:

- JSONSchema Validation
- SDK Generated from schemas (Golang)
- Improved testing

Releases:

- Golang SDK v0.3 released
- Java SDK v0.1 (draft) available on maven central
- Python SDK v0.1 soon to be on PyPi





Tools Adoption

Photo by Clay Banks, CC0



Overview

Available:

- Jenkins (plugin published)
- Tekton (experimental)

CNCF Projects:

- Argo
- Flux
- Harbour

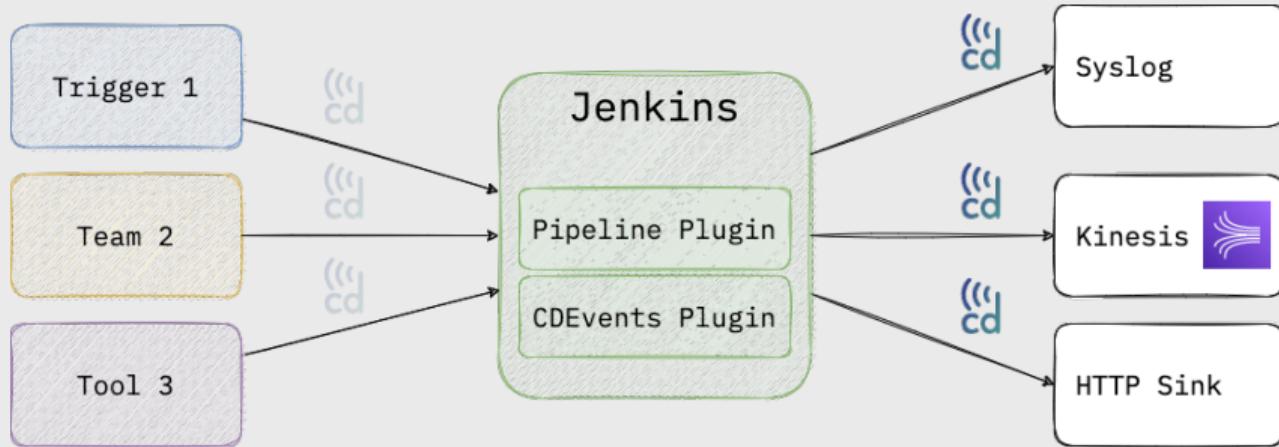
Work in Progress:

- Spinnaker (RFC approved)
- Testkube

Other Projects:

- Tracetest
- JReleaser
- Shipwright
- Jenkins-X





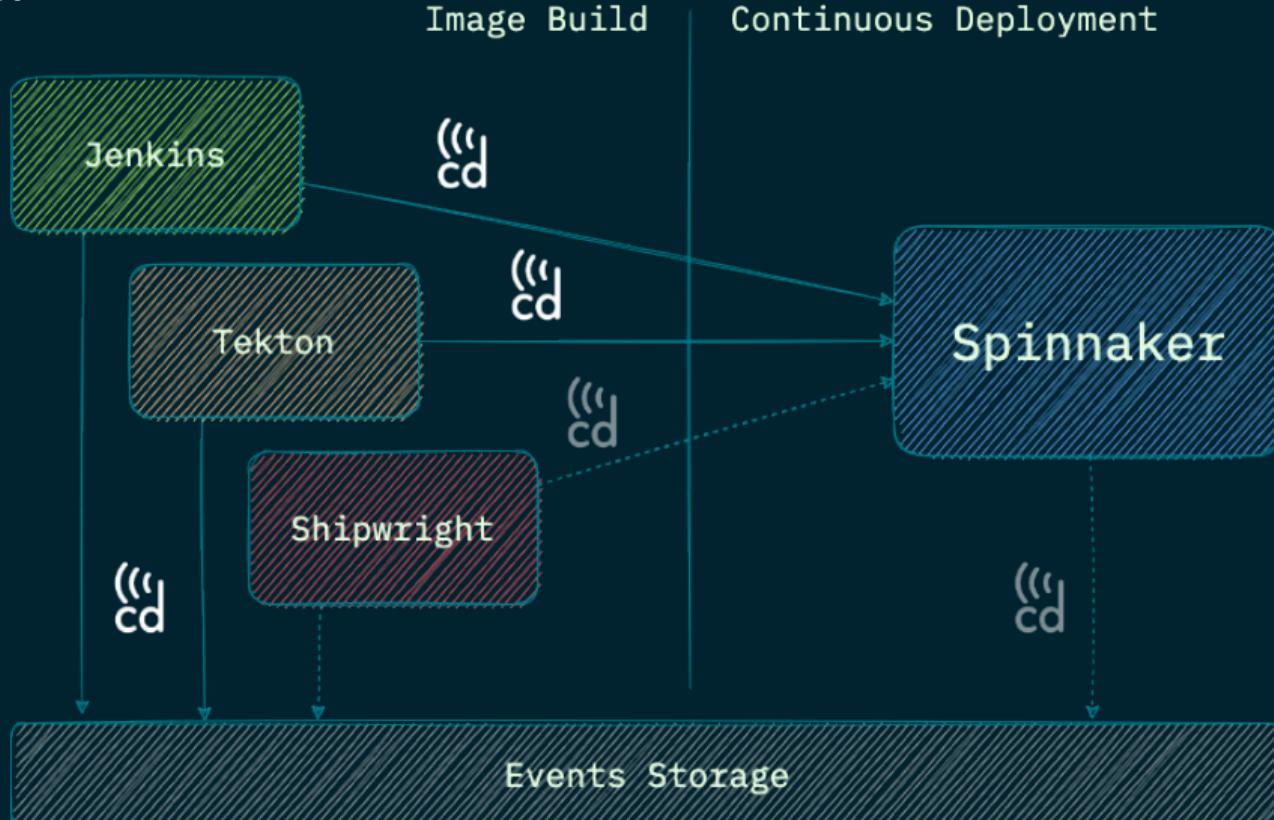
Next Steps

Support CDEvents as triggers as well.

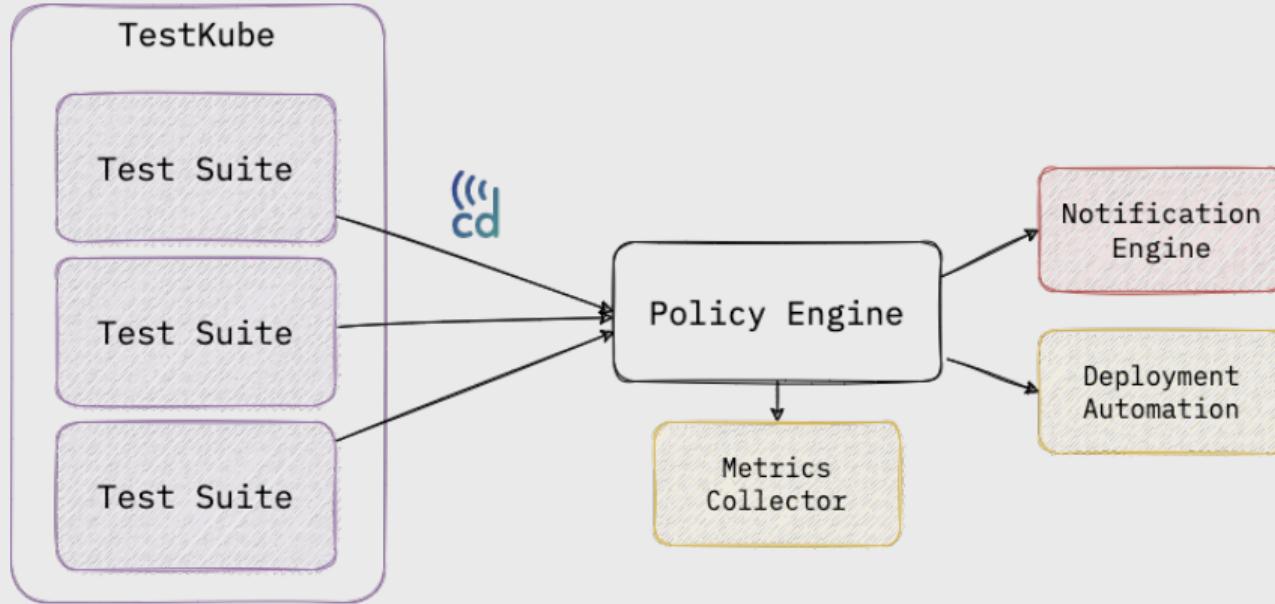
CDEvents Core Events

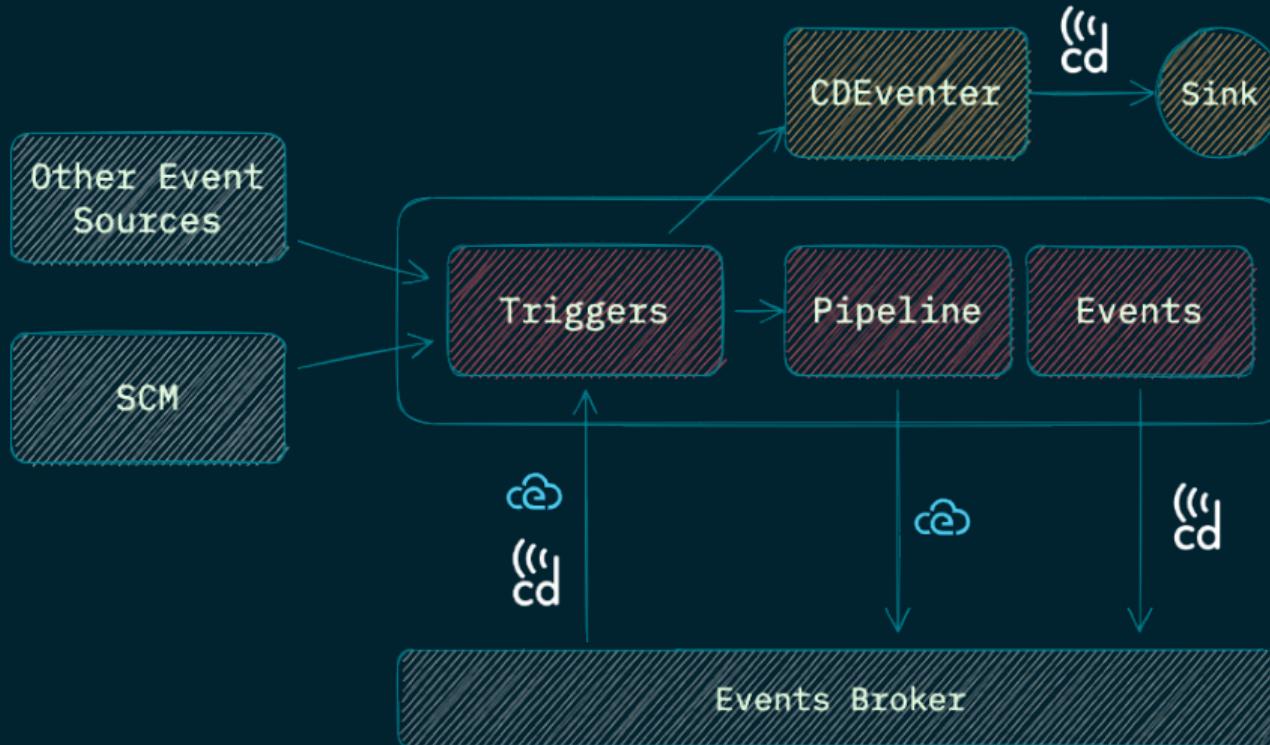
PipelineRun Queued, Started, Finished
TaskRun Started, Finished

Spinnaker



Testkube





Lessons Learnt

Adoption:

- › Reference Architecture
- › Event Broker
- › Responding to events
- › Incremental adoption
- › Community

Specification:

- › Examples events
- › Example implementations
- › Generate docs from schema

SDKs:

- › Generate SDKs from schema
- › SDK documentation
- › SDK validation
- › JS, Rust

Community:

- › CDF, Special Interest Groups
- › End Users use events today
- › Collaboration with tool communities
- › Collaboration with other foundations



Roadmap



CDEvents Roadmap

v0.4 and beyond

Supply Chain Security

- SBOM,
- Provenance
- Signed Events

New features

- Links,
- Workflow IDs
- Compositions
- Releases

Software & Architecture

- SDKs (JS, Rust)
- Adapters
- Proof of concept
- Broker, Policy

Documentation:

- Reference Architecture
- Example events
- Example implementations





Collaborations

- CDF, SIG Interop:
Reference Architecture
- CNCF TAG App Delivery
- Value Stream Management
Interoperability (VSMI) TC
- CDF, Workshop working group

Community

CDF

- SIG Interop
- SIG Supply Chain
- SIG Best Practices

Tools communities

- Tekton
- Spinnaker
- Shipwright
- Jenkins
- Jenkins X
- Flux, Argo

Companies

- Ericsson
- IBM / RedHat
- Apple
- VMWare
- Fidelity
- SAS

Get Involved!!

- Specification
- SDKs (Rust, JS, Ruby, C#)
- Tools
- Proof-of-concepts
- End users



Thank You!



References

- › cdevents.dev, github.com/cdevents
- › github.com/cdevents/spec/blob/main/CDEvents_Whitepaper.pdf
- › github.com/jenkinsci/cdevents-plugin
- › github.com/spinnaker/governance/blob/master/rfc/cdevents-spinnaker.md
- › github.com/afrittoli/cdeventer
- › github.com/cncf/tag-app-delivery
- › VSMI TC @ www.oasis-open.org/committees

Andrea Frittoli | andrea.frittoli@uk.ibm.com

 @blackchip76 |  afrittoli |  andreafruttoli