# Eiffel vs CDF SIG Events protocol on Cloudevents

# Agenda

- CDF
- SIG Events
- The protocol
- ~~Demo of the POC~~

*Please ask questions*

# What is the CDF?

- Continuous Delivery Foundation is an open source community improving the world's ability to deliver software with security and speed.

- Part of the Linux Foundation umbrella
  - CNCF – Cloud Native Computing Foundation is a sister organization
    - The CNCF believes most CD-related tooling is out of scope and broader than their focused cloud native definition, which is focused on containerization, microservices, service meshes, and orchestration – CDF FAQ



CD.FOUNDATION

# Projects hosted by CDF
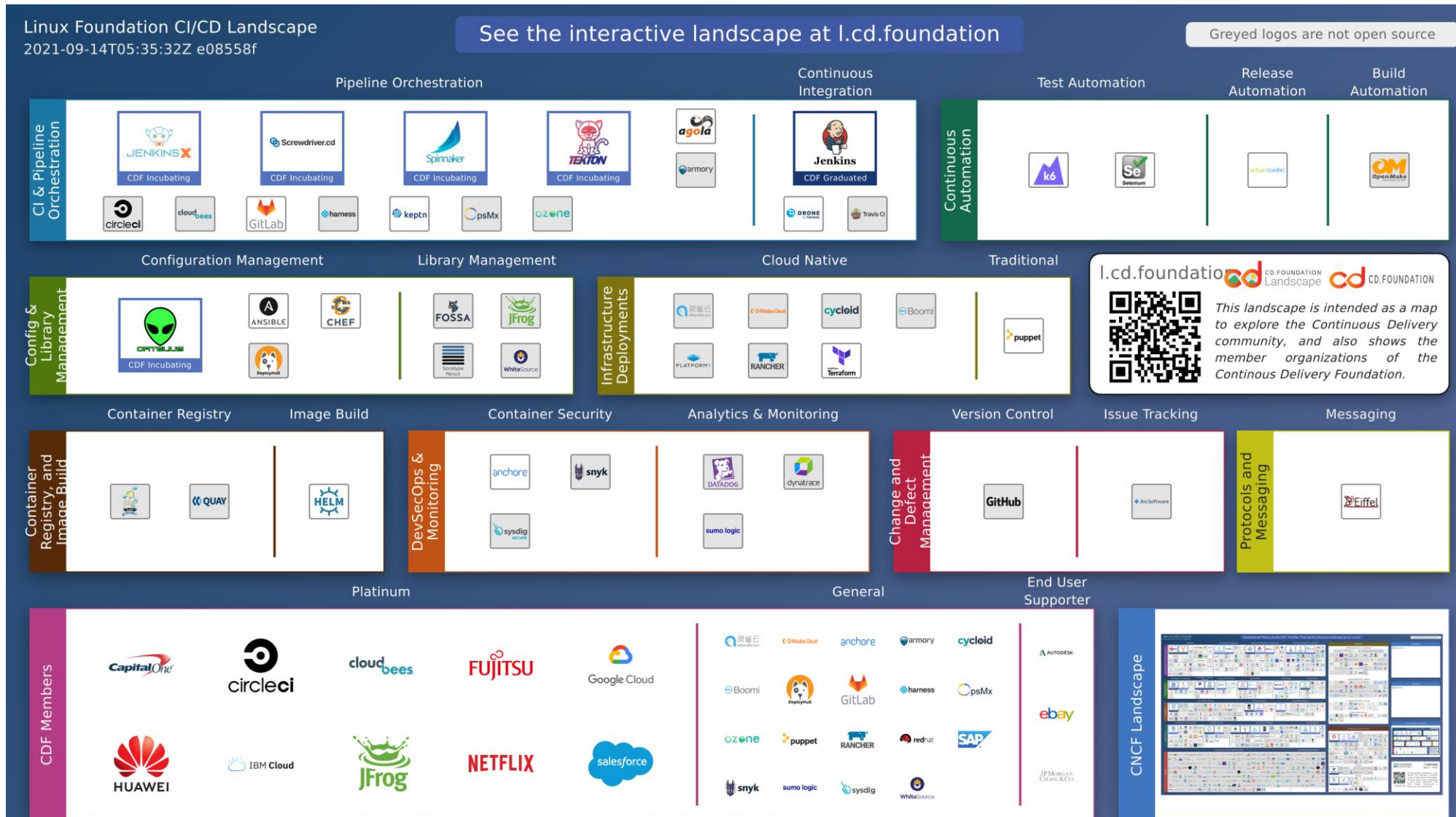
# SIG Events

- Chaired by Emil Bäckmark (Ericsson/Eiffel) and Andrea Fritolli (IBM/Tekton)
- Meetings
  - SIG
  - Vocabulary Workgroup
- History
  - Operated as a steam inside SIG interoperability
  - Stream created June 2020
  - Became a SIG February 2021
- Focus areas:
  - Protocol vocabulary
  - SDK (Go lang)
  - PoC – Keptn & Tekton

- Participants such as
  - IBM
  - Dynatrace
  - Cloudbees
  - Ortelius/Deploy Hub
  - doWhile
  - LearnK8s
  - OpsMx
  - RedHat
  - Harness

# Event protocol from SIG Events

- Basic draft
- Trying to make it compatible with Eiffel
- Based on cloud events

# Current messages

- PipelineRun
  - Queued
  - Started
  - Finished
- TaskRun
  - Started
  - Finished
- Repository
  - Created
  - Modified
  - Deleted
- Branch
  - Created
  - Deleted

- Change
  - Created
  - Reviewed
  - Merged
  - Abandoned
  - Updated
- Build
  - Queued
  - Started
  - Finished
- Test Case
  - Queued
  - Started
  - Finished

- Test Suite
  - Started
  - Finished
- Artifact
  - Packaged
  - Published
- Environment
  - Created
  - Modified
  - Deleted
- Service
  - Deployed
  - Upgraded
  - Rolledback
  - Removed

# CDF vs Eiffel

**CDF events**
- PipelineRun
  - Queued
  - Started
  - Finished
- TaskRun
  - Started
  - Finished
- Build
  - Queued
  - Started
  - Finished

**Eiffel**
- Activity events
  - EiffelActivityTriggeredEvent (ActT)
  - EiffelActivityCanceledEvent (ActC)
  - EiffelActivityStartedEvent (ActS)
  - EiffelActivityFinishedEvent (ActF)

# CDF vs Eiffel

**CDF events**

- Change
  - Created
  - Reviewed
  - Merged
  - Abandoned
  - Updated

**Eiffel**

- Source Change
  - EiffelSourceChangeCreatedEvent (SCC)
  - EiffelSourceChangeSubmittedEvent (SCS)

# CDF vs Eiffel

**CDF events**

- Test Case
  - Queued
  - Started
  - Finished
- Test Suite
  - Started
  - Finished

**Eiffel**

- Test case
  - EiffelTestCaseTriggeredEvent (TCT)
  - EiffelTestCaseCanceledEvent (TCC)
  - EiffelTestCaseStartedEvent (TCS)
  - EiffelTestCaseFinishedEvent (TCF)
- Test suite
  - EiffelTestSuiteStartedEvent (TSS)
  - EiffelTestSuiteFinishedEvent (TSF)

# CDF vs Eiffel

**CDF events**

- Artifact
  - Packaged
  - Published

**Eiffel**

- Artifact
  - EiffelArtifactCreatedEvent (ArtC)
  - EiffelArtifactPublishedEvent (ArtP)
  - EiffelArtifactReusedEvent (ArtR)

# CDF vs Eiffel

**CDF events**

- Environment
  - Created
  - Modified
  - Deleted

**Eiffel**

- EiffelEnvironmentDefinedEvent (ED)

# CDF vs Eiffel

**CDF events**

- Service
  - Deployed
  - Upgraded
  - Rolledback
  - Removed

**Eiffel**

- N/A

# CDF vs Eiffel

**CDF events**

- Repository
  - Created
  - Modified
  - Deleted

- Branch
  - Created
  - Deleted

**Eiffel**

- N/A

# CDF vs Eiffel

**CDF events**
- N/A

**Eiffel**
- EiffelConfidenceLevelModifiedEvent (CLM)

- EiffelCompositionDefinedEvent (CD)

- EiffelFlowContextDefinedEvent (FCD)

- EiffelIssueVerifiedEvent (IV)
- EiffelIssueDefinedEvent (ID)

- EiffelAnnouncementPublishedEvent (AnnP)

# A look at two events

## CDF - Artifact packaged

```
{
  "data": {
    "custom" : "data"
  },
  "artifactid": "com.good.package",
  "artifactname": "A good package",
  "artifactversion": "1.0",
  "datacontenttype": "application/json",
  "id": "acfab08d-73ec-4644-9a6d-a31e8fbf0792",
  "source": "cde-cli",
  "specversion": "1.0",
  "time": "2021-09-06T13:39:22.0658039Z",
  "type": "cd.artifact.packaged.v1"
}
```

## Eiffel - Artifact created

```
{
  "meta": {
    "type": "EiffelArtifactCreatedEvent",
    "version": "3.0.0",
    "time": 1234567890,
    "id": "aaaaaaaa-bbbb-5ccc-8ddd-eeeeeeeeeee0",
    "source": {
      "serializer": "pkg:maven/com.mycompany.tools/eiffel-
serializer@1.0.3"
    },
    "tags": [
      "fast-track",
      "customer-a"
    ]
  },
  "data": {
    "identity": "pkg:maven/com.mycompany.myproduct/artifact-
name@2.1.7",
    "fileInformation": [
    ...
    ],
    "buildCommand": "/my/build/command with arguments",
    "name": "Full verbose artifact name"
  },
  "links": [
  ...
  ]
}
```

# A look at two events

## CDF - Pipline started event

```
{
  "data": {
      "custom": "data"
  },
  "pipelinerunerrors": "Hopefully no errors",
  "pipelinerunid": "pipe1",
  "pipelinerunname": "My Pipeline",
  "pipelinerunstatus": "Starting",
  "pipelinerunurl": "http://my-pipelinerunner",
  "datacontenttype": "application/json",
  "id": "8ba216bb-b443-4019-956e-f9b4d1700847",
  "source": "cde-cli",
  "specversion": "1.0",
  "time": "2021-07-16T14:30:33.1000937Z",
  "type": "cd.pipelinerun.started.v1"
}
```

## Eiffel – Activity Started

```
{
  "meta": {
    "type": "EiffelActivityStartedEvent",
    "version": "4.1.0",
    "time": 1234567890,
    "id": "aaaaaaaa-bbbb-5ccc-8ddd-eeeeeeeeee0"
  },
  "data": {
    "executionUri": "https://my.jenkins.host/myJob/43",
    "liveLogs": [
     …
    ]
  },
  "links": [
    …
  ]
}
```
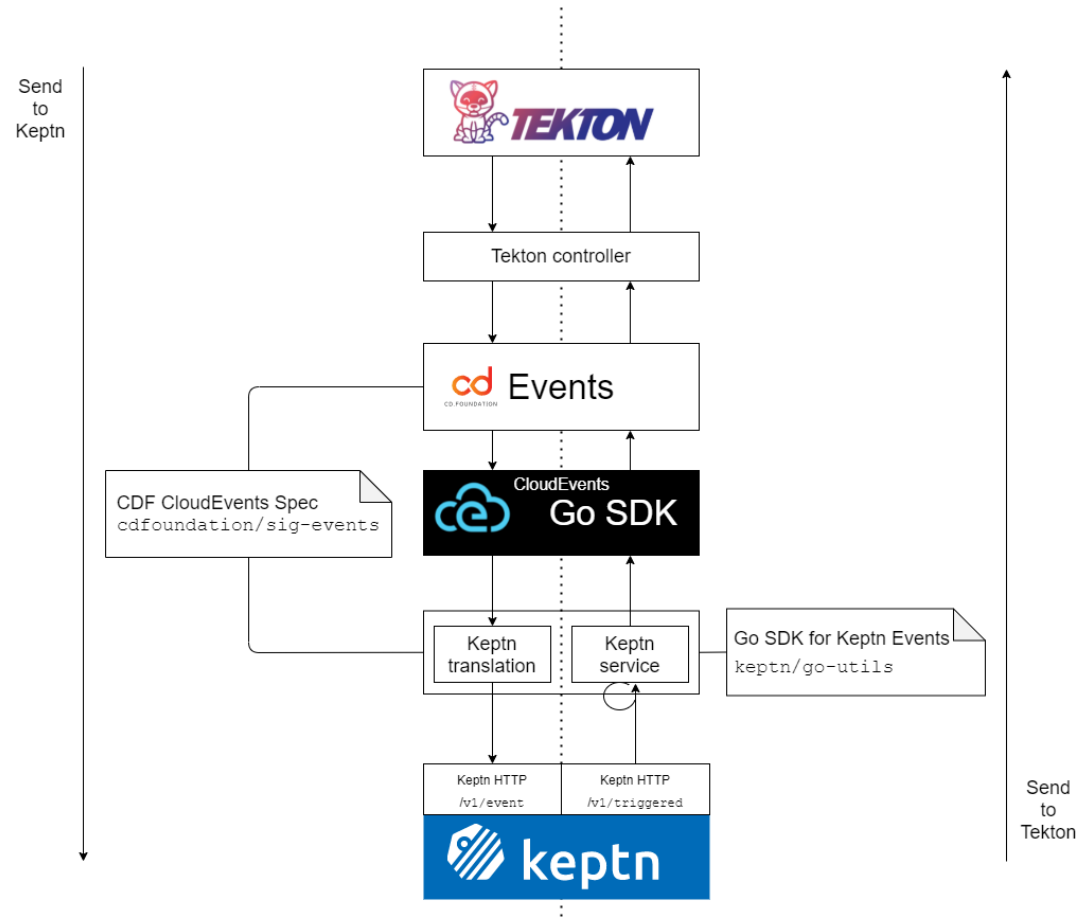
# Summary

- Based on cloud events
- Many participants come from a cloud backgroud
- Currently no links, but discussion is ongoing
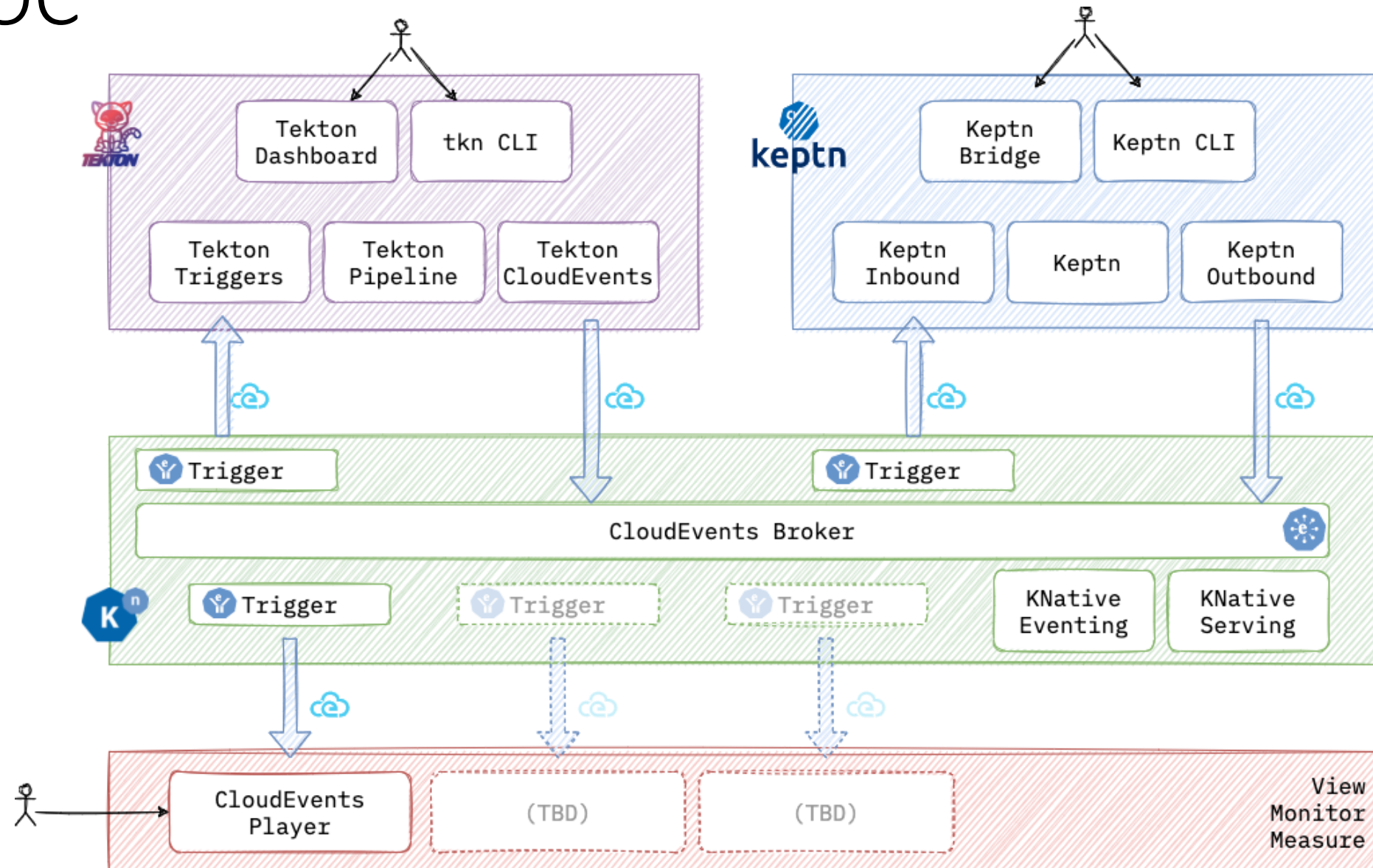
# POC

- Tekton
  - Cloud-native solution for building CI/CD pipelines
  - Using Tekton Pipelines here

- Keptn
  - Cloud-native application life-cycle orchestration

# POC

# POC

# Questions?