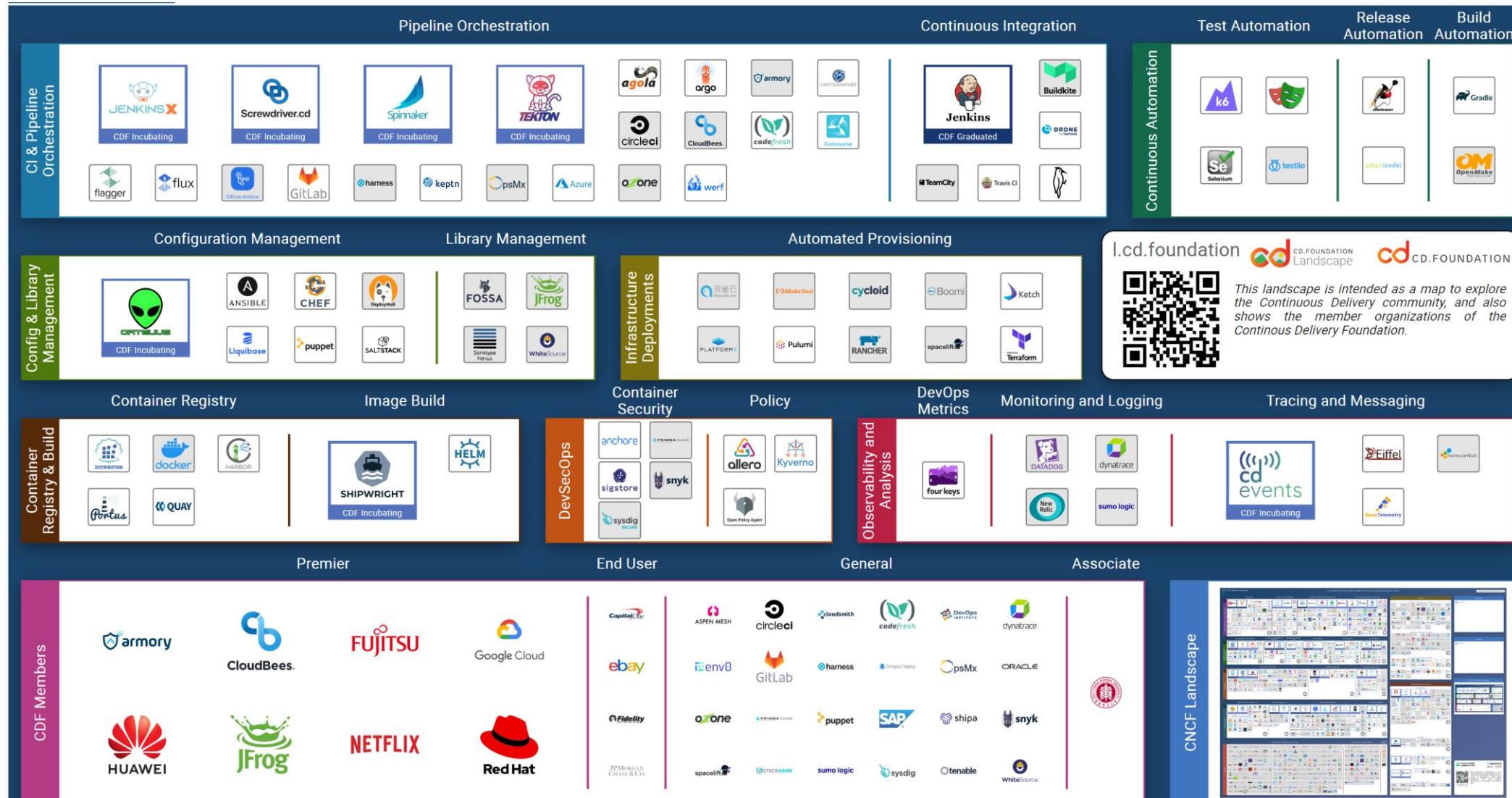# Eiffel vs CDEvents

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 in CI/CD domain, acked by CDF

SIG Events / CDEvents

- Chaired by Emil Bäckmark (Ericsson/Eiffel) and Andrea Fritolli (IBM/Tekton)
- Meetings
  - SIG
  - Vocabulary Workgroup
- History
  - Operated as a stream inside SIG Interoperability
  - Stream created June 2020
  - Became a SIG February 2021
  - CDEvents project launched early 2022
- Focus areas:
  - Protocol vocabulary – CDEvents v0.1
  - SDK (Go, Python, Java)
  - PoC – Keptn, Tekton, Spinnaker & Jenkins (& Eiffel)

- Participants from for example
  - IBM
  - Dynatrace
  - Cloudbees
  - Ortelius/Deploy Hub
  - doWhile
  - Apple
  - eBay
  - LearnK8s
  - OpsMx
  - RedHat
  - Harness

CDEvents protocol

- Basic draft, soon v0.1
- "Compatible" with Eiffel
- Based on Cloudevents
- Event types have a "subject" and a "predicate"

Current Event Types
Core Events

- PipelineRun
  - Queued
  - Started
  - Finished

- TaskRun
  - Started
  - Finished

Current Event Types
Source Code Version Control Events

- Repository
  - Created
  - Modified
  - Deleted

- Branch
  - Created
  - Deleted

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

Current Event Types
Continuous Integration Events

- Build
  - Queued
  - Started
  - Finished

- Artifact
  - Packaged
  - Published

- Test Case
  - Queued
  - Started
  - Finished

- Test Suite
  - Started
  - Finished

Current Event Types
Continuous Deployment Events

- Environment
  - Created
  - Modified
  - Deleted

- Service
  - Deployed
  - Upgraded
  - Rolledback
  - Removed
  - Published

Change Merged

```
{
  "context": {
    "id": "1a2dd834-3e31-4099-a0b3-56c721a87694",
    "source": "git.af-cdevents-dff43bc8701fcd5837d6de963718ad39-0000.eu-gb.containers.appdomain.cloud/cdevents/podtato-head",
    "timestamp": "2022-09-16T15:17:31.556800166Z",
    "type": "dev.cdevents.change.merged.v1",
    "version": "0.1.0-draft"
  },
  "subject": {
    "id": "f0648dbc5041dffd6cda59c462ebd05f903753ba",
    "source": "git.af-cdevents-dff43bc8701fcd5837d6de963718ad39-0000.eu-gb.containers.appdomain.cloud/cdevents/podtato-head",
    "type": "change",
    "content": {
      "repository": {
        "id": "cdevents/podtato-head"
      }
    }
  },
  "customData": { … },
  "customDataContentType": "application/json"
}
```

Artifact Packaged

```json
{
  "context": {
    "id": "e18b5294-f7f1-4b73-87b3-d41264fbd34d",
    "source": "buildscript/podtato-head-server",
    "timestamp": "2022-09-16T15:18:55.523885462Z",
    "type": "dev.cdevents.artifact.packaged.v1",
    "version": "0.1.0-draft"
  },
  "subject": {
    "id": "pkg:docker/podtatoserver@sha256:b8759e43dc156eb1d230f39c0dea7e1774a9c490ef0b0f60c35e0eee3de30b7d",
    "source": "buildscript/podtato-head-server",
    "type": "artifact",
    "content": {
      "change": {
        "id": "f0648dbc5041dffd6cda59c462ebd05f903753ba",
        "source": "git.af-cdevents-dff43bc8701fcd5837d6de963718ad39-0000.eu-gb.containers.appdomain.cloud/cdevents/podtato-head"
      }
    }
  },
  "customData": {
    "repository": "git.af-cdevents-dff43bc8701fcd5837d6de963718ad39-0000.eu-gb.containers.appdomain.cloud/cdevents/podtato-head"
  },
  "customDataContentType": "application/json"
}
```

Artifact Published

```
{
  "context": {
    "id": "5129bf41-72ba-4900-bf63-2c7d7cb22abd",
    "source": "cdevents.azurecr.io",
    "timestamp": "2022-09-16T15:18:51.072388192Z",
    "type": "dev.cdevents.artifact.published.v1",
    "version": "0.1.0-draft"
  },
  "subject": {
    "id": "pkg:docker/podtatoserver@sha256:b8759e43dc156eb1d230f39c0dea7e1774a9c490ef0b0f60c35e0eee3de30b7d",
    "source": "cdevents.azurecr.io",
    "type": "artifact",
    "content": {},
  },
  "customData": { … },
  "customDataContentType": "application/json"
}
```
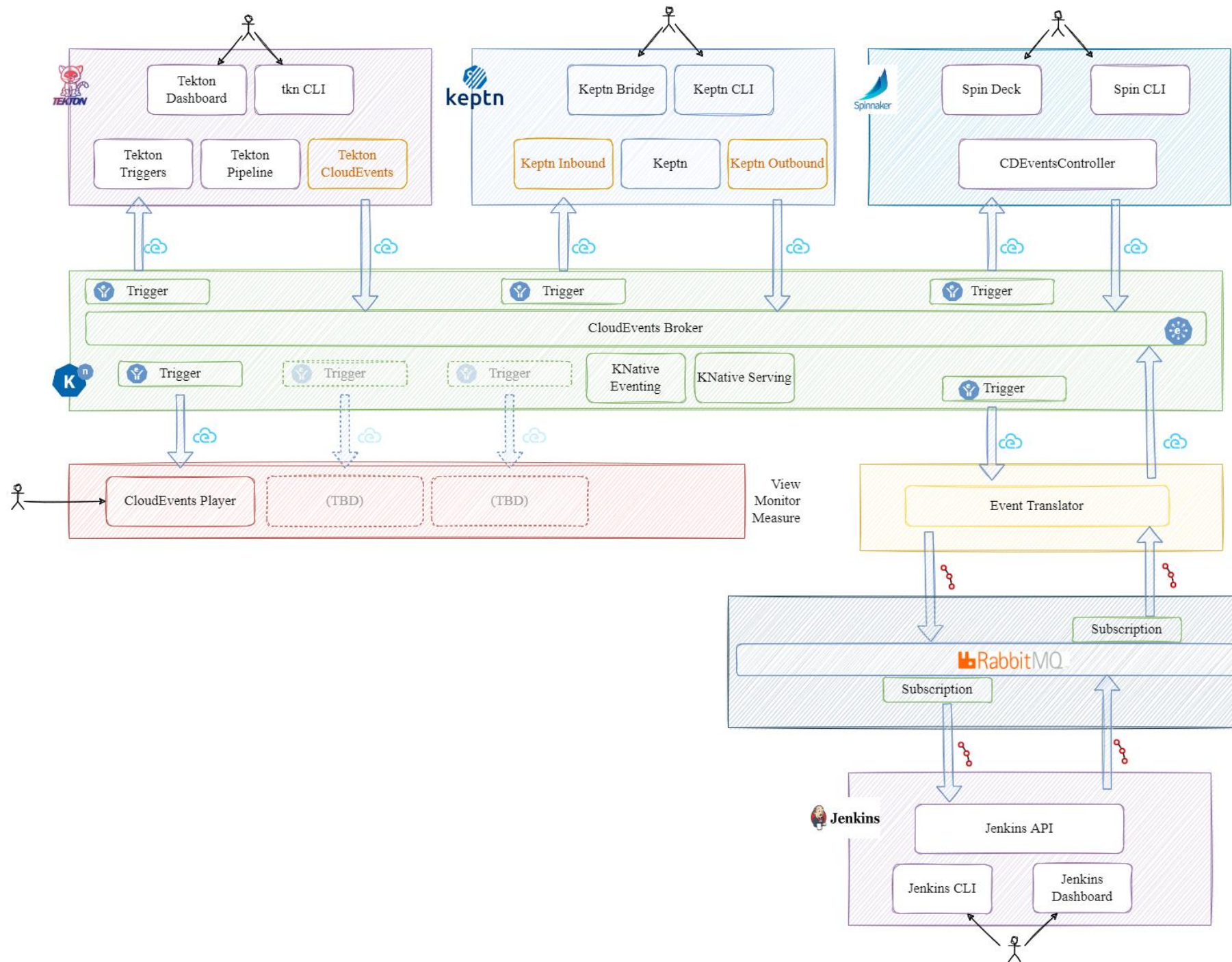
Service Deployed

```
{
  "context": {
    "id": "8ec76402-9d85-42c8-8eb9-40f8d5a661f7",
    "source": "https://172.21.0.1:443",
    "timestamp": "2022-09-16T15:13:25.573904079Z",
    "type": "dev.cdevents.service.deployed.v1",
    "version": "0.1.0-draft"
  },
  "subject": {
    "id": "/apis/apps/v1/namespaces/production/deployments/podtato-server",
    "source": "https://172.21.0.1:443",
    "type": "service",
    "content": {
      "artifactId": "cdevents.azurecr.io/podtatoserver@sha256:3589637f88593d730fdb3cd32558588d846bc699cbdc04e8a97f200687c4b6cf",
      "environment": {
        "id": "production"
      }
    }
  },
  "customData": { … },
  "customDataContentType": "application/json"
}
```

Service Upgraded

```
{
  "context": {
    "id": "57ce50ef-ffc4-4f6f-9052-d41649ae8752",
    "source": "https://172.21.0.1:443",
    "timestamp": "2022-09-16T15:21:53.178148896Z",
    "type": "dev.cdevents.service.upgraded.v1",
    "version": "0.1.0-draft"
  },
  "subject": {
    "id": "/apis/apps/v1/namespaces/production/deployments/podtato-server",
    "source": "https://172.21.0.1:443",
    "type": "service",
    "content": {
      "artifactId": "cdevents.azurecr.io/podtatoserver@sha256:b8759e43dc156eb1d230f39c0dea7e1774a9c490ef0b0f60c35e0eee3de30b7d",
      "environment": {
        "id": "production"
      }
    }
  },
  "customData": { … },
  "customDataContentType": "application/json",
}
```

Questions?