



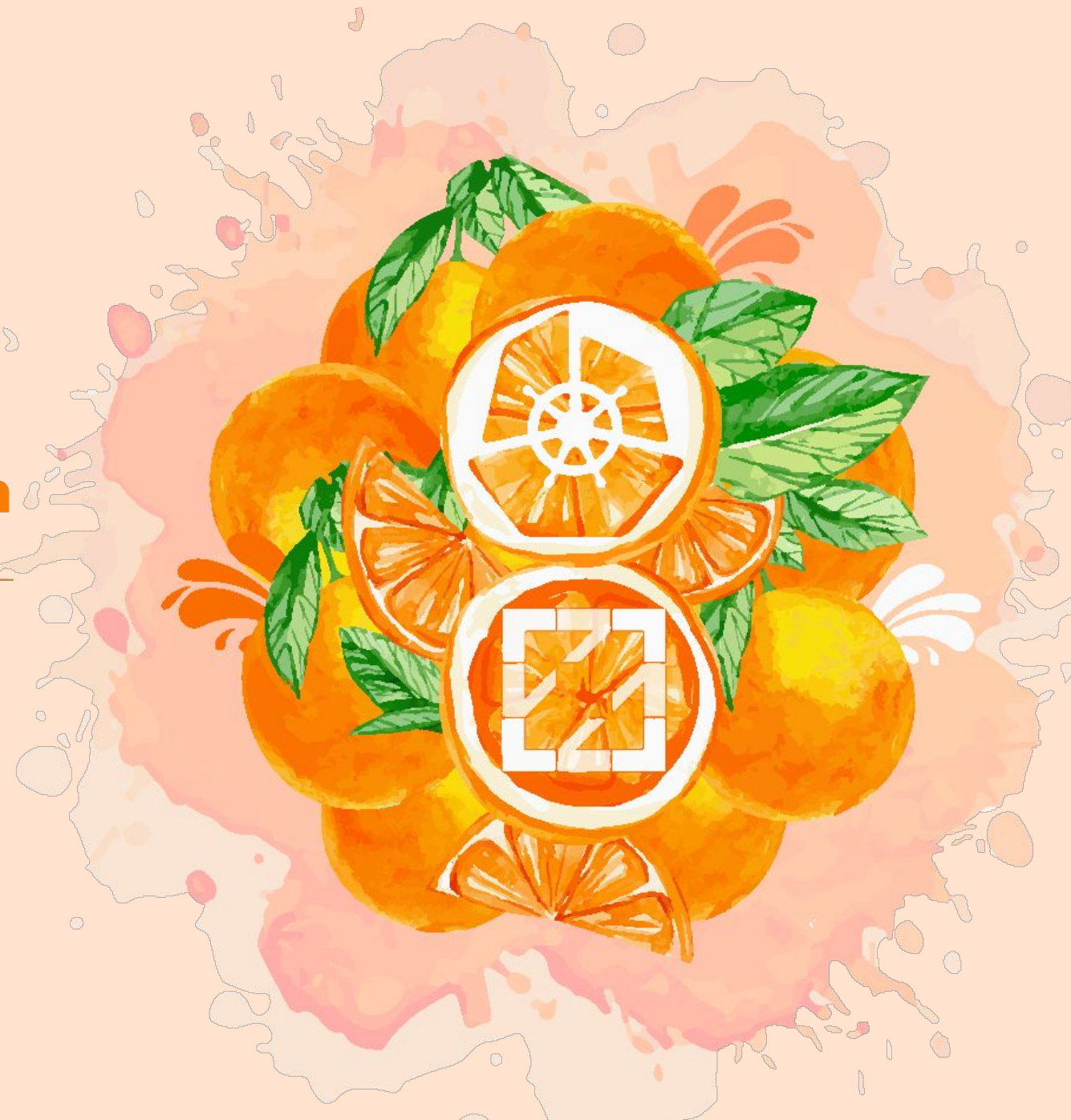
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WELCOME TO VALENCIA





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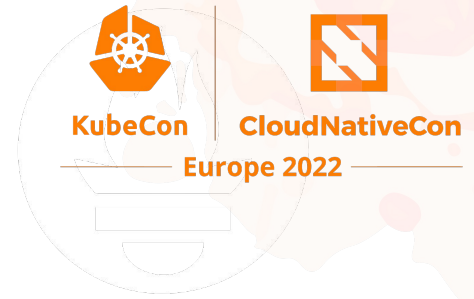
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The Ortelius Journey with GitOps and Event Driven CI/CD

Brad McCoy - CDF Ambassador



The Ortelius Journey with GitOps and Event Driven CI/CD



PromCon
North America 2021

Head of Platform Engineering

Open Source Contributor

- CDF Ortelius Project
- CNCF Keptn Project

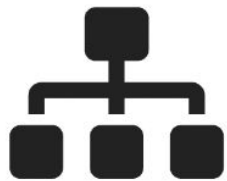


Brad McCoy
CDF Ambassador

The Ortelius Journey with GitOps and Event Driven CI/CD



What Ortelius Does



Microservice Dependency Mapping



Microservice Catalog



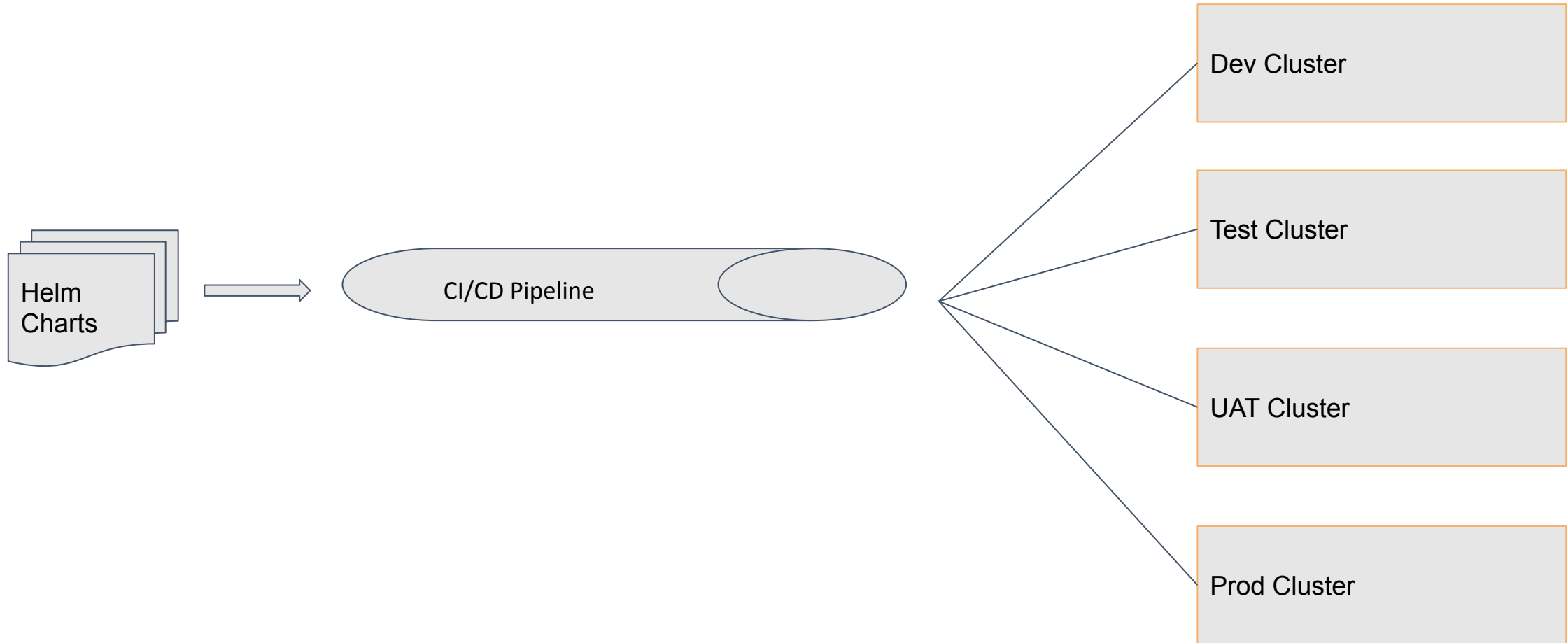
Microservice Supply Chain with Versioning

ortelius.io

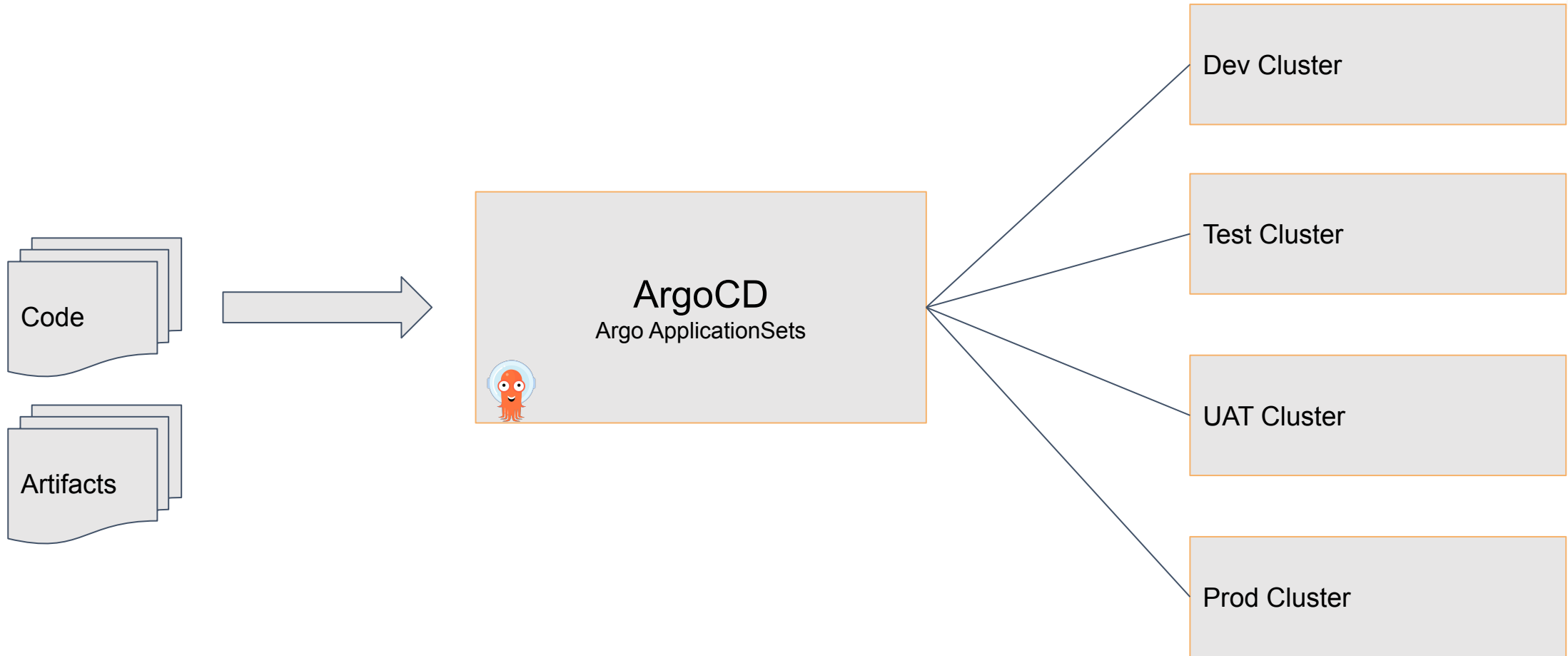
Our problem statement

Provide the capability to be able to deploy and track microservice sprawl across multiple environments

The Ortelius Journey with GitOps and Event Driven CI/CD



The Ortelius Journey with GitOps and Event Driven CI/CD



The Ortelius Journey with GitOps and Event Driven CI/CD



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✓ base

! kustomization.yaml

✓ overlays

> development

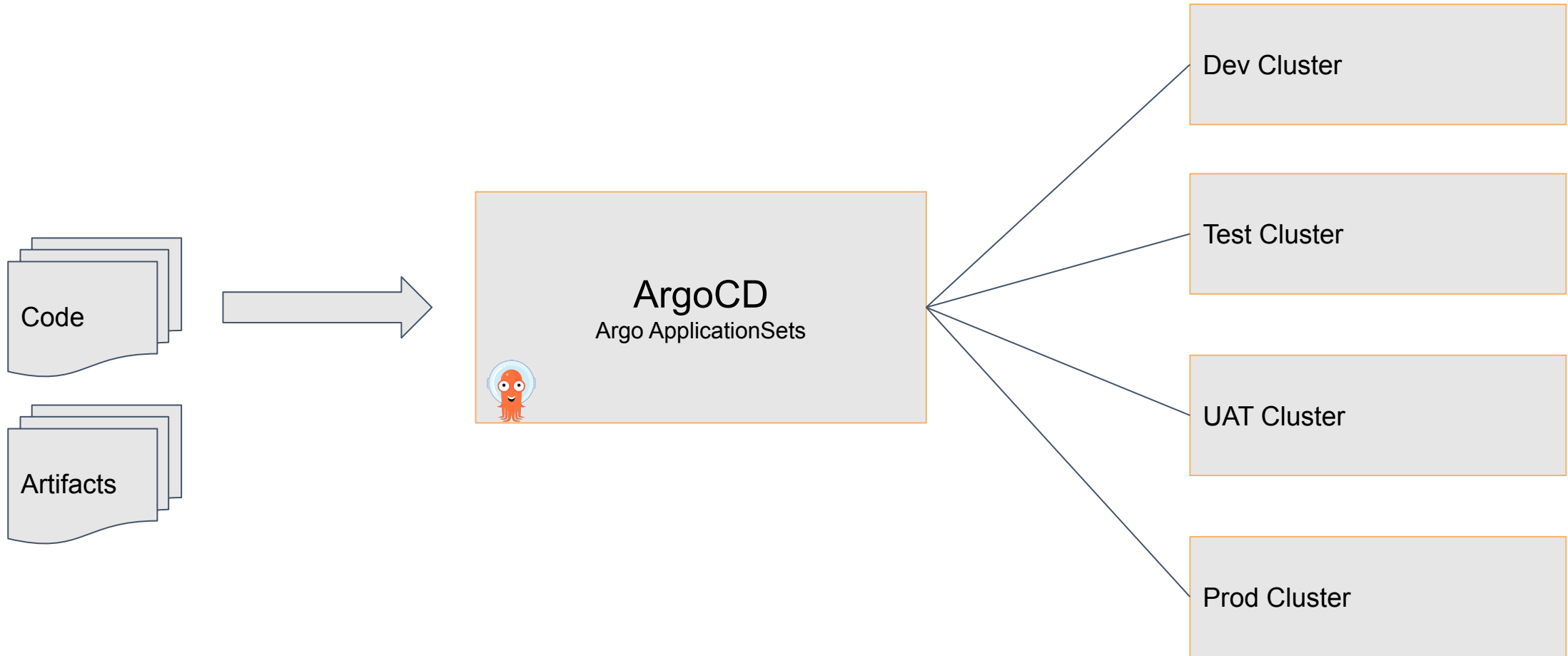
> production

> test

> uat

```
apiVersion: argoproj.io/v1alpha1
kind: ApplicationSet
metadata:
  name: demo-dev
  namespace: ci-cd
spec:
  generators:
    - matrix:
        generators:
          - git:
              repoURL: https://github.com/ortelius/ortelius-kubernetes.git
              revision: HEAD
              directories:
                - path: kube-infra/kustomize/demo/*
              exclude:
            - list:
                elements:
                  - cluster: production
                    url: https://aks-7e3b88d3.hcp.eastus.azmk8s.io:443
                    values:
                      CLIENT_ENVIRONMENT: production
  template:
    metadata:
      name: '{{ path.basename }}'
    spec:
      project: ortelius
      source:
        repoURL: https://github.com/ortelius/ortelius-kubernetes.git
        targetRevision: HEAD
        path: '{{path}}/overlays/{{cluster}}'
      destination:
        server: '{{url}}'
      syncPolicy:
        automated:
          prune: true
          selfHeal: true
        syncOptions:
          - CreateNamespace=true
```


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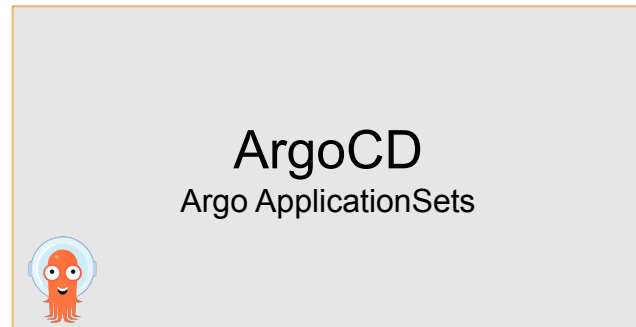
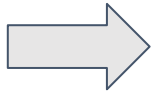
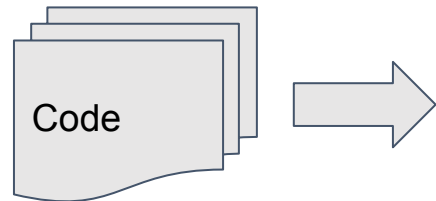
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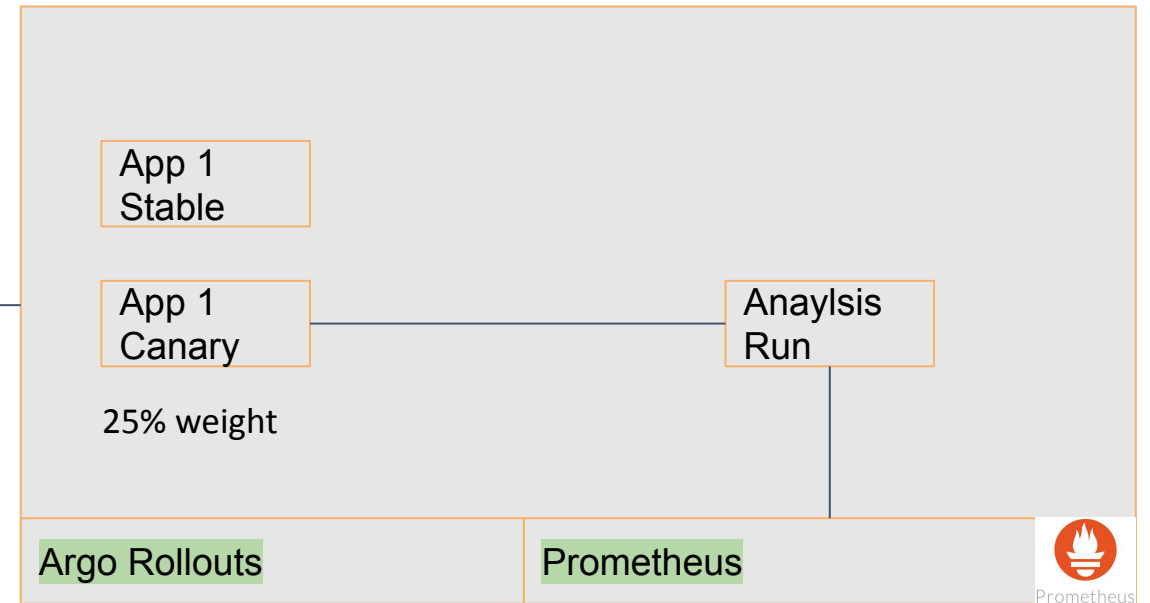
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Argo Rollouts



Cluster n



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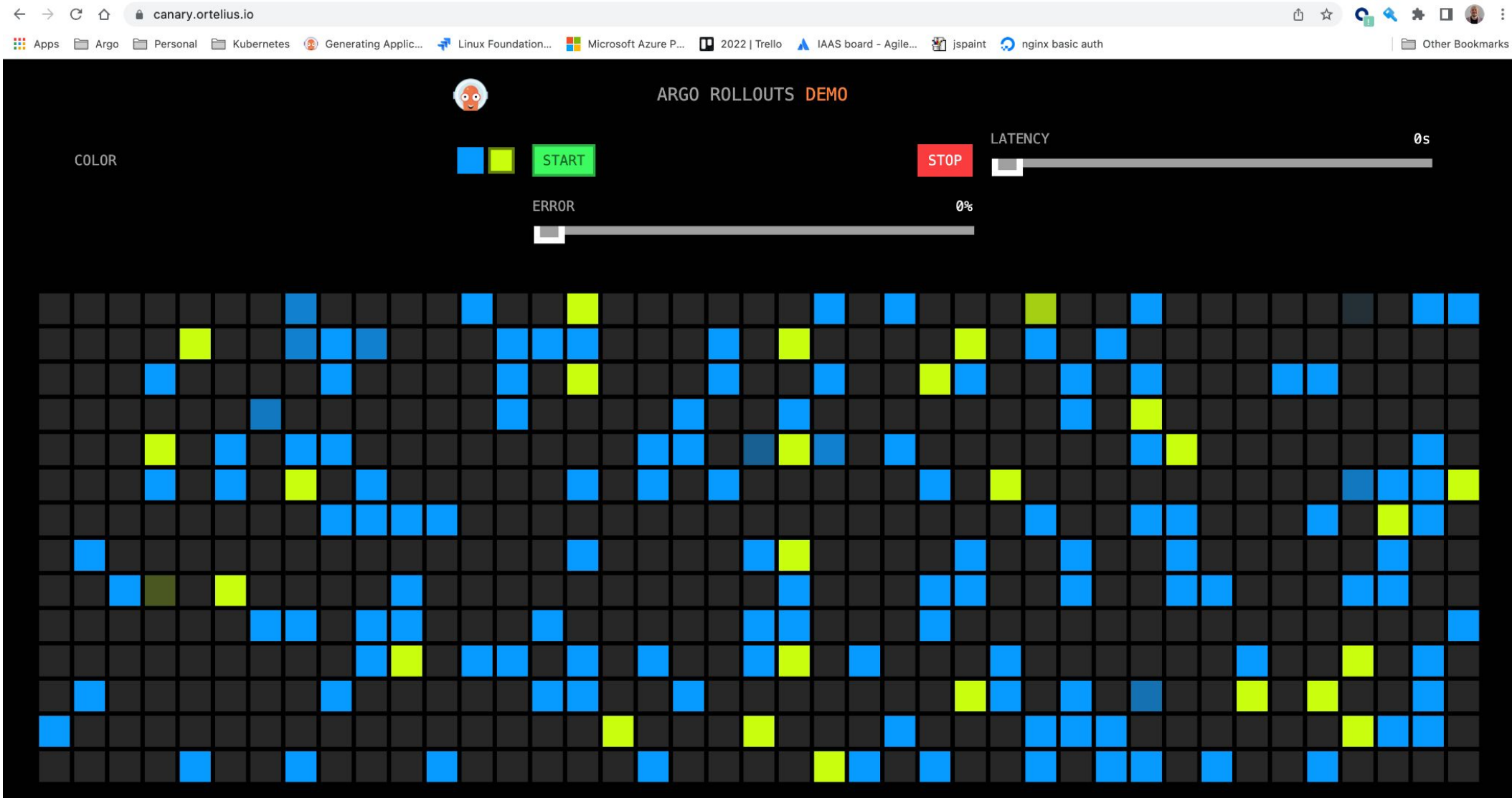


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github.com/argoproj/rollouts-demo

Apps | Argo | Personal | Kubernetes | Generating Applic... | Linux Foundation... | Microsoft Azure P... | 2022 | Trello | IAAS board - Agile... | jspaint | nginx basic auth | Other Bookmarks

Search or jump to... | Pull requests | Issues | Marketplace | Explore

argoproj / rollouts-demo Public

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<> Code | Issues 4 | Pull requests 5 | Actions | Projects | Wiki | Security | Insights

master 2 branches 1 tag

Go to file | Add file | Code

About

No description, website, or topics provided.

Readme

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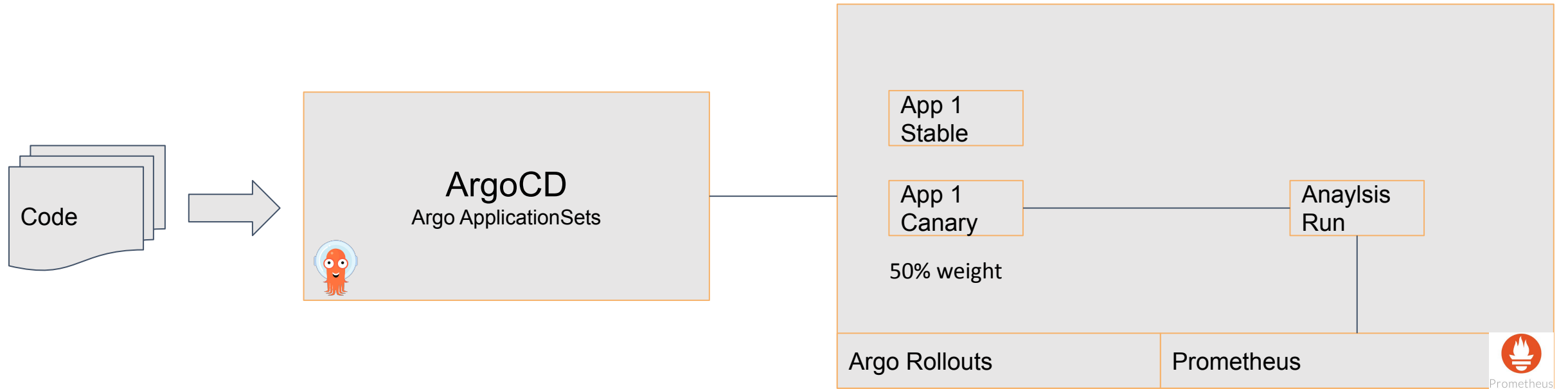
15 watching

91 forks

| | | | |
|-------------|---|------------------------|------------|
| huikang | fix: analysis args for istio-subset example (#21) | 6179837 on 18 Oct 2021 | 77 commits |
| examples | fix: analysis args for istio-subset example (#21) | 7 months ago | |
| load-tester | feat: Using --no-install-recommends (Optimization) (#7) | 2 years ago | |
| .eslintrc | Initial commit | 3 years ago | |
| gitignore | feat: Redesign demo app (#17) | 10 months ago | |

<https://github.com/argoproj/rollouts-demo>

The Ortelius Journey with GitOps and Event Driven CI/CD



The Ortelius Journey with GitOps and Event Driven CI/CD



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ArgoCD

Argo ApplicationSets
Argo Rollouts



```
apiVersion: argoproj.io/v1alpha1
kind: Rollout
metadata:
  name: keptn-ortelius-service-prod
  namespace: ortelius-prod
  annotations:
    notifications.argoproj.io/subscribe.on-rollout-completed.slack: argo-notifications
    notifications.argoproj.io/subscribe.on-rollout-updated.slack: argo-notifications
    notifications.argoproj.io/subscribe.on-rollout-aborted.slack: argo-notifications
spec:
  replicas: 5
  minReadySeconds: 30
  strategy:
    canary:
      analysis:
        templates:
          - templateName: success-rate
        args:
          - name: service-name
            value: demo-stable
      canaryService: demo-canary
      stableService: demo-stable
      trafficRouting:
        nginx:
          stableIngress: canary-stable
      steps:
        - setWeight: 25
```

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ArgoCD

Argo ApplicationSets
Argo Rollouts



```
apiVersion: argoproj.io/v1alpha1
kind: AnalysisTemplate
metadata:
  name: success-rate
  namespace: ortelius-prod
spec:
  args:
    - name: service-name
  metrics:
    - name: success-rate
      interval: 1m
      successCondition: result[0] >= 0.95
      failureLimit: 1
      provider:
        prometheus:
          address: http://kube-prometheus-stack-prometheus.observability:9090
          query: |
            sum(irate(nginx_ingress_controller_requests{ingress=~"canary-stable",status!~"[4-5].*"}[5m])) /
            sum(irate(nginx_ingress_controller_requests{ingress=~"canary-stable"}[5m]))
```

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← → ↺ ⌂ argocd.ortelius.io/applications/argo-rollouts-demo?view=tree&resource= 🔑 📄 ☆ 🔄 🔍 ⚙️ 🗑️ 👤 ⋮

Apps Argo Personal Kubernetes Generating Applic... Linux Foundation... Microsoft Azure P... 2022 | Trello IAAS board - Agile... jspaint nginx basic auth Other Bookmarks

Applications /

APPLICATION DETAILS TREE

APP DETAILS APP DIFF SYNC SYNC STATUS HISTORY AND ROLLBACK DELETE REFRESH

APP HEALTH **Suspended**

CURRENT SYNC STATUS **Synced** [MORE](#)
To **HEAD (ab725dc)**
Author: Brad McCoy <bradmccoydev@gmail.com> -
Comment: add more envs

LAST SYNC RESULT **Sync OK** [MORE](#)
Succeeded 12 days ago (Wed May 04 2022 11:34:14 GMT+0200)
Author: Brad McCoy <bradmccoydev@gmail.com> -
Comment: update demo app to yellow

FILTERS

NAME

KINDS

SYNC STATUS

☐ Synced

☐ OutOfSync

HEALTH STATUS

☐ Healthy

☐ Progressing

☐ Degraded

☐ Suspended

☐ Missing

☐ Unknown

100%

argo-rollouts-demo

ortelius-prod ns

demo-canary svc

demo-stable svc

success-rate analysisistemplate

keptn-ortelius-service-prod rollout

canary-stable ing

demo-canary-stable-canary ing

demo-canary ep

demo-canary-hgph7 endpointslice

demo-stable ep

demo-stable-t59ld endpointslice

keptn-ortelius-service-prod-5d6... pod

keptn-ortelius-service-prod-5d6... pod

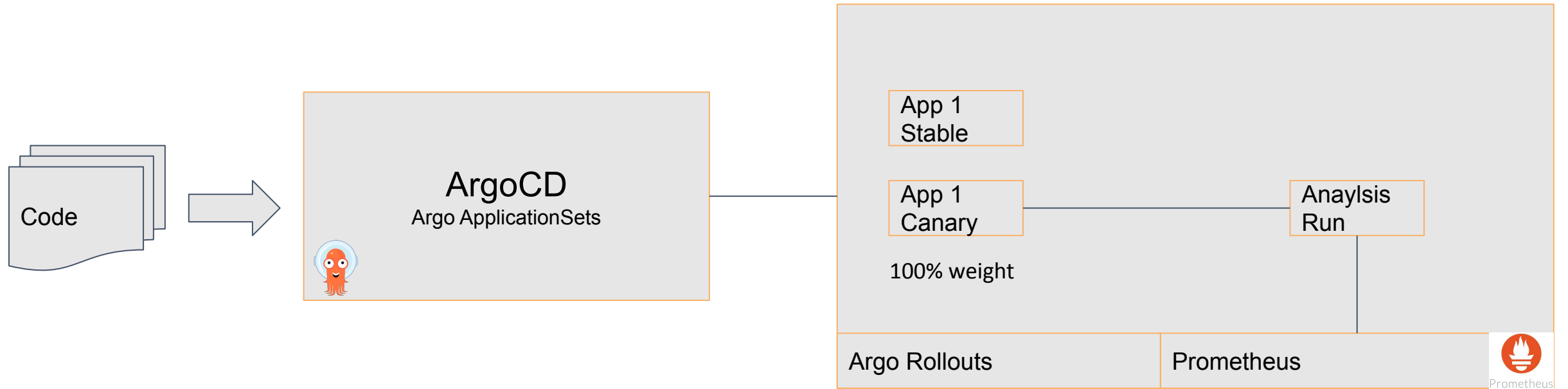
keptn-ortelius-service-prod-5d6... pod

keptn-ortelius-service-prod-5d6... pod

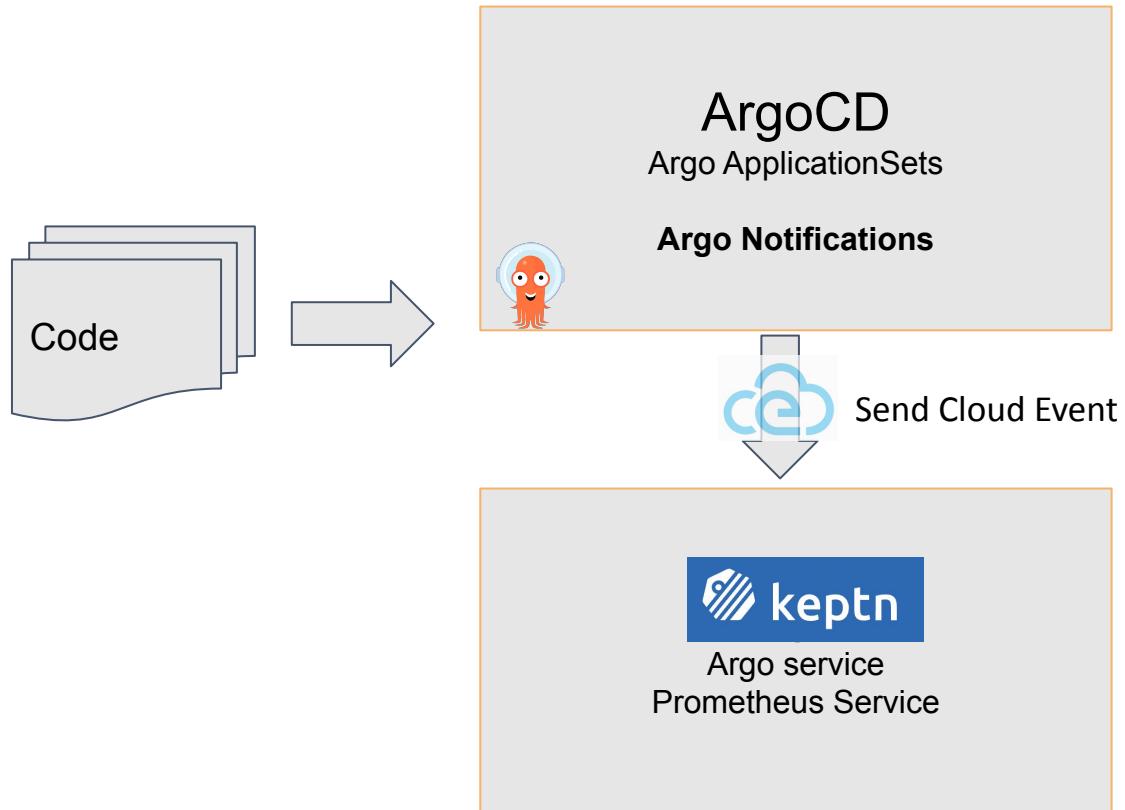
keptn-ortelius-service-prod-6cd... pod

keptn-ortelius-service-prod-6cd... pod

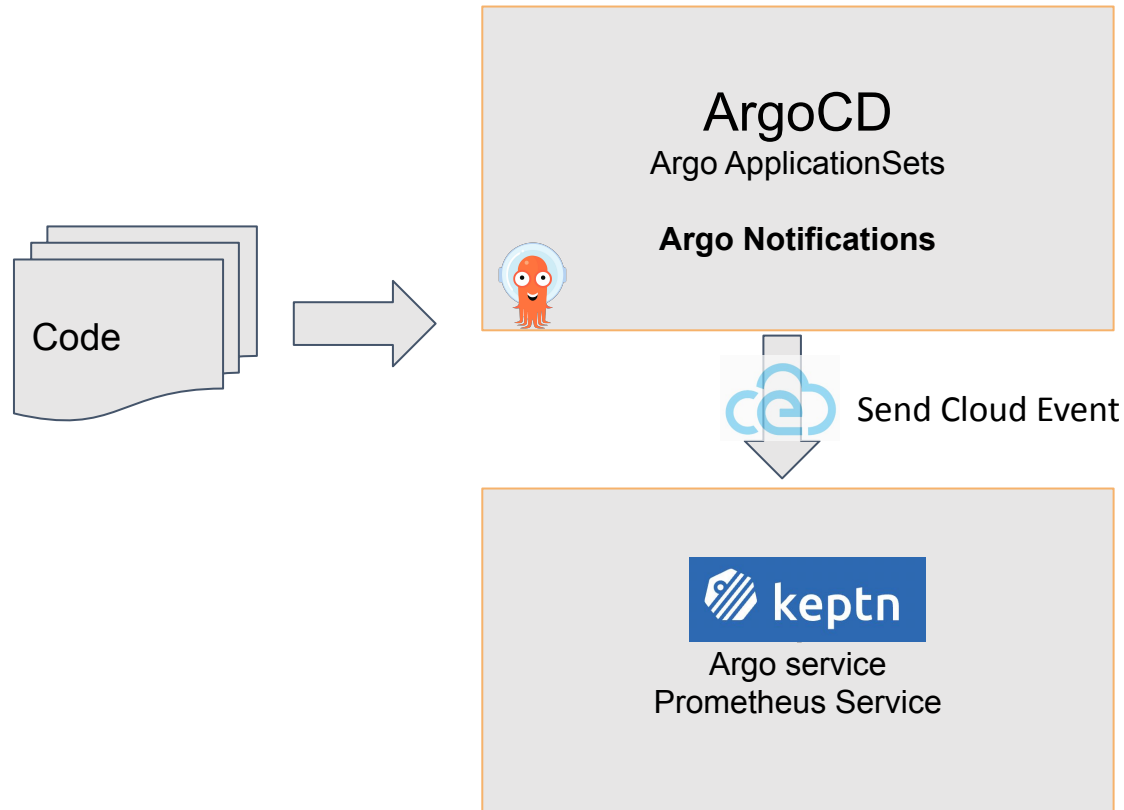
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The Ortelius Journey with GitOps and Event Driven CI/CD



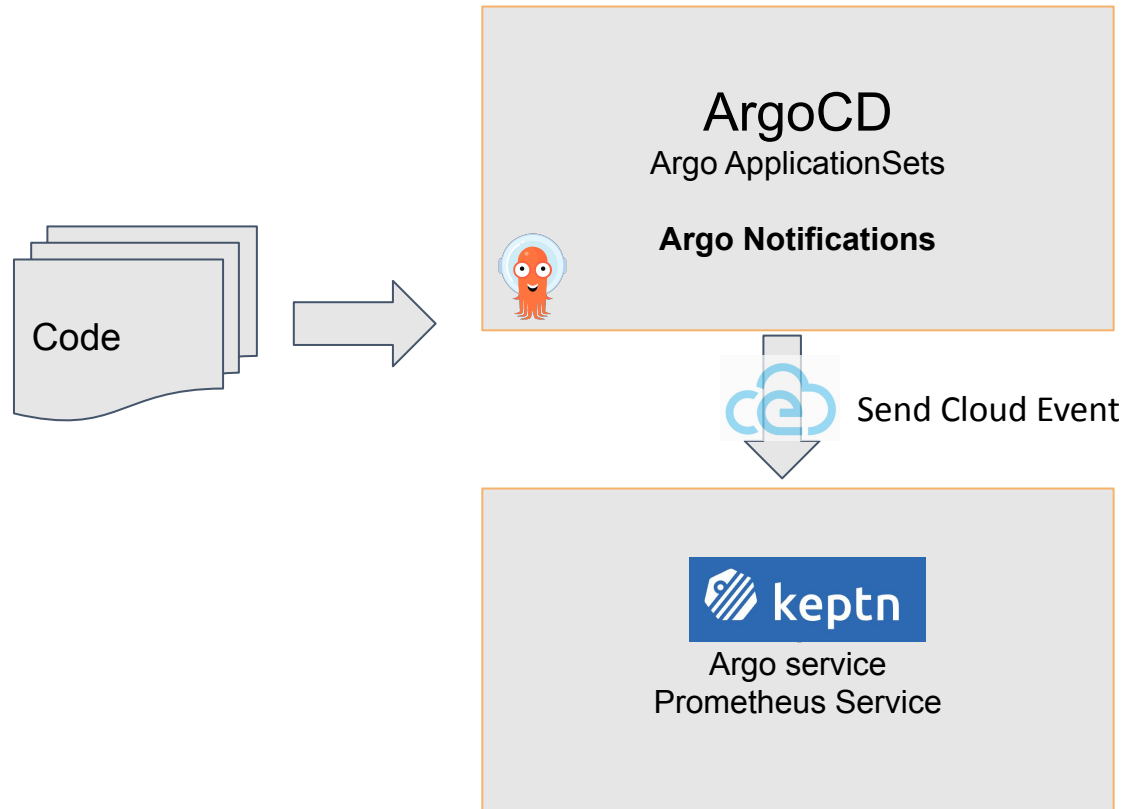
The Ortelius Journey with GitOps and Event Driven CI/CD



What is Keptn?

- Event Orchestrator
- SLO-driven multi-stage delivery
- Operations and remediation

The Ortelius Journey with GitOps and Event Driven CI/CD



Argo Notification Triggers

app-created
app-deleted
app-deployed
app-health-degraded
app-sync-failed
app-sync-running
app-sync-status-unknown
app-sync-succeeded
app-out-of-sync

The Ortelius Journey with GitOps and Event Driven CI/CD

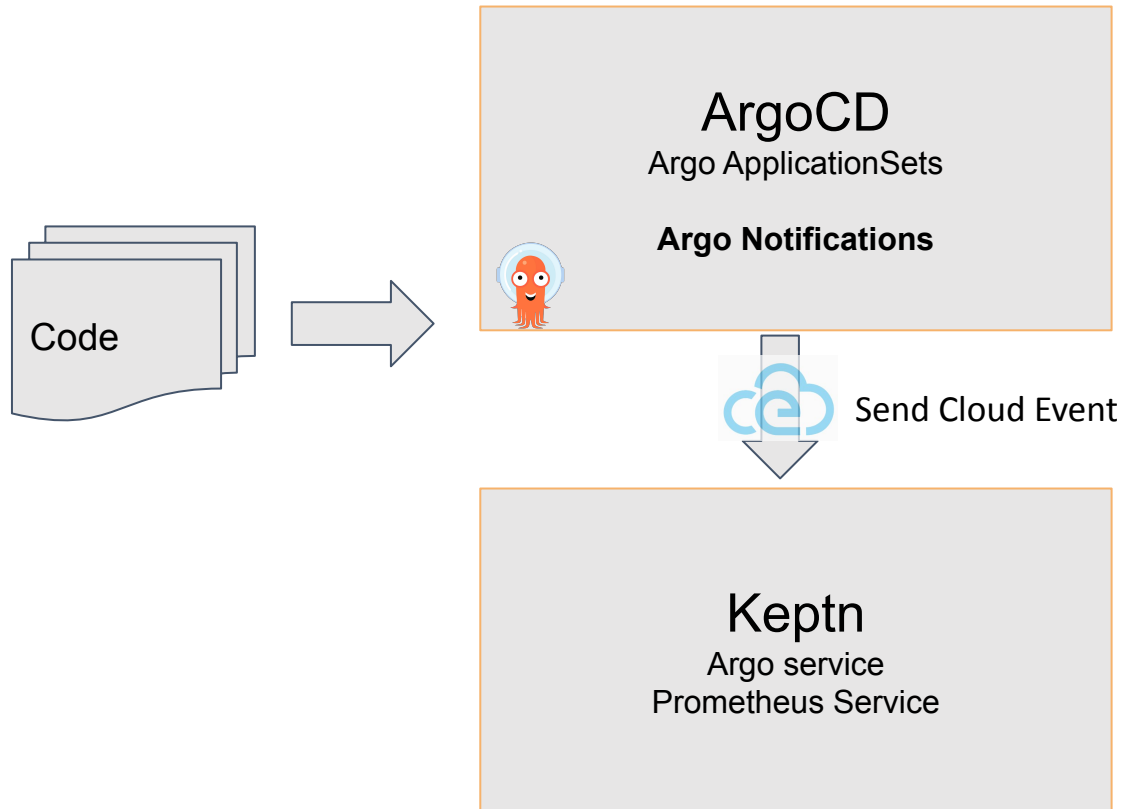


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```
service.webhook.keptn: |
  url: https://keptn.ortelius.io/api/v1/event
  headers:
    - name: x-token
      value: $keptn-x-token
    - name: Content-Type
      value: application/json
  template.keptn: |
    webhook:
      keptn:
        method: POST
        body: |
          {
            "data": {
              "project": "{{.app.spec.project}}",
              "service": "keptn-ortelius-service",
              "stage": "prod",
              "image": "argoproj/rollouts-demo",
              "tag": "yellow",
              "labels": {
                "deployWith": "ArgoRollout",
                "buildId": "{{.app.status.sync.revision}}",
                "owner": "{{(call .repo.GetCommitMetadata .app.status.sync.revision).Author}}",
                "link": "{{.context.argocdUrl}}/applications/{{.app.metadata.name}}",
                "repository": "{{.app.spec.source.repoURL}}"
              }
            },
            "configurationChange": {
              "values": {
                "image": "argoproj/rollouts-demo:yellow"
              }
            }
          }
    },
    You, 2 weeks ago • update argo notification cm ...
    "source": "test",
    "specversion": "1.0",
    "type": "sh.keptn.event.prod.canaryphase1.triggered"
  }
```

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← → ↻ 🏠 🔒 keptn.ortelius.io/bridge/project/ortelius/sequence/e96ff5ce-2520-447f-9b13-44d70ae4fdff

Apps Argo Personal Kubernetes Generating Applic... Linux Foundation... Microsoft Azure P... 2022 | Trello IAAS board - Agile... jspaint nginx basic auth Other Bookmarks

Keptn / ortelius ▾

Filter by

Service

- ☐ keptn-ortelius-service

Stage

- ☐ prod

Sequence

- ☐ canaryphase1

Status

- ☐ Active
- ☐ Failed
- ☐ Aborted
- ☐ Succeeded

Trigger a new sequence

canaryphase1 of keptn-ortelius-service waiting

Started today at 07:36 and running for 1 minute
Recent task:

canaryphase1 of keptn-ortelius-service started

prod

Started today at 07:36 and running for 1 minute
Recent task: test

canaryphase1 waiting

Pause Abort

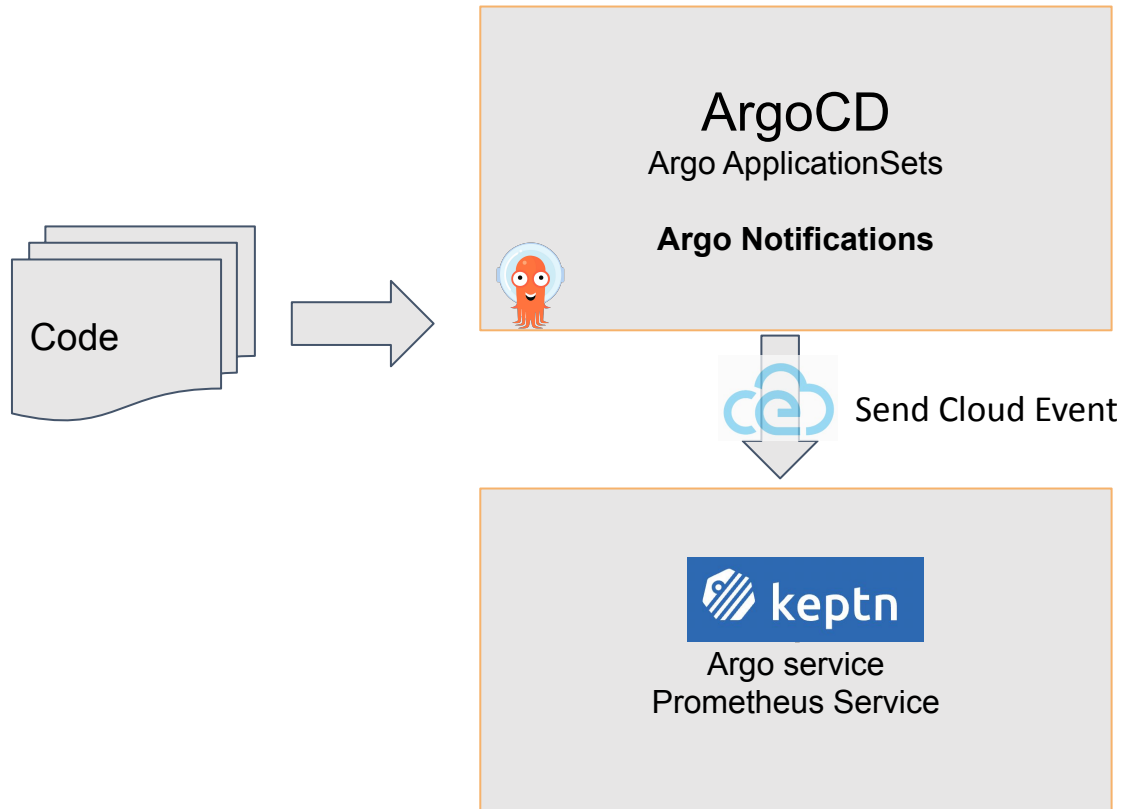
Last time fetched: today at 07:37:52

Event payload

```
{
  "data": {
    "configurationChange": {
      "values": {
        "image": "argoproj/rollouts-demo:green"
      }
    },
    "image": "argoproj/rollouts-demo",
    "labels": {
      "buildId": "1.0.0",
      "deployWith": "ArgoRollout",
      "owner": "Brad"
    },
    "project": "ortelius",
    "service": "keptn-ortelius-service",
    "stage": "prod",
    "tag": "green"
  },
  "id": "7c03dec1-3f75-4a00-992a-0572aa2de4e3",
  "shkeptncontext": "e96ff5ce-2520-447f-9b13-44d70ae4fdff",
  "shkeptnspecversion": "0.2.4",
  "source": "brads-hotel",
  "specversion": "1.0",
  "time": "2022-05-17T05:36:52.824Z",
  "type": "sh.keptn.event.prod.canaryphase1.triggered"
}
```

Copy Close

The Ortelius Journey with GitOps and Event Driven CI/CD



```
apiVersion: "spec.keptn.sh/0.2.2"
kind: "Shipyard"
metadata:
  name: "argocd-demo-shipyard"
spec:
  stages:
    - name: "dev"
      sequences:
        - name: "artifact-delivery"
          tasks:
            - name: "deliver"
              # (optional) your extra tasks here (eg. load tests, security scans, quality gates etc.)
              #- name: "load"
              #- name: "foo-task-here"
              #- name: "evaluation"
```

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Project configuration

Project

Services





Uniform

Integrations

Secrets

Support

Common use cases

| Name  | Version | Cluster / Host  | Namespace  | Location  | Active subscriptions |
|--|---------|--|---|--|---|
| approval-service | 0.14.1 | aks-gitopsuseapr-38535628-vmss000004 | keptn | control-plane | sh.keptn.event.approval.* |
| lighthouse-service | 0.14.1 | aks-agentpool-15790906-vmss000000 | keptn | control-plane | sh.keptn.event.evaluation.triggered sh.keptn.event.get-sli.finished sh.keptn.event.monitoring.configure |
| jmeter-service | 0.14.1 | aks-agentpool-15790906-vmss000000 | keptn | control-plane | sh.keptn.event.test.triggered |
| argo-service | 0.14.3 | aks-gitopsuseapr-38535628-vmss000004 | keptn | control-plane | sh.keptn.event.release.triggered sh.keptn.event.rollback.triggered sh.keptn.event.test.triggered |
| remediation-service | 0.14.1 | aks-gitopsuseapr-38535628-vmss000004 | keptn | control-plane | sh.keptn.event.get-action.triggered |
| webhook-service | 0.14.1 | aks-gitopsuseapr-38535628-vmss000002 | keptn | control-plane | n/a |
| keptn-ortelius-service | 0.13.7 | aks-gitopsuseapr-38535628-vmss000001 | keptn | control-plane | sh.keptn.event.catalog.triggered |

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[Pull requests](#) [Issues](#) [Marketplace](#) [Explore](#)

[keptn-sandbox / keptn-argocd-integration](#) Public

Edit Pins Watch 2 Fork 2 Star 8

[Code](#) [Issues 6](#) [Pull requests](#) [Actions](#) [Projects](#) [Wiki](#) [Security](#) [Insights](#)

main 2 branches 0 tags

[Go to file](#) [Add file](#) [Code](#)

bradmccoydev Merge pull request #10 from keptn-sandbox/fixes_demo ce73e4c 7 days ago 14 commits

| | | |
|----------------|---------------------------|-------------|
| argo-config | removed file | 10 days ago |
| keptn-config | fixed token name | 7 days ago |
| samples | doc: added initial readme | 12 days ago |
| CODEOWNERS | doc: added initial readme | 12 days ago |
| LICENSE | Initial commit | 12 days ago |
| README.md | Add workflow items | 11 days ago |
| bigpicture.png | fix: modified big picture | 12 days ago |

README.md

ArgoCD Integration for Keptn

About

No description, website, or topics provided.

- Readme
- Apache-2.0 license
- Code of conduct
- 8 stars
- 2 watching
- 2 forks

Releases

No releases published
[Create a new release](#)

Packages

No packages published

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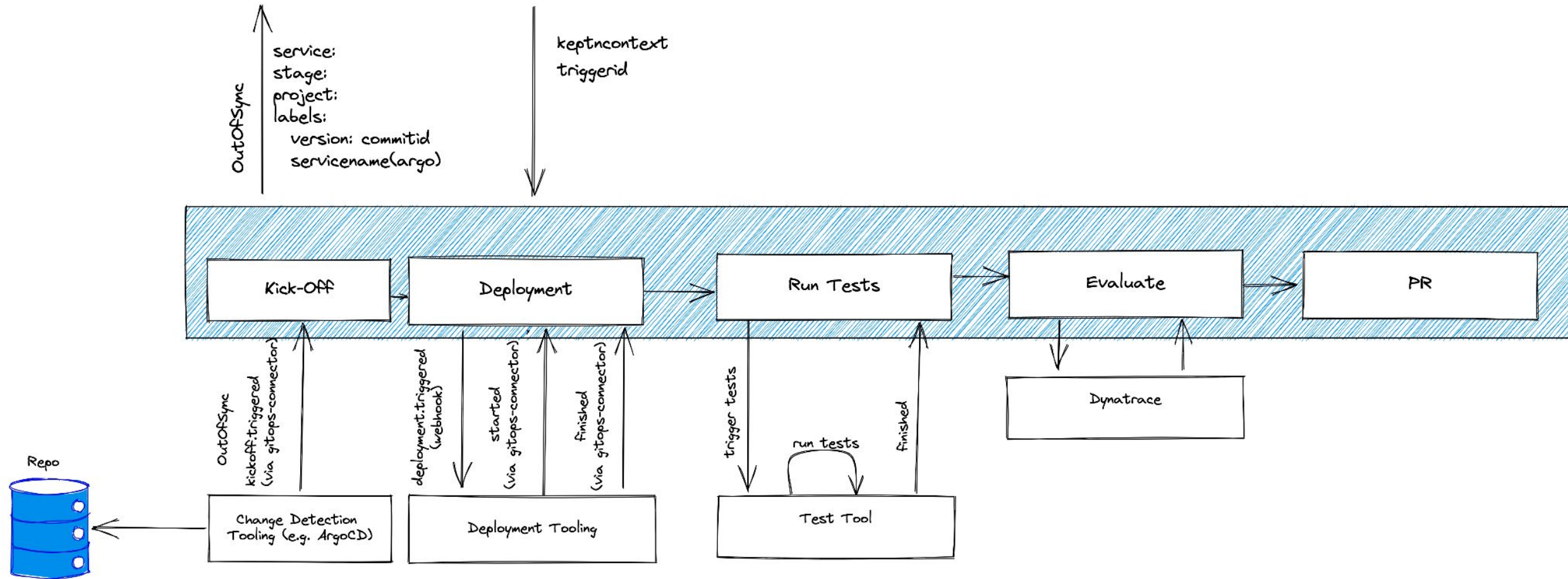


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Thankyou!

<https://ortelius.io/contributor>

<https://keptn.sh/community/contributing>