

# CI/CD

## Etat des lieux

2022.02  
v1.0

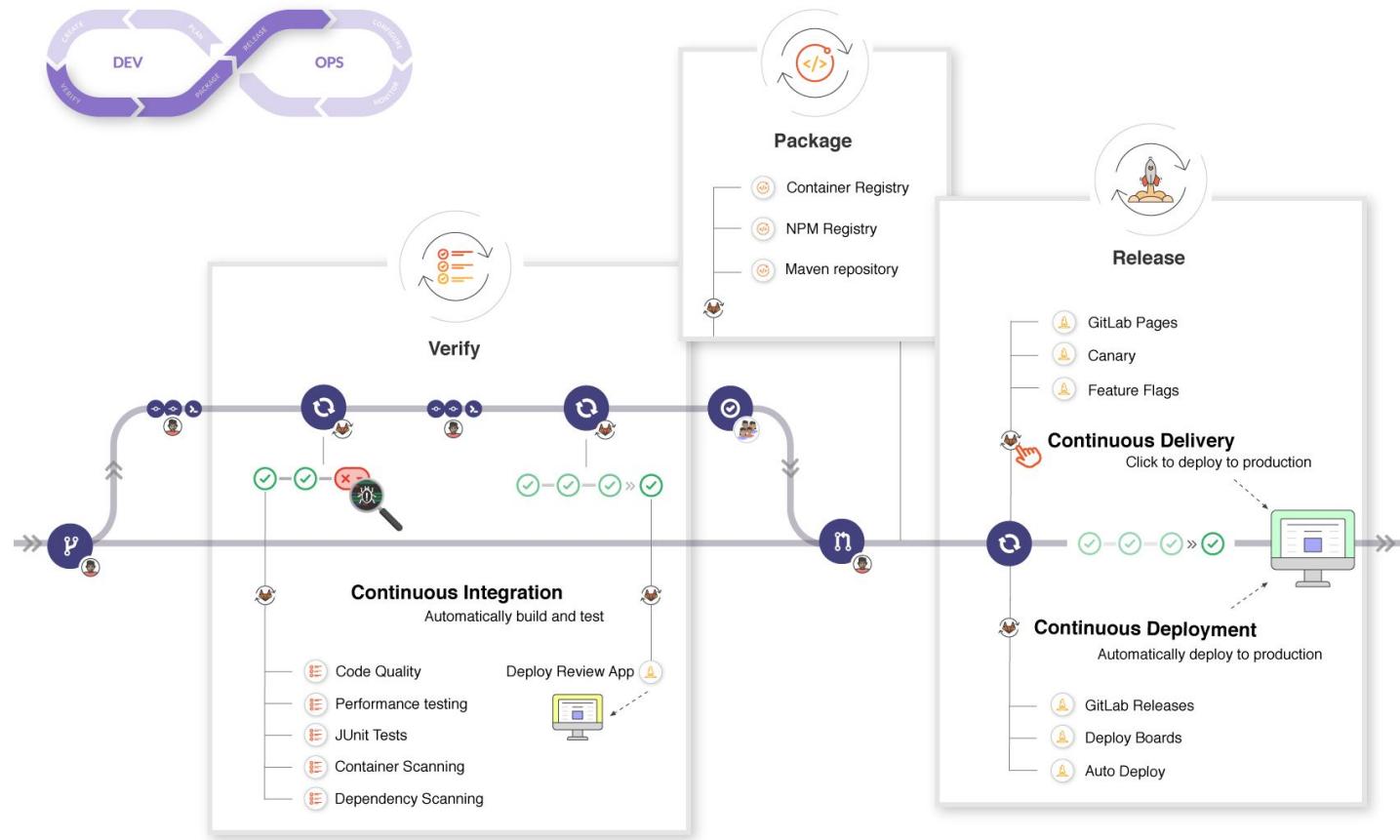


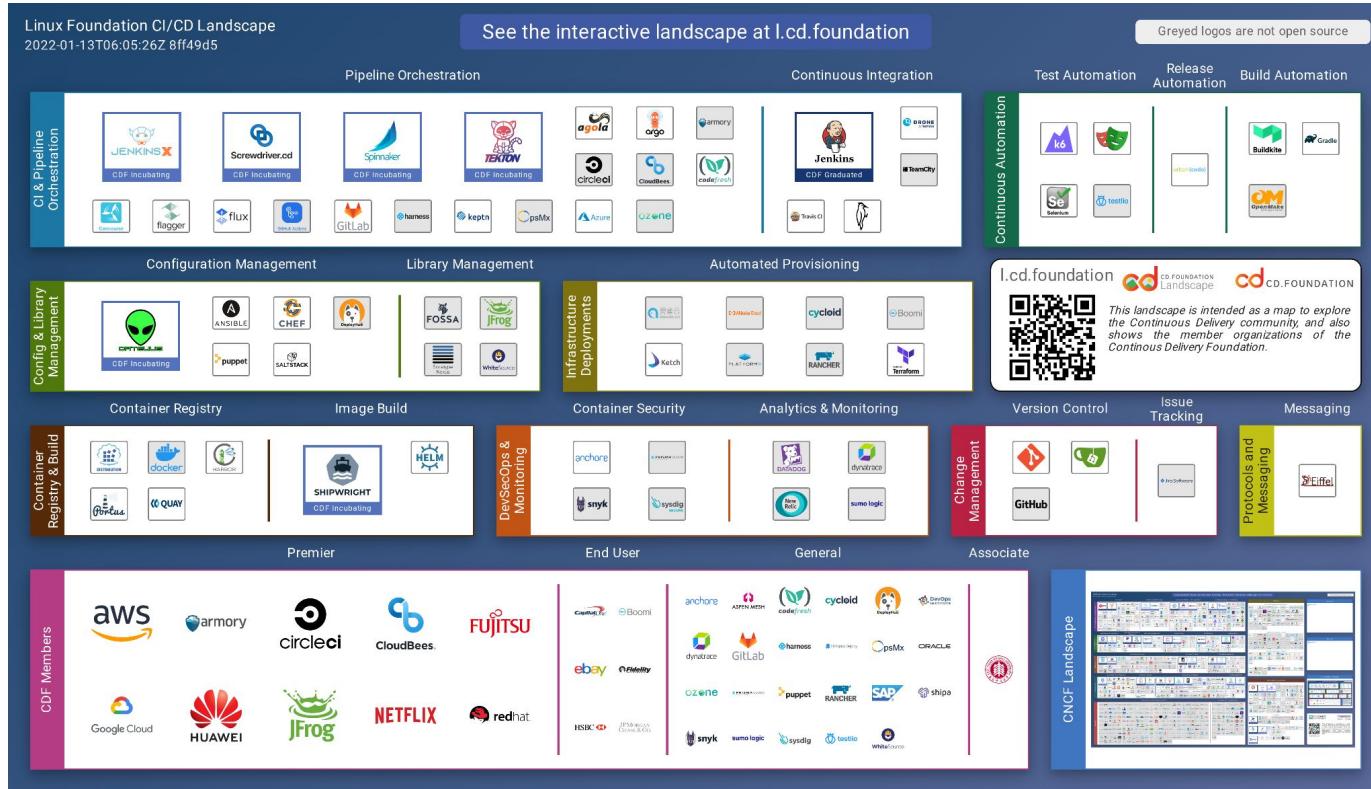
# Présentation générale

# Définitions

- CI : Continuous Integration :
  - Intégration continue, processus d'automatisation de tâches de compilations, de tests (Unitaires, fonctionnels, d'intégration).
- CD : Continuous Delivery
  - Distribution continue, cette étape suit la CI, et permet la mise à disposition d'un artifact (Binaire, Image de conteneur) pour un futur déploiement.
- CD : Continuous Deployment
  - Déploiement continu, étape ultime, il s'agit de déployer l'artefact créé lors de l'étape précédente. Ce déploiement peut être fait sur un environnement de test et aller jusqu'en production.







# Ecosystème



# Propriétaire

- Github Actions
- Google Cloud Build
- AWS CodeBuild, AWS CodeDeploy, AWS CodePipeline
- Azure Pipeline (Azure Devops)

# Open Source

- GitlabCI
- Tekton
- Jenkins-X

# Push





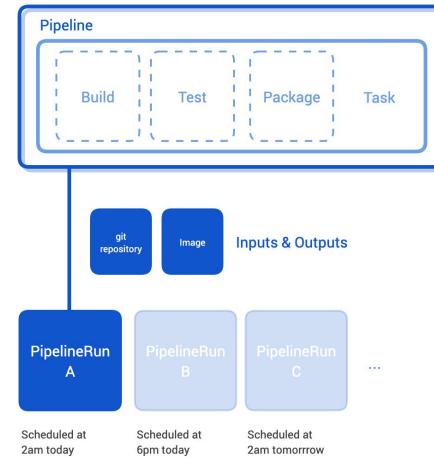
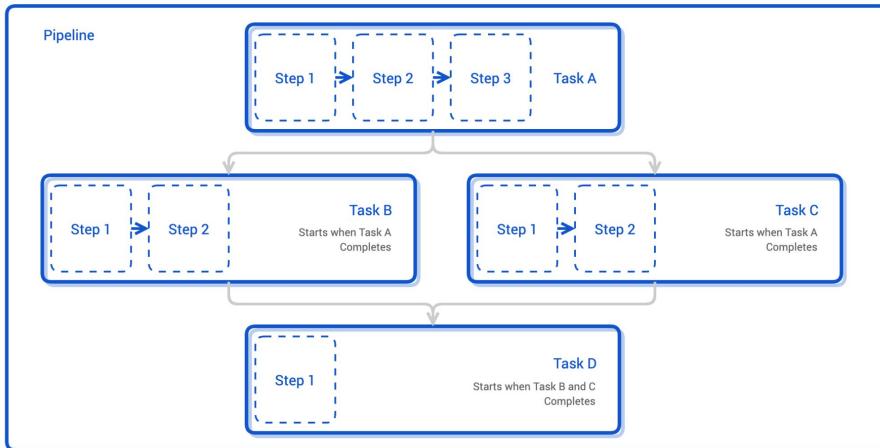
# Tekton

- Provient de Google (Knative Build). Maintenant géré par la [CD Foundation](#)
- Composants:
  - Pipelines : blocs de construction de base (tâches et pipelines) d'un flux de travail CI/CD
  - Triggers
  - CLI : tkn
  - Dashboard
- Fourni des CRD Kubernetes

# Configuration



- Task:
  - plus petite entité manipulable (aka une fonction)
  - Composée de Step
  - accepte des arguments, et produit des résultats
- Pipeline:
  - Regroupement de Tasks
  - Organisation des tasks
- PipelineResource:
  - objet qui est utilisé comme entrée ou sortie d'une tâche dans un pipeline
- TaskRun:
  - Instance de Task en cours d'exécution
- PipelineRun:
  - Instance de Pipeline en cours d'exécution
  - Crée des objets TaskRun pour les différentes Tasks le composant



# Hub



**Welcome to Tekton Hub**

Discover, search and share reusable Tasks and Pipelines

Sort By

Kind

- Task
- Pipeline

Platform

- Linux/amd64
- Linux/ppc64le
- Linux/s390x
- Linux/arm64

Catalog

- Tekton

Category

- Automation
- Build Tools
- Cli
- Cloud
- Code Quality
- Continuous Integration
- Deployment
- Developer Tools
- Git
- Image Build
- Integration & Delivery
- Kubernetes
- Messaging
- Monitoring
- Networking
- Openshift
- Publishing
- Security
- Storage
- Testing

<b>git cli</b> v0.3	<b>golang build</b> v0.3	<b>jenkins operation</b> v0.1	<b>jib maven</b> v0.4
This task can be used to perform Git operations. Git command that needs to be run can be passed as a script to the task. This task needs authentication to git in order to push!	This Task is Golang task to build Go projects.	The following task can be used to interact with the Jenkins REST API.	This Task builds Java/Kotlin/Groovy/Scala source into a container image using Google's Jib tool. Jib works with Maven and Gradle projects, and this tem...
Updated 3 months ago <a href="#">View</a>	Updated a month ago <a href="#">Build tool</a>	Updated 2 months ago <a href="#">Build</a> <a href="#">Jenkins</a>	Updated 2 months ago <a href="#">Image build</a>
<b>YQ replace</b> v0.3	<b>buildah</b> v0.3	<b>Buildpacks</b> v0.3	<b>Buildpacks (phases)</b> v0.2
This task can be used to replace fields in YAML files. For example for altering helm charts on GitOps repos.	Buildah task builds source into a container image and then pushes it to a container registry. Buildah Task builds source into a container image using Project Atomic's Buildah bu...	The Buildpacks task builds source into a container image and pushes it to a registry, using Cloud Native Buildpacks. This task separately calls the aspects of the Cloud...	The Buildpacks-Phases task builds source into a container image and pushes it to a registry, using Cloud Native Buildpacks. This task separately calls the aspects of the Cloud...
Updated a day ago <a href="#">View</a>	Updated 2 months ago <a href="#">Image build</a>	Updated 2 months ago <a href="#">Image build</a>	Updated 2 months ago <a href="#">Image build</a>
<b>Amazon ECR Login</b> v0.1	<b>curl</b> v0.1	<b>kn</b> v0.1	<b>aws cli</b> v0.2



# Dashboard



Tekton Dashboard

Tekton resources

Pipelines

PipelineRuns

PipelineResources

Tasks

ClusterTasks

TaskRuns

Conditions

EventListeners

Triggers

TriggerBindings

ClusterTriggerBindings

TriggerTemplates

ClusterInterceptors

Extensions

k8s cronjobs

PipelineRuns

Input a label filter of the format labelKey=labelValue

Status: All

Status	Name	Pipeline	Namespace	Created	Duration
○	pull-catalog-catin-run-m6gg	catin-linter	tekton-ci	46 seconds ago	46 seconds
○	pull-catalog-diff-task-run-rmh77	diff-task-job	tekton-ci	45 seconds ago	45 seconds
●	pull-catalog-catin-run-5sp7f	catin-linter	tekton-ci	23 minutes ago	18 seconds
●	pull-catalog-diff-task-run-8thcq	diff-task-job	tekton-ci	23 minutes ago	46 seconds
●	pull-catalog-catin-run-v4bd	catin-linter	tekton-ci	32 minutes ago	1 minute 19 seconds
●	pull-catalog-diff-task-run-hsl9x	diff-task-job	tekton-ci	32 minutes ago	48 seconds

Tekton Dashboard

Tekton resources

Pipelines

PipelineRuns

PipelineResources

Tasks

ClusterTasks

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TriggerBindings

ClusterTriggerBindings

TriggerTemplates

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Extensions

k8s cronjobs

pull-catalog-diff-task-run-rmh77 Last updated 22 seconds ago

Completed Tasks Completed: 2 (Failed: 0, Cancelled: 0, Skipped: 1)

clone Completed Duration: 1 second

clone-repo

clone

get-task-diff

post-comment

Logs Status Details

```
[{"level": "info", "time": "2023-07-10T10:24:00Z", "source": "git", "target": "workspace/output/", "msg": "Successfully cloned https://github.com/tektoncd/catalog # v7.0.0-rc.0 in path /workspace/output/ [level]: [info]: "2023-07-10T10:24:00Z", "caller": "git/git.go:169", "msg": "Successfully cloned https://github.com/tektoncd/catalog # v7.0.0-rc.0 in path /workspace/output/"}, {"level": "info", "time": "2023-07-10T10:24:00Z", "source": "git", "target": "workspace/output/", "msg": "Successfully initialized and updated submodules in path /workspace/output/ [level]: [info]: "2023-07-10T10:24:00Z", "caller": "git/git.go:207", "msg": "Successfully initialized and updated submodules in path /workspace/output/"}, {"level": "info", "time": "2023-07-10T10:24:00Z", "source": "git", "target": "workspace/output/", "msg": "git re-pause HEAD [level]: [info]: "2023-07-10T10:24:00Z", "caller": "git/git.go:526", "msg": "git re-pause HEAD"}, {"level": "info", "time": "2023-07-10T10:24:00Z", "source": "git", "target": "workspace/output/", "msg": "EXIT_CODE=0 [level]: [info]: "2023-07-10T10:24:00Z", "caller": "git/git.go:526", "msg": "EXIT_CODE=0"}, {"level": "info", "time": "2023-07-10T10:24:00Z", "source": "git", "target": "workspace/output/", "msg": "print \"\nhttps://github.com/tektoncd/catalog\n\"", "caller": "git/git.go:526"}, {"level": "info", "time": "2023-07-10T10:24:00Z", "source": "git", "target": "workspace/output/", "msg": "print \"\nhttps://github.com/tektoncd/catalog\n\"", "caller": "git/git.go:526"}]
```

Step completed successfully

## Useful Commands

The following commands help you understand and effectively use the Tekton CLI:

- `tkn help`: Displays a list of the commands with helpful information.
- `tkn bundle`: Manage Tekton [bundles](#)
- `tkn clustertask`: Parent command of the ClusterTask command group.
- `tkn clustertriggerbinding`: Parent command of the ClusterTriggerBinding command group.
- `tkn completion`: Outputs a BASH, ZSH, Fish or PowerShell completion script for `tkn` to allow command completion with Tab.
- `tkn condition`: Parent command of the Condition command group.
- `tkn eventlistener`: Parent command of the Eventlistener command group.
- `tkn hub`: Search and install Tekton Resources from [Hub](#)
- `tkn pipeline`: Parent command of the Pipeline command group.
- `tkn pipelinerun`: Parent command of the Pipelinerun command group.
- `tkn resource`: Parent command of the Resource command group.
- `tkn task`: Parent command of the Task command group.
- `tkn taskrun`: Parent command of the Taskrun command group.
- `tkn triggerbinding`: Parent command of the Triggerbinding command group.
- `tkn triggertemplate`: Parent command of the Triggertemplate command group.
- `tkn version`: Outputs the cli version.

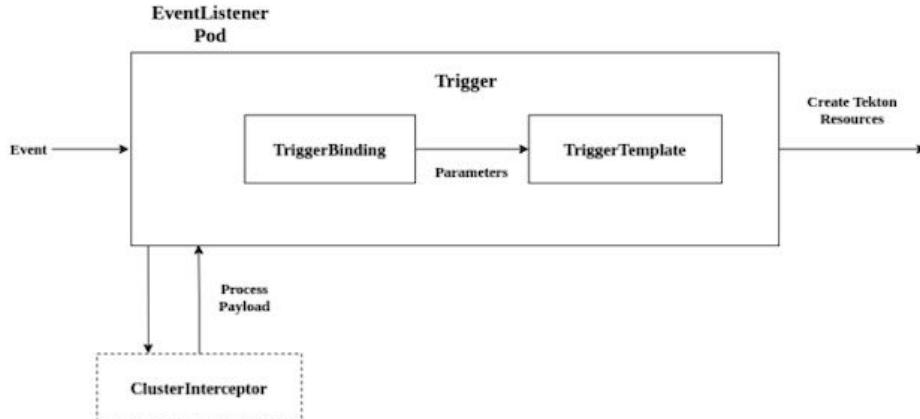
For every `tkn` command, you can use `-h` or `--help` flags to display specific help for that command.



# Triggers



- Exécuter des TaskRuns et PipelineRuns en fonction d'évènements.
- Transmettre les informations extraites aux TaskRuns et PipelineRuns à partir d'événements



# Chains



- Signature des images OCI avec Cosign (du projet Sigstore)
- Futur:  
<https://security.googleblog.com/2021/06/verifiable-supply-chain-metadata-for.html>

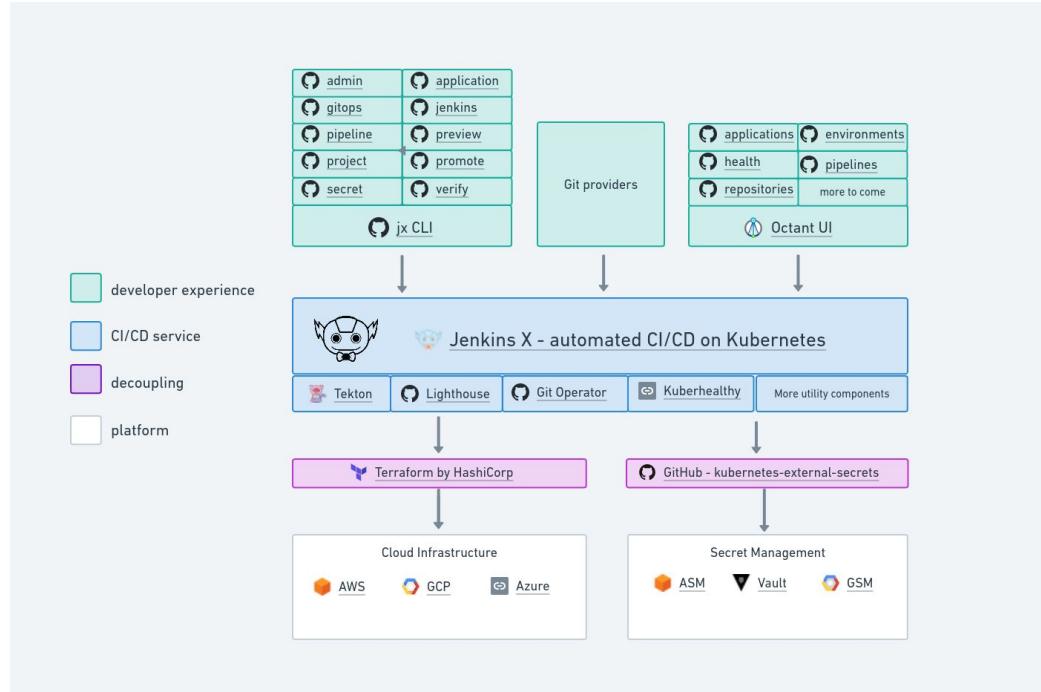


# Jenkins-X

- Refonte de Jenkins :
  - API First
  - CI/CD pour les applications Cloud Native
  - Pipelines basé sur Tekton
  - ChatOps
  - MLOps (???)
- Composants:
  - CLI : jx
  - Dashboard
  - Catalog (Ex: [jx3-pipeline-catalog](#))



# Architecture





# Dashboard

https://pipelines.jx.example.com

JENKINS X Pipelines

**Top Statuses**

508	Succeeded
234	Failed
5	Running

**Top Repositories**

391	repo-1
103	repo-2
66	repo-3
187	Other

**Top Authors**

138	someone
102	someone-else
85	another-one
422	Other

**Top Durations**

326	> 5 min
228	15-30 min
141	5-15 min
52	> 30 min

Show 25 entries

Repository	Branch	Build	Context	Status	Start	End	Duration
dailymotion/repo-1	PR-2077	22	helm-chart-validation	Succeeded	08:31:12	08:32:55	1m43s
dailymotion/repo-1	PR-2077	21	build-sanitize-threads	Running	08:31:10		
dailymotion/repo-1	PR-2077	20	build-sanitize-memory	Running	08:31:08		
dailymotion/repo-1	PR-2077	19	build-sanitize-basic	Running	08:31:07		
dailymotion/repo-1	PR-2077	18	build-debug	Running	08:31:02		
dailymotion/repo-1	PR-2077	17	build-release	Running	08:31:01		
dailymotion/some-repo	PR-197	235	preview-env	Failed	07:03:31	07:09:07	5m36s
dailymotion/some-repo	PR-197	234	lint	Failed	07:03:30	07:07:35	4m5s

https://pipelines.jx.example.com/dailymotion/repo/PR-197/233

Pipelines > dailymotion > repo > PR-197 helm-chart-validation #233

**Pipeline**

Name	dailymotion-repo-pr-197-233
Context	helm-chart-validation
Build	233
YAML	<a href="#">View raw YAML</a>

**Status**

Status	Succeeded
PR	197
Commit	553dc4bb8b
Duration	3m3s

**Source**

Repo	dailymotion/repo
------	------------------

**Stages**

Show Timeline
---------------

1 + Showing logs for build dailymotion-repo-90764-233 stage chart-validation and container credential-initializer  
4 + Showing logs for build dailymotion-repo-90764-233 stage chart-validation and container working-dir-initializer  
6 + Showing logs for build dailymotion-repo-90764-233 stage chart-validation and container place-tools  
8 + ✓ 5s Showing logs for build dailymotion-repo-90764-233 stage chart-validation and container step-git-source-dailymotion-repo-90764-6szp6  
13 + ✓ 0s Showing logs for build dailymotion-repo-90764-233 stage chart-validation and container step-setup-builder-home  
15 + ✓ 2s Showing logs for build dailymotion-repo-90764-233 stage chart-validation and container step-init  
72 + ✓ 2s Showing logs for build dailymotion-repo-90764-233 stage chart-validation and container step-merge  
74 + ✓ 2s Showing logs for build dailymotion-repo-90764-233 stage chart-validation and container step-update-dependencies  
79 + ✓ 1s Showing logs for build dailymotion-repo-90764-233 stage chart-validation and container step-unit-tests  
92 + ✓ 0s Showing logs for build dailymotion-repo-90764-233 stage chart-validation and container step-lint  
97 + ✓ 0s Showing logs for build dailymotion-repo-90764-233 stage chart-validation and container step-package  
108 + ✓ 0s Showing logs for build dailymotion-repo-90764-233 stage chart-validation and container step-template  
187 + ✓ 3s Showing logs for build dailymotion-repo-90764-233 stage chart-validation and container step-apply-dry-run  
113 + ✓ 0s Showing logs for build dailymotion-repo-90764-233 stage chart-validation and container step-yamlint  
118 + ✓ 0s Showing logs for build dailymotion-repo-90764-233 stage chart-validation and container step-kubeval

[Toggle Steps](#) [View raw logs](#) [Download raw logs](#)  Follow logs



# CLI

- JX :
- Plugins : <https://github.com/orgs/jenkins-x-plugins/repositories>

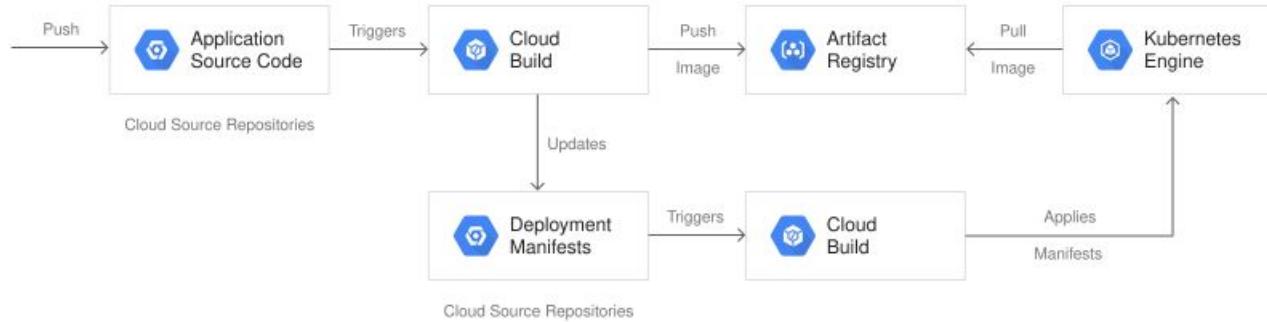


# Google Cloud Build

- Service managé, serverless
- Exécution par steps
- Builder partagés (Ex: [cloud-builders-community](#))
- Déclenchement manuel ou par événements
- PubSub pour les notifications



# Workflow





# Configuration

```
steps:  
# This step runs the unit tests on the app  
- name: 'python:3.7-slim'  
  id: Test  
  entrypoint: /bin/sh  
  args:  
  - '-c'  
  - 'pip install flask && python test_app.py -v'  
  
# This step builds the container image.  
- name: 'gcr.io/cloud-builders/docker'  
  id: Build  
  args:  
  - 'build'  
  - '-t'  
  - '  
    us-central1-docker.pkg.dev/$PROJECT_ID/my-repository/hello-cloudbuild:$SHORT_SHA'  
  - '.'  
  
# This step pushes the image to Artifact Registry  
# The PROJECT_ID and SHORT_SHA variables are automatically  
# replaced by Cloud Build.  
- name: 'gcr.io/cloud-builders/docker'  
  id: Push  
  args:  
  - 'push'  
  - '  
    us-central1-docker.pkg.dev/$PROJECT_ID/my-repository/hello-cloudbuild:$SHORT_SHA'
```

```
steps:  
# This step deploys the new version of our container image  
# in the hello-cloudbuild Kubernetes Engine cluster.  
- name: 'gcr.io/cloud-builders/kubectl'  
  id: Deploy  
  args:  
  - 'apply'  
  - '-f'  
  - 'kubernetes.yaml'  
  env:  
  - 'CLOUDSDK_COMPUTE_REGION=us-central1'  
  - 'CLOUDSDK_CONTAINER_CLUSTER=hello-cloudbuild'  
  
# This step copies the applied manifest to the production branch  
# The COMMIT_SHA variable is automatically  
# replaced by Cloud Build.  
- name: 'gcr.io/cloud-builders/git'  
  id: Copy to production branch  
  entrypoint: /bin/sh  
  args:  
  - '-c'  
  - '|'  
  - 'set -x && '\  
    # Configure Git to create commits with Cloud Build's service account  
    git config user.email $(gcloud auth list --filter=status:ACTIVE  
    --format='value(account)') && \  
    # Switch to the production branch and copy the kubernetes.yaml file  
    # from the candidate branch  
    git fetch origin production && git checkout production && \  
    git checkout $COMMIT_SHA kubernetes.yaml && \  
    # Commit the kubernetes.yaml file with a descriptive commit message  
    git commit -m "Manifest from commit $COMMIT_SHA  
    $(git log --format=%B -n 1 $COMMIT_SHA)" && \  
    # Push the changes back to Cloud Source Repository  
    git push origin production
```

# Gitops



# OpenGitops



- Déclaratif : Un système géré par GitOps doit avoir son état souhaité exprimé de manière déclarative.
- Versionné et immuable : L'état souhaité est stocké d'une manière qui applique l'immuabilité, la gestion des versions et conserve un historique complet des versions.
- Récupération automatique : Les agents extraient automatiquement les déclarations d'état souhaitées de la source.
- Réconciliation en permanence : Les agents observent en permanence l'état réel du système et tentent d'appliquer l'état souhaité.

# Implémentations

- Argo : Applatix puis Intuit. CNCF
- FluxCD : WeaveWorks
- CNCF Incubating pour les 2
- Gitops Engine : fusion annulée :  
<https://www.weave.works/blog/argo-flux-join-forces>

# Argo

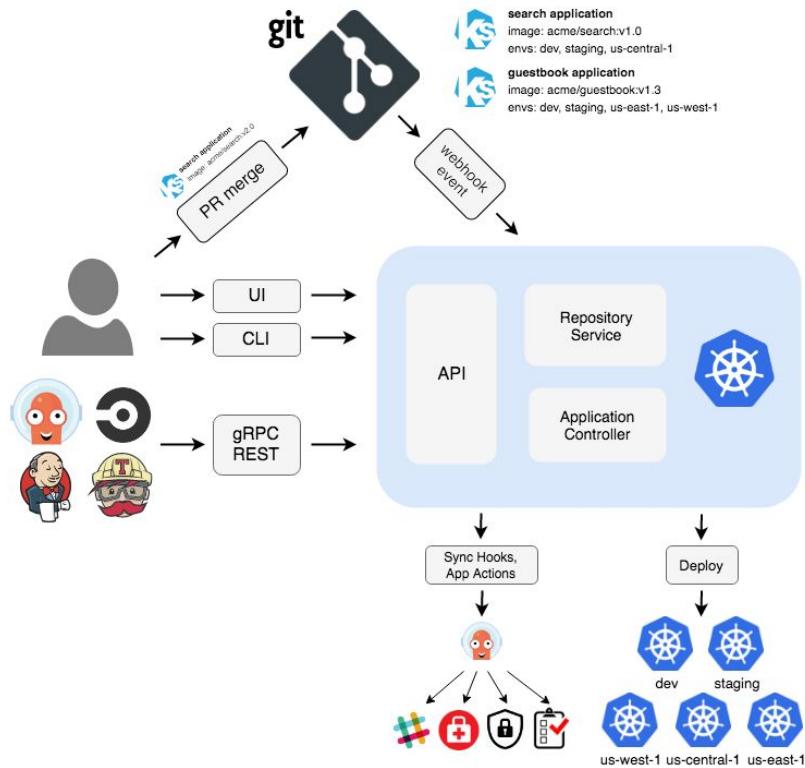


Argo se compose d'un ensemble d'outils open source :

- [Argo CD](#) : livraison continue déclarative (aka Gitops)
- [Argo Workflows](#) : moteur de workflow natif Kubernetes prenant en charge les workflows DAG et basés sur les étapes.
- [Argo Rollouts](#) : stratégies de déploiement avancées dans Kubernetes (Canary, Blue-Green, ...)
- [Argo Events](#) : gestion des dépendances basée sur les événements pour Kubernetes.



# Architecture





# Caractéristiques

- CLI
- WebUI
- Support de Kustomize, Helm et Jsonnet
- Reconciliation
- Healthchecks
- Métriques au format Prometheus
- Notifications (Slack, ...)



Applications

v2.0.0h

+ NEW APP   SYNC APPS

Search applications... (I)

FILTERS

SYNC STATUS

- Unknown 1
- Synced 16
- OutOfSync 3

HEALTH STATUS

- Unknown 0
- Progressing 0
- Suspended 1
- Healthy 18
- Degraded 1
- Missing 0

LABELS

PROJECTS

CLEAR

APPLICATIONS

Items per page: all

Project	Label	Status	Repo	Target R...	Path	Destinati...	Namesp...
argo-cd	default	app.kubernetes.io/instance=argoproj	https://github.com/argoproj/argoproj-de...	HEAD	argocd	gke_alex_sb_us-central1-a_argo-ci-public	argocd
argo-events	default	app.kubernetes.io/instance=argoproj	https://github.com/argoproj/argoproj-de...	HEAD	argo-events	gke_alex_sb_us-central1-a_argo-ci-public	argo
argo-rollouts	default	app.kubernetes.io/instance=argoproj	https://github.com/argoproj/argo-rollouts	v0.10.2	manifests/cluster-install	gke_alex_sb_us-central1-a_argo-ci-public	argo-rollouts
argo-workflows	default	app.kubernetes.io/instance=argoproj	https://github.com/argoproj/argoproj-de...	HEAD	argo-workflows	gke_alex_sb_us-central1-a_argo-ci-public	argo
argocd-image-updater	default	app.kubernetes.io/instance=argoproj	https://github.com/argoproj/argoproj-de...	HEAD	argocd-image-updater	gke_alex_sb_us-central1-a_argo-ci-public	argocd
argocd-notifications	default	app.kubernetes.io/instance=argoproj	https://github.com/argoproj/argoproj-de...	HEAD	argocd-notifications	gke_alex_sb_us-central1-a_argo-ci-public	argocd

SYNC REFRESH DELETE

APPLICATIONS

Argo CD Application Details

v1.8.1+rc

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

Sync OK

Synced (18m ago)  
Authored by Arthur Koziel <arthur@tharkozel.com>

Sync OK

Succeeded a few seconds ago (Thu Dec 31 2020 15:28:22 GMT+0800)  
Authored by Arthur Koziel <arthur@tharkozel.com>

Pods

- argocd-application-controller (18 minutes)
- argocd-dex-server (18 minutes)
- argocd-server (18 minutes)
- applications.argoproj.io (a day)
- appsprojects.argoproj.io (a day)
- argo-cd-argocd-application-controller (18 minutes, rev. 171)
- argo-cd-argocd-redis (18 minutes, rev. 171)
- argo-cd-argocd-repo-server-8f6... (18 minutes, rev. 171)
- argo-cd-argocd-server-5f64fc... (18 minutes, rev. 171)
- argo-cd-argocd-server-5f64fc... (18 minutes, rev. 171)

Logs

Metrics

Events



```
- *** argo cd app list
NAME CLUSTER NAMESPACE PROJECT STATUS HEALTH SYNCPOLICY CONDITIONS REPO PATH TARGET
hembasics https://kubernetes.default.svc default default Synced Healthy <none> <none> https://github.com/mifonpe/helmbasics . HEAD
- *** argo cd app get helmbasics
Name: helmbasics
Project: default
Server: https://kubernetes.default.svc
Namespace: default
URL: https://localhost/applications/helmbasics
Repo: https://github.com/mifonpe/helmbasics
Target: HEAD
Path: .
SyncWindow: Sync Allowed
Sync Policy: <none>
Sync Status: Synced to HEAD (8ceb9ee)
Health Status: Healthy

GROUP KIND NAMESPACE NAME STATUS HEALTH HOOK MESSAGE
Secret default helmbasics-secret Synced secret/helmbasics-secret created
ConfigMap default helmbasics-cm Synced configmap/helmbasics-cm created
ConfigMap default helmbasics-cm-scripts Synced configmap/helmbasics-cm-scripts created
PersistentVolumeClaim default helmbasics-myhttpdclaim Synced Healthy persistentvolumeclaim/helmbasics-myhttpdclaim created
Service default helmbasics-httpd-service Synced Healthy service/helmbasics-httpd-service created
apps Deployment default apache-deployment Synced Healthy deployment.apps/apache-deployment created
```

```
- *** argo cd app create helmcli --repo https://github.com/mifonpe/helmbasics --path . --dest-namespace test --dest-server https://kubernetes.default.svc
application 'helmcli' created
- *** argo cd app list
NAME CLUSTER NAMESPACE PROJECT STATUS HEALTH SYNCPOLICY CONDITIONS REPO PATH TARGET
helmcli https://kubernetes.default.svc test default OutOfSync Missing <none> <none> https://github.com/mifonpe/helmbasics .
hembasics https://kubernetes.default.svc default default Synced Healthy <none> <none> https://github.com/mifonpe/helmbasics . HEAD
- *** argo cd app get helmcli
Name: helmcli
Project: default
Server: https://kubernetes.default.svc
Namespace: test
URL: https://localhost/applications/helmcli
Repo: https://github.com/mifonpe/helmbasics
Target:
Path: .
SyncWindow: Sync Allowed
Sync Policy: <none>
Sync Status: OutOfSync from (8ceb9ee)
Health Status: Missing

GROUP KIND NAMESPACE NAME STATUS HEALTH HOOK MESSAGE
ConfigMap test helmcli-cm OutOfSync Missing
ConfigMap test helmcli-cm-scripts OutOfSync Missing
PersistentVolumeClaim test helmcli-myhttpdclaim OutOfSync Missing
Secret test helmcli-secret OutOfSync Missing
Service test helmcli-httpd-service OutOfSync Missing
apps Deployment test apache-deployment OutOfSync Missing
```





# RUN / Incidents

```
$ argocd app set <APPNAME> --sync-policy none
```

## Patch

- Live : kubectl edit ...
- Git : commit / push

```
$ argocd app set <APPNAME> --sync-policy automated
```

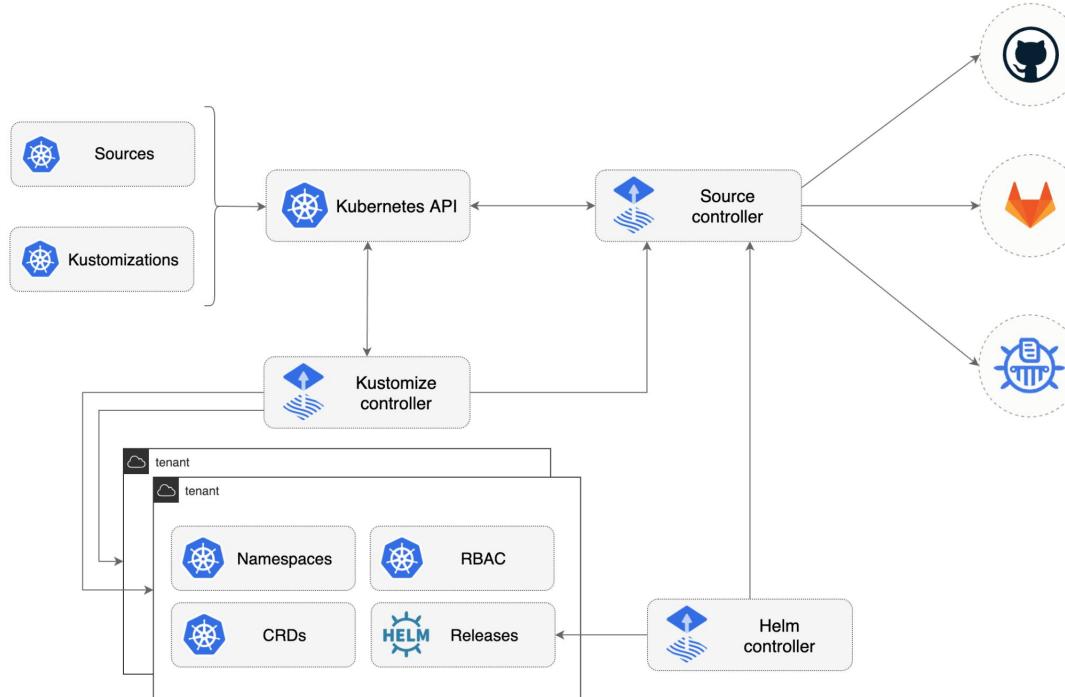


# FluxCD

- Refonte de Flux CD ([Gitops with Flux v2](#))
- Installation :
  - CLI
  - UI : [Weave Gitops](#)
  - Helm Chart
  - Provider Terraform



# Gitops Toolkit





# Caractéristiques

- CLI
- Support de Kustomize et Helm
- Reconciliation
- Healthchecks
- Gestion des dépendances
- Métriques au format Prometheus
- Dashboards Grafana
  - Control plane
  - Cluster reconciliation
- Notifications (Slack, ...)



# HelmRepository

NAMESPACE	NAME	READY	MESSAGE	REVISION	SUSPENDED
flux-system	banzaicloud-charts	True	Fetched revision: 2021-02-02T14:10:47Z	2021-02-02T14:10:47Z	False
flux-system	bitnami	True	Fetched revision: 2021-02-03T15:30:48.264572976Z	2021-02-03T15:30:48.264572976Z	False
flux-system	chaos-mesh	True	Fetched revision: 2021-01-21T12:22:45.095133381Z	2021-01-21T12:22:45.095133381Z	False
flux-system	falcosecurity	True	Fetched revision: 2020-06-17T11:36:18.151554517+02:00	2020-06-17T11:36:18.151554517+02:00	False
flux-system	flagger-charts	True	Fetched revision: 2021-01-28T08:32:34.64301213Z	2021-01-28T08:32:34.64301213Z	False
flux-system	fluent	True	Fetched revision: 2020-03-22T21:40:46.55347677Z	2020-03-22T21:40:46.55347677Z	False
flux-system	grafana-loki	True	Fetched revision: 2020-12-24T14:11:58.50410996Z	2020-12-24T14:11:58.50410996Z	False
flux-system	jetstack	True	Fetched revision: 2021-01-29T17:49:20Z	2021-01-29T17:49:20Z	False
flux-system	k8s-at-home-charts	True	Fetched revision: 2021-02-03T01:28:05.616699694Z	2021-02-03T01:28:05.616699694Z	False
flux-system	kubernetes-incubator-charts	True	Fetched revision: 2020-11-14T07:58:40.970932-05:00	2020-11-14T07:58:40.970932-05:00	False
flux-system	kubernetes-ingress-nginx	True	Fetched revision: 2020-04-26T21:05:21.59370903Z	2020-04-26T21:05:21.59370903Z	False
flux-system	kubernetes-sigs-charts	True	Fetched revision: 2020-07-23T18:29:32.485518695Z	2020-07-23T18:29:32.485518695Z	False
flux-system	kubernetes-stable-charts	True	Fetched revision: 2020-11-14T08:06:25.527333-05:00	2020-11-14T08:06:25.527333-05:00	False
flux-system	litmuschaos	True	Fetched revision: 2020-12-17T22:08:22.969534601Z	2020-12-17T22:08:22.969534601Z	False
flux-system	open-policy-agent	True	Fetched revision: 2021-01-28T03:17:51.037752255Z	2021-01-28T03:17:51.037752255Z	False
flux-system	openfaas-charts	True	Fetched revision: 2021-01-30T10:50:05.319629Z	2021-01-30T10:50:05.319629Z	False
flux-system	osm	True	Fetched revision: 2021-02-01T20:50:06.556640078Z	2021-02-01T20:50:06.556640078Z	False
flux-system	podinfo	True	Fetched revision: 2021-02-02T14:49:04.873884512Z	2021-02-02T14:49:04.873884512Z	False
flux-system	pomerium	True	Fetched revision: 2020-01-14T01:09:54.635843979Z	2020-01-14T01:09:54.635843979Z	False
flux-system	portefaix	True	Fetched revision: 2021-02-02T13:50:22.977630783Z	2021-02-02T13:50:22.977630783Z	False
flux-system	prometheus-community-charts	True	Fetched revision: 2020-09-27T05:31:40.762116-04:00	2020-09-27T05:31:40.762116-04:00	False
flux-system	vector	True	Fetched revision: 2020-12-17T17:45:20.696559492Z	2020-12-17T17:45:20.696559492Z	False
flux-system	vmware-tanzu	True	Fetched revision: 2019-12-18T18:07:47.212339875Z	2019-12-18T18:07:47.212339875Z	False



# HelmChart

```
) flux get sources chart -A
NAMESPACE      NAME
flux-system    cert-manager-cert-manager
flux-system    dns-external-dns
flux-system    flux-system-chaos-mesh
flux-system    flux-system-litmus-chaos
flux-system    identity-pomerium
flux-system    ingress-controllers-ingress-nginx
flux-system    logging-fluent-bit
flux-system    logging-loki
flux-system    logging-vector-agent
flux-system    monitoring-kube-prometheus-stack
flux-system    monitoring-thanos
flux-system    osm-system-osm
flux-system    security-falco
flux-system    security-falco-exporter
```

READY	MESSAGE	REVISION	SUSPENDED
True	Fetched revision: v1.1.0	v1.1.0	False
True	Fetched revision: 4.6.0	4.6.0	False
True	Fetched revision: v0.4.1	v0.4.1	False
True	Fetched revision: 1.11.0	1.11.0	False
True	Fetched revision: 15.0.0	15.0.0	False
True	Fetched revision: 3.22.0	3.22.0	False
True	Fetched revision: 0.10.0	0.10.0	False
True	Fetched revision: 2.0.1	2.0.1	False
True	Fetched revision: 0.11.1	0.11.1	False
True	Fetched revision: 13.4.1	13.4.1	False
True	Fetched revision: 0.3.31	0.3.31	False
True	Fetched revision: 0.6.1	0.6.1	False
True	Fetched revision: 1.7.2	1.7.2	False
True	Fetched revision: 0.5.0	0.5.0	False



# Kustomization

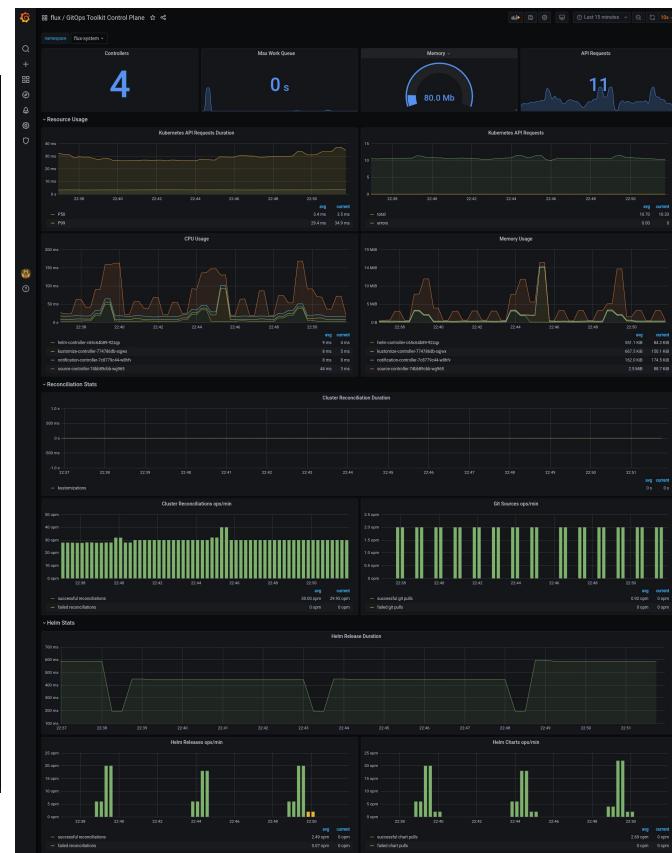
```
> flux get kustomizations -A
```

NAMESPACE	NAME	READY	MESSAGE	REVISION	SUSPENDED
flux-system	cert-manager	False	dependency 'flux-system/kube-prometheus-stack' is not ready	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	chaos-mesh	False	dependency 'flux-system/kube-prometheus-stack' is not ready	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	chaos-mesh-crdts	True	Applied revision: master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	external-dns	False	dependency 'flux-system/kube-prometheus-stack' is not ready	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	falco	False	dependency 'flux-system/kube-prometheus-stack' is not ready	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	fluent-bit	False	dependency 'flux-system/kube-prometheus-stack' is not ready	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	flux-monitoring	False	dependency 'flux-system/kube-prometheus-stack' is not ready	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	flux-system	True	Applied revision: master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	flux-system-charts	True	Applied revision: master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	flux-system-notifications	True	Applied revision: master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	flux-system-sops	True	Applied revision: master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	ingress-controllers	False	dependency 'flux-system/kube-prometheus-stack' is not ready	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	kube-prometheus-stack	Unknown	reconciliation in progress	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	letsencrypt	False	dependency 'flux-system/kube-prometheus-stack' is not ready	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	limetus-chaos	False	dependency 'flux-system/kube-prometheus-stack' is not ready	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	loki	False	dependency 'flux-system/kube-prometheus-stack' is not ready	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	osm	False	dependency 'flux-system/kube-prometheus-stack' is not ready	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	pomerium	False	dependency 'flux-system/kube-prometheus-stack' is not ready	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	thanos	False	dependency 'flux-system/kube-prometheus-stack' is not ready	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	vector	False	dependency 'flux-system/kube-prometheus-stack' is not ready	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False
flux-system	velero	False	dependency 'flux-system/kube-prometheus-stack' is not ready	master/cb90b1f0ac8d08ff972b700946588446b9d23b2c	False



# HelmRelease

NAMESPACE	NAME	READY	MESSAGE	REVISION	SUSPENDED
cert-manager	cert-manager	True	Release reconciliation succeeded	v1.1.0	False
dns	external-dns	True	Release reconciliation succeeded	4.6.0	False
flux-system	chaos-mesh	True	Release reconciliation succeeded	v0.4.1	False
flux-system	litmus-chaos	True	Release reconciliation succeeded	1.11.0	False
identity	pomerium	False	Helm upgrade failed: timed out waiting for the condition		False
ingress-controllers	ingress-nginx	True	Release reconciliation succeeded	3.22.0	False
logging	fluent-bit	True	Release reconciliation succeeded	0.10.0	False
logging	loki	True	Release reconciliation succeeded	2.0.1	False
logging	vector-agent	True	Release reconciliation succeeded	0.11.1	False
monitoring	kube-prometheus-stack	True	Release reconciliation succeeded	13.4.1	False
monitoring	thanos	True	Release reconciliation succeeded	0.3.31	False
osm-system	osm	True	Release reconciliation succeeded	0.6.1	False
security	falco	True	Release reconciliation succeeded	1.7.2	False
security	falco-exporter	True	Release reconciliation succeeded	0.5.0	False





Weave GitOps Applications

Applications Sources

namespace:flux-system

Clear All

Name	Type	Namespace	Cluster	Source	Status	Message	Revision	Last Updated
charts	Kustomization	flux-system	Default	flux-system	<span>Ready</span>	Applied revision: feat/weave-ghops/2+e4d2f9ee3fbfbafbe57e4662b5990dc3307	feat/weave-ghops/2+e4d2f9ee3fbfbafbe57e4662b5990dc3307	4 minutes ago
core	Kustomization	flux-system	Default	flux-system	<span>Ready</span>	Applied revision: feat/weave-ghops/2+e4d2f9ee3fbfbafbe57e4662b5990dc3307	feat/weave-ghops/2+e4d2f9ee3fbfbafbe57e4662b5990dc3307	8 minutes ago
crds	Kustomization	flux-system	Default	flux-system	<span>Ready</span>	Applied revision: feat/weave-ghops/2+e4d2f9ee3fbfbafbe57e4662b5990dc3307	feat/weave-ghops/2+e4d2f9ee3fbfbafbe57e4662b5990dc3307	4 minutes ago
flux-system	Kustomization	flux-system	Default	flux-system	<span>Ready</span>	Applied revision: feat/weave-ghops/2+e4d2f9ee3fbfbafbe57e4662b5990dc3307	feat/weave-ghops/2+e4d2f9ee3fbfbafbe57e4662b5990dc3307	4 minutes ago
fluxcd	Kustomization	flux-system	Default	flux-system	<span>Ready</span>	Applied revision: feat/weave-ghops/2+e4d2f9ee3fbfbafbe57e4662b5990dc3307	feat/weave-ghops/2+e4d2f9ee3fbfbafbe57e4662b5990dc3307	8 minutes ago
kube-prometheus-stack-crd	Kustomization	flux-system	Default	kube-prometheus-stack-source	<span>Ready</span>	Applied revision: kube-prometheus-stack-36.2.0+4906c2349fb6e35d8c7fc12e04795f043	kube-prometheus-stack-36.2.0+4906c2349fb6e35d8c7fc12e04795f043	3 minutes ago
kyverno-crd	HelmRelease	flux-system	Default	flux-system-kyverno-crd	<span>Ready</span>	Release reconciliation succeeded	v2.0.3	2 hours ago
observability	Kustomization	flux-system	Default	flux-system	<span>Ready</span>	Applied revision: feat/weave-ghops/2+e4d2f9ee3fbfbafbe57e4662b5990dc3307	feat/weave-ghops/2+e4d2f9ee3fbfbafbe57e4662b5990dc3307	7 minutes ago
weave-ghops	HelmRelease	flux-system	Default	flux-system-weave-ghops	<span>Ready</span>	Release reconciliation succeeded	2.2.5	3 hours ago

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Kubernetes: v1.23.4 Flux: v0.31.3 Weave GitOps: v0.81 © 2022 Weaveworks

Weave GitOps Applications > observability

Applications Sources

observability

Applied revision: feat/weave-ghops/2+e4d2f9ee3fbfbafbe57e4662b5990dc3307

SYNC SUSPEND

DETAILS EVENTS GRAPH YAML

Source: GitHub repository:flux-system  
Applied Revision: feat/weave-ghops/2+e4d2f9ee3fbfbafbe57e4662b5990dc3307  
Cluster: Default  
Path: /gitops/flux/clusters/kind/local/apps/observability  
Interval: 10m 0s  
Last Updated: 7 minutes ago

Name	Type	Namespace	Status	Message	Images
alarmmanager-min	HelmRelease	monitoring	<span>Ready</span>	Resource is current	-
grafana-datasource-prometheus	ConfigMap	monitoring	<span>Ready</span>	Resource is always ready	-
kube-prometheus-stack	HelmRelease	monitoring	<span>Ready</span>	Resource is current	-
kube-state-metrics-min	HelmRelease	monitoring	<span>Ready</span>	Resource is current	-
kubernetes-min	HelmRelease	monitoring	<span>Ready</span>	Resource is current	-
monitoring	Namespace	<span>Ready</span>	Resource is current	-	
prometheus-min	HelmRelease	monitoring	<span>Ready</span>	Resource is current	-
prometheus-operator-min	HelmRelease	monitoring	<span>Ready</span>	Resource is current	-

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Kubernetes: v1.23.4 Flux: v0.31.3 Weave GitOps: v0.81 © 2022 Weaveworks



# RUN / Incidents

```
$ flux suspend kustomization kube-prometheus-stack
```

## Patch

- Live : kubectl edit ...
- Git : commit / push

```
$ flux resume kustomization kube-prometheus-stack
```

# Questions