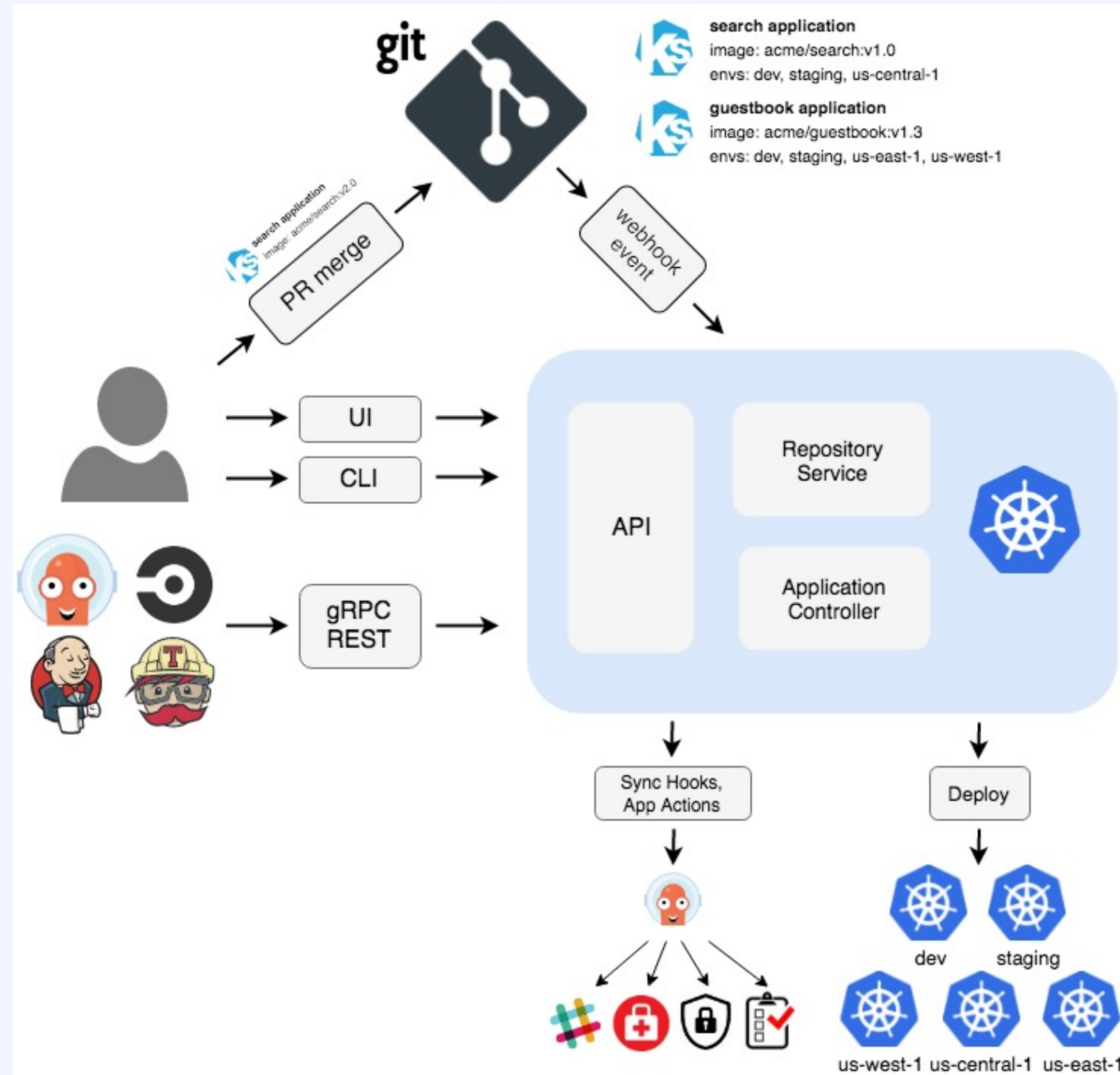


5 Kubernetes 배포를 위한 GitHub와 ArgoCD 활용

03 Kubernetes 배포 도구(ArgoCD, ArgoRollout) 소개

ArgoCD란?

03. Kubernetes 배포 도구(ArgoCD, ArgoRollout) 소개



출처 : <https://argo-cd.readthedocs.io/en/stable/>

ArgoCD 특징

03. Kubernetes 배포 도구(ArgoCD, ArgoRollout) 소개

- 지정된 대상 환경에 애플리케이션 **자동 배포**
- 다양한 방식의 **템플릿 Manifest** 지원(Kustomize, Helm, Plain-YAML)
- Git Repository 내 커밋된 애플리케이션 대상 **업데이트/롤백**
- GitOps기준의 **원하는 상태**(Desired State)로 자동 또는 수동 **동기화**
- 애플리케이션 배포/실행 상태의 **실시간 동기화/헬스체크**를 제공하는 **웹 UI**
- 다양한 Git 저장소의 **Webhook 지원**(GitHub, BitBucket, GitLab)

ArgoCD Web UI

03. Kubernetes 배포 도구(ArgoCD, ArgoRollout) 소개

The screenshot displays the ArgoCD Web UI interface. On the left, a sidebar contains navigation icons for Applications, Clusters, Projects, and Labels. The main content area is divided into two sections. The top section, titled 'Applications', shows a list of applications with filters for SYNC and HEALTH. The bottom section, titled 'guestbook', shows the details of the 'guestbook' application, including its project, labels, status, repository, target revision, path, destination, and namespace. The application is currently 'Healthy' and 'Synced'. Below the details, there are buttons for 'SYNC', 'REFRESH', and 'DELETE'. The bottom section also shows a 'synchronization' status and a diagram of the application's resources, including 'guestbook-ui' and 'guestbook-ui-65b878495d-wlxpz'.

Applications

+ NEW APP SYNC APPS

guestbook

Project: default

Labels:

Status: Healthy Synced

Repository: https://github.com/argoproj/argocd-exa...

Target R... latest

Path: guestbook

Destinati... https://kubernetes.default.svc

Namesp... default

SYNC REFRESH DELETE

SYNC

<input type="checkbox"/> Synced	1
<input type="checkbox"/> Unknown	0
<input type="checkbox"/> OutOfSync	0

HEALTH

<input type="checkbox"/> Healthy	1
<input type="checkbox"/> Unknown	0
<input type="checkbox"/> Progressing	0
<input type="checkbox"/> Suspended	0
<input type="checkbox"/> Degraded	0
<input type="checkbox"/> Missing	0

LABELS

PROJECTS

CLUSTERS

Applications / guestbook

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

Healthy Synced synchronization

To latest (6bed858)
Authored by Alex Collins <alexec@users.noreply.gith...
Updates examples to better reflect hook usage toda...

To 6bed858
Succeeded 4 minutes ago (Tue Dec 03 2019 16:48:21 GMT-0500)
Authored by Alex Collins <alexec@users.noreply.github.com>
Updates examples to better reflect hook usage today (#41)

guestbook-ui (service)

guestbook (application)

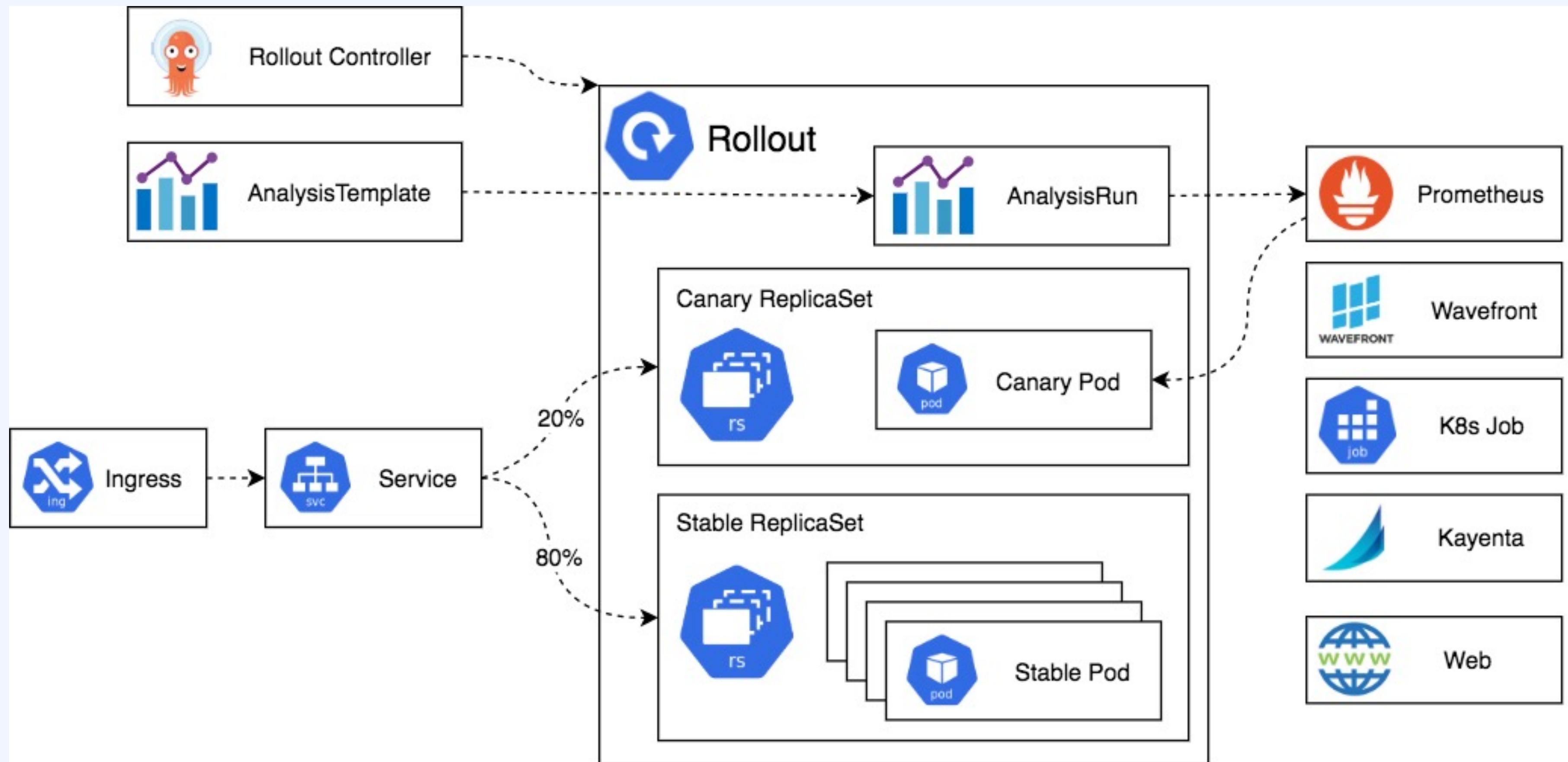
guestbook-ui (rev:1 deployment)

guestbook-ui-65b878495d-wlxpz (running 1/1 pod)

show 2 hidden resources

Argo Rollout이란?

03. Kubernetes 배포 도구(ArgoCD, ArgoRollout) 소개



출처 : <https://argoproj.github.io/argo-rollouts/architecture/>

Argo Rollout 특징

03. Kubernetes 배포 도구(ArgoCD, ArgoRollout) 소개

- Blue/Green 배포 지원
- Canary 배포 지원
- 세분화된 가중치 적용 트래픽 라우팅
- 자동화된 롤백 적용 가능
- Ingress Controller 통합: AWS ALB, NGINX등
- Service Mesh 통합: Istio, Linkerd, SMI등

Argo Rollout UI

03.
Kubernetes
배포
도구(ArgoCD,
ArgoRollout)
소개

Rollouts

NS: rollouts-demo v1.0.0+75eeb71.dirty

Search...

bluegreen-demo

Strategy BlueGreen

bluegreen-demo-6cbccd9f99 Revision 1

✓

✓

✓

RESTART PROMOTE-FULL

canary-demo

Strategy Canary

Weight 20

canary-demo-68f96454b6 Revision 9

✓

canary-demo-645d5dbc4c Revision 6

✓

✓

✓

✓

RESTART PROMOTE-FULL

rollouts-demo

Strategy

Weight

rollouts-demo-7bf84f9696

✓

✓

✓

✓

rollouts-demo-789746c88d

✓

RESTART PROMOTE-FULL

Rollouts / canary-demo

NS: rollouts-demo v1.0.0+75eeb71.dirty

RESTART RETRY ABORT PROMOTE-FULL

Summary

Strategy Canary

Step 1/8

Set Weight 20

Actual Weight 20

Containers

canary-demo argoproj/rollouts-demo:green

Add more containers to fill this space!

Revisions

Revision 9

argoproj/rollouts-demo:green

canary-demo-68f96454b6

✓

Revision 8

argoproj/rollouts-demo:yellow

ROLLBACK

Steps

Set Weight: 20%

Pause

Set Weight: 40%

Pause: 10s

Set Weight: 60%

Pause: 10s

Argo Rollout 배포 방식 – Blue/Green 배포

03. Kubernetes 배포 도구(ArgoCD, ArgoRollout) 소개



출처 : <https://argoproj.github.io/argo-rollouts/concepts/>

Argo Rollout 배포 방식 – Canary 배포

03. Kubernetes 배포 도구(ArgoCD, ArgoRollout) 소개



출처 : <https://argoproj.github.io/argo-rollouts/concepts/>

Argo Rollout Canary 배포 실행 예

```

Name:      rollouts-demo
Namespace: default
Status:    II Paused
Strategy:  Canary
  Step:    1/8
  SetWeight: 20
  ActualWeight: 20
Images:    argoproj/rollouts-demo:blue (stable)
           argoproj/rollouts-demo:yellow (canary)
Replicas:
  Desired: 5
  Current: 5
  Updated: 1
  Ready: 5
  Available: 5

NAME                                         KIND      STATUS      AGE   INFO
○ rollouts-demo                             Rollout    II Paused   10m
├─ # revision:2
│   └─ rolloutsdemo789746c88d               ReplicaSet ✓ Healthy   40s   canary
│       └─ rolloutsdemo789746c88d-qkxrh      Pod        ✓ Running   40s   ready:1/1
└─ # revision:1
    └─ rolloutsdemo7bf84f9696               ReplicaSet ✓ Healthy   10m   stable
        └─ rolloutsdemo7bf84f9696-8m8fk      Pod        ✓ Running   10m   ready:1/1
            └─ rolloutsdemo7bf84f9696-lmbtk   Pod        ✓ Running   10m   ready:1/1
                └─ rolloutsdemo7bf84f9696-msbtk Pod        ✓ Running   10m   ready:1/1
                    └─ rolloutsdemo7bf84f9696-qllf5 Pod        ✓ Running   10m   ready:1/1
    
```

출처 : <https://argoproj.github.io/argo-rollouts/getting-started/>

CI/CD Pipeline에서의 ArgoCD와 Argo Rollout 적용

03. Kubernetes 배포 도구(ArgoCD, ArgoRollout) 소개

