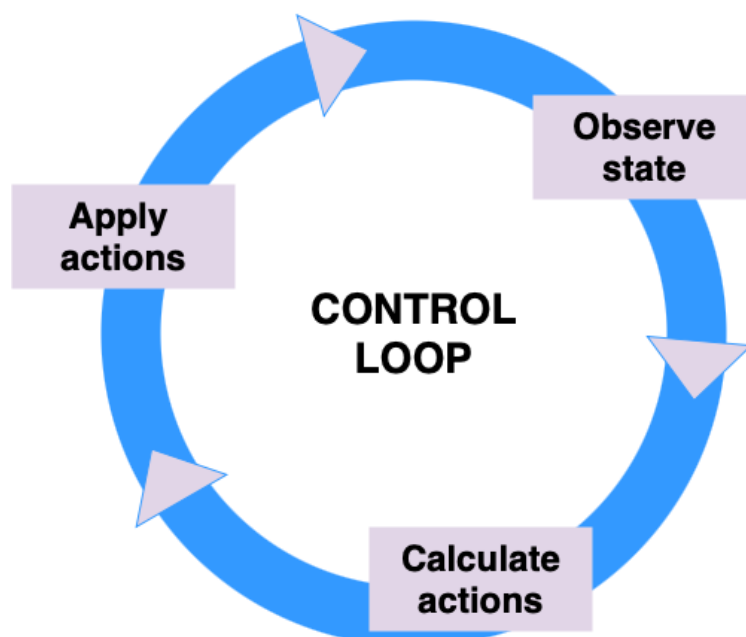
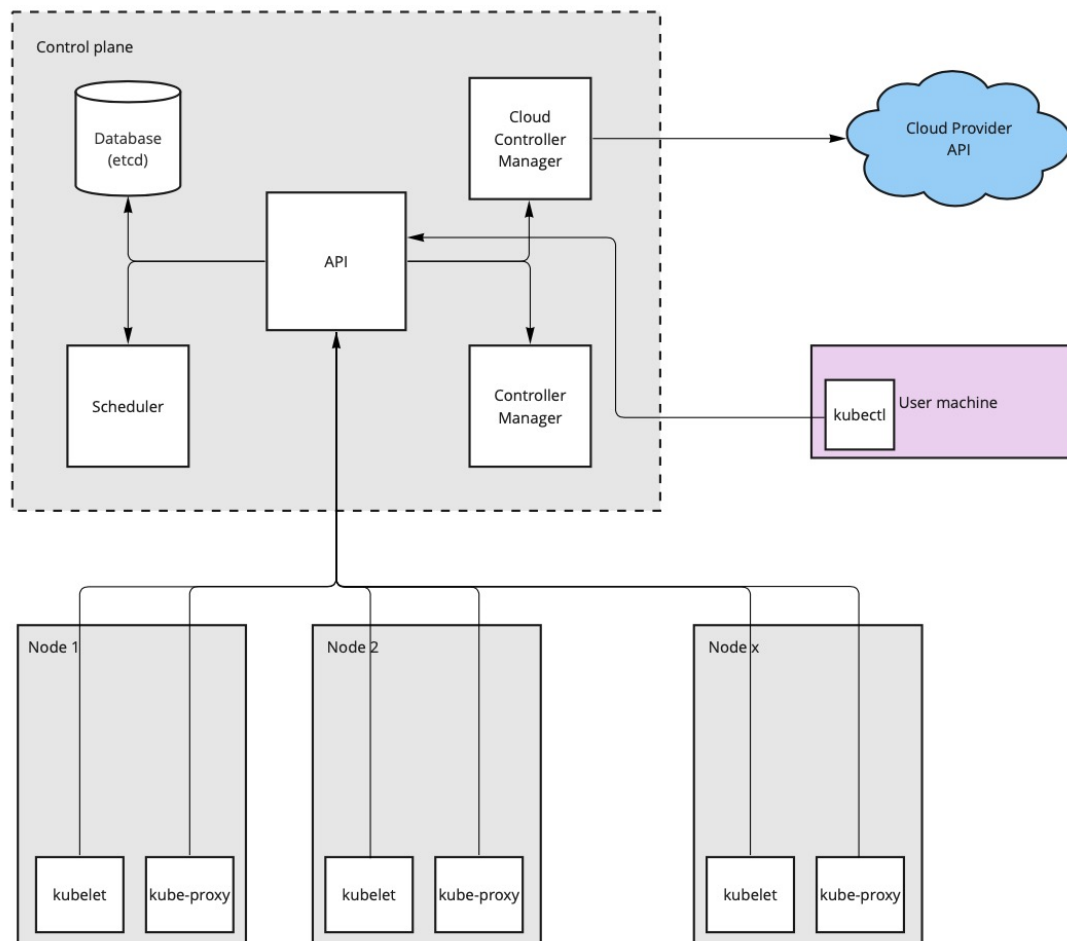
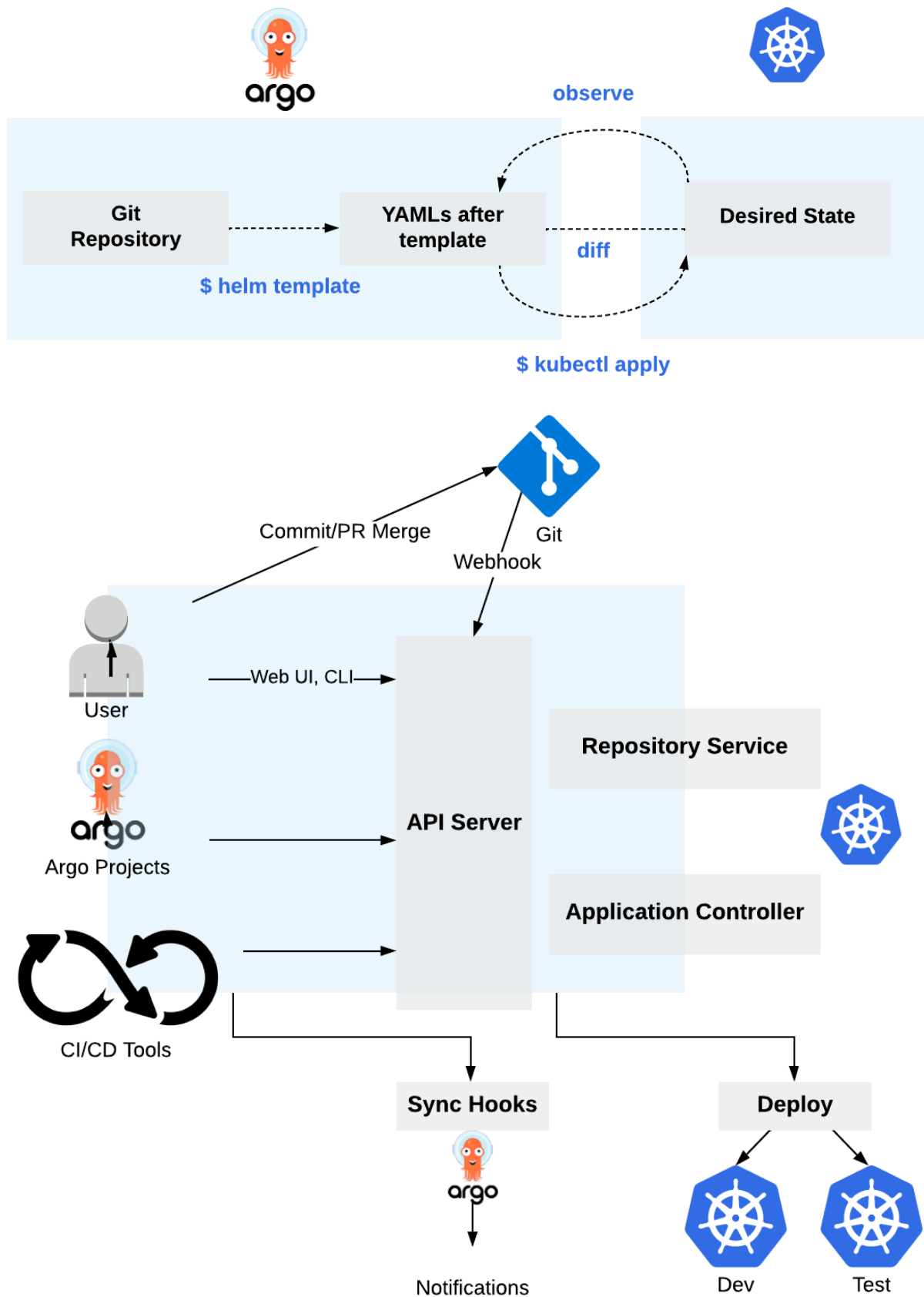


Chapter 1: GitOps and Kubernetes



Chapter 2: Getting Started with Argo CD

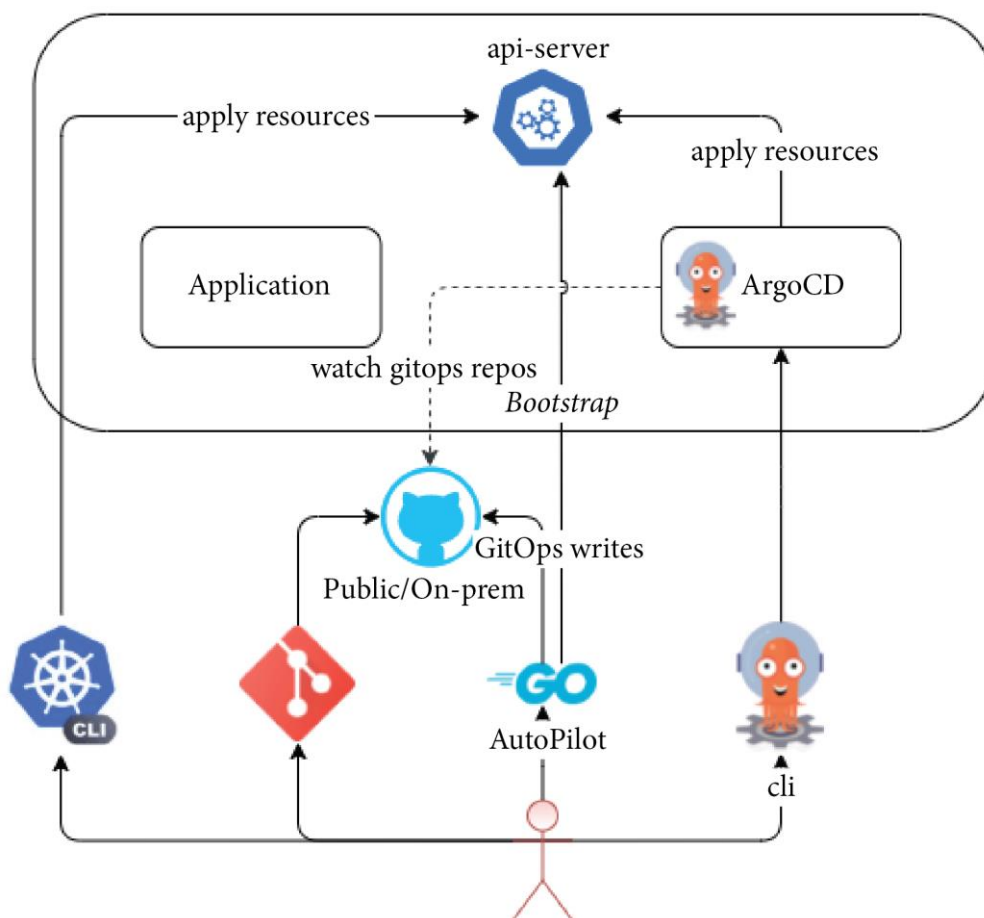
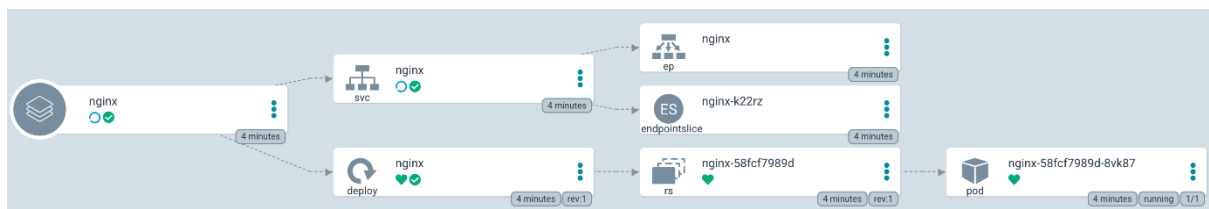


```

→ kind create cluster --config=kind.yaml --name=ch02
Creating cluster "ch02" ...
✓ Ensuring node image (kindest/node:v1.20.2) 🖼️
✓ Preparing nodes 📦
✓ Writing configuration 📜
✓ Starting control-plane 🚦
✓ Installing CNI 🌐
✓ Installing StorageClass 🗄️
Set kubectl context to "kind-ch02"
You can now use your cluster with:

kubectl cluster-info --context kind-ch02

```



- GitHub Apps
- OAuth Apps
- Personal access tokens

New personal access token

Personal access tokens function like ordinary OAuth access tokens. They can be used instead of a password for Git over HTTPS, or can be used to [authenticate to the API over Basic Authentication](#).

Note

ARGOCD_AUTOPILOT_TOKEN

What's this token for?

Select scopes

Scopes define the access for personal tokens. [Read more about OAuth scopes](#).

- ☒ repo Full control of private repositories
- ☒ repo:status Access commit status
- ☒ repo_deployment Access deployment status
- ☒ public_repo Access public repositories
- ☒ repo:invite Access repository invitations
- ☒ security_events Read and write security events

argo-cd

Project: default

Labels: app.kubernetes.io/managed-by=argocd-autopilot, ap...

Status: Healthy Synced

Repository: https://github.com/spirosoik/ch02.git

Target Revisi...

Path: bootstrap/argo-cd

Destination: in-cluster

Namespace: argocd

SYNC

REFRESH

DELETE

autopilot-bootstrap

Project: default

Labels: app.kubernetes.io/managed-by=argocd-autopilot, ap...

Status: Healthy Synced

Repository: https://github.com/spirosoik/ch02.git

Target Revisi...

Path: bootstrap

Destination: in-cluster

Namespace: argocd

SYNC

REFRESH

DELETE

cluster-resources-in-cluster

Project: default

Labels: app.kubernetes.io/managed-by=argocd-autopilot, ap...

Status: Healthy Synced

Repository: https://github.com/spirosoik/ch02.git

Target Revisi...

Path: bootstrap/cluster-resources/in-cluster

Destination: in-cluster

Namespace: argocd

SYNC

REFRESH

DELETE

root

Project: default

Labels: app.kubernetes.io/managed-by=argocd-autopilot, ap...

Status: Healthy Synced

Repository: https://github.com/spirosoik/ch02.git

Target Revisi...

Path: projects

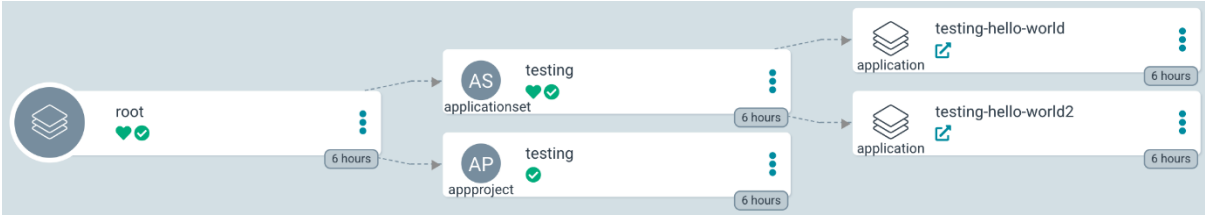
Destination: in-cluster

Namespace: argocd

SYNC

REFRESH

DELETE



Chapter 3: Operating Argo CD

The screenshot shows the Argo CD web interface. On the left is a sidebar with the Argo CD logo, version 'v2.1.1+a', and navigation icons. The main header is 'Applications'. Below it are buttons for '+ NEW APP', 'SYNC APPS', and a search bar 'Search applications...'. A 'FILTERS' section on the left shows sync and health status counts. The main content area displays details for the 'argocd' application.

Applications

+ NEW APP SYNC APPS Search applications...

FILTERS

SYNC STATUS

- ☐ Unknown 0
- ☒ Synced 1
- ☐ OutOfSync 0

HEALTH STATUS

- ☐ Unknown 0
- ☐ Progressing 0
- ☐ Suspended 0
- ☒ Healthy 1

argocd

Project: default

Labels:

Status: ♥ Healthy ✔ Synced

Repository: [https://github.com/PacktPublishing/Argo...](https://github.com/PacktPublishing/ArgoCD)

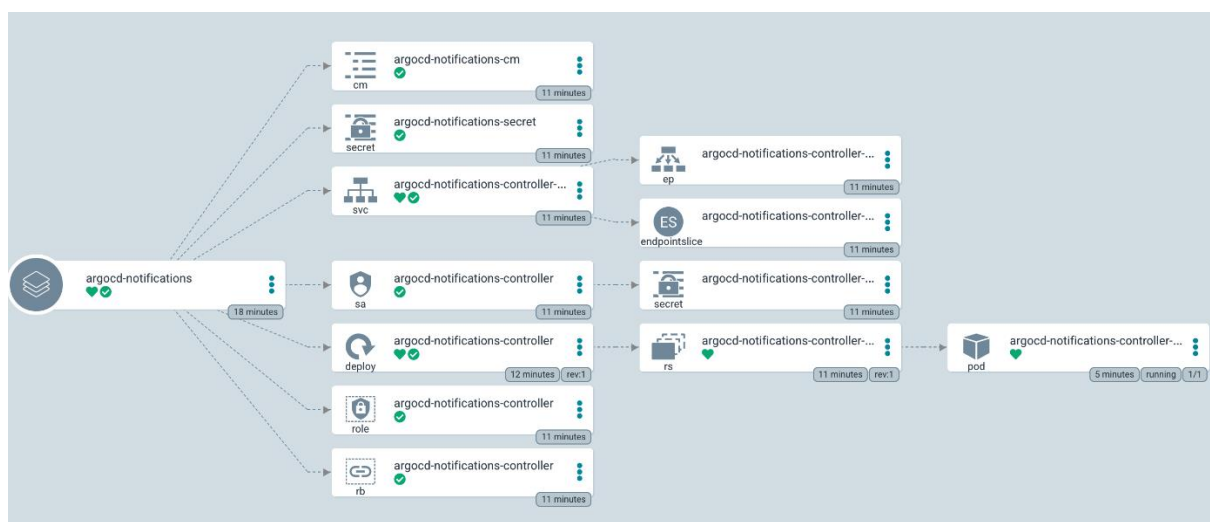
Target Repository: main

Path: ch3/kustomize-installation

Destination: in-cluster

Namespace: argocd

SYNC REFRESH DELETE



New project › Create blank project

Project name

resume-manual-pipeline

Project URL

https://gitlab.com/

liviu-costea

Project slug



resume-manual-pipeline

Want to house several dependent projects under the same namespace? [Create a group.](#)

Project description (optional)

Description format

Visibility Level

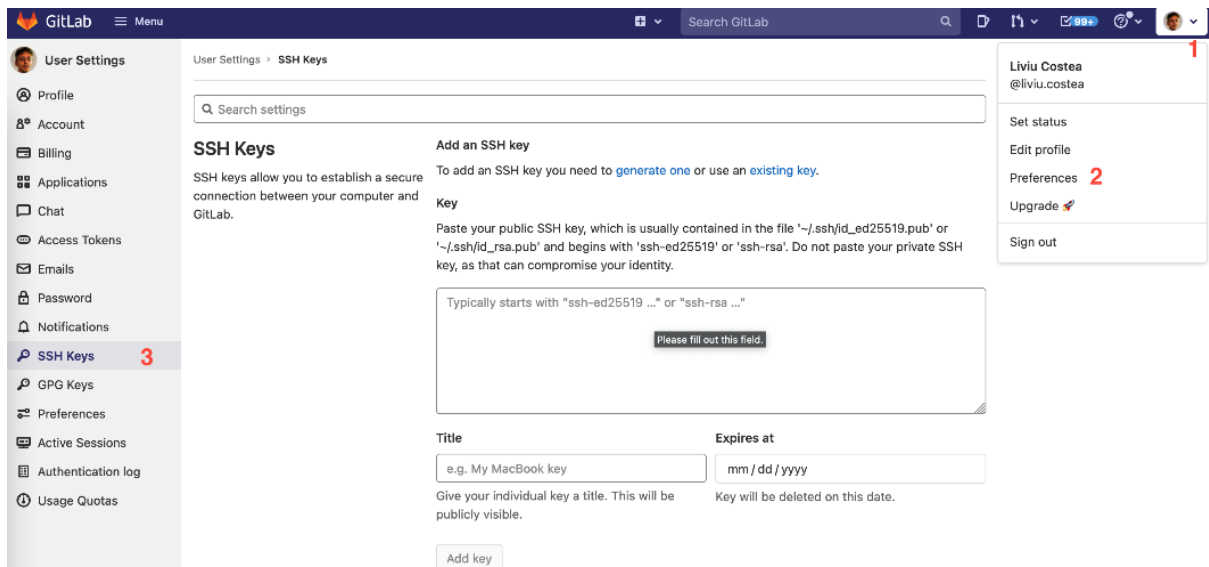
- ☐  **Private**
Project access must be granted explicitly to each user. If this project is part of a group, access will be granted
- ☒  **Public**
The project can be accessed without any authentication.

☒ Initialize repository with a README

Allows you to immediately clone this project's repository. Skip this if you plan to push up an existing repository.

Create project

Cancel



GitLab Menu

User Settings

- Profile
- Account
- Billing
- Applications
- Chat
- Access Tokens
- Emails
- Password
- Notifications
- SSH Keys 3**
- GPG Keys
- Preferences
- Active Sessions
- Authentication log
- Usage Quotas

User Settings › SSH Keys

Search settings

SSH Keys

SSH keys allow you to establish a secure connection between your computer and GitLab.

Add an SSH key

To add an SSH key you need to [generate one](#) or use an [existing key](#).

Key

Paste your public SSH key, which is usually contained in the file '~/.ssh/id_ed25519.pub' or '~/.ssh/id_rsa.pub' and begins with 'ssh-ed25519' or 'ssh-rsa'. Do not paste your private SSH key, as that can compromise your identity.

Typically starts with "ssh-ed25519 ..." or "ssh-rsa ..."

Please fill out this field.

Title

e.g. My MacBook key

Give your individual key a title. This will be publicly visible.

Expires at

mm / dd / yyyy

Key will be deleted on this date.

Add key

1 Liviu Costea @liviu.costea

2 Preferences

Manage your project's triggers

Description

Argo CD Notifications Webhook

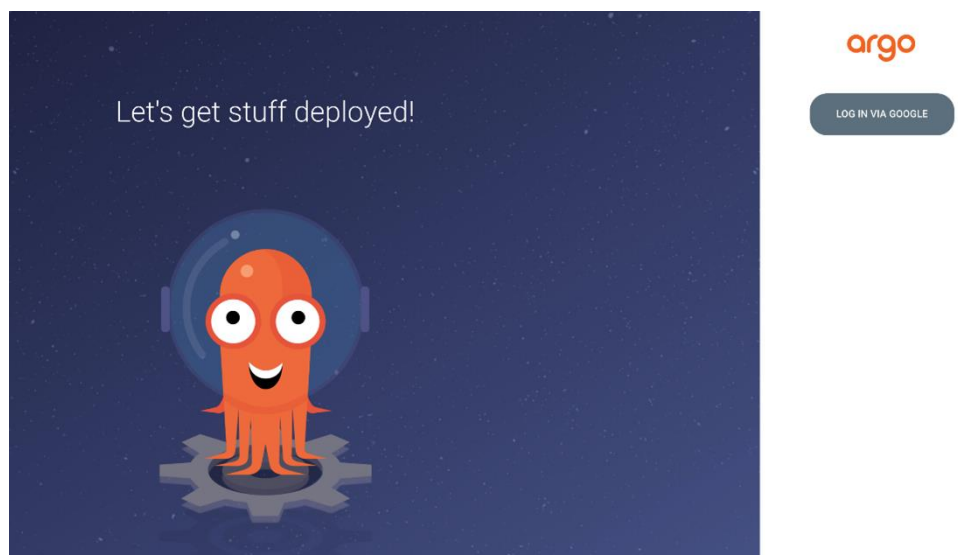
Add trigger

No triggers exist yet. Use the form above to create one.

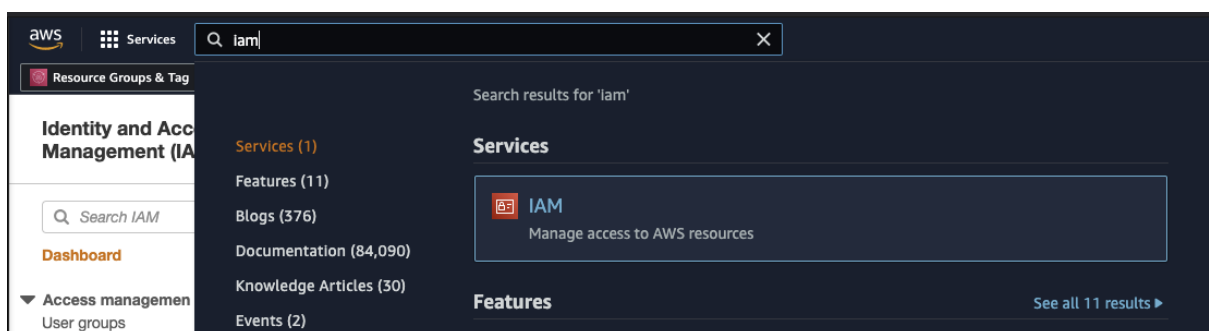
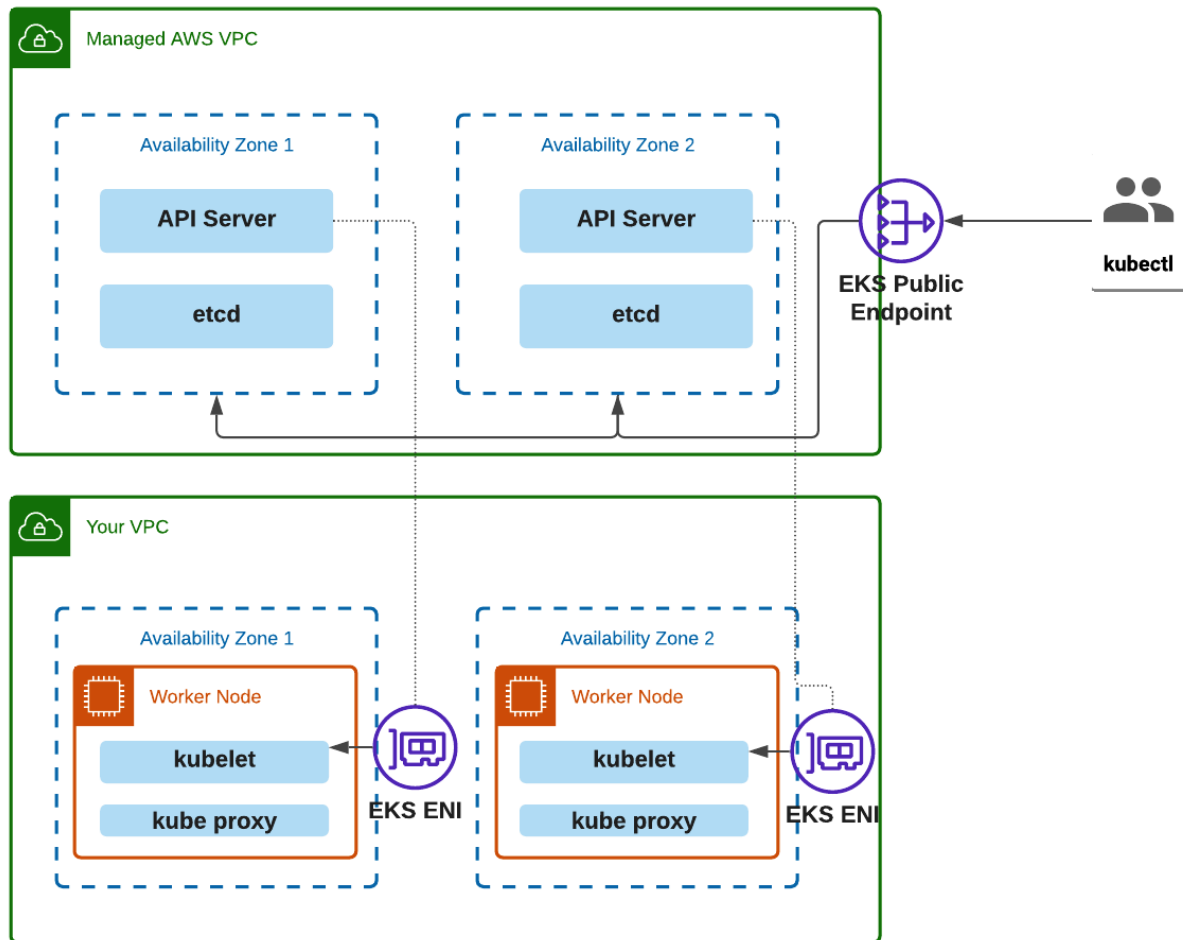
```
32 Using docker image sha256:14119a10abf4669e8cdbdff324a9f9605d99697215a0d21c360fe8dfa8471bab for alpine:3.14 with digest
32 2e3d3c45ccccac829840a25941e679c25d438cc8412c2fa221cf1a824e6a ...
33 $ echo "Deploy status $APPLICATION_DEPLOY_STATUS for Application $APPLICATION_NAME on commit $APPLICATION_GIT_COMMIT"
34 Deploy status Synced for Application argocd on commit e8035777f082ff4d214503d0a0b26a2281b5a0f7
36 Cleaning up project directory and file based variables
38 Job succeeded
```

Chapter 4: Access Control

OPERATION	Sync
PHASE	Succeeded
MESSAGE	successfully synced (all tasks run)
STARTED AT	a minute ago (Tue Oct 04 2022 22:39:58 GMT+0300)
DURATION	00:01 min
FINISHED AT	a minute ago (Tue Oct 04 2022 22:39:59 GMT+0300)
REVISION	e37ff4b
INITIATED BY	proj:argocd:read-sync



Chapter 5: Argo CD Bootstrap k8s Cluster



Add user

- 1
- 2
- 3
- 4
- 5

Set user details

You can add multiple users at once with the same access type and permissions. [Learn more](#)

User name* test-bot

+ Add another user

Select AWS access type

Select how these users will primarily access AWS. If you choose only programmatic access, it does NOT prevent users from accessing the console using an assumed role. Access keys and autogenerated passwords are provided in the last step. [Learn more](#)

- Select AWS credential type*




☒ Access key - Programmatic access
Enables an **access key ID** and **secret access key** for the AWS API, CLI, SDK, and other development tools.

☐ Password - AWS Management Console access
Enables a **password** that allows users to sign-in to the AWS Management Console.

Create a group and select the policies to be attached to the group. Using groups is a best-practice way to manage users' permissions by job functions, AWS service access, or your custom permissions. [Learn more](#)

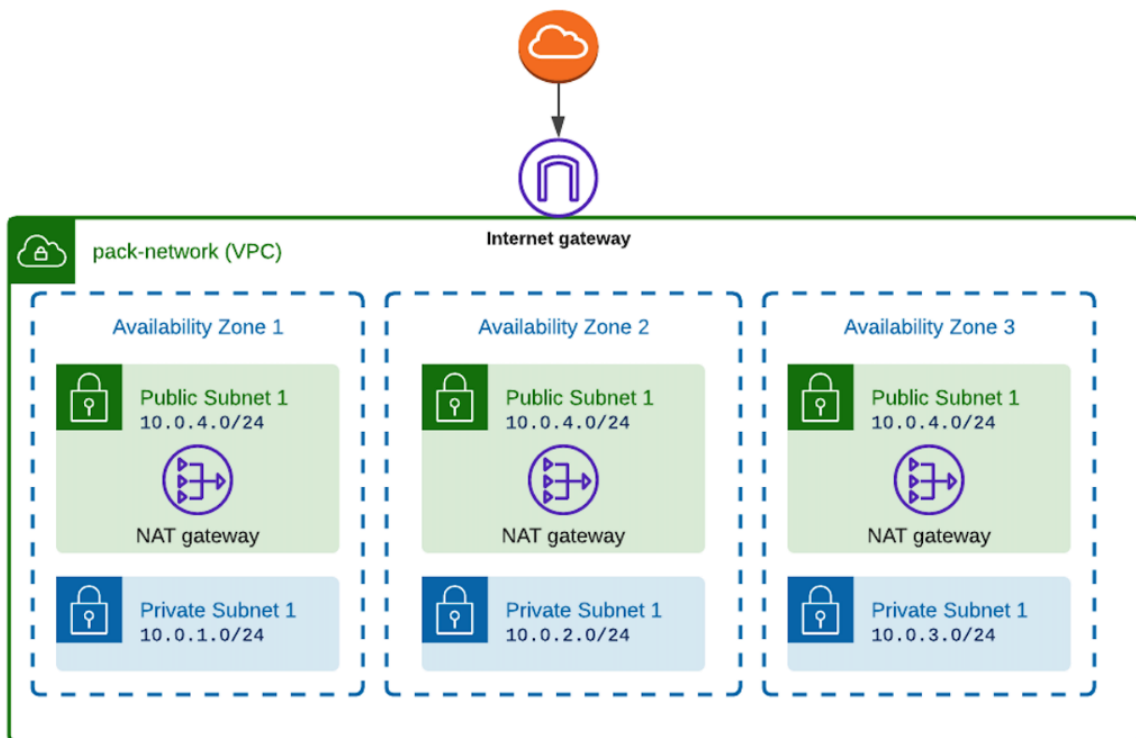
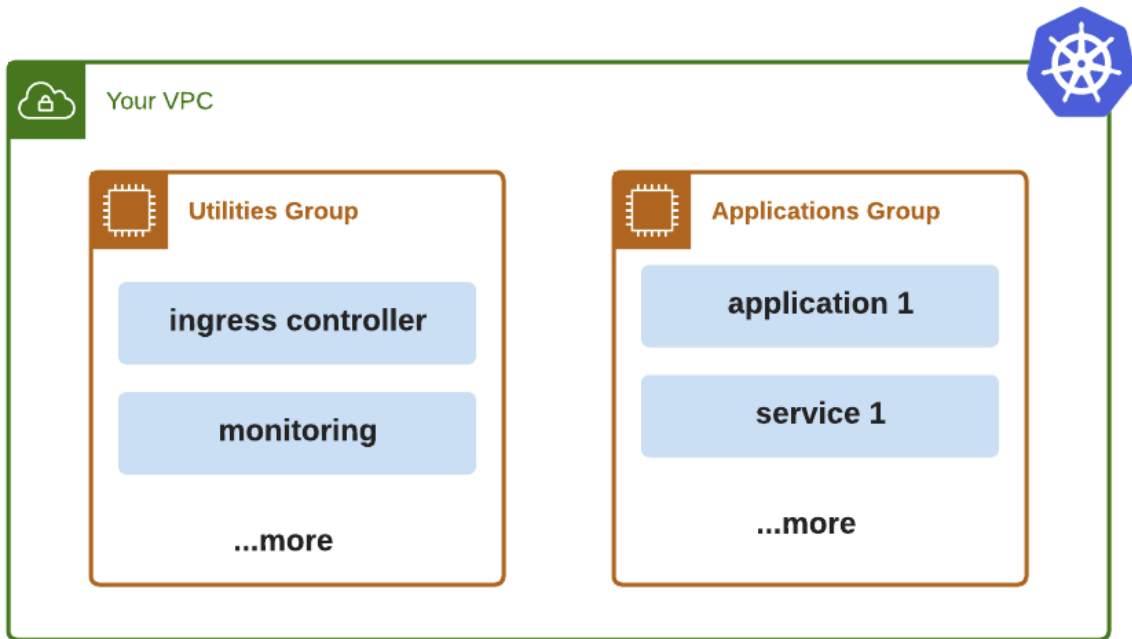
Group name TestGroup

Create policy Refresh

Filter policies <input type="text" value="Search"/>					Showing 768 results
	Policy name	Type	Used as	Description	
<input checked="" type="checkbox"/>	 AdministratorAccess	Job function	Permissions policy (1)	Provides full access to AWS services and resources.	
<input type="checkbox"/>	 AdministratorAccess-Amplify	AWS managed	None	Grants account administrative permissions while explicitly allowing direct access to resources needed by A...	
<input type="checkbox"/>	 AdministratorAccess-AWSElasticBeanstalk	AWS managed	None	Grants account administrative permissions. Explicitly allows developers and administrators to gain direct ac...	

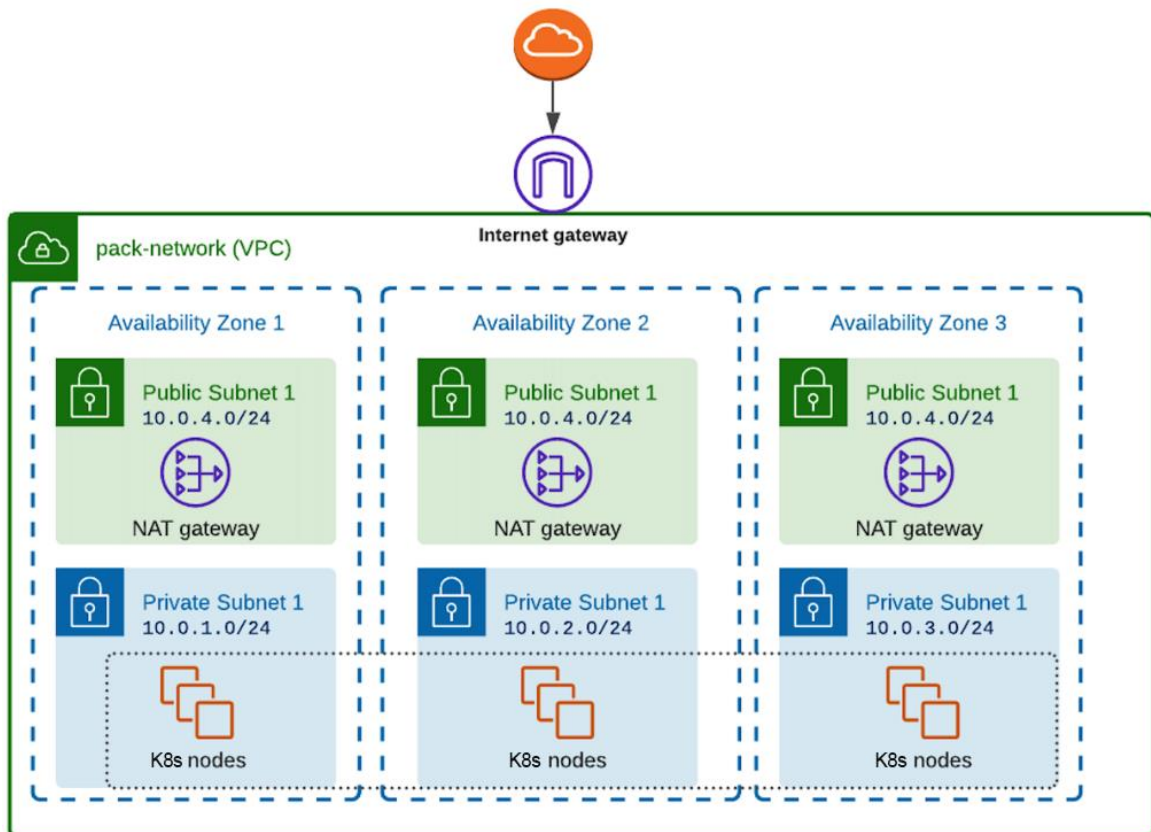
Download .csv

	User	Access key ID	Secret access key
<div><div></div><div>test-bot</div></div>	AKIAT3CQUENN43DTW577	<div>*****</div> <div>Show</div>	



Main route table

Destination	Target
10.0.0.0/16	local
0.0.0.0/16	nat-gateway-id



NAME	READY	STATUS	RESTARTS	AGE
aws-node-4tdgf	1/1	Running	0	14m
aws-node-bsjzp	1/1	Running	0	14m
aws-node-d554x	1/1	Running	0	14m
aws-node-jm25x	1/1	Running	0	14m
coredns-65bfc5645f-84wbt	1/1	Running	0	28m
coredns-65bfc5645f-nqx26	1/1	Running	0	28m
kube-proxy-87hbc	1/1	Running	0	14m
kube-proxy-cf7j9	1/1	Running	0	14m
kube-proxy-h7nlw	1/1	Running	0	14m
kube-proxy-ksrhn	1/1	Running	0	14m

NAME	READY	STATUS	RESTARTS	AGE
pod/argocd-application-controller-0	1/1	Running	0	86s
pod/argocd-repo-server-6fd99dbbb5-rswbc	1/1	Running	0	86s
pod/argocd-server-7674b5cff5-szj77	1/1	Running	0	88s

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
service/argocd-dex-server	ClusterIP	172.20.226.115	<none>	5556/TCP,5557/TCP,5558/TCP	4m17s
service/argocd-metrics	ClusterIP	172.20.61.41	<none>	8082/TCP	4m15s
service/argocd-redis	ClusterIP	172.20.28.95	<none>	6379/TCP	90s
service/argocd-repo-server	ClusterIP	172.20.22.22	<none>	8081/TCP,8084/TCP	90s
service/argocd-server	ClusterIP	172.20.151.64	<none>	80/TCP,443/TCP	90s
service/argocd-server-metrics	ClusterIP	172.20.246.236	<none>	8083/TCP	4m15s

NAME	READY	UP-TO-DATE	AVAILABLE	AGE
deployment.apps/argocd-dex-server	0/1	0	0	4m18s
deployment.apps/argocd-redis	0/1	0	0	4m18s
deployment.apps/argocd-repo-server	1/1	1	1	88s
deployment.apps/argocd-server	1/1	1	1	91s

NAME	DESIRED	CURRENT	READY	AGE
replicaset.apps/argocd-dex-server-5896d988bb	1	0	0	4m19s
replicaset.apps/argocd-redis-74d8c6db65	1	0	0	4m19s
replicaset.apps/argocd-repo-server-6fd99dbbb5	1	1	1	89s
replicaset.apps/argocd-server-7674b5cff5	1	1	1	92s

NAME	READY	AGE
statefulset.apps/argocd-application-controller	1/1	90s



argo-cd

Project: default

Labels:

Status: ♥ Healthy ✔ Synced

Repository: <https://github.com/PacktPublishing/ArgoCD-in-Pra...>

Target Revis... HEAD

Path: ch05/applications/argocd-app

Destination: in-cluster

Namespace: argocd

SYNC

REFRESH

DELETE

APP HEALTH ?
Healthy

CURRENT SYNC STATUS ? MORE
Synced To **HEAD (362b24a)**
Author: Spiros Economakis <spiros.oikonomak...>
Comment: fix: argocd cm

LAST SYNC RESULT ? MORE
Sync OK To **362b24a**
Succeeded 3 minutes ago (Thu Nov 25 2021 00:36:26 GMT+0200)
Author: Spiros Economakis <spiros.oikonomak...>
Comment: fix: argocd cm

argocd

34 minutes

argocd-cm

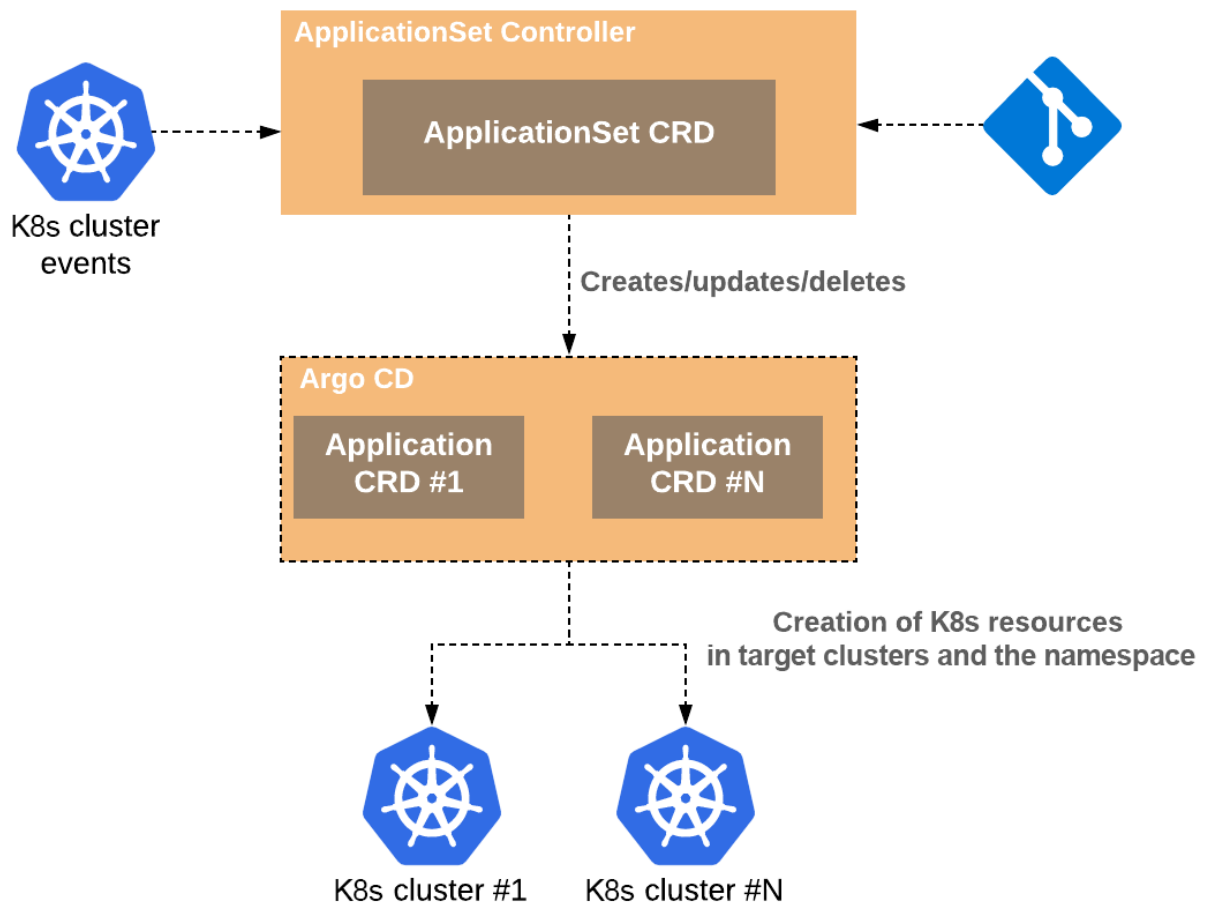
an hour

Route 53 > Hosted zones

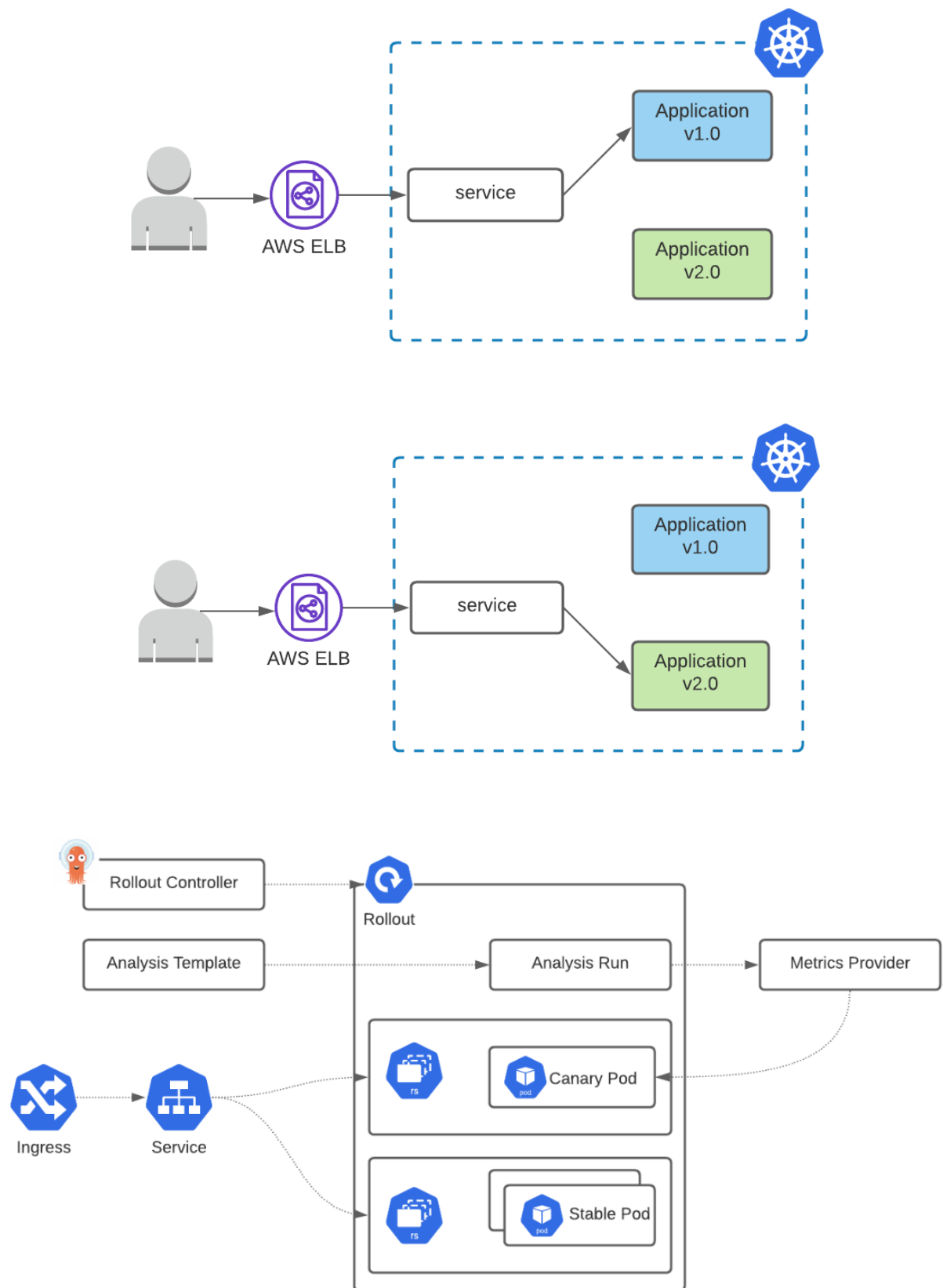
Hosted zones (1)
Automatic mode is the current search behavior optimized for best filter results. To change modes go to settings.

Filter hosted zones by property or value

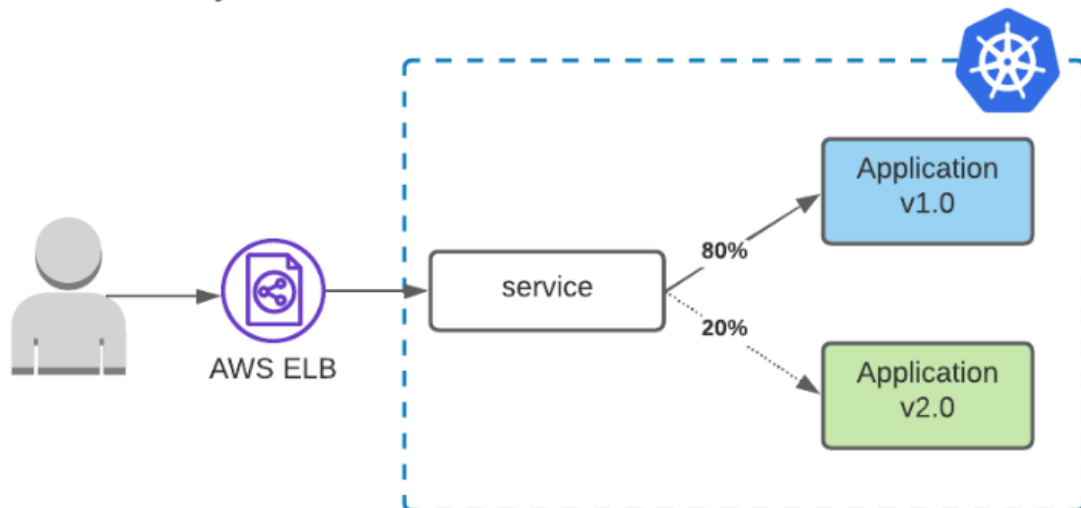
Domain name	Type	Created by	Record count	Description
packtargocdbook.link	Public	Route 53	2	HostedZone created by Route53 Registrar



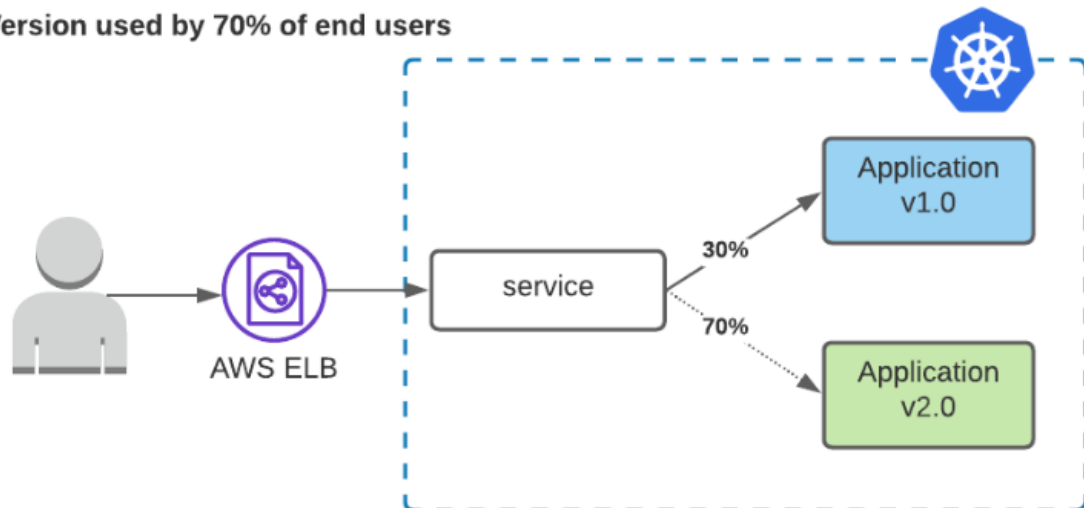
Chapter 6: Designing Argo CD Delivery Pipelines



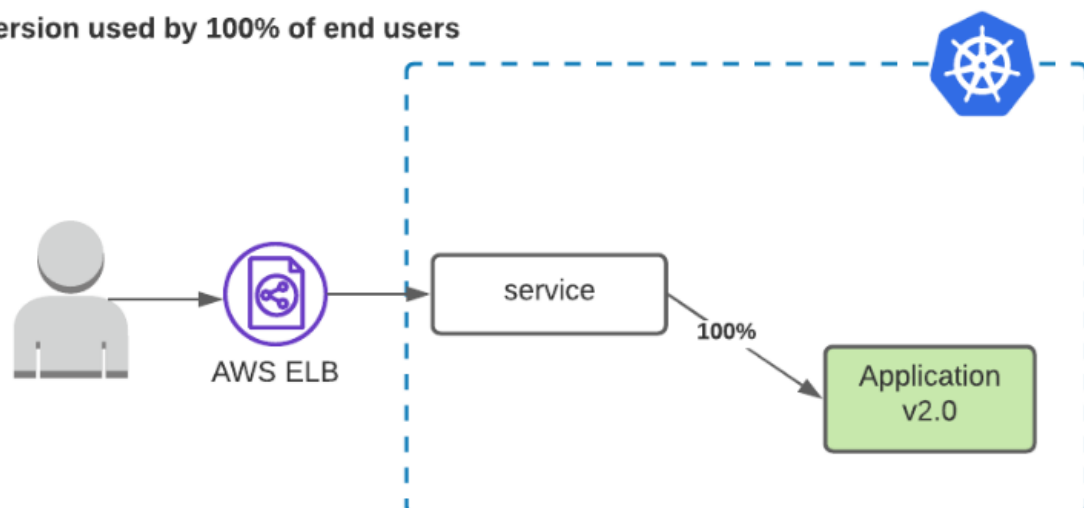
New Version used by 20% of end users



New Version used by 70% of end users



New Version used by 100% of end users





argo-rollouts

Project: default

Labels:

Status: Healthy Synced

Repository: <https://github.com/PacktPublishing/ArgoCD-in-Practice.git>

Target Revision: feat/ch06

Path: ch05/applications/argo-rollouts

Destination: in-cluster

Namespace: argo-rollouts

SYNC

REFRESH

DELETE



blue-green

Project: team

Labels:

Status: Suspended Synced

Repository: <https://github.com/spirosoik/argocd-rollouts-cicd.git>

Target Revisi...

Path: deployments/argo

Destination: in-cluster

Namespace: team-demo

SYNC

REFRESH

DELETE

Time



Phases

PreSync

Sync

PostSync

cd.yaml

on: push



Build & Push

45s



Deploy

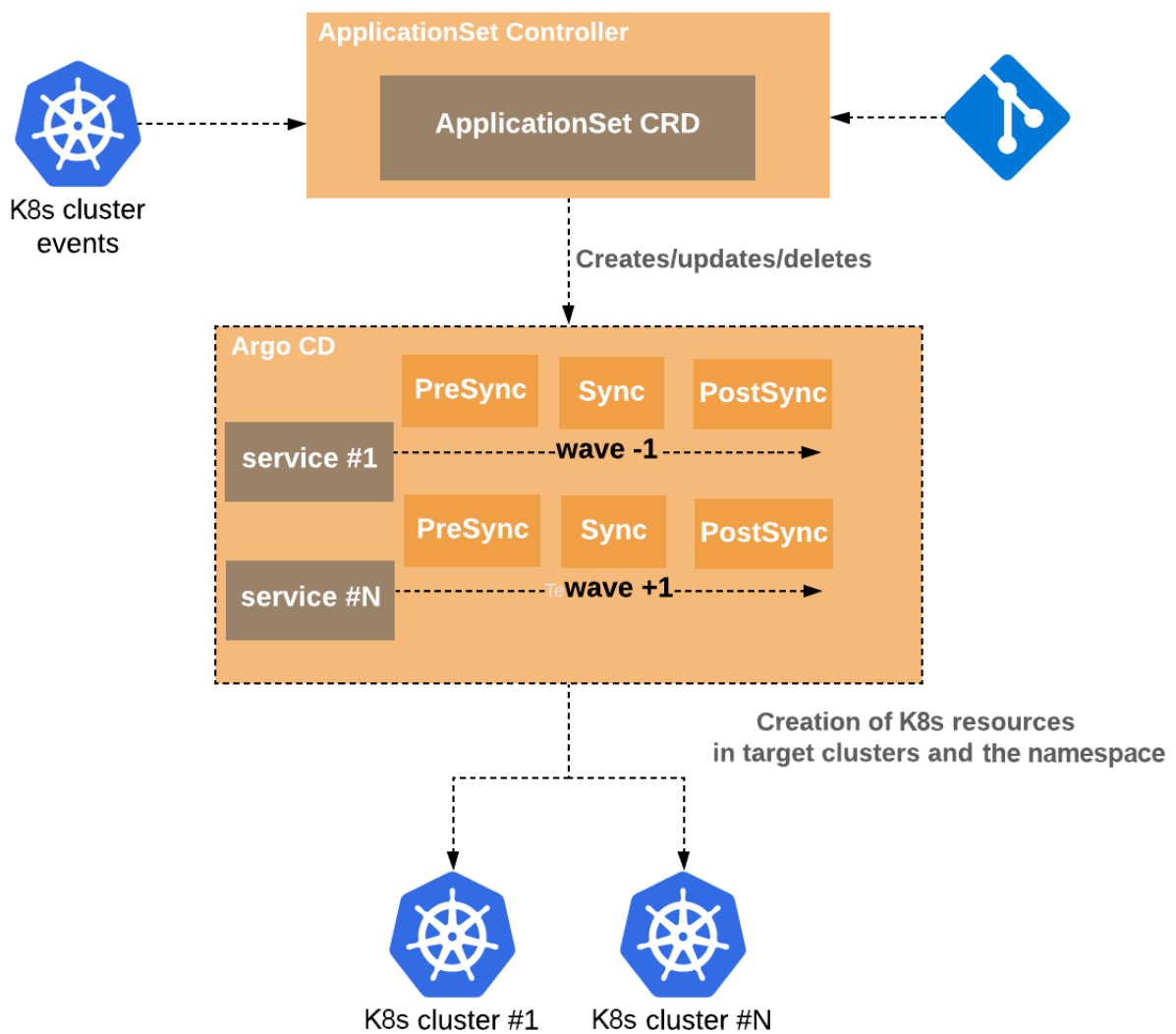
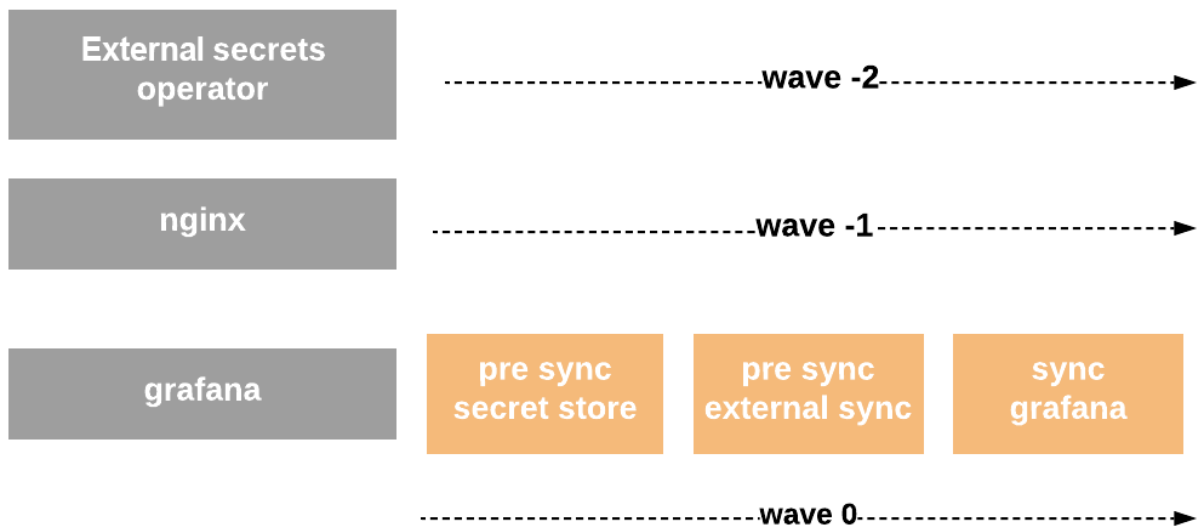
16s

Deploy

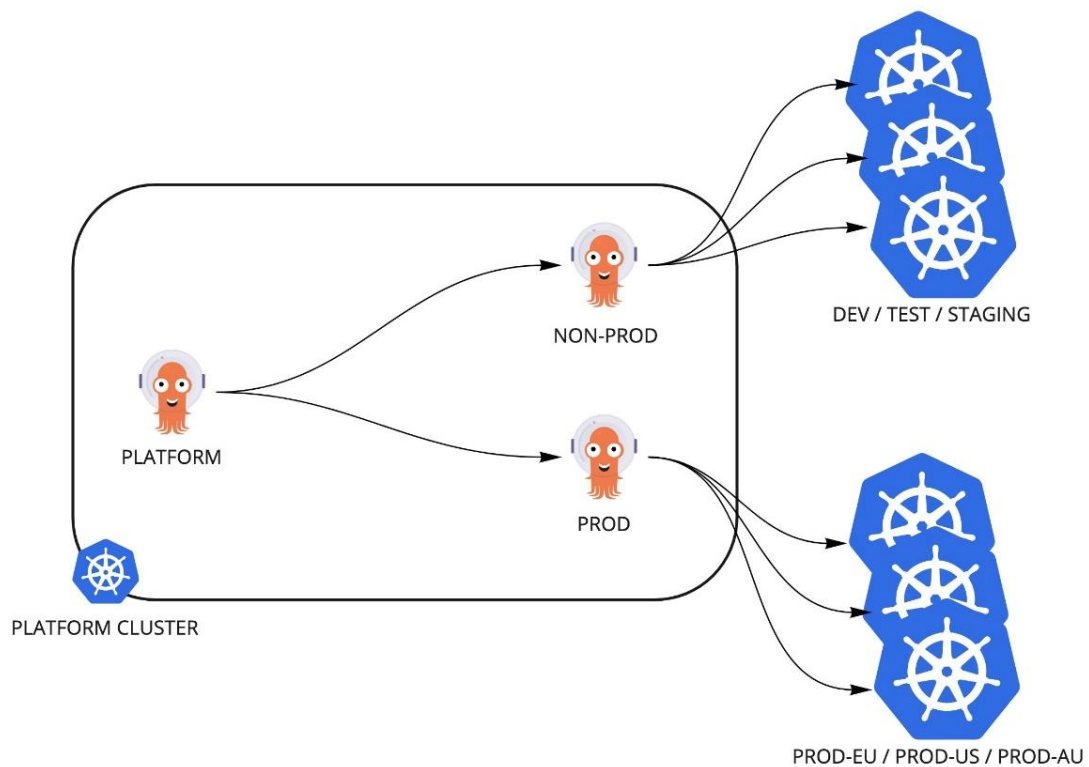
succeeded 5 minutes ago in 16s

- > ✓ Set up job
- > ✓ Checkout
- > ✓ Download Argo CD CLI
- > ✓ Update Docker Tag
- > ✓ Deploy Argo App
- > ✓ Integration Tests and Promote
- > ✓ Cleanup tests
- > ✓ Post Checkout
- > ✓ Complete job





Chapter 7: Troubleshooting Argo CD



Applications / [argocd-nonprod](#)

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

APP HEALTH Healthy CURRENT SYNC STATUS Unknown [MORE](#) main APP CONDITIONS 2 Errors

FILTERS

KINDS

KINDS

SYNC STATUS

☐ Synced

☐ OutOfSync

argocd-nonprod a minute

Chapter 8: YAML and Kubernetes Manifests (Parsing and Verification)

No images...

Chapter 9: Future and Conclusion

NAME	READY	STATUS	RESTARTS	AGE
app-f6c66b898-gxcmn	1/1	Running	0	4s
app-f6c66b898-ljxdq	1/1	Running	0	4s
gitops-agent-648cf56fc8-2fxpr	2/2	Running	0	12s