



From ::1 to prod

It is NAIS to be a developer at NAV



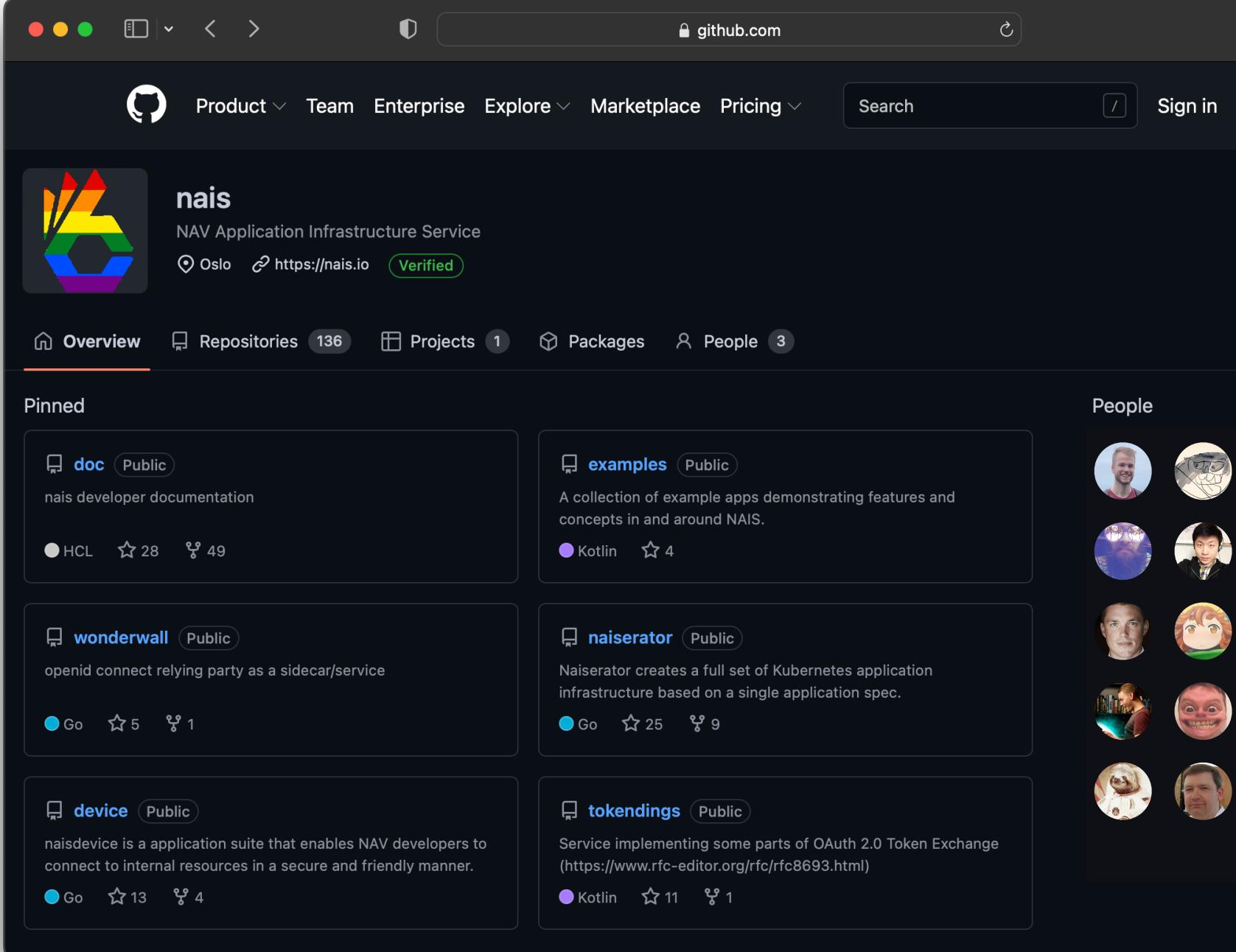


Hans Kristian Flaatten
Starefossen

Kubernetes Platform @[nais](#) and
@[navikt](#), Infrastructure and Docker
@[nodejs](#) Foundation  Previously
@[evry](#) @[Turistforeningen](#).



// NAV



The screenshot shows the GitHub repository page for the organization 'nais'. The page has a dark theme. At the top, there's a navigation bar with links for Product, Team, Enterprise, Explore, Marketplace, Pricing, a search bar, and a 'Sign in' button. The main header features the 'nais' logo (a colorful hexagonal icon) and the text 'NAV Application Infrastructure Service'. It includes location information ('Oslo'), a link to the website ('https://nais.io'), and a 'Verified' badge. Below the header, there are tabs for Overview, Repositories (136), Projects (1), Packages, and People (3). The 'Overview' tab is selected. The 'Pinned' section contains six repository cards:

- doc** Public: nais developer documentation. HCL, 28 stars, 49 forks.
- examples** Public: A collection of example apps demonstrating features and concepts in and around NAIS. Kotlin, 4 stars.
- wonderwall** Public: openid connect relying party as a sidecar/service. Go, 5 stars, 1 fork.
- naiserator** Public: Naiserator creates a full set of Kubernetes application infrastructure based on a single application spec. Go, 25 stars, 9 forks.
- device** Public: naisdevice is a application suite that enables NAV developers to connect to internal resources in a secure and friendly manner. Go, 13 stars, 4 forks.
- tokendings** Public: Service implementing some parts of OAuth 2.0 Token Exchange (<https://www.rfc-editor.org/rfc/rfc8693.html>). Kotlin, 11 stars, 1 fork.

On the right side of the page, there's a 'People' section showing small profile pictures of several individuals.

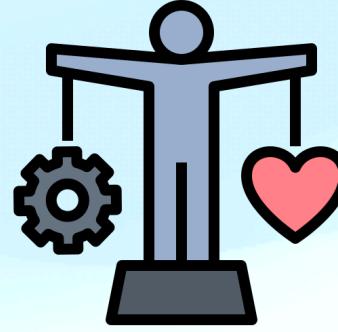
Why you should work @ NAV!



Common goal & purpose



Best together



Work-life balance



Freedom & responsibility



Hybrid work environment



Skilled colleagues

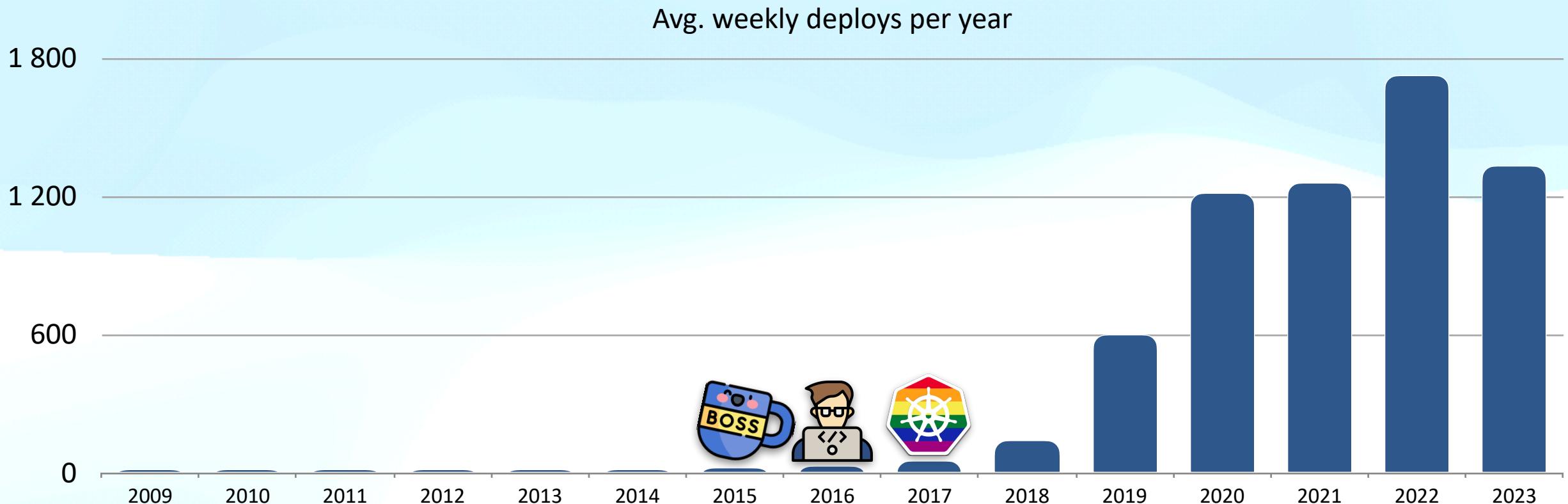


Right tools™



detsombetynoe.no

Then something happened...



Some NAIS stats

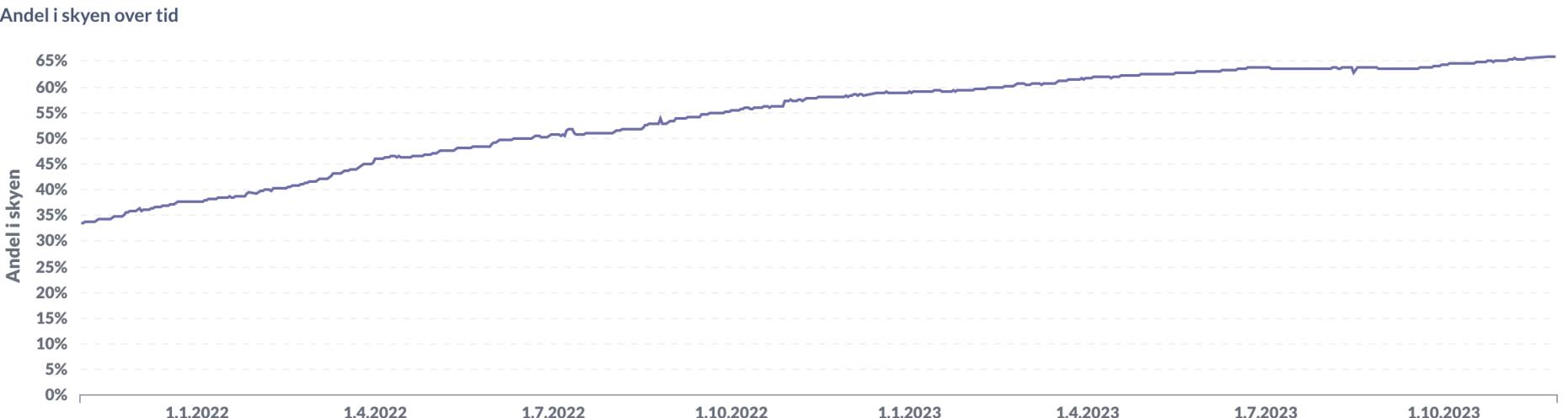
1 684

Apper i prod ⓘ



66%

Andel i GCP ⓘ



Development practices



Autonomy



Sharing

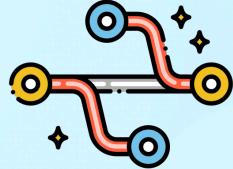


No reinventing
the same wheel

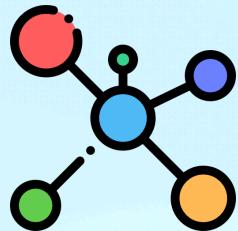


Easy way → right way

Architecture principles



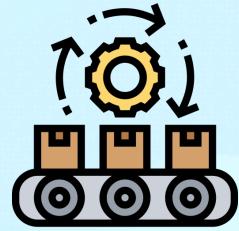
One code base
in source control



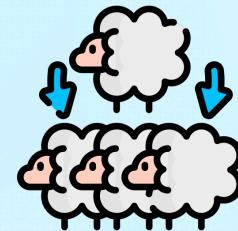
Declare
dependencies



Config in
environment



Build → Test
→ Run



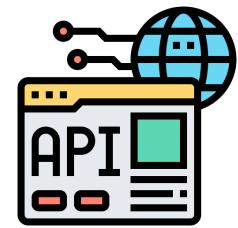
Horizontal
scaling



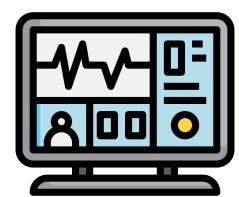
Fast startup
and safe exit



Test and Prod
parity



API-first



Built in
telemetry



Authentication
and authorisation

A screenshot of a web browser window displaying the NAIS Teams application. The URL in the address bar is `teams.nav.cloud.nais.io`. The page title is "NAIS Teams". On the right side of the header, there is a user profile for "Hans Kristian Flaatten" and a "Logout" button. Below the header, the main content area has a title "My teams" and a "Create" button. There is also a link "Show all teams". A table lists five teams with their identifiers and purposes:

Identifier	Purpose
aura	The NAIS platform team
frontendplattform	Frontendplattform
nais-verification	A place for NAIS to run verification workloads
onboarding	temporary team for nais onboarding
teknologiredaksjonen	Redaksjon for Teknologiradaren, Teknisk demo mm

Three files to rule them all



Dockerfile

```
FROM gradle:jdk17 AS build
WORKDIR /home/gradle/src

COPY --chown=gradle:gradle
gradlew *.gradle *.gradle.kts
./
COPY --chown=gradle:gradle
gradle ./gradle/
RUN ./gradlew --no-daemon
assemble || true

COPY --chown=gradle:gradle
src ./src/
RUN ./gradlew --no-daemon
assemble
```



deploy.yaml

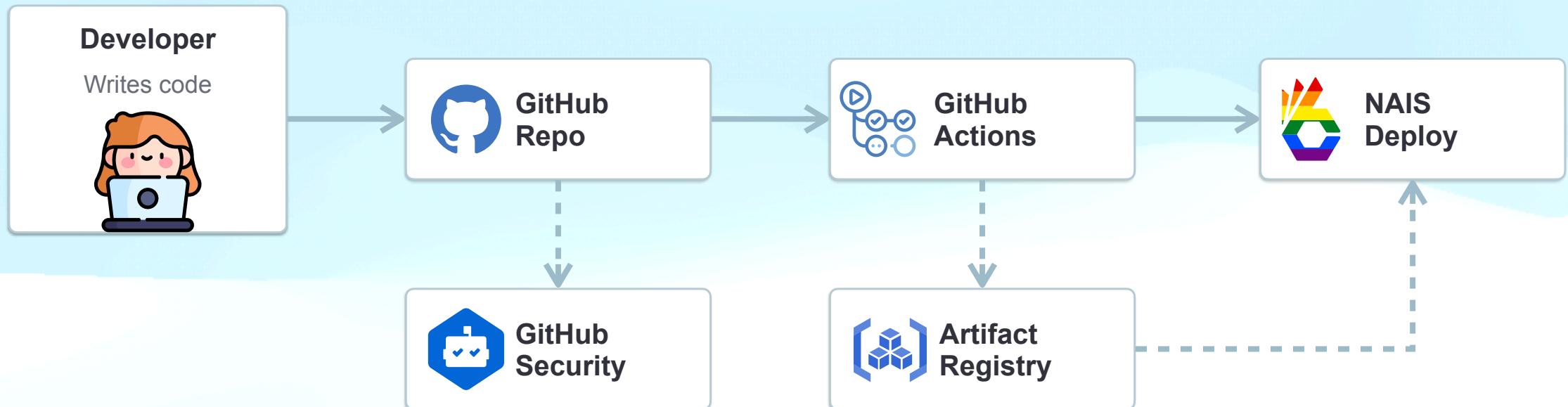
```
deploy:
  name: Deploy to gcp
  needs: [build, docker]
  steps:
    - uses: nais/deploy/actions/
      deploy@v1
      env:
        APIKEY: ${{ secrets.NAIS_FRONTEND_DEPLOY_
          APIKEY }}
        CLUSTER: dev-gcp
        RESOURCE: .nais/nais.yaml
        IMAGE: ${{ env.IMAGE }}
```



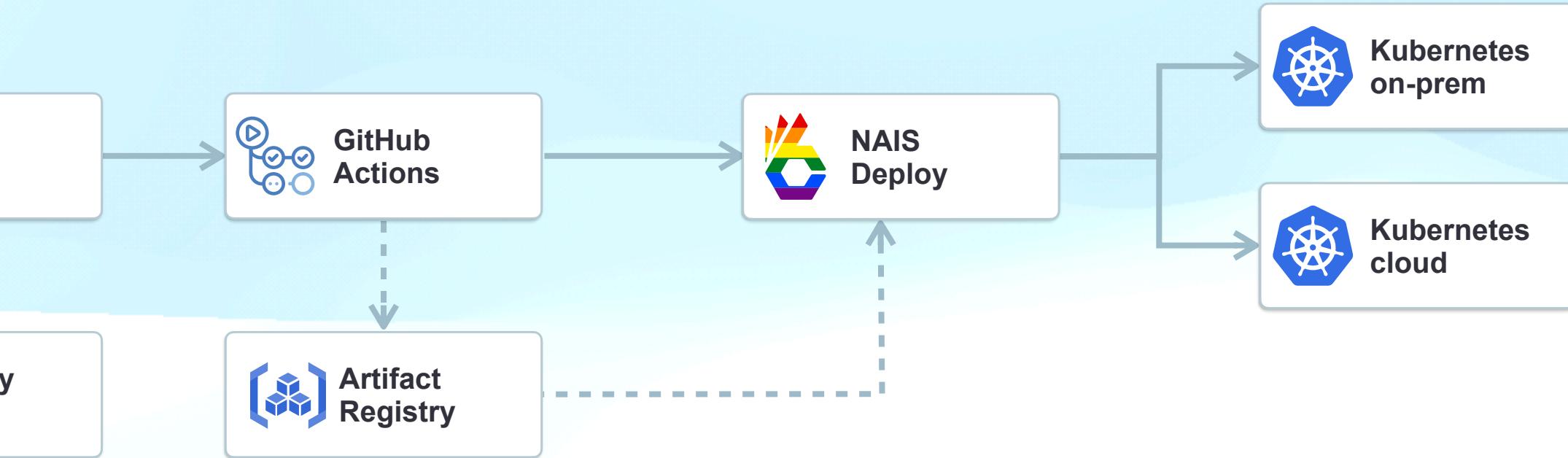
nais.yaml

```
apiVersion: "nais.io/v1alpha1"
kind: "Application"
metadata:
  name: "min-app"
  namespace: "mitt-team"
  labels:
    team: "mitt-team"
spec:
  image: "ghcr.io/navikt/app"
  ...
```

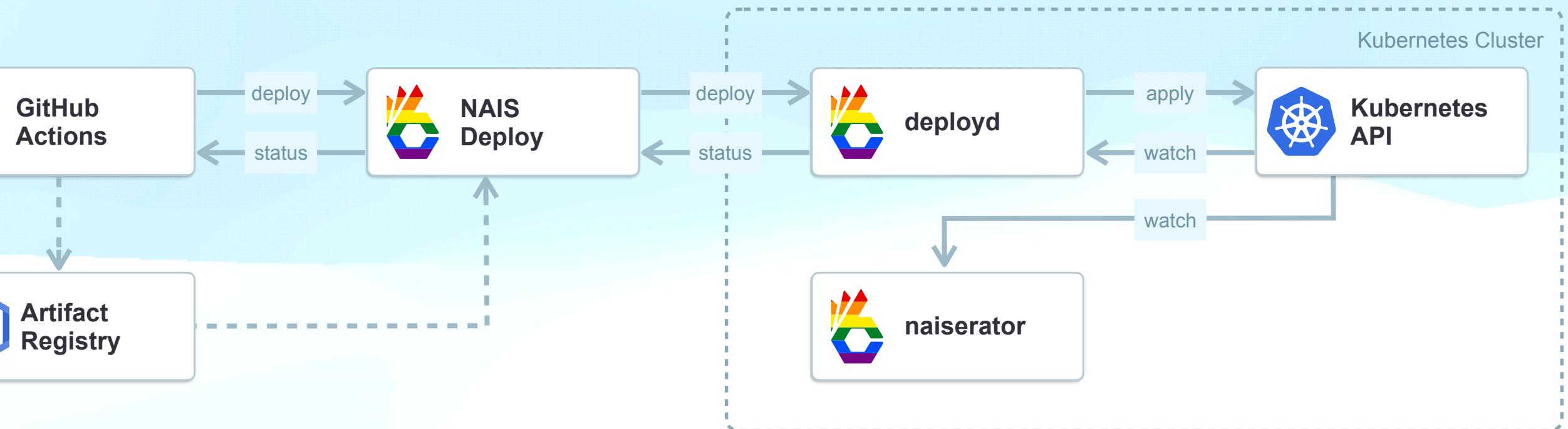
From ::1 to prod



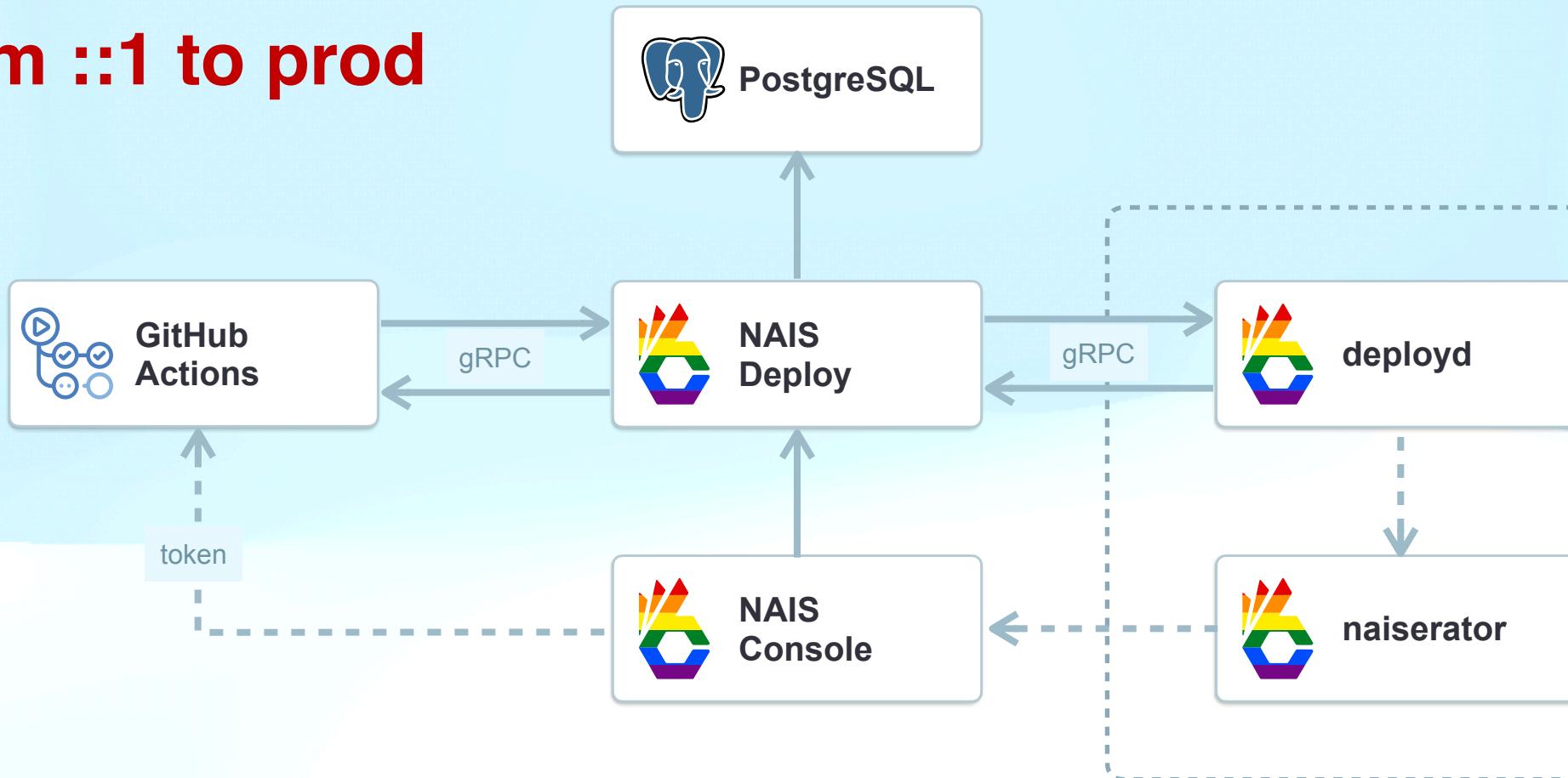
From ::1 to prod



From ::1 to prod



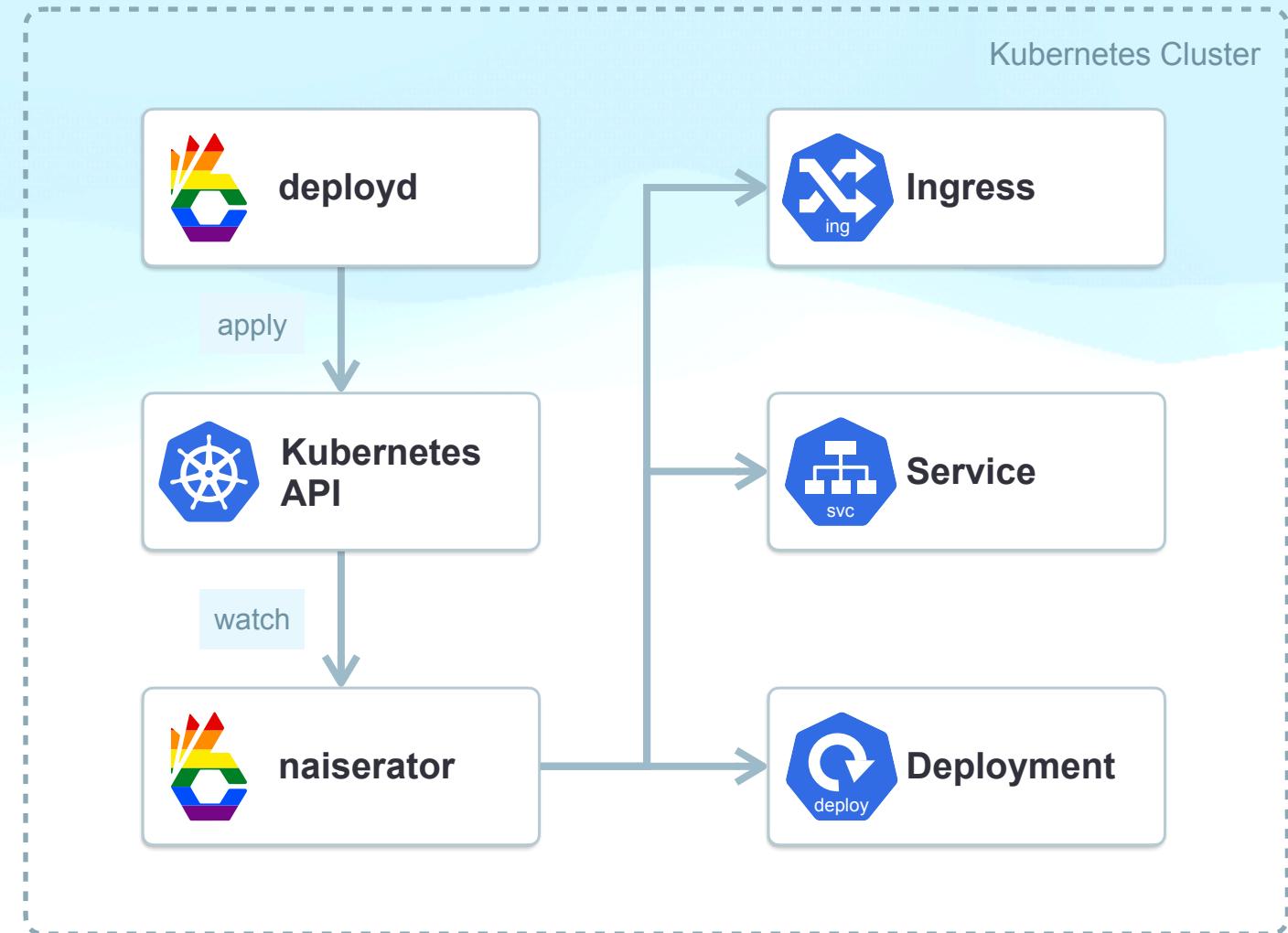
From ::1 to prod



From ::1 to prod

● ● ● nais.yaml

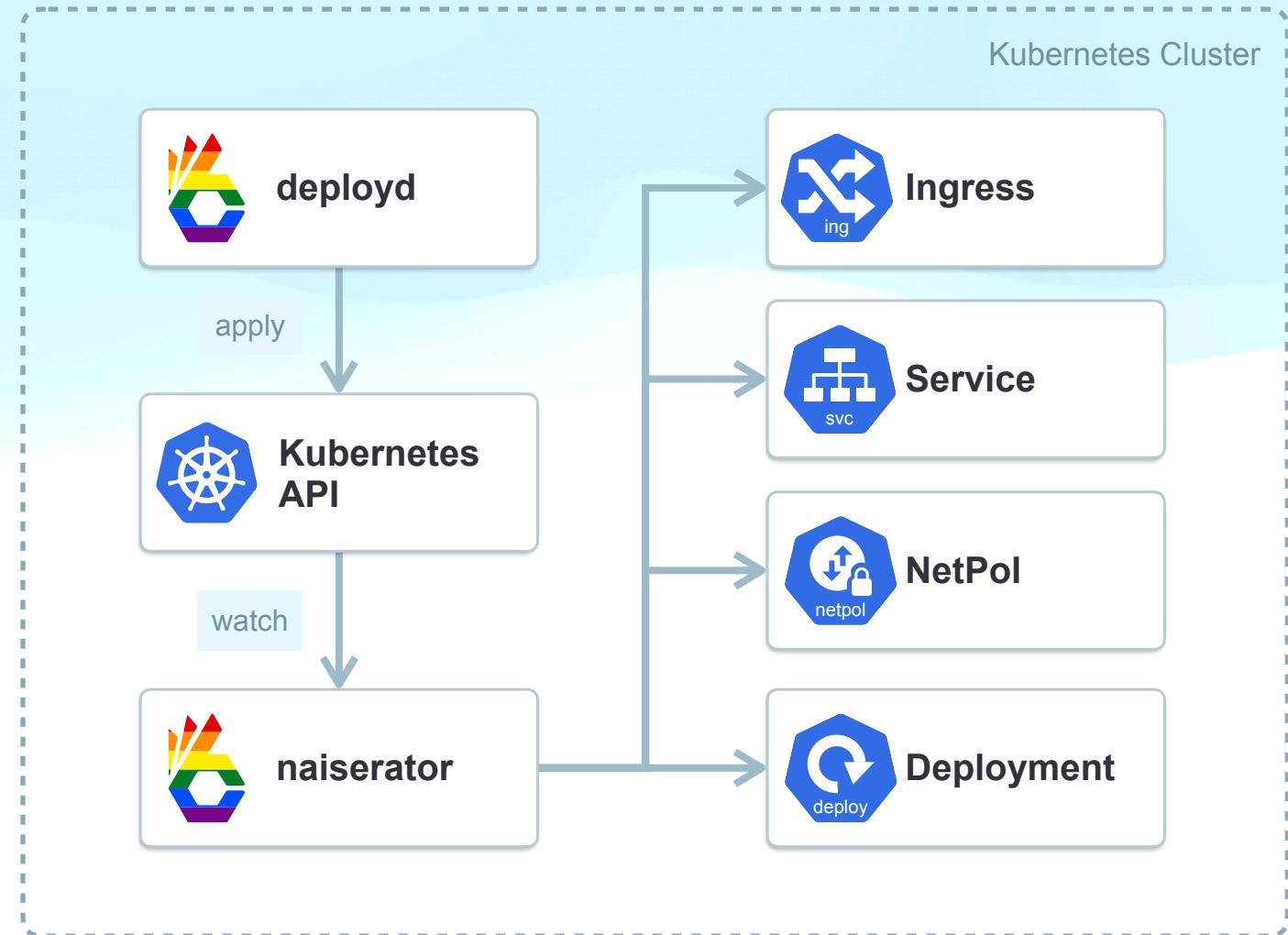
```
apiVersion: "nais.io/v1alpha1"
kind: "Application"
metadata:
  name: "app-a"
  namespace: "team-a"
  labels:
    team: "team-a"
spec:
  image: "ghcr.io/navikt/app-a"
  ingress:
  - "https://app-a.nav.no"
```



From ::1 to prod

● ● ● nais.yaml

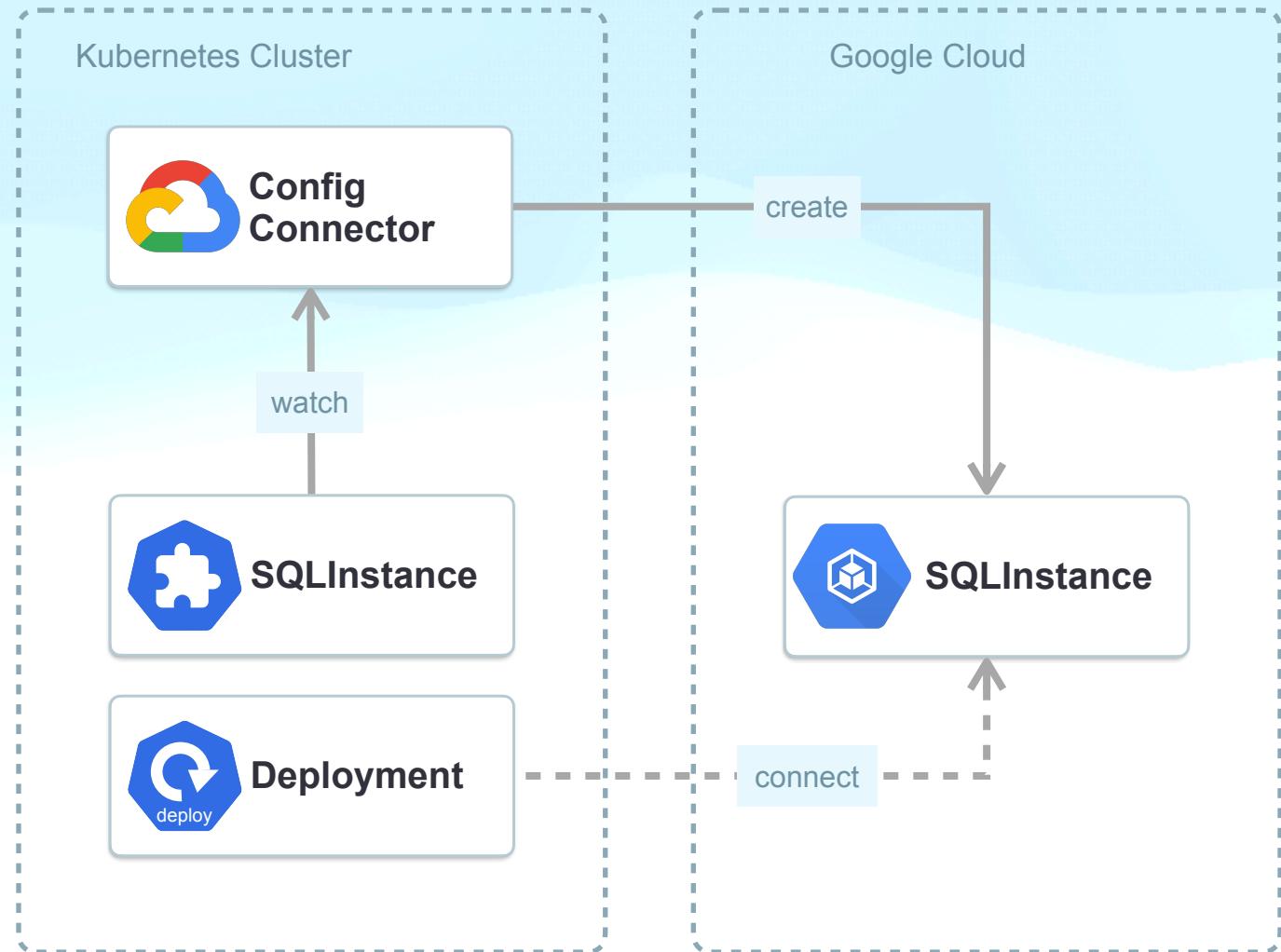
```
apiVersion: "nais.io/v1alpha1"
kind: "Application"
metadata:
  name: "app-a"
  namespace: "team-a"
  labels:
    team: "team-a"
spec:
  ...
accessPolicy:
  outbound:
    rules:
      - application: "app-b"
```



From ::1 to prod

nais.yaml

```
apiVersion: "nais.io/v1alpha1"
kind: "Application"
metadata:
  name: "app-a"
  namespace: "team-a"
  labels:
    team: "team-a"
spec:
  ...
gcp:
  sqlInstances:
    - type: "POSTGRES_14"
      databases:
        - name: "min-db"
```



From ::1 to prod



nais.yaml

```
apiVersion: "nais.io/v1alpha1"
kind: "Application"
metadata:
  name: "app-a"
  namespace: "team-a"
  labels:
    team: "team-a"
spec:
  ...
  gcp:
    sqlInstances:
      - type: "POSTGRES_14"
        databases:
          - name: "min-db"
```



liberator



unleaserator



azureator



kafkarator



bqrator



digdirator



naiserator



krakend



aivenator

And more...

 kube
builder



What more can I get?



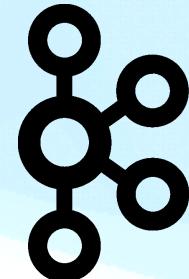
PostgreSQL



Cloud Storage



Bigquery



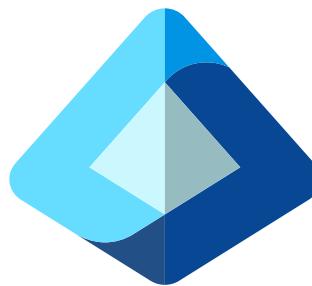
Kafka



OpenSearch



ID-porten



EntraID



Alarmer

Console Deployes Teams Docs Hans Kristian Flaatten

My teams

- onboarding**
temporary team for nais onboarding >
- aura**
The NAIS platform team >
- frontendplattform**
Frontendplattform >
- nais-verification**
A place for NAIS to run verification workloads >
- teknologiredaksjonen**
Redaksjon for Teknologiradaren, Teknisk demo mm >

My teams latest deploys

Team	App	Env	When
nais-verification	nais-deploy-canary	prod-gcp	20 minutes ago
nais-verification	nais-deploy-canary	prod-fss	20 minutes ago
nais-verification	nais-deploy-canary	dev-gcp	20 minutes ago
nais-verification	nais-deploy-canary	dev-fss	20 minutes ago
nais-verification	nais-deploy-canary	ci-gcp	20 minutes ago
nais-verification	nais-deploy-canary	ci-fss	20 minutes ago
nais-verification	nais-deploy-canary	prod-gcp	25 minutes ago
nais-verification	nais-deploy-canary	prod-fss	25 minutes ago
nais-verification	nais-deploy-canary	dev-gcp	25 minutes ago
nais-verification	nais-deploy-canary	dev-fss	25 minutes ago

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frontendplattform

Apps Jobs Members Deployes Cost Utilization Vulnerabilities Settings

Cost

November (estimated): €22.19
(+88.05%)
October: €12.19

Name ↓	Env ↑	Instances	Deployed
⚠ sentiment-api	dev-gcp	1 / 1 running	about 23 hours ago
⚠ shop-backend	dev-gcp	1 / 1 running	about 23 hours ago
⚠ shop-frontend	dev-gcp	1 / 1 running	about 3 hours ago
⚠ sitemaperator	dev-gcp	1 / 1 running	10 months ago
⚠ sitemaperator	prod-gcp	1 / 1 running	about 2 months ago

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[frontendplattform / dev-gcp / sentiment-api](#)

Overview Status • Logs Deploys Manifest Cost Utilization

Status ⚠
Application is not nais.
[1 issue detected.](#)

Cost
November (estimated): €0.10

Image [Copy image name](#)
[Deployed](#) about 23 hours ago by [Starefossen](#).

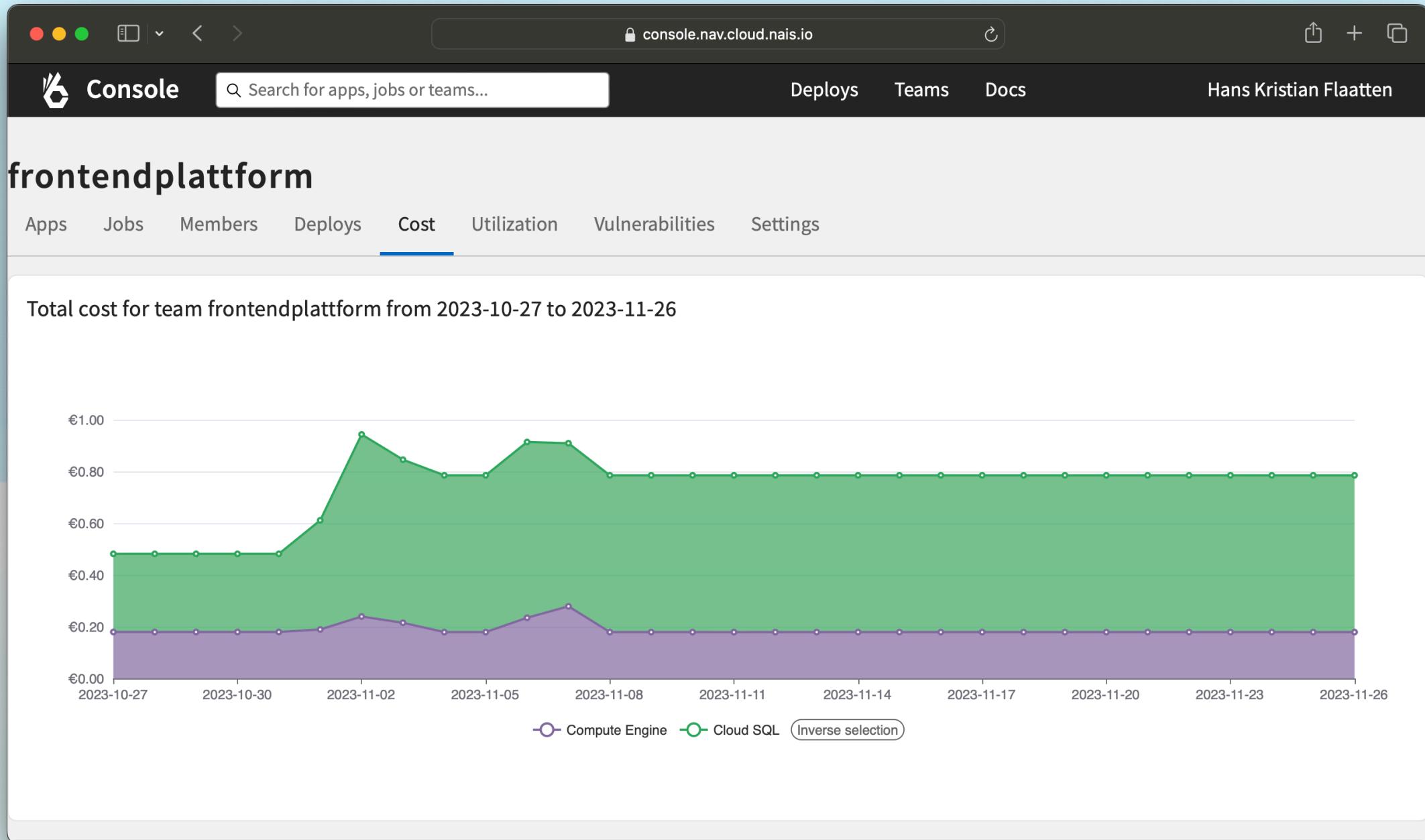
Registry
ghcr.io
Name
sentiment-api

Repository
nais/examples
Tag
20231127-172931-57a41ab

Vulnerabilities
⚠ No data found in dependencytrack. [How to fix](#)

Instances
min: 1 max: 1

Name	CPU request	Memory request	Restarts	Status	Created	Message
sentiment-api-65fd95dfb7-7sq77	10m	256Mi	0	RUNNING	about 23 hours ago	
Total:	0.01 CPUs (13.52%)	256Mi (139.95%)				



En podcast med
Audun Fauchald Strand / Hans Kristian Flaatten

Episoder

21. november 2023

2: Den med Skatteetaten

I denne episoden snakker Hans Kristian Flaatten og Audun Strand med Are Vattekær fra Skatteetaten (Skatt) om deres erfaring med å bygge applikasjonsplattform med Kubernetes og veien videre ut i sky.

▶ [Lytt](#) / [Vis notater](#)

8. november 2023

1: Den med politiet - PIT

I denne episoden snakker Hans Kristian Flaatten og Audun Strand med Erlend Wiig og Roger Karlsson fra Politiets IT-enhet (PIT).

▶ [Lytt](#) / [Vis notater](#)

Plattformpodden

En podcast om applikasjonsplattformer og teamene som bygger de.

■ [Om podcasten](#)

I denne podcasten snakker Hans Kristian Flaatten og Audun Fauchald Strand med

KCD Oslo 2024

KCD Norway

Jan 24, 2024 at 9:00 AM – Jan 25, 2024 at 6:00 PM

In-person event

KCD (Kubernetes and Cloud Native Community Days) is taking over Norway and the beautiful city of Oslo for the first time in January 2024! Join us for two days of learning, experience sharing and community building. The tickets are now available!