CNOE & Siemens' One Software Engineering System

Standardizing with the community

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Why One Software Engineering System?

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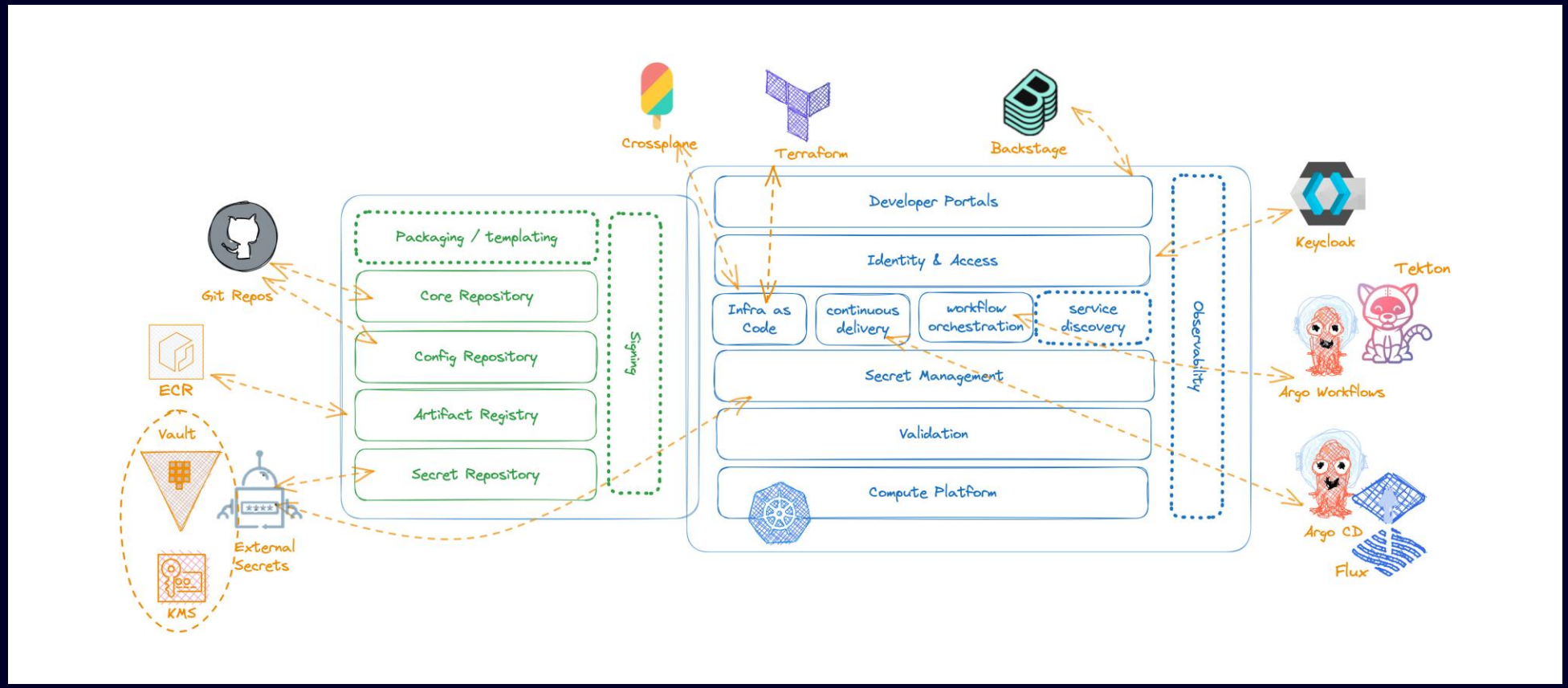
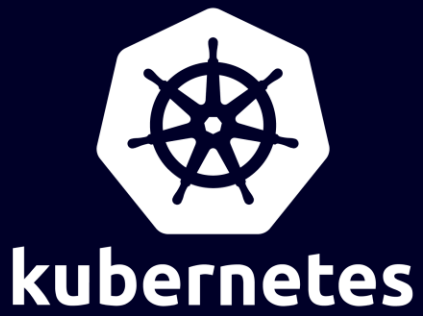
CNOE: Siemens is not alone with this challenge



Common OSS Foundation



Container runtime +
Universal control plane

GitOps Engine

Developer Portal

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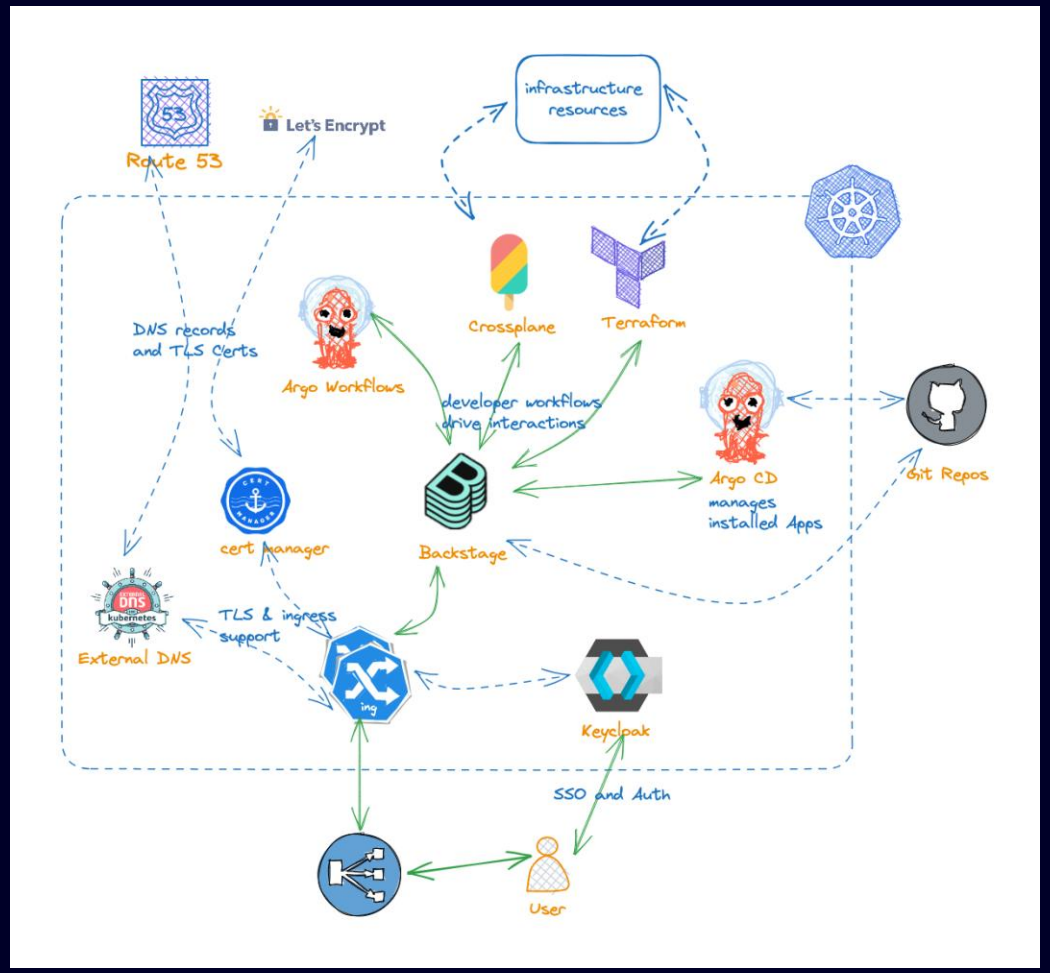
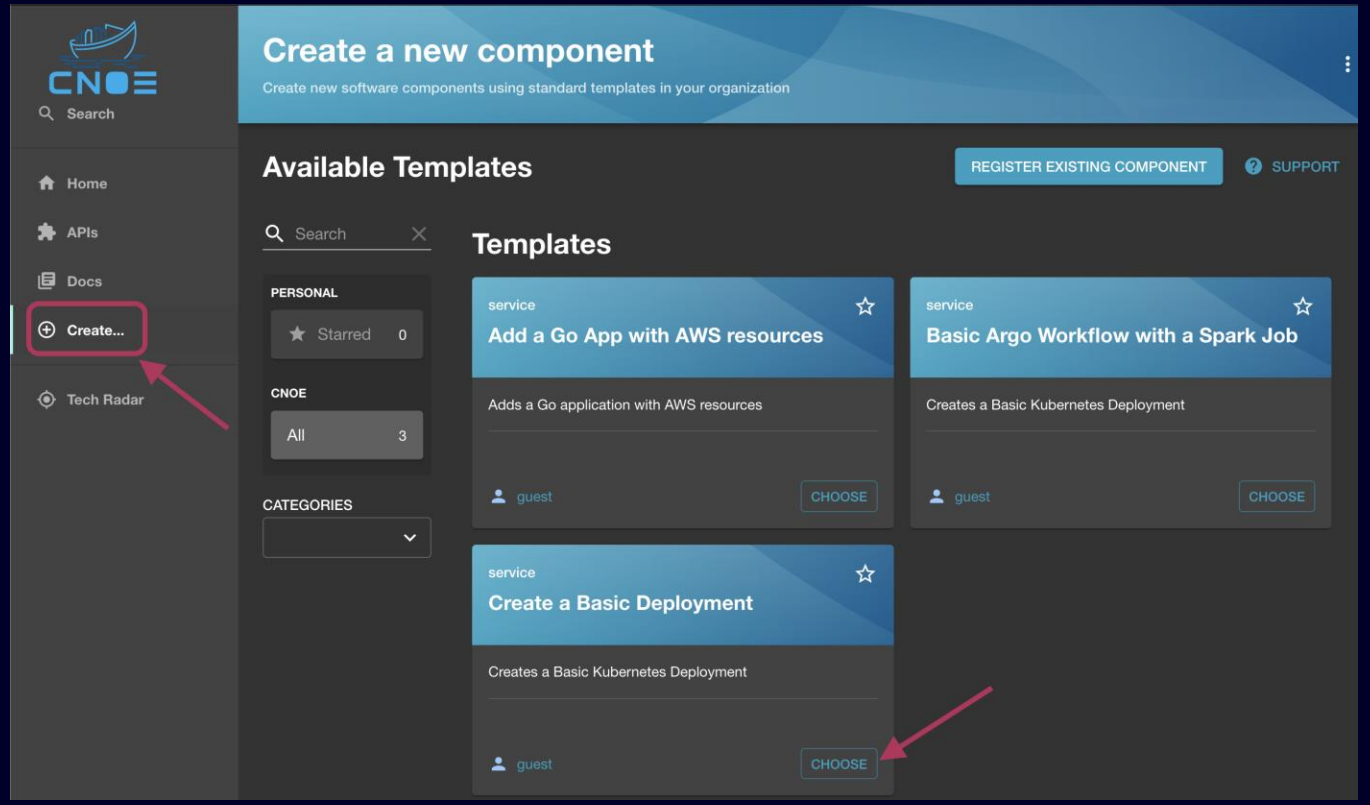
Reference Implementations





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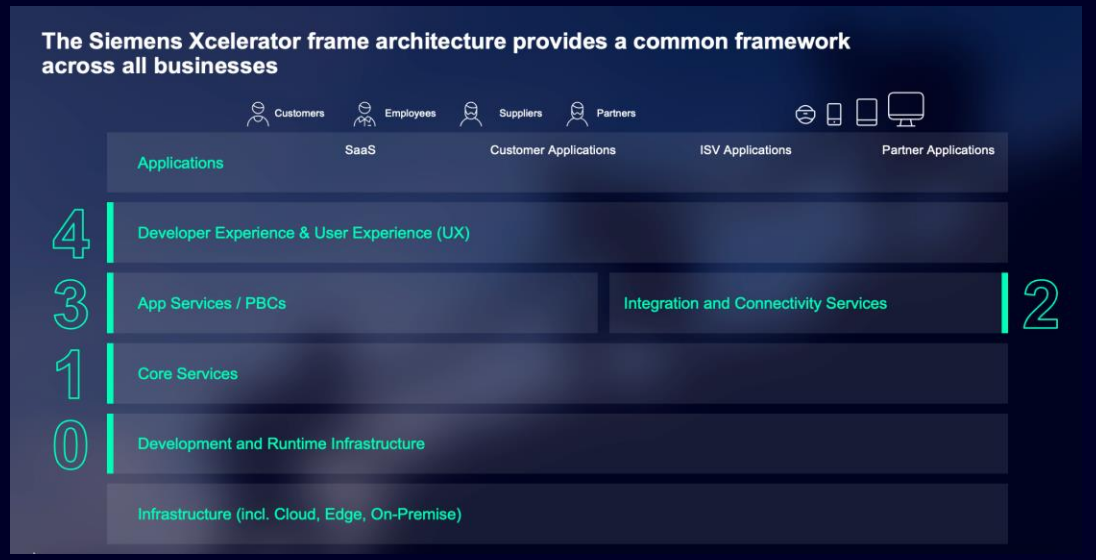
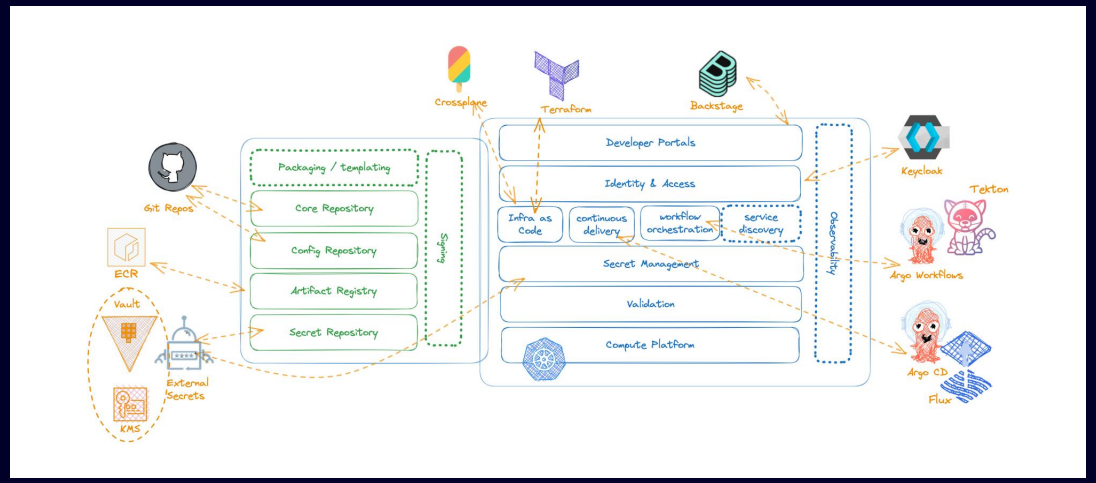
Siemens using CNOE for OSES

- Siemens Foundational Services provide a set of services for development of modern, flexible, open and cybersecure SaaS and Edge Applications.
- They are sorted in 5 pillars
  - Pillar 0: Development & Runtime Infrastructure
  - Pillar 1: Core Services
  - Pillar 2: Integration and Connectivity Infrastructure
  - Pillar 3; App Services
  - Pillar 4: Developer Experience and UX

- OSES is using off-the-shelf technology as well as Pillar 0 and Pillar 4 foundational services to define one software engineering system for Siemens while closely collaborating with other CNOE members





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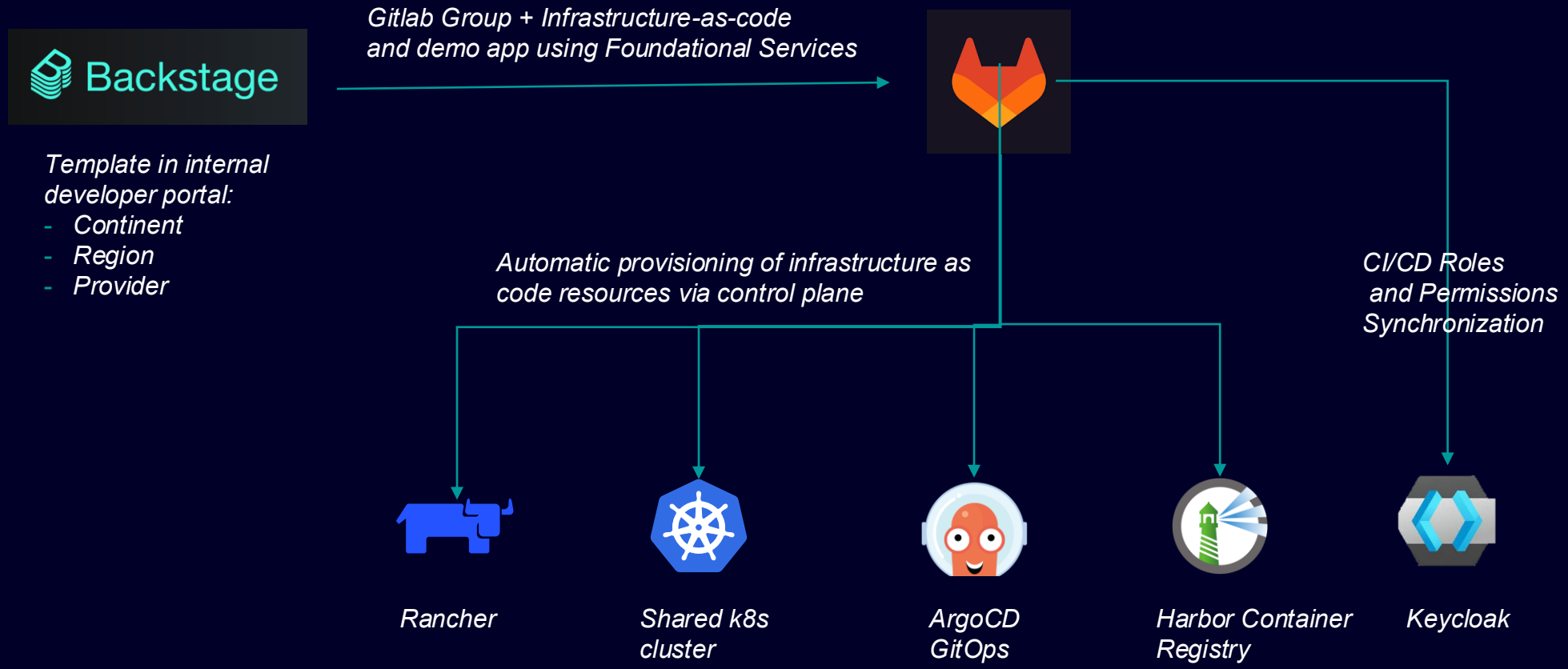
Example: Infrastructure rollout using foundational services



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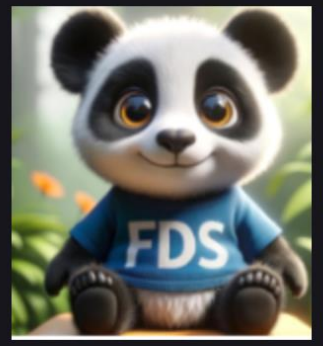
Example: code.siemens.com/to-do-product

Infrastructure Definition for `to-do-product`



TL;DR: This repository creates a set of shared services (**Kubernetes namespaces on a shared cluster**, **container registry**, and **ArgoCD**) for your development team.

> 🎉 **Note**: After the pipeline completes, you will find the list of provisioned resources in the
>
> 🔐 infrastructure.md file.

We also generate a Backstage catalog entry for you.

> 📑 **Catalog Info**: *(note: this is generated asynchronously)*
>
> - to-do-product Backstage Domain
> - to-do-product Backstage Infrastructure System

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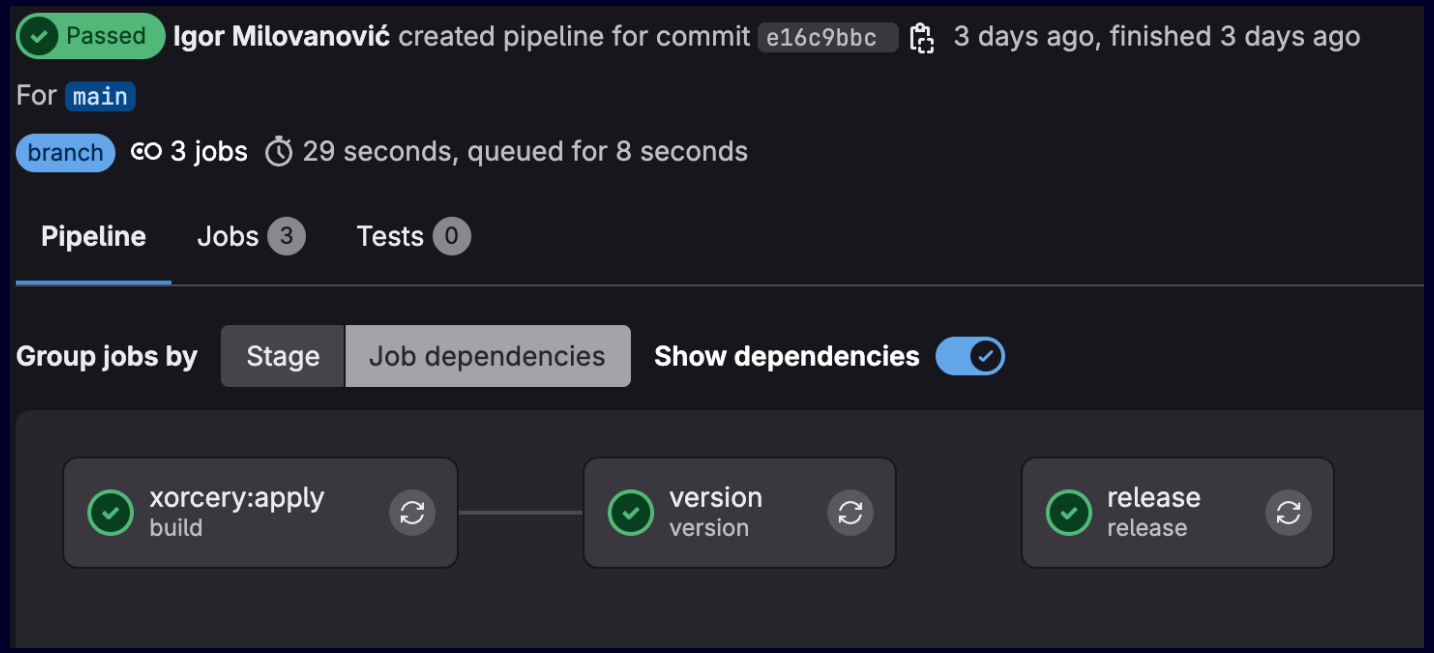
CI/CD Pipeline Infrastructure



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Provisioned Resources

Infrastructure Configuration

These are the access URLs and configuration settings for the infrastructure. The access rights to the infrastructure are synchronized with the access rights on this GitLab group.

Infrastructure URLs

Environment	Cloud Provider	Region	Service	URL
STAGE	AWS	🇺🇸 US	us-aws-to-do-product-rancher-cluster	https://k8s.qa.us[redacted]ns.com/dashboard/c/c-fv7cc
DEV	AWS	🇺🇸 US	us-aws-to-do-product-rancher-cluster	https://k8s.qa.us-[redacted]siemens.com/dashboard/c/c-fv7cc
DEV	AWS	🇺🇸 US	us-aws-to-do-product-argocd	https://argocd[redacted].kaas.sws.siemens.com
STAGE	AWS	🇺🇸 US	us-aws-to-do-product-argocd	https://argocd[redacted]kaas.sws.siemens.com
HARBOR	N/A	🇺🇸 US	us-to-do-product-harbor-project	https://harbo[redacted]-1.kaas.sws.siemens.com/harbor/projects/11067

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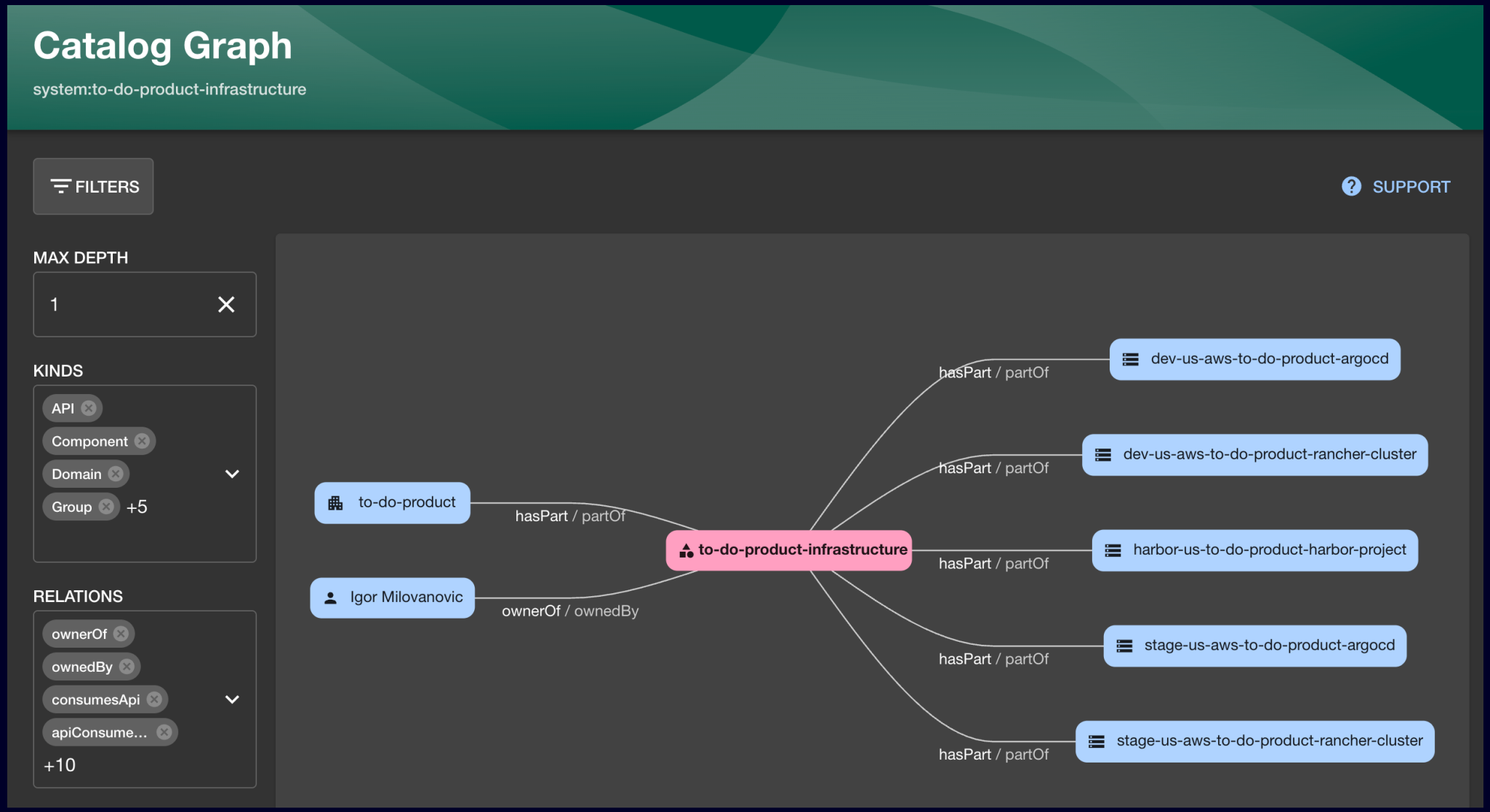
Catalog Entry in Backstage



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Calls to action, learn more

Adopt & Discover (internally)

- Start using the OSES developer portal internally
- Experiment with CNOE and the industry standard OSS stacks it creates

Contribute / Inner-source

- OSES development is transparent and inner-source.
- Increase code discovery and inner-source with standardized toolchain.

CNOE

https://cnoe.io
https://github.com/cnoe-io

Join SIGs:

- idp-builders
- agentic-ai

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