

The SVA logo consists of the letters 'SVA' in a bold, white, sans-serif font, positioned on a black rectangular background. This background is part of a larger blue and black geometric shape in the top right corner of the slide.

SVA

02/02/2026

CfgMgmtCamp 2026 – Ansible Track

Building an Infrastructure Automation Platform

Agenda

1

Introduction & Motivation

2

Platform Engineering &
Principles

3

Infrastructure Developer
Platform

4

Demo & Lessons Learned

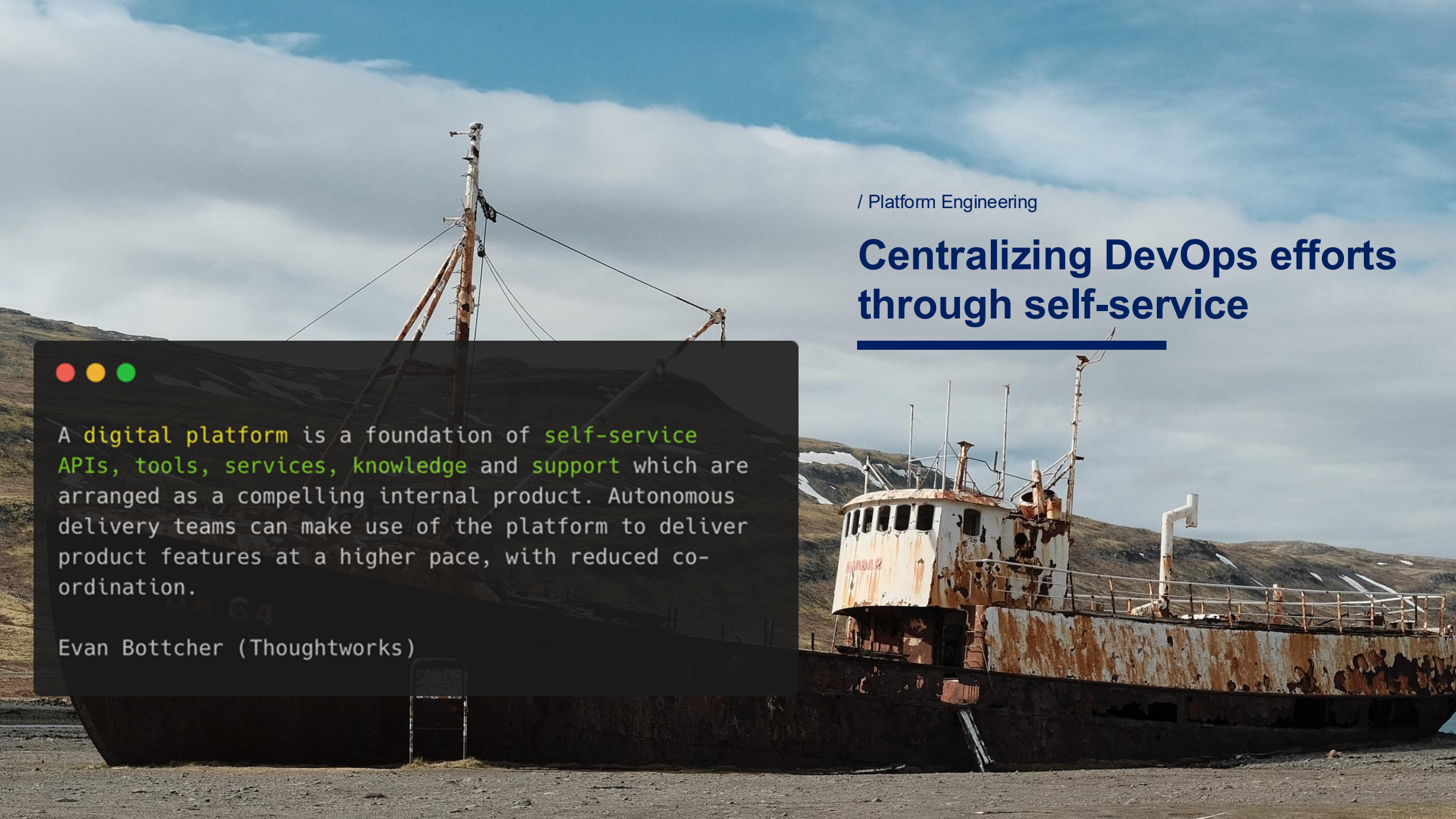
Whoami



Niklas Werker (he/him)

- 📍 Cologne, Germany
- 🏢 SVA System Vertrieb Alexander GmbH
- 👤 DevOps: Infrastructure Automation
- First Ansible Playbook: 2017

• nwerker @   A N S I B L E

A large, rusted shipwreck, possibly a fishing vessel, is beached on a dark, pebbly shore. The ship's hull is heavily corroded, showing a mix of brown, orange, and white. The superstructure is also rusted, with some windows visible. The ship is positioned diagonally across the frame. In the background, there are low, grassy hills under a sky with scattered white clouds. The overall mood is one of decay and abandonment.

/ Platform Engineering

Centralizing DevOps efforts through self-service



A **digital platform** is a foundation of **self-service APIs, tools, services, knowledge** and **support** which are arranged as a compelling internal product. Autonomous delivery teams can make use of the platform to deliver product features at a higher pace, with reduced co-ordination.

Evan Bottcher (Thoughtworks)

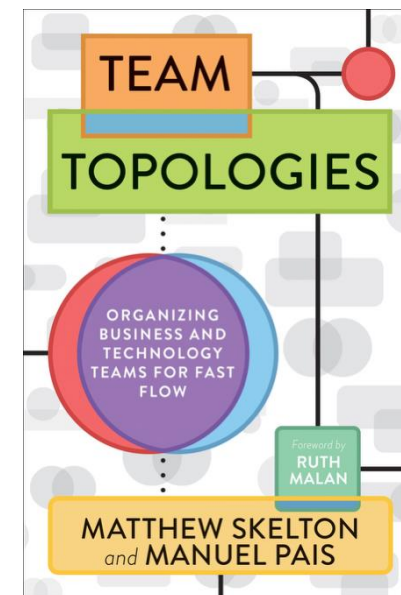
Timeline

- 2010s – FAANG Companies build the first platforms
- 2018 – Evan Bottcher Blogpost
- 2019 – Team Topologies Book is released



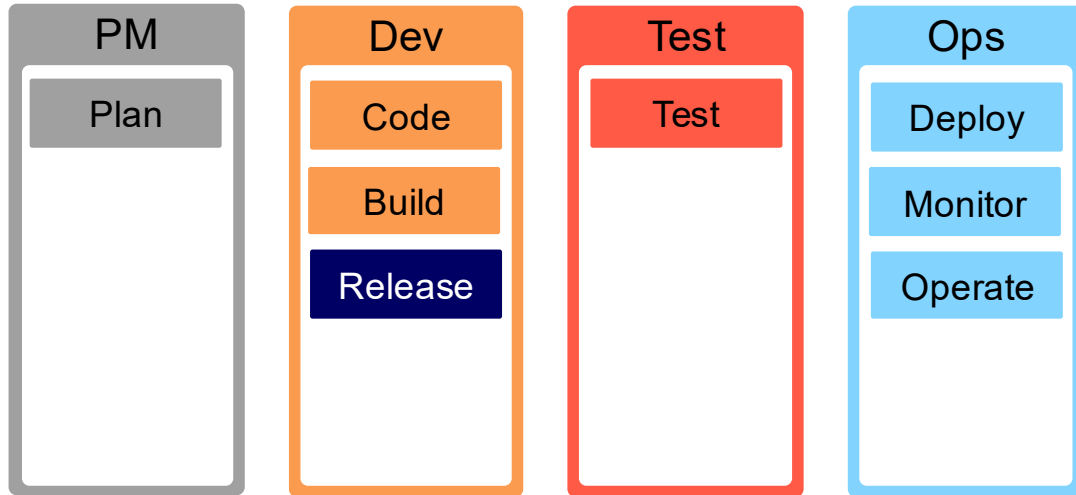
```
[0]rganizations which design systems (in the broad sense used here) are constrained to produce designs which are copies of the communication structures of these organizations.
```

- 2020 – Backstage is accepted by the CNCF as project
- ongoing – People are not really sure what Platform Engineering is

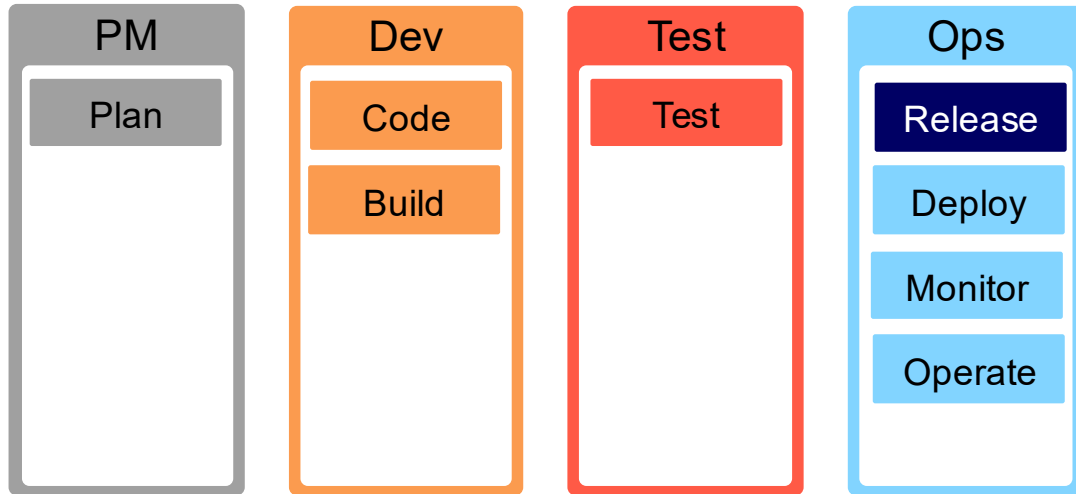


DevOps

Product A

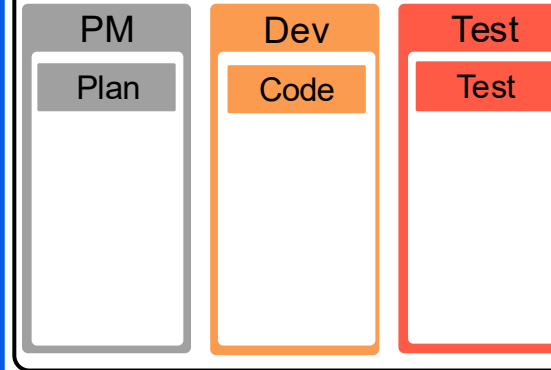


Product B

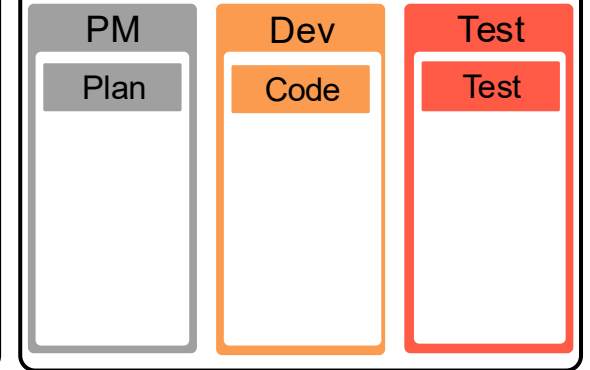


Platform Engineering

Product A



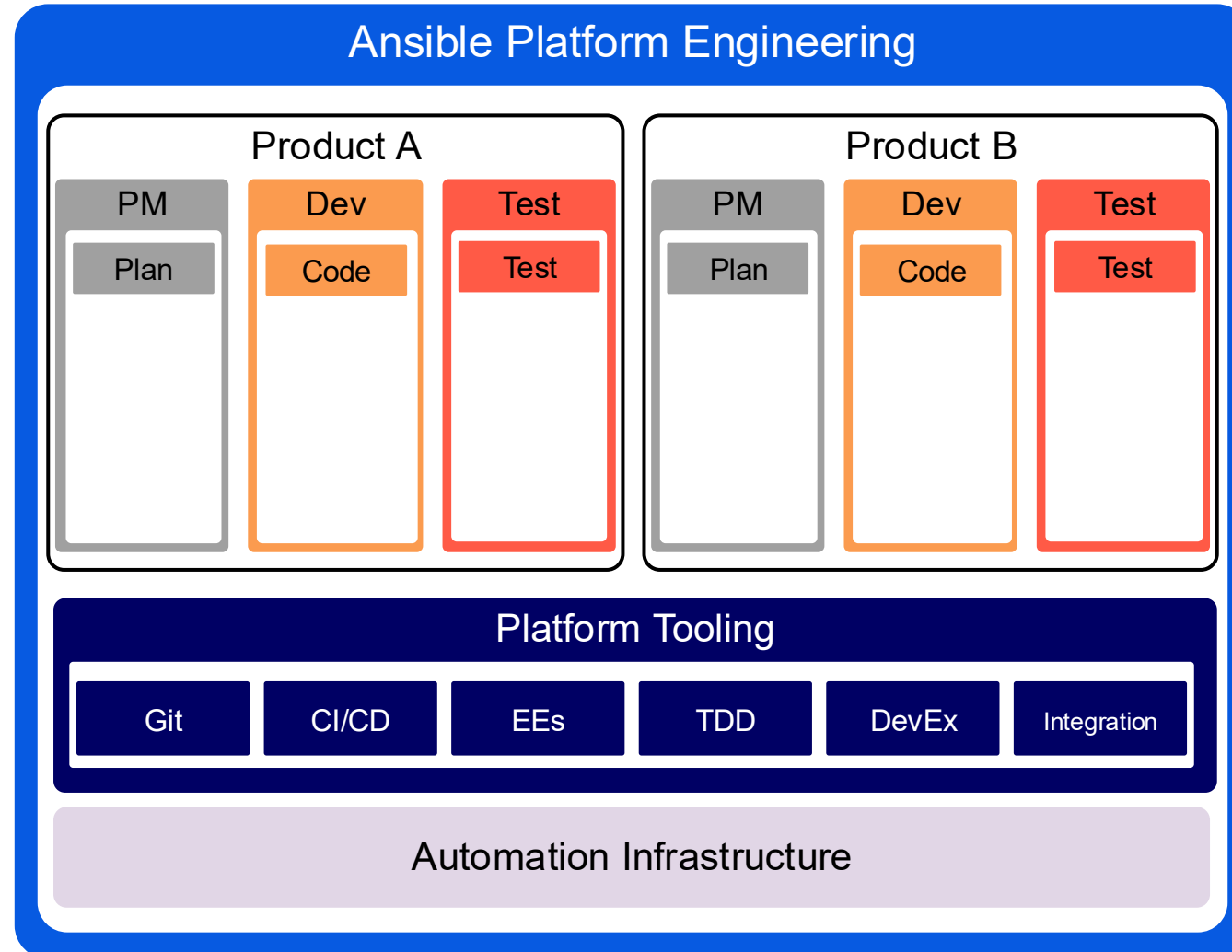
Product B



Platform Tooling



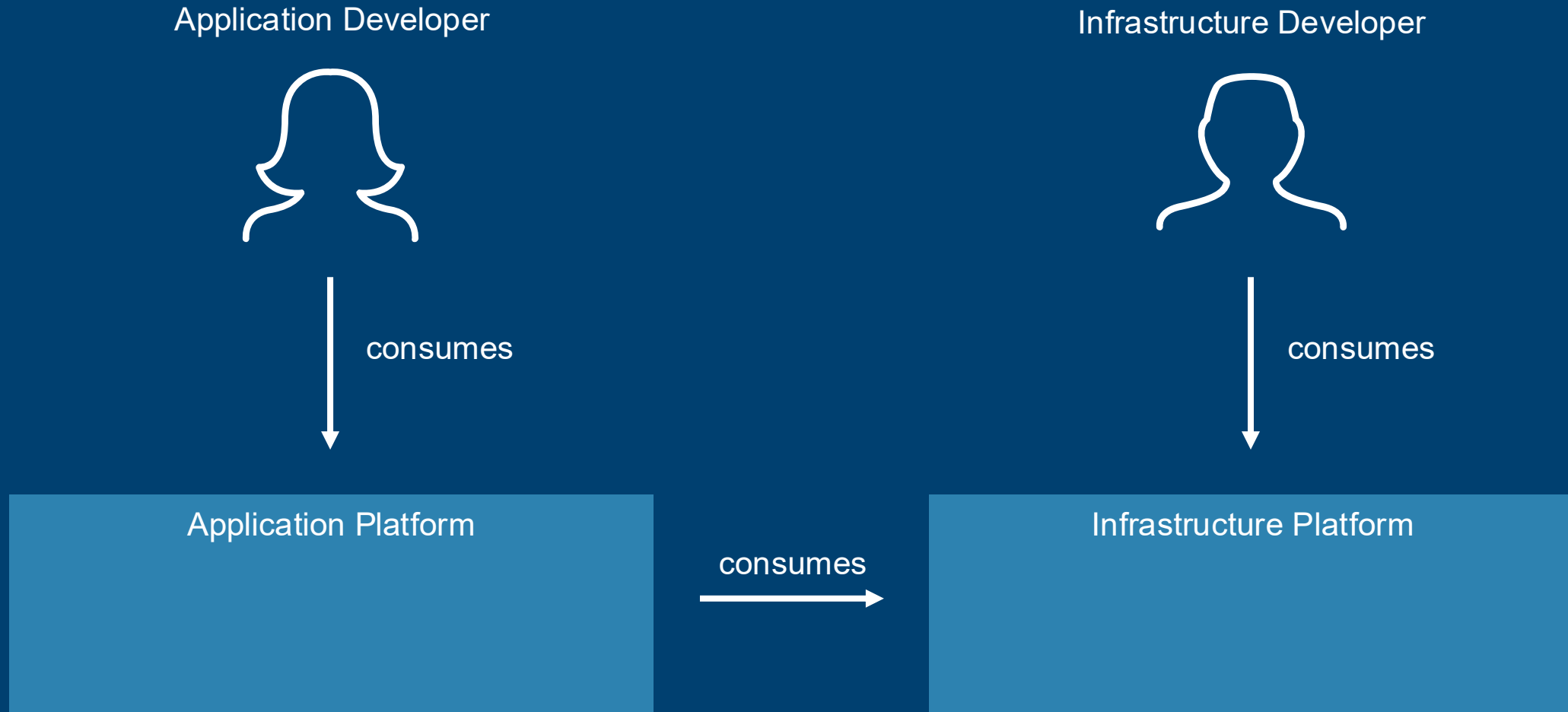
Example Ansible Platform Approach



Dev tool utilization

	Version Control	Staging	IDE	Language Tooling	Static Code Analysis	Testing	AI Coding Assistants
Software Development							
Infrastructure as Code							

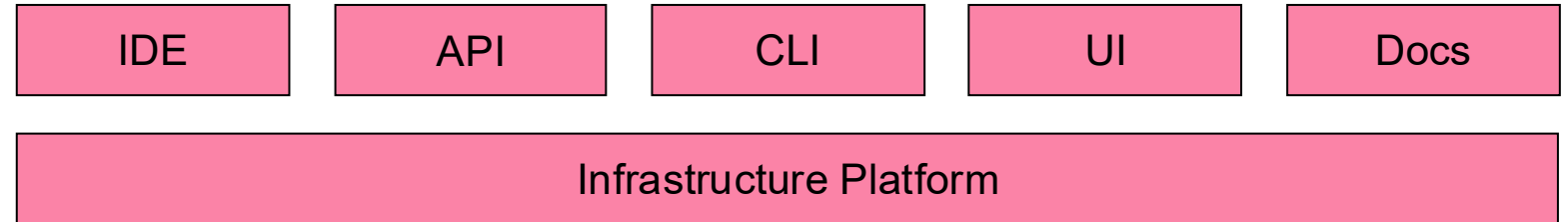
Recursion of Platforms



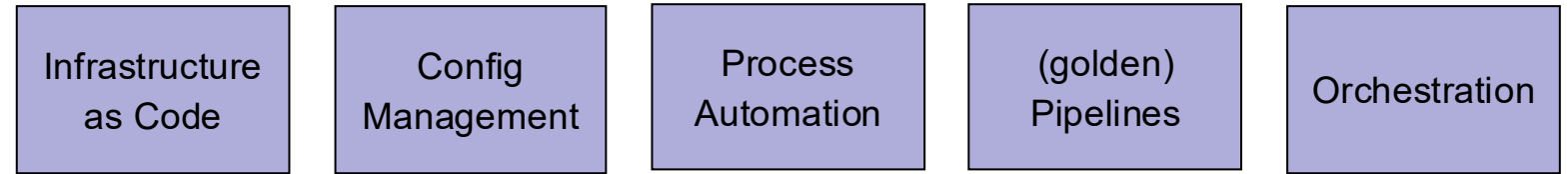
/ Application Platforms, Secure Supply
Chains & Digital Sovereignty demand a
higher standard in Infrastructure Automation

Capability overview

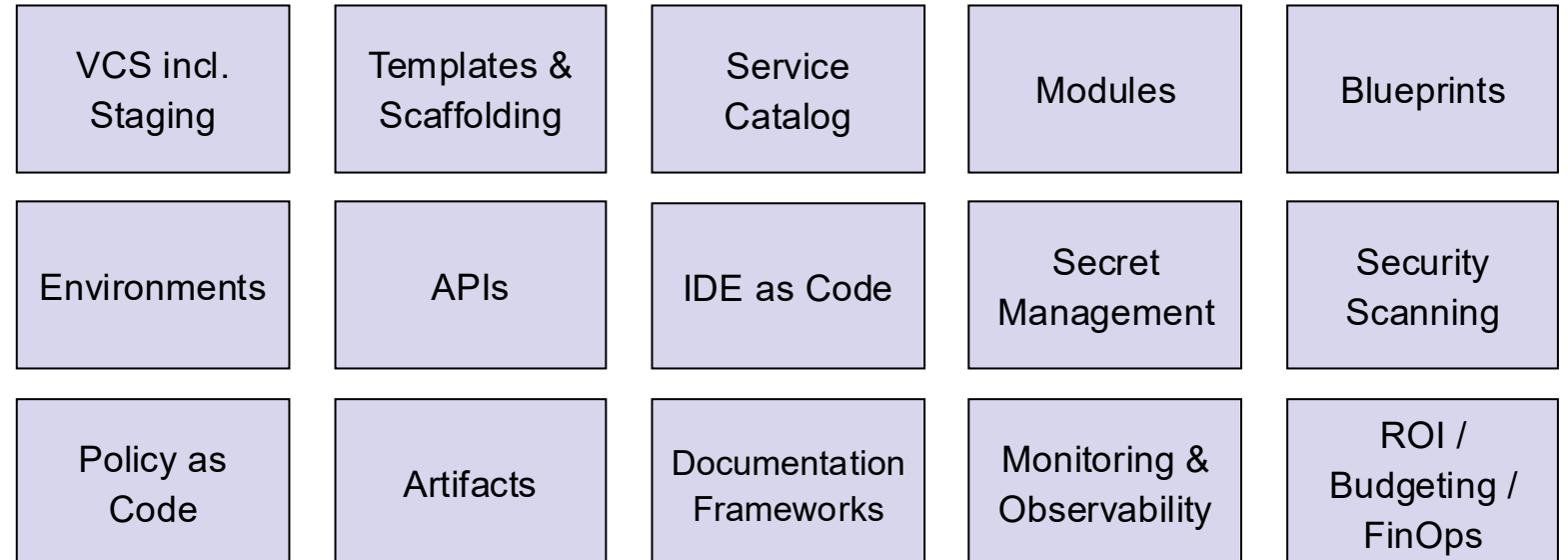
User facing



Services



Capabilities



Internal Developer Platforms (IDP)

What?

- Central Web UI to bundle all Services of Development Assets in “Goldenen Paths” & Documentation

Why?

- Central perception as platform
 - No sprawl of interfaces and web UIs
- Self Service Portal
- Discoverability

How?

- Backstage
 - Red Hat Developer Hub
 - Roadie or other SaaS
- HashiCorp Waypoint
- Port



Backstage vs. Developer Hub



- Open Source (CNCF incubating)
 - Minimal by default
 - Static code based plugins
- Community Plugins & Ecosystem
 - Works anywhere



- Enterprise build of Backstage
 - Opinionated defaults
 - Dynamic plugin handling
 - Red Hat certified plugins
 - OpenShift & Hyperscaler

Tech Stack for today



Dunder Mifflin Hub

Select a sign-in method

Guest

Enter as a Guest User.
You will not have a verified identity, meaning
some features might be unavailable.

Enter

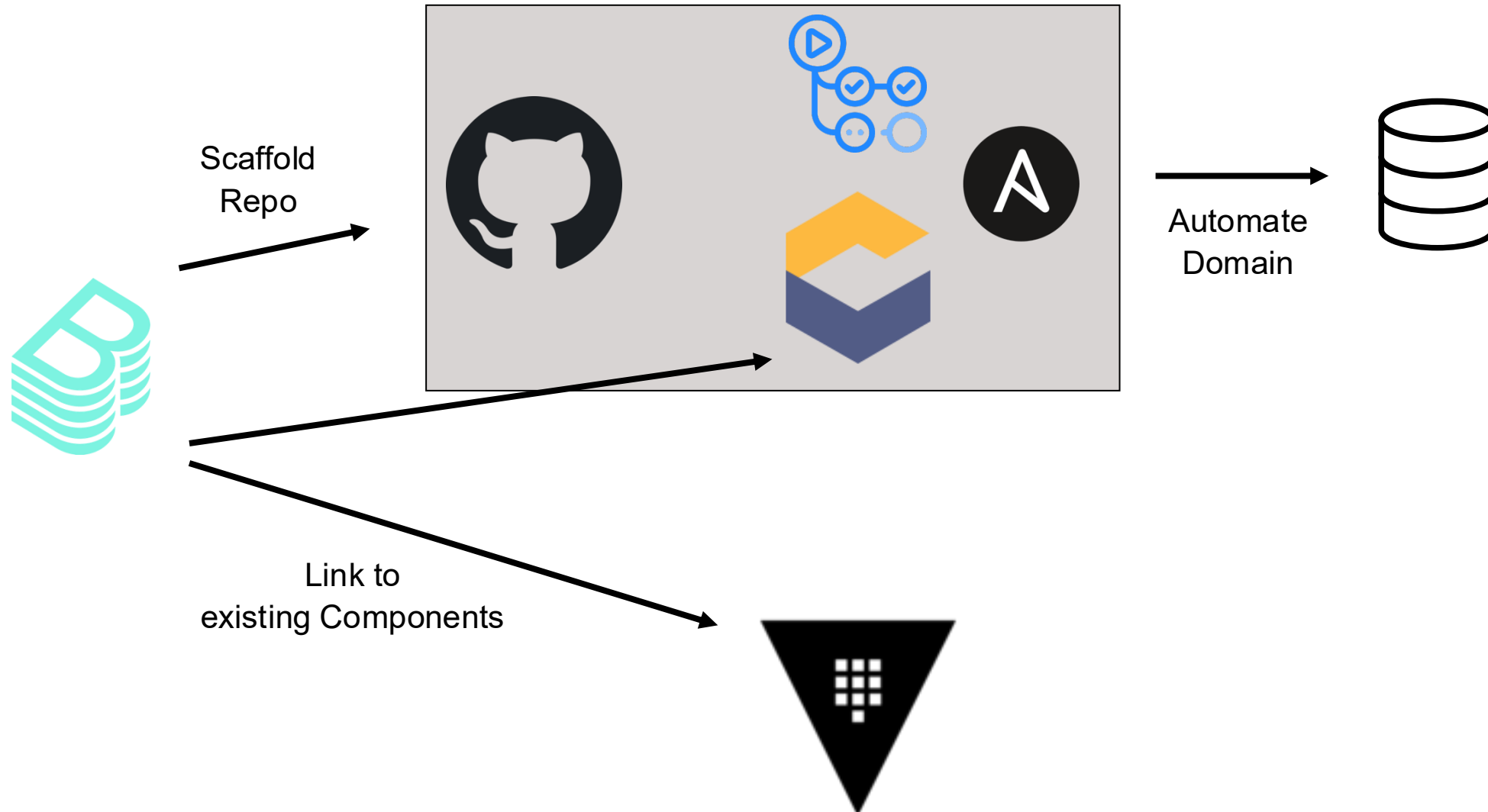
GitHub

Sign in using GitHub

Sign In



Pattern 1 (Scaffold Repo)



How does Scaffolding work?

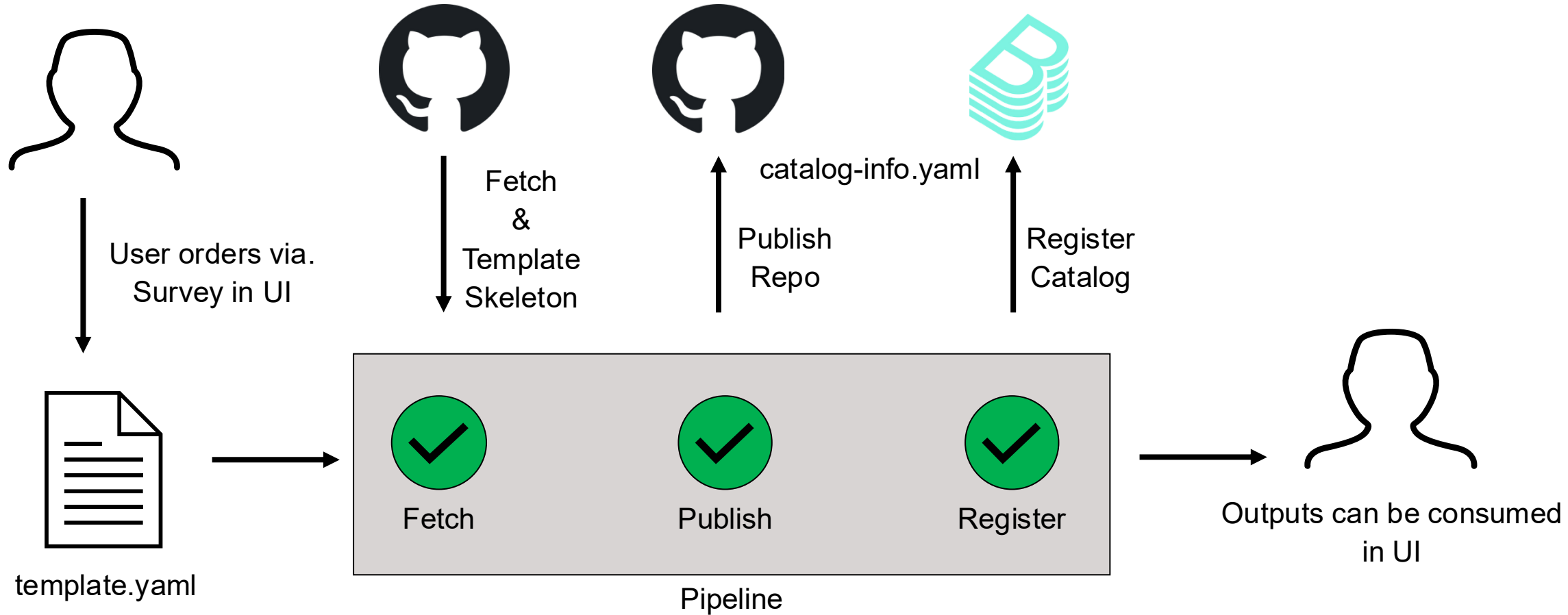
- Templates are defined in YAML
 - Almost everything in Backstage is defined in Kubernetes Object like YAML
- Templates define
 - Inputs
 - Actions
 - Outputs
- Skeletons can be templated with nunjucks templating engine

```
---
apiVersion: scaffolder.backstage.io/v1beta3
kind: Template
metadata:
  name: playbook
  title: Ansible Playbook Project
  description: Create a new Ansible Playbook Repo with
    company standards in a GitHub repository
  tags:
    - ansible
    - cfgmgmtcamp
    - playbook
spec:
  owner: dundermifflin-pe
  type: service

  parameters:
    - title: Repository settings
      required:
        - repoName
      properties:
        repoName:
          title: Repository and playbook name
          type: string
    ...
  steps:
    - id: fetch
      name: Fetch template repository
      action: fetch:template
      input:
        url: https://github.com/nwerkerdev/ansible-
          template
      values:
        name: ${ parameters.repoName }
        owner: ${ parameters.owner }
        description: ${ parameters.description }

  output:
    links:
      - title: Repository
        url: ${ steps.publish.output.remoteUrl }
```

Scaffolding in Action





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Niklas Werker



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Run of Ansible Playbook Project

Task 7162c4eb-245f-4f05-844e-e330ba792c97



Fetch template repository

48 minutes, 31 seconds



Publish to GitHub

48 minutes, 32 seconds



Register

48 minutes, 30 seconds

Repository

Open in catalog

```
6 2026-02-01T14:14:06.000Z info: Writing file .gitignore to template output path with mode 33188.
7 2026-02-01T14:14:06.000Z info: Writing directory .vscode/ to template output path.
8 2026-02-01T14:14:06.000Z info: Writing file README.md to template output path with mode 33188.
9 2026-02-01T14:14:06.000Z info: Writing file catalog-info.yaml to template output path with mode 33188.
10 2026-02-01T14:14:06.000Z info: Writing file devfile.yaml to template output path with mode 33188.
11 2026-02-01T14:14:06.000Z info: Writing directory docs/ to template output path.
12 2026-02-01T14:14:06.000Z info: Writing file mkdocs.yaml to template output path with mode 33188.
13 2026-02-01T14:14:06.000Z info: Writing file playbook.yaml to template output path with mode 33188.
14 2026-02-01T14:14:06.000Z info: Writing file requirements.yml to template output path with mode 33188.
15 2026-02-01T14:14:06.000Z info: Writing directory .github/workflows/ to template output path.
16 2026-02-01T14:14:06.000Z info: Writing file .vscode/extensions.json to template output path with mode 33188.
17 2026-02-01T14:14:06.000Z info: Writing file .vscode/settings.json to template output path with mode 33188.
18 2026-02-01T14:14:06.000Z info: Writing file docs/index.md to template output path with mode 33188.
19 2026-02-01T14:14:06.000Z info: Writing file .github/workflows/ansible-lint.yml to template output path with mode 33188.
20 2026-02-01T14:14:06.000Z info: Template result written to /tmp/7162c4eb-245f-4f05-844e-e330ba792c97
21 2026-02-01T14:14:06.000Z Finished step Fetch template repository
22 2026-02-01T14:14:06.000Z Beginning step Publish to GitHub
23 2026-02-01T14:14:08.000Z info: Init git repository {dir=/tmp/7162c4eb-245f-4f05-844e-e330ba792c97}
24 2026-02-01T14:14:08.000Z info: Adding file {dir=/tmp/7162c4eb-245f-4f05-844e-e330ba792c97,filepath=.}
25 2026-02-01T14:14:08.000Z info: Committing file to repo {dir=/tmp/7162c4eb-245f-4f05-844e-e330ba792c97,message=initial commit}
26 2026-02-01T14:14:08.000Z info: Pushing directory to remote {dir=/tmp/7162c4eb-245f-4f05-844e-e330ba792c97,remote=origin}
27 2026-02-01T14:14:09.000Z warn: Branch protection was not enabled as it requires GitHub Pro for private repositories
28 2026-02-01T14:14:09.000Z Finished step Publish to GitHub
29 2026-02-01T14:14:09.000Z Beginning step Register
30 2026-02-01T14:14:09.000Z info: Registering https://github.com/nwerkerdev/my-first-playbook/tree/main/catalog-info.yaml in the catalog
31 2026-02-01T14:14:10.000Z Finished step Register
```

Search



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COMPONENT - SERVICE

my-first-playbook ☆

Owner

user:user

Lifecycle

experimental

Overview

Issues

Pull/Merge Requests

CI

API

Dependencies

Docs

Links

🌐

Open Ansible project in OpenShift Dev Spaces

🌐

Open Ansible project HashiCorp Vault Path

Compliance report

Protected Branches

⚠️ None

License

⚠️ None

About

View

Source

View

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Description

This is my first playbook on the first day of the job

Owner

user:user

System

No System

Type

service

Lifecycle

experimental

Tags

ansible

playbook

cfgmgmtcamp

Vault Plugin card Shortcomings RHDH

- Community Plugin installable via. Dynamic plugins
- Need to edit typescript / React components (not easy and straight forward with dynamic plugin loading)

```
plugins:
- package: https://registry.npmjs.org/@backstage-community/plugin-vault/-/plugin-vault-0.15.0.tgz
  integrity: sha512-J0gn8oXQEuHlWXesFZXY0...
```

Vault

Secrets for service-test in test/backstage

SECRET	VIEW URL	EDIT URL
secret::one	👁	✎
secret::three	👁	✎
secret::two	👁	✎

10 rows |< < 1-3 of 3 > >|



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My Org Catalog

Self-service

Kind

Component

Type

all

Personal

Owned 0

Starred 0

My Org

All 1

Owner

Lifecycle

Tags

Processing Status

All Components (1)

Search

Name	System	Owner	Type	Lifecycle	Description	Tags	Created At	Actions
------	--------	-------	------	-----------	-------------	------	------------	---------

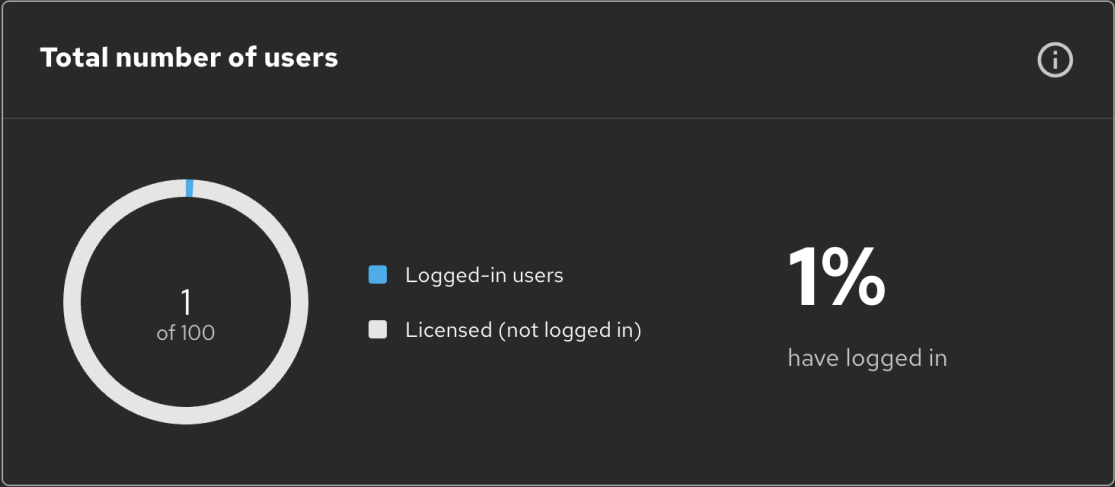
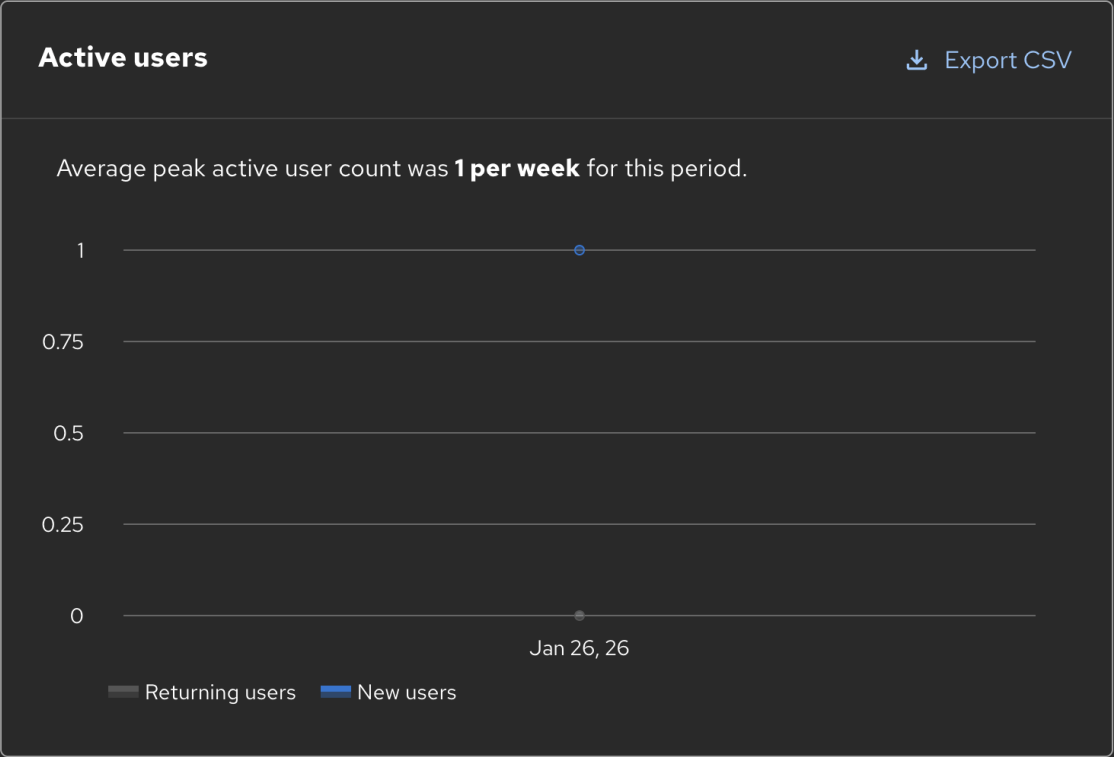
@ cfgmgmtcamp26		user:user	service	experimental	This role...	ansible role cfgmgmtcamp		🔗 ✎ ☆
-----------------	--	-----------	---------	--------------	--------------	---	--	--

< >

Administration >

nwerker Change tag from 'playbook' to 'role' in YAML 1f04a47 · 2 hours ago History

```
Code Blame 26 lines (25 loc) · 897 Bytes
1  apiVersion: backstage.io/v1alpha1
2  kind: Component
3  metadata:
4    name: "cfgmgmtcamp26"
5    annotations:
6      backstage.io/techdocs-ref: dir:.
7      github.com/project-slug: nwerkerdev/cfgmgmtcamp26
8      vault.io/secrets-path: playbook/cfgmgmtcamp26
9      vault.io/secrets-engine: kv # Optional. By default it uses the 'secretEngine' value from your app-config.
10   tags:
11     - ansible
12     - role
13     - cfgmgmtcamp
14   description: "This role includes all the nice things needed for yaml camp"
15   links:
16     - url: https://devspaces.apps.rm2.thpm.p1.openshiftapps.com/#https://github.com/nwerkerdev/cfgmgmtcamp26
17       title: Open Ansible project in OpenShift Dev Spaces
18       icon: web
19     - url: http://0.0.0.0:8200/ui/vault/secrets/kv/kv/playbook%2Fcfgmgmtcamp
20       title: Open Ansible project HashiCorp Vault Path
21       icon: lock
22   spec:
23     type: service
24     lifecycle: experimental
25     owner: "user:default/user"
```



Top 3 catalog entities

Select kind

Name	Kind	Last used	Views
rhdh-local	System	Today	10
thering	Component	Today	6
cfgmgmtcamp26	Component	Today	4
Top 3			

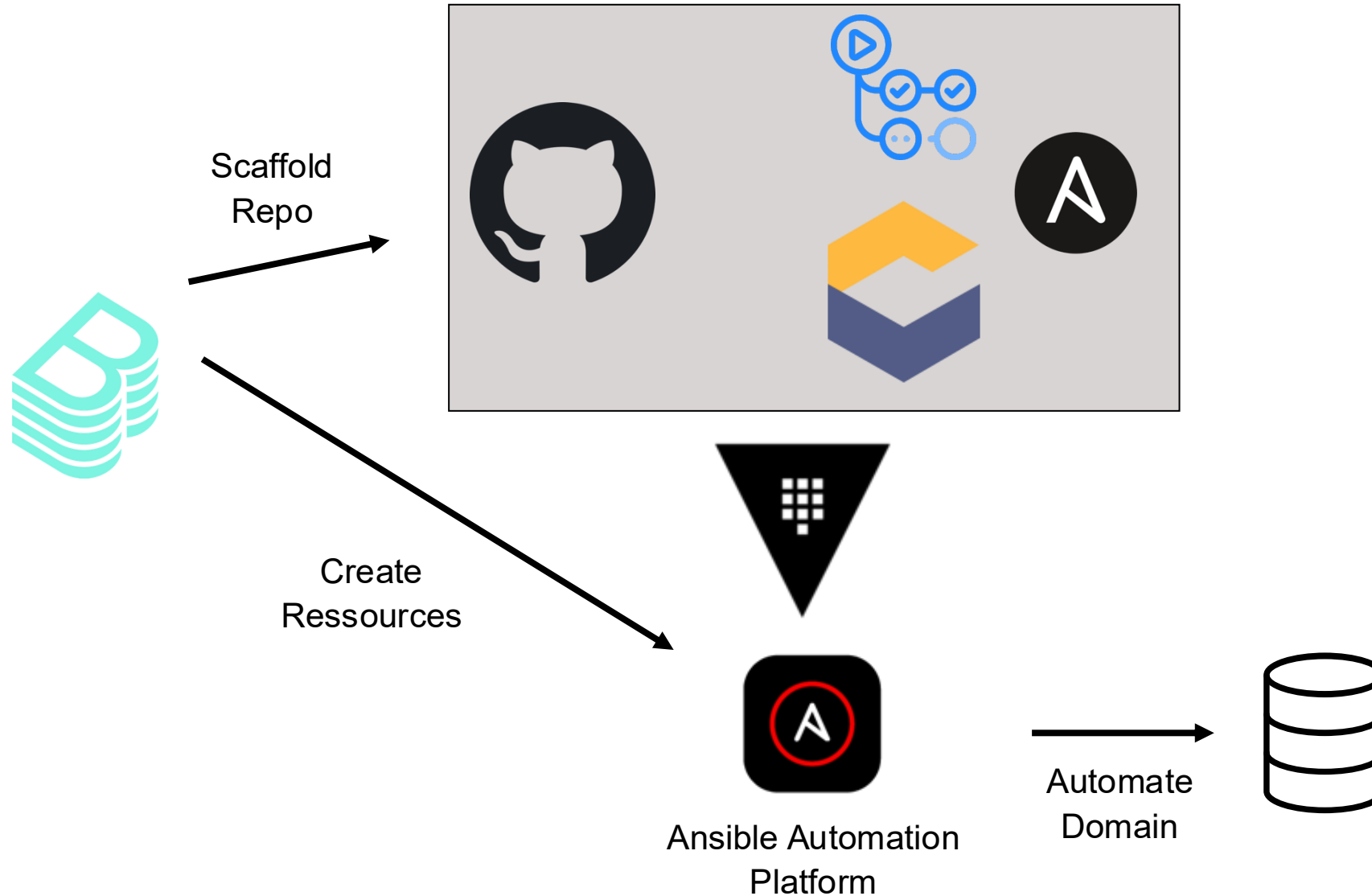
Top 3 templates

Name	Executions
playbook	4
role	2
executionenvironment	1
Top 3	

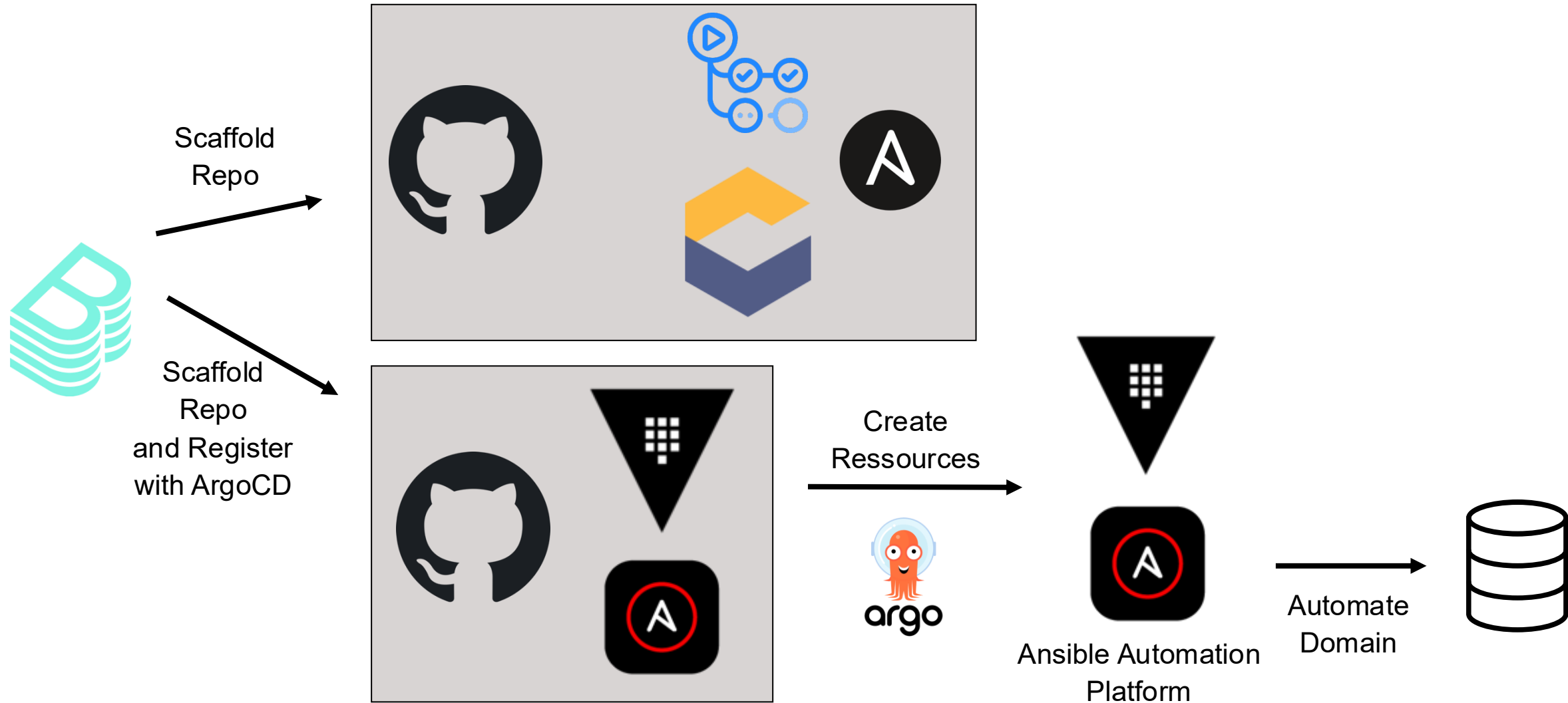
Top 3 plugins

Name	Trend	Views

Pattern 2 (Scaffold Repo + Action Create)

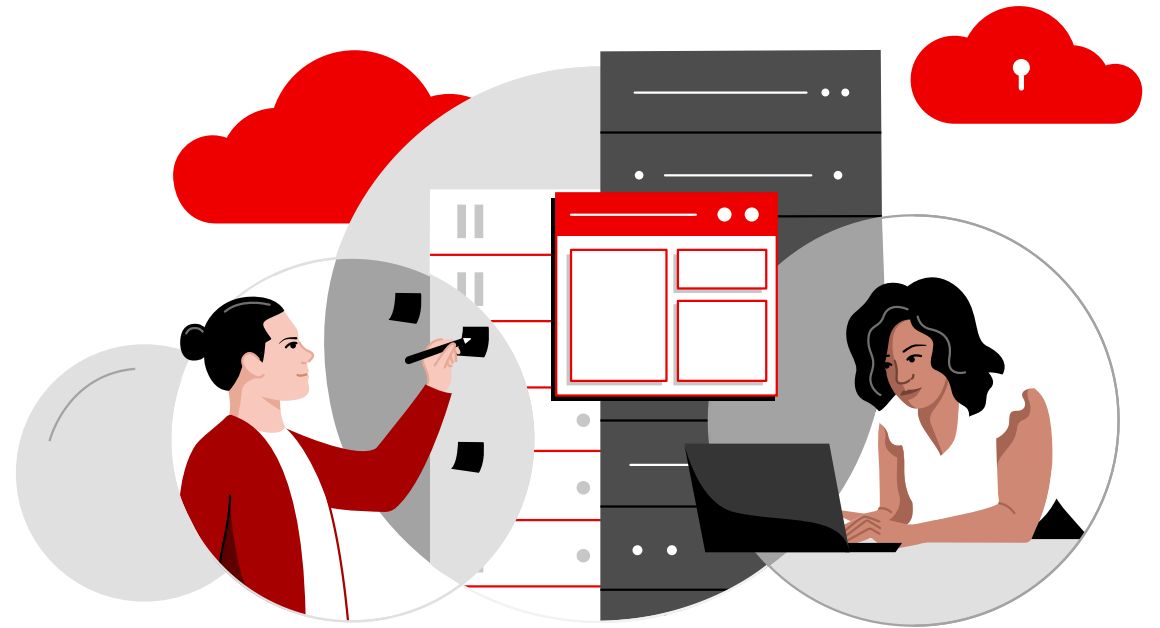


Pattern 3 (Scaffold Repo + GitOps ArgoCD)



Getting started: Red Hat Developer Hub Local (rhdh-local)

- It works on my machine (podman-compose)
- Rapid Prototyping
 - Sqlite3 Database in memory
- Supports full fledged features like dynamic plugins
- Builtin Documentation
- Advanced guides



<https://github.com/redhat-developer/rhdh-local>

Principles

- Principle 1: Lay the foundation
 - Operate Automation Infrastructure for yourself and others
- Principle 2: Do the dirty work
 - Research the biggest need / toil that stops your org from producing good automation
 - Develop Best Practices in form of Golden Paths / Templates
- Principle 3: Drive and track adoption
 - Get People and workload on your platform
 - Offer training and documentation
- Principle 4: Manage the Platform as an internal Product
 - Get User Feedback
 - Lifecycle Templates
 - Innovate

/ Culture > Tools

/ Internal Developer Platform $\neq$ Platform
Engineering

/ Backstage is no rocket science, the real work lies in Templates, Documentation and Best Practices

Ressources

- Web:
 - internaldeveloperplatform.org
 - [Evan Bottcher Blogpost - What I Talk About When I Talk About Platforms](#)
- Talks:
 - [Kief Morris – From bottleneck to enabler: Pulling infrastructure coding out of the value stream](#) CfgMgmtCamp Keynote 2025
- Books:
 - Team Topologies – Matthew Skelton, Manuel Pais
 - Platform Engineering – Camille Fournier, Ian Nowland
- GitHub Projects:
 - [Backstage](#)
 - [rdhd-local](#)
 - [ansible-rdhd-templates](#)

