



nethopper.io

Overcome Kubernetes Tool Sprawl

KAOPS

*Jumpstart your platform
engineering*

Applications Power the Digital Economy

Enterprise, B2B, Consumer, Mobile, Desktop...



\$430 billion

Total mobile Appy market revenue in 2022

235 million

App downloads in 2022

5.7 million

Apps in the Google Play and Apple App Stores

Business Problem: Most Enterprise Apps Fail

Why: **Kubernetes is Hard!**

79%

of Application Modernization
efforts fail

Source: Common Pitfalls of App Modernization Projects (Nov 2022)

Inadequate Skills

- Global lack of <Cloud, Containers, Kubernetes, DevOps>...
- Competing with tech giants for expertise
- Workforce turnover

Lack of Intelligent Tools

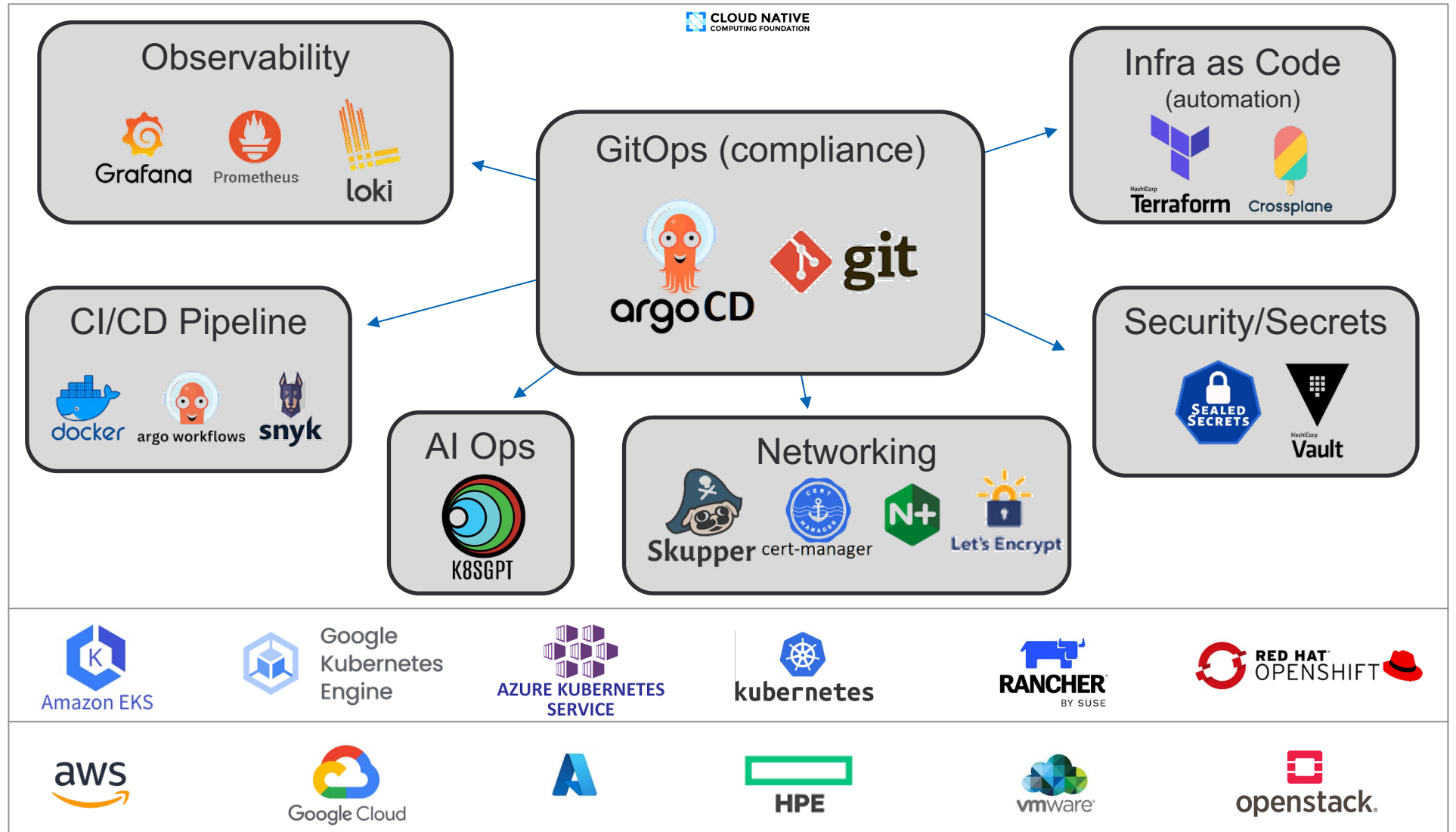
- Lots of open source, but no support
- No integrated platform
- Missing Auditability

Underestimated Effort

- Complexity, Timeline, Budget
- “Lift and shift” is easy, but true “cloud native” is difficult
- **K8s is just infrastructure; Apps don't deploy themselves.**

Technology Problem: Kubernetes “tools not included”

3. Required Tools



2. Kubernetes

1. Infrastructure

Result: Dev-Ops Chaos

Devs

They know the software

They **DO NOT** know Kubernetes

Results:

- Devs spend all their time learning Kubernetes and *operating it*.
- App development suffers

Ops

They know Kubernetes

BUT MUST ADD a suite of 15+ Ops tools

Results:

- Ops spends all their time trying to *develop* a tools platform.
- Apps fail and disrupt your business

Solution: Get a Kubernetes Operations Platform...

Let Ops operate, so that Devs can develop

Poll Question #1:

**Is your DevOps team developing a tools platform
(ie. platform engineering)?**

Yes

No

Anti-Demo: K8s DevOps Tool Sprawl

DevOps



3 x cluster builds

3 x kubectl terminals

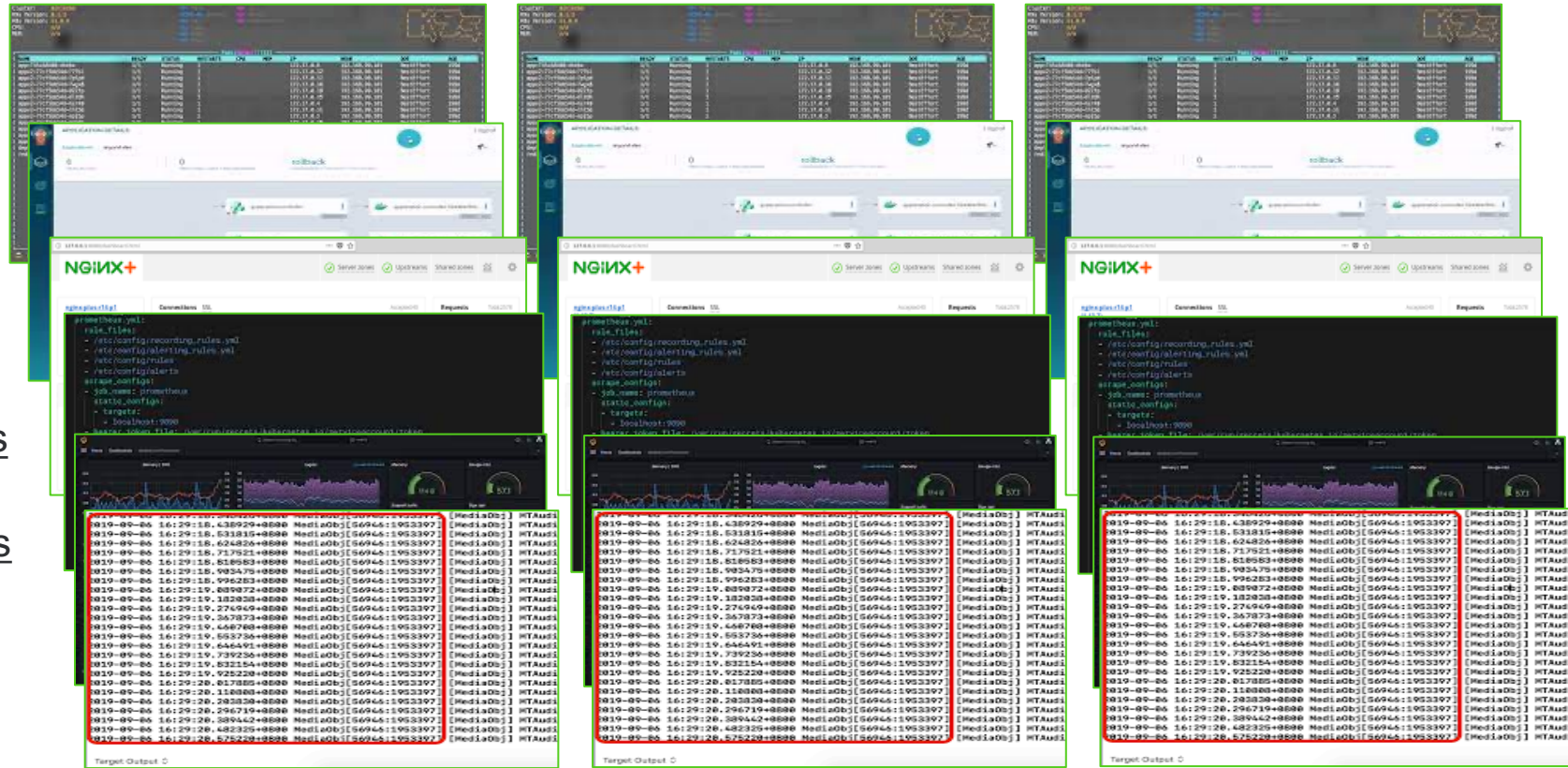
3 x ArgoCD servers

3 x Ingress controllers

3 x Prometheus servers

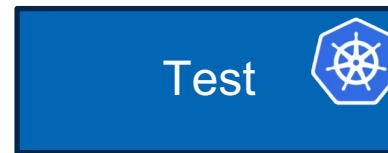
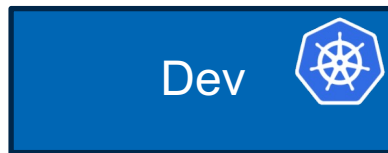
3 x Grafana dashboards

3 x Log monitors



>7 experts

>21 Installs/consoles



Poll Question #2:

How many tools does your DevOps team install, before deploying apps?

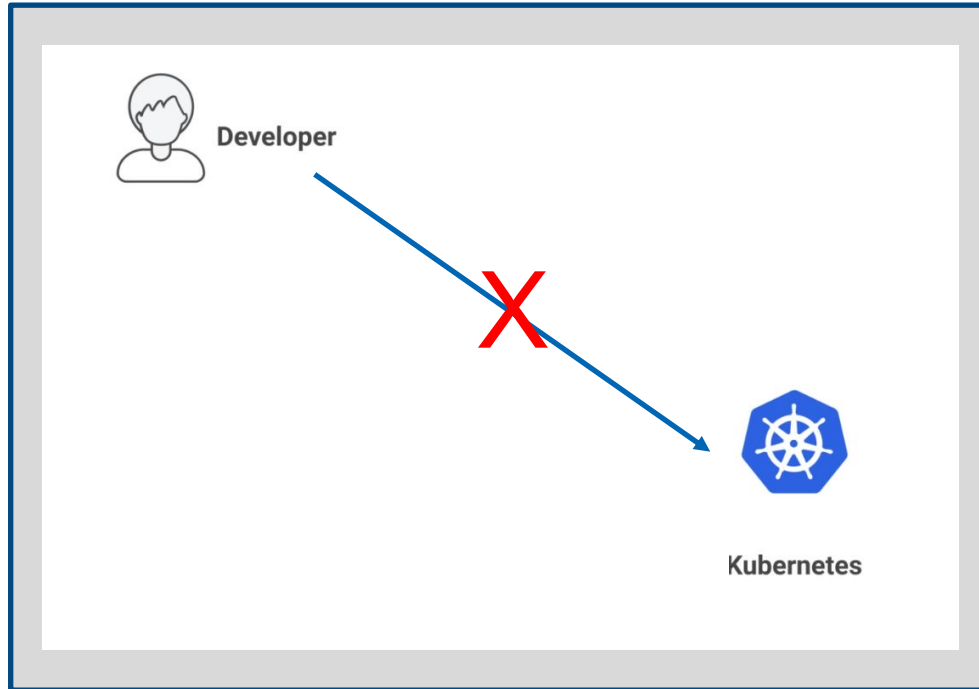
- 0
- 1-5
- 5-10
- >10

K8s lessons learned #1 – Use GitOps pattern

“Pull, don’t Push”

Don't:

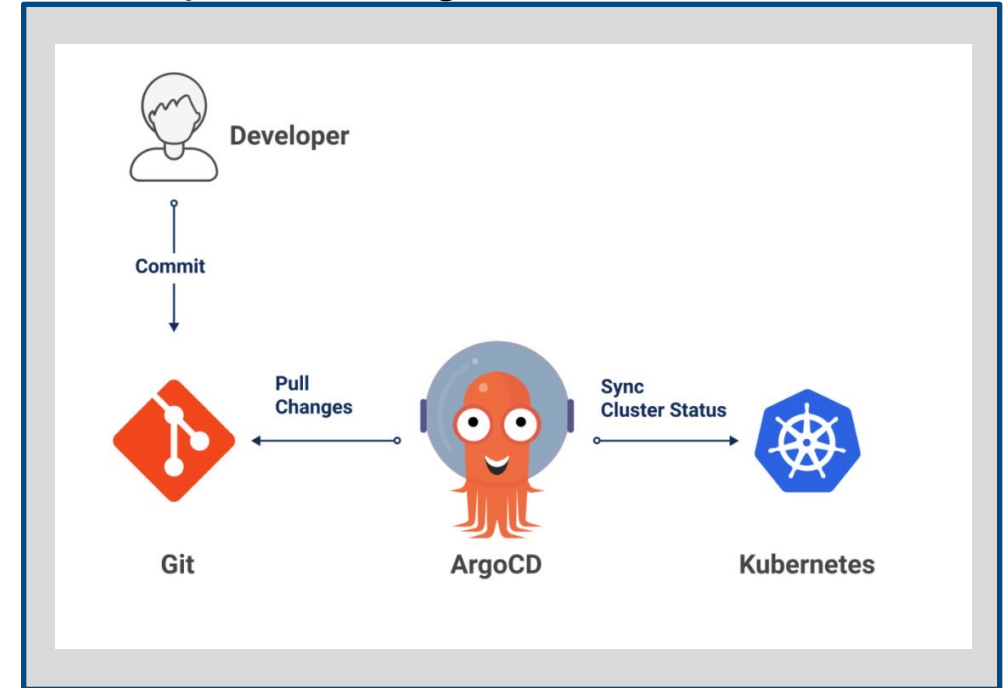
Push your configuration to K8s (ie kubectl, or Github actions)



Every Dev needs to be a K8s expert
Every Dev becomes Ops/Support
Who did what? when?

Do:

Pull your K8s configuration from Git source



Devs develop and Ops operate K8s
Repeatable
Auditable
Scalable

Poll Question #3:

Does your K8s team currently use a GitOps pattern for application deployments?

Yes

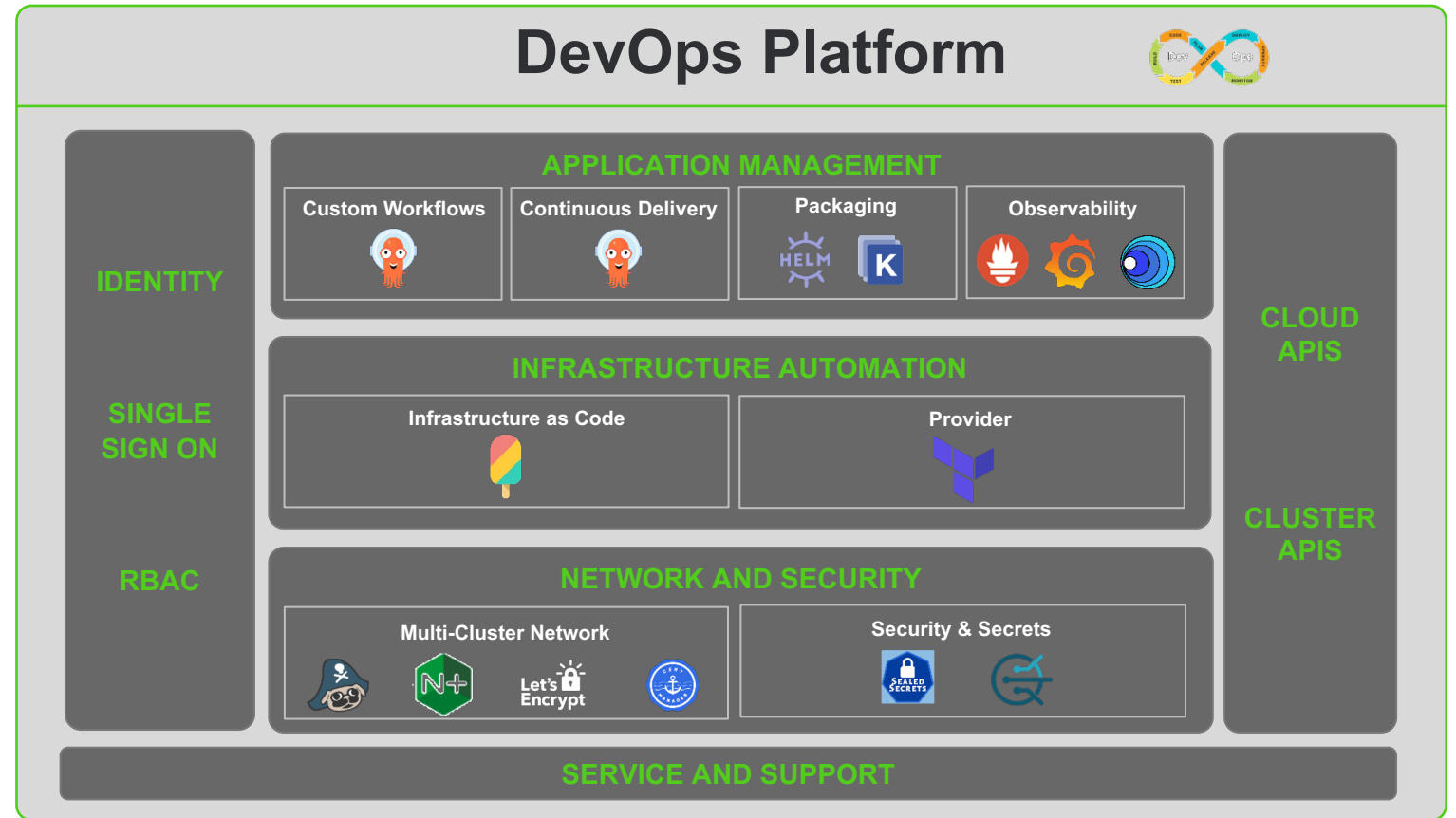
No

Solution: Platform Engineering

DevOps



- All your Tools
- Installed Automatically
- Single Pane of Glass
- Single Sign On
- 24 x 7 Support



Introducing: KAOPS

Kubernetes Application Operations Platform as a Service

Also offered as
HPE Managed Service

Hewlett Packard
Enterprise
Managed
Service



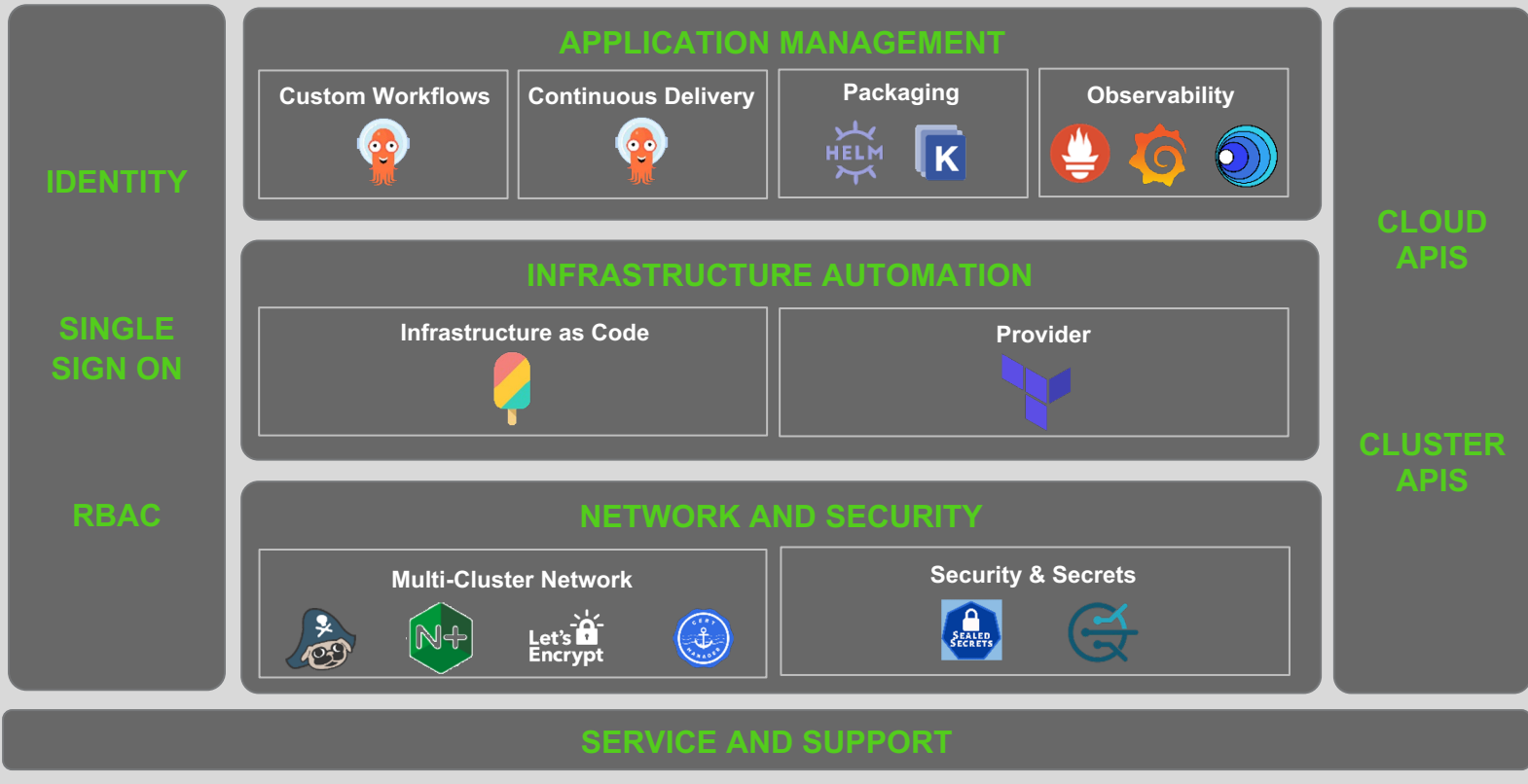
KAOPS



Kubernetes Application Operations Platform as a Service

FOR
Customer
DevOps-IT Teams

servicenow



TO CONTROL
Customer Clouds
and Clusters



KAOPS Key Differentiators



Works With All Clouds & K8s

(Public and Private, Hybrid/Multi-cloud)

Made for Application Teams

(DevOps, Platform Engineering, SRE)

GitOps for Auditability

(Git Tracks Who Did What, and When)

Other platforms

Works with only one Cloud or K8s

(e.g., AWS, RedHat)

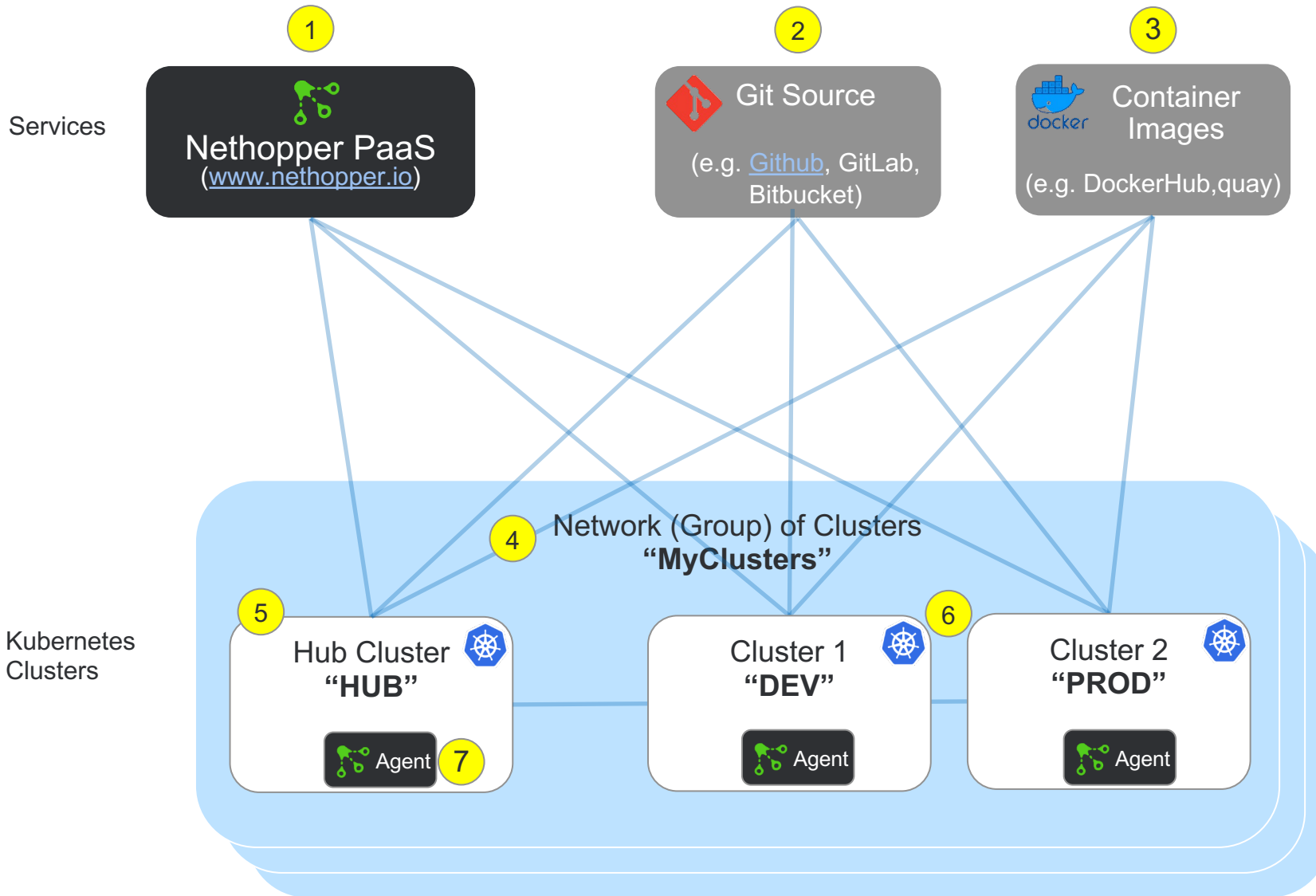
Made for IT

(e.g., ServiceNow)

No Auditability

(e.g., Terraform, Kubernetes itself)

KAOPS Demo Architecture



- 1 Nethopper PaaS**
Access with Browser or API
- 2 Git**
A place to store and access your code and Kubernetes configuration (yaml, helm, Kustomize)
- 3 Container Registry**
A place to store and access your images
- 4 Network of Clusters**
A group of clusters that are managed as one
- 5 Hub Cluster**
The main cluster where tools will be installed. Must be routable to other clusters
- 6 Attached Clusters**
Part of the group of clusters.
- 7 Nethopper Agent**
Copy/Paste Deployment for a cluster to join KAOPS

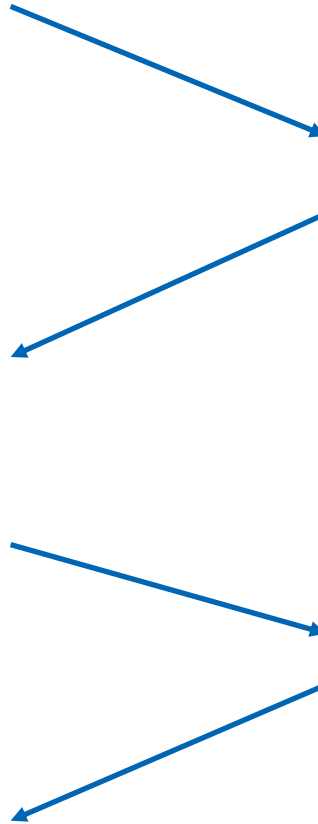
Demo Steps

Nethopper KAOPS (mynethopper.io)

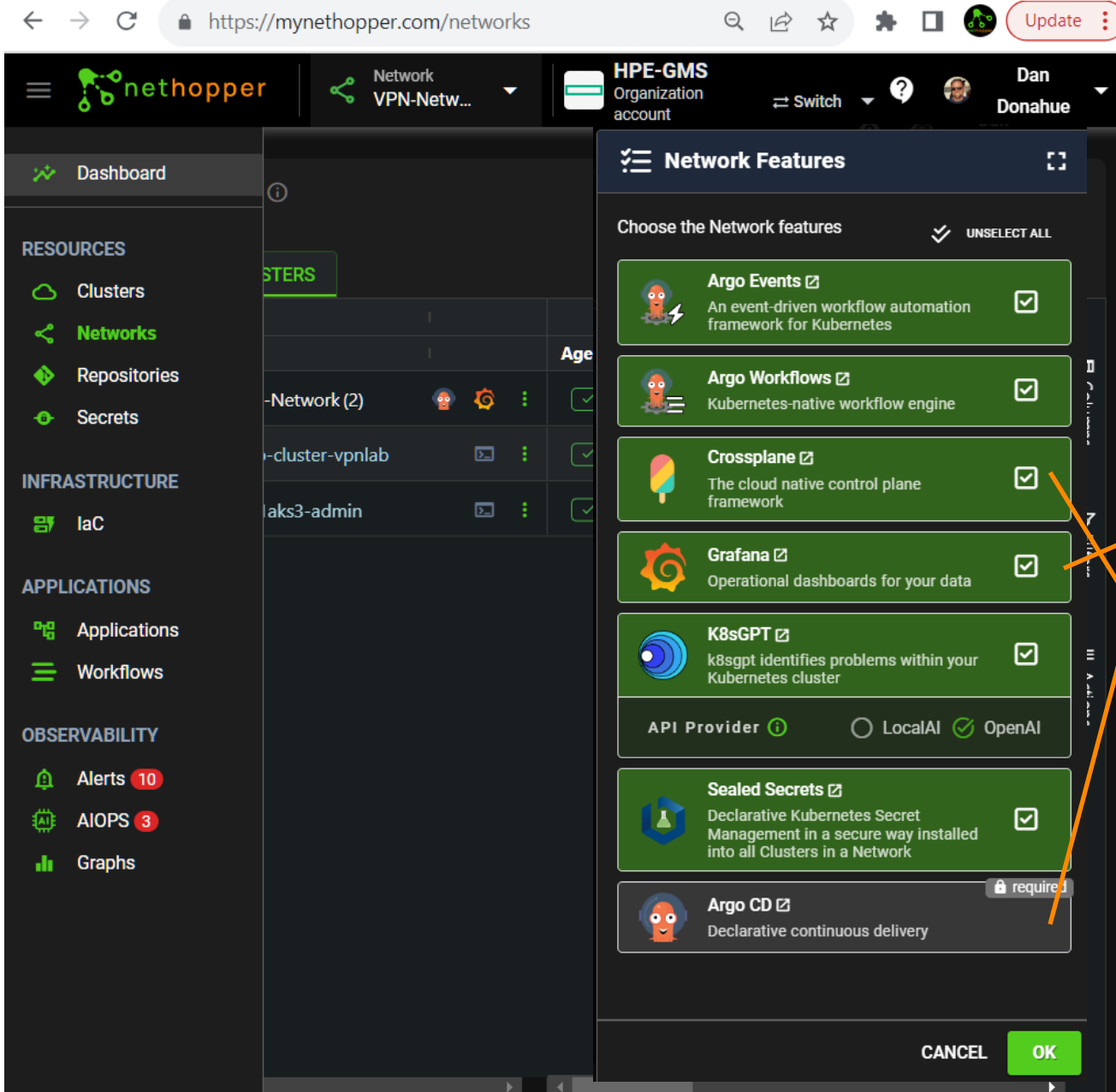
- 1 Login
- 2 Create a Network (“MyClusters”)
 - Select your tools
 - Get “**HUB**” KAOPS Agent Install instructions
- 4 Check **HUB** Status -> “UP”
 - All Tools installed (try them)
- 5 Attached **DEV** and **PROD** clusters to the Network
 - Get KAOPS Agent install instructions
- 7 Deploy Applications ([github app directory](#))
- 8 Use tools to access, upgrade, secure and monitor apps

Cluster K8 CLI (kubectl)

- 3 Copy/Paste install KAOPS Agent in HUB Cluster
- 6 Install KAOPS Agent in DEV and PROD Clusters



Demo - Network (group of clusters) creation screenshot



1 ArgoCD – The most popular Kubernetes GitOps tool, globally. Used by many enterprises, including Intuit, BlackRock, Adobe, Nethopper. ArgoCD is tested to scale to 10,000 applications, achieving a 35-minute sync time for all apps.

2 Grafana/Prometheus – The most popular Kubernetes Observability tool, globally. Used by many enterprises, including Fidelity, WellsFargo, Citigroup, etc. The Grafana project is tested to 23,000 timeseries (aka. monitored applications or objects) containing over 1.3M Raw records

3 Crossplane - The most popular CNCF IaC tools (ie Kubernetes compatible). With good support for popular private and public cloud providers, Crossplane also supports all existing Terraform code and TF Providers. Crossplane is tested to over 1000 CRDs (instances of infrastructure).

Poll Question #4:

Would you like a personalized demo or PoC of the KAOPS Platform?

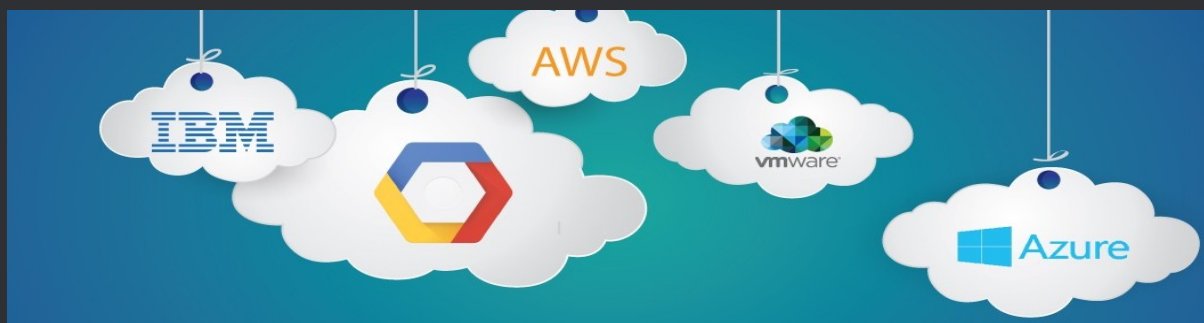
Yes

No



The leader in KAOPS Cloud Native Platforms

Simplifying Application Modernization
across private, hybrid, edge, and multi-cloud



- ✓ Based on mature open source
- ✓ Nethopper SaaS launched in May 2021
- ✓ 1000+ registered customer



PoV Program Spots Available

Contact:
russell@nethopper.io