

Platforms aren't tools,  
they are experiences.

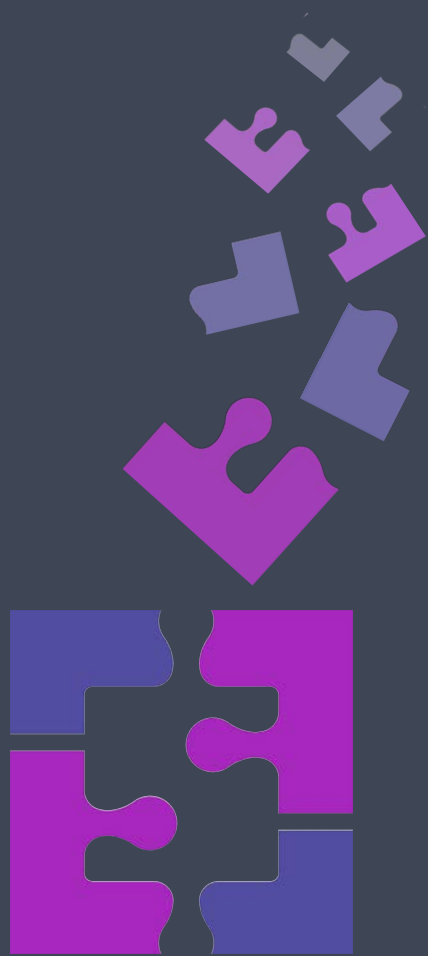
And Kubernetes isn't a  
platform, it's a foundation

Abby Bangser (she/her)

 [a\\_bangser](https://twitter.com/a_bangser)

 [abangser@hachyderm.io](mailto:abangser@hachyderm.io)

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**Platforms** and  
**Platform Engineering**  
are at risk of entering  
buzzword territory



**Platforms** and  
**Platform Engineering**  
are ~~at risk of~~ entering  
buzzword territory





# We have been here before and it makes me sad

Google search for "DevOps role vs culture". The search results show a top result from devops.com titled "DevOps Is Not a Role — It's a Culture". The snippet reads: "Many assume that DevOps is just a set of tools. Instead, some experts argue that DevOps is more of a combination of varying roles, tools and processes. 'DevOps started as a model—it's not a tool,' Purighalla reiterated. In essence, it's more of a culture than a specific job title." The date is 8 Jul 2022.

Google search for "agile or Agile". The search results show a top result from Prosci titled "Stop Confusing agile with Agile - Prosci". The snippet reads: "Upper case 'A' Agile is a method of approaching a particular initiative that originated in software development but has extended into other types of change. Lower case 'a' agile is a trait marked by the ability to change more effectively and less painfully."



# What are the symptoms of becoming a buzzword?

- New job titles pop up without any change in role
- Vendors pay for the search term for existing tools
- “State of” reports are published
- Confusion ensues as the internet argues if the term is new or not and if it is useful or not



## My particular pet peeve:

The new ideas and terms usually introduce a **nuanced improvement**, but the bandwagoning use of the term confuses attempts to understand this nuance.

Nothing like  
a Gartner  
report to  
confirm you  
have made it!

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# What Is Platform Engineering?

October 05, 2022

Contributor: Lori Perri

Platform engineering is an emerging technology approach that can accelerate the delivery of applications and the pace at which they produce business value.

Platform engineering improves developer experience and productivity by providing self-service capabilities with automated infrastructure operations. Platform engineering is trending because of its promise to optimize the developer experience and accelerate product teams' delivery of customer value.





Hmmm...  
Sounds a  
lot like  
DevOps  
here huh?

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Insights / Information Technology / Article

# What Is Platform Engineering?

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It is made  
too easy to  
read the  
headlines  
and miss the  
nuance

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# What Is Platform Engineering?

October 05, 2022

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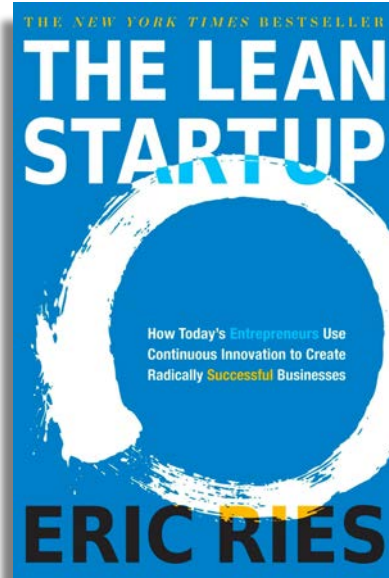
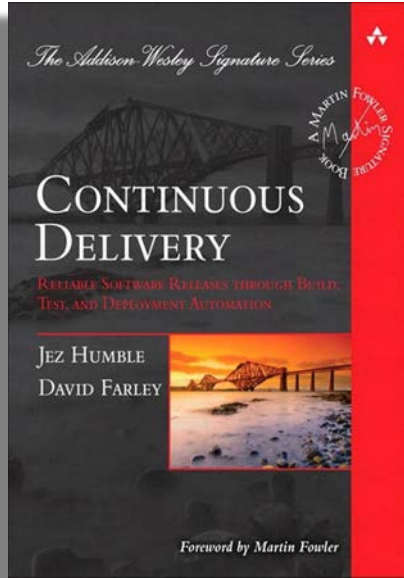
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# Tech has already been accelerating the delivery of business value






# And with Platforms-as-a-Service (PaaS)





Overview Resources **Deploy** Metrics Activity Access Settings

**Add this app to a pipeline**  
Create a new pipeline or choose an existing one and add this app to a stage in it.

**Add this app to a stage in a pipeline to enable additional features**


 Pipelines let you connect multiple apps together and promote code between them. [Learn more.](#)

 Pipelines connected to GitHub can enable review apps, and create apps for new pull requests. [Learn more.](#)

 flow-demo

**Choose a stage to add this app to**

staging

This app will be added to staging in  flow-demo

**Add to pipeline**



## But, like the title says, platform engineering is **more than just tools**

- Incident management
- Testing
- Customer support
- Compliance
- Onboarding and offboarding



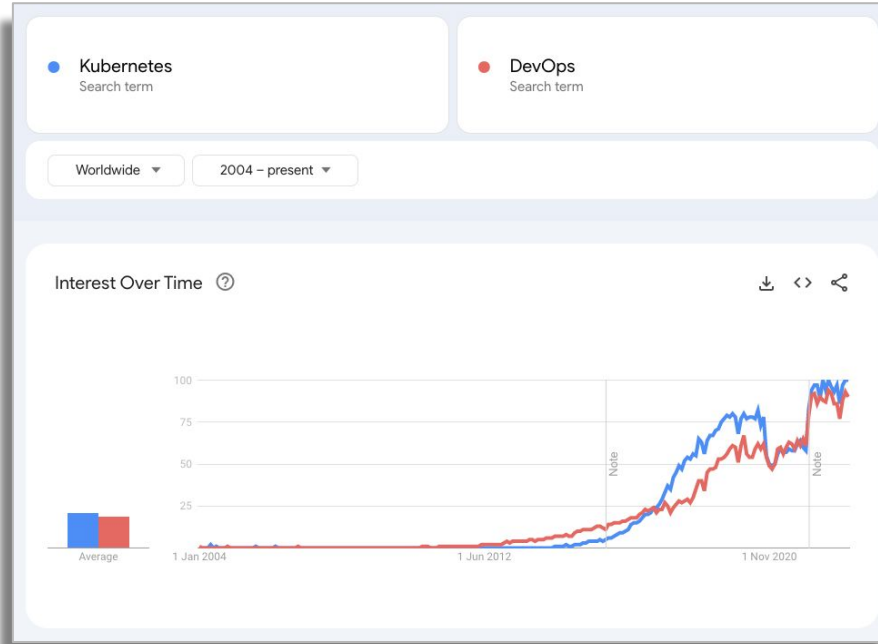
PaaS experiences showed the power of **autonomy** and **service offerings**.

Application teams wanted more.



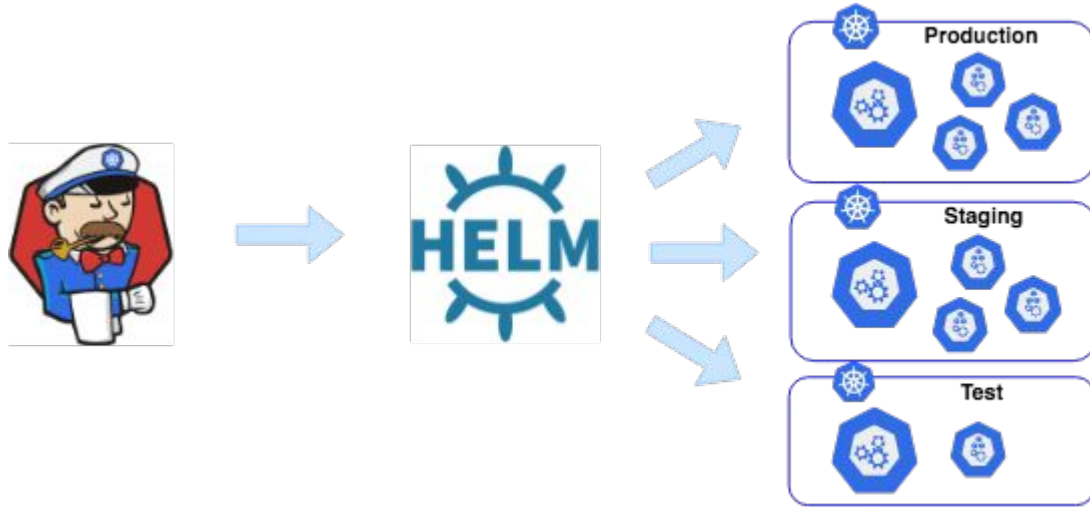


# Kubernetes answers the call for more broad and bespoke solutions





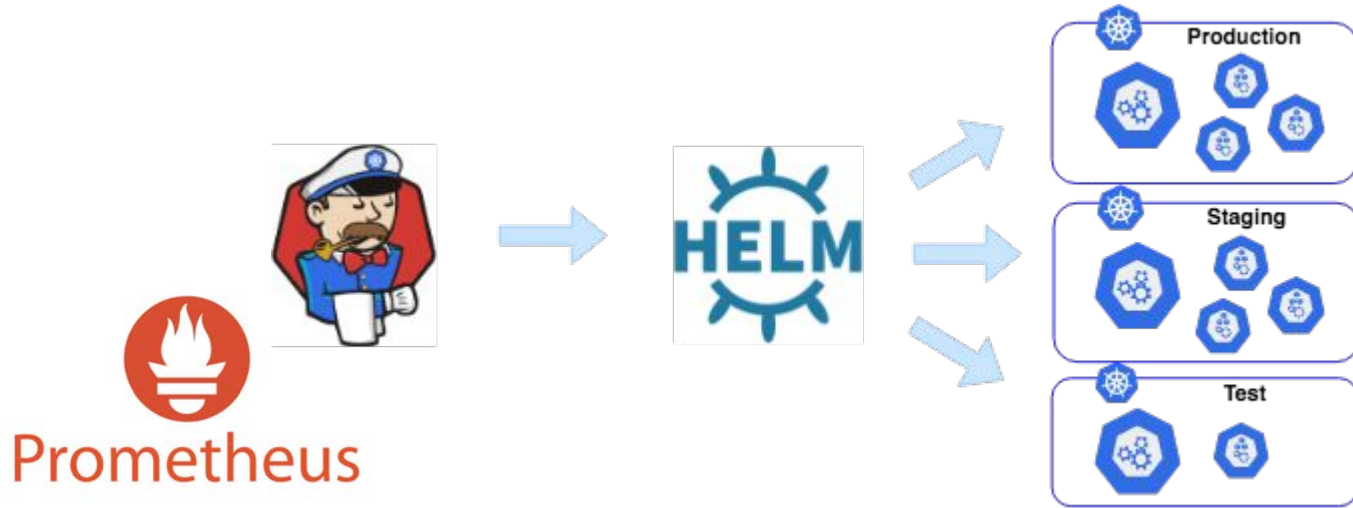
**A simple helm install could deliver any tool with any configuration**







# A simple helm install could deliver any tool with any configuration

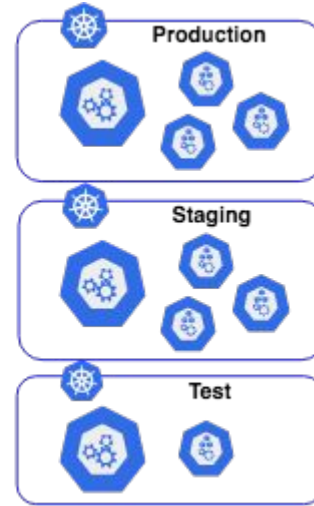




# A simple helm install could deliver any tool with any configuration



Grafana



Prometheus

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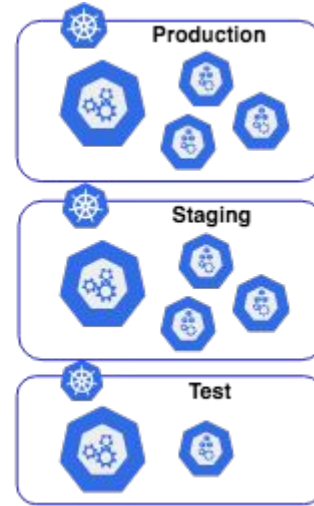


Grafana



Prometheus

Created by  
ThoughtWorks



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Grafana

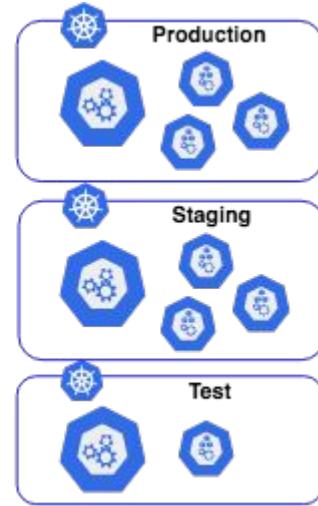


Prometheus

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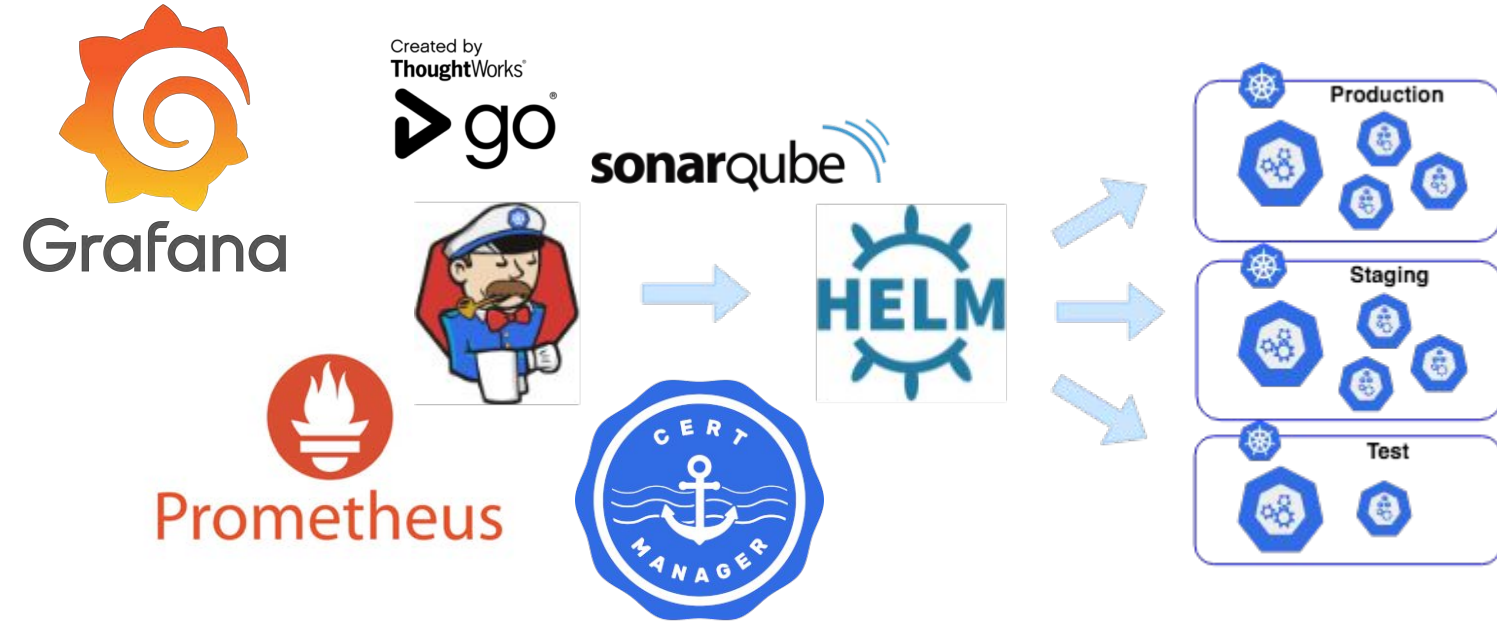
sonarqube



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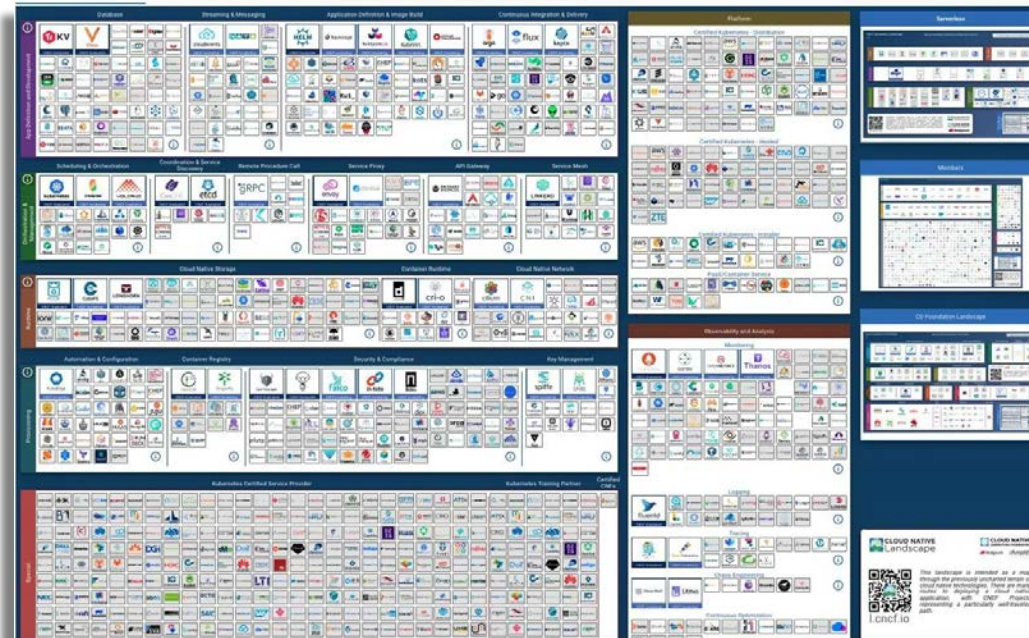


# A simple helm install could deliver any tool with any configuration



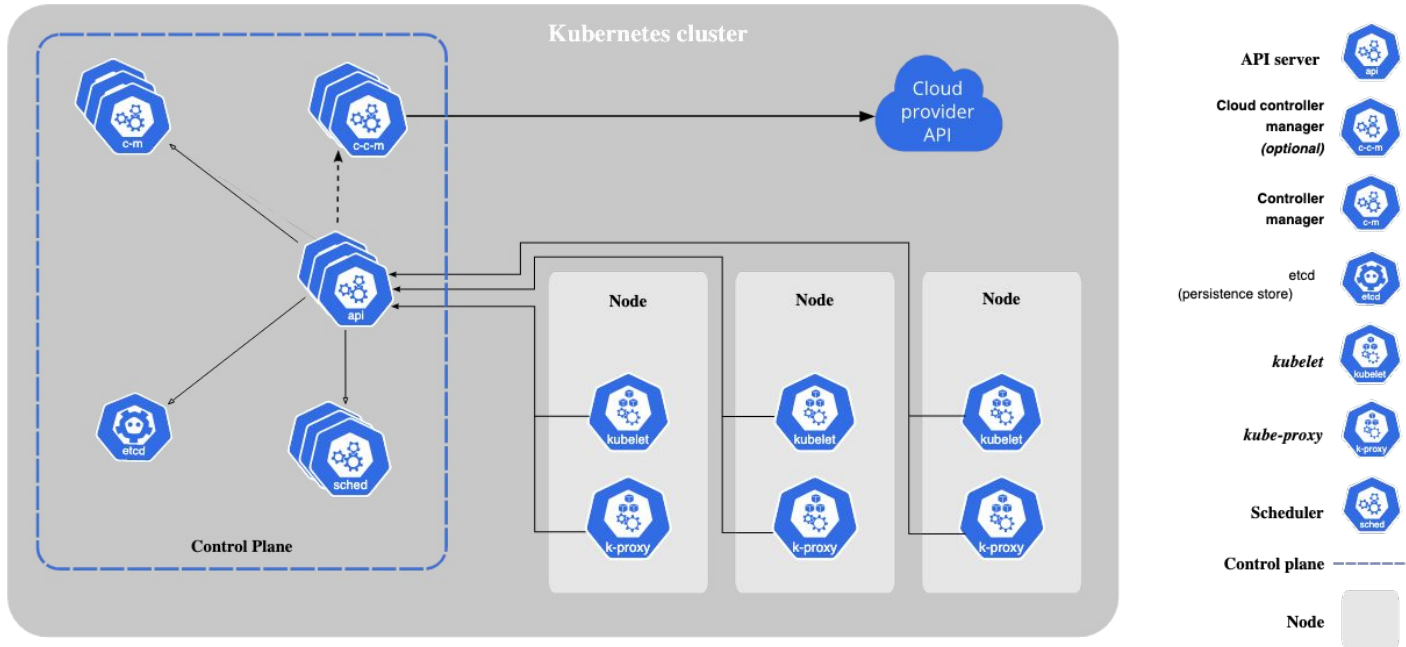


# The complexity of the Kubernetes ecosystem has become a bit of a joke

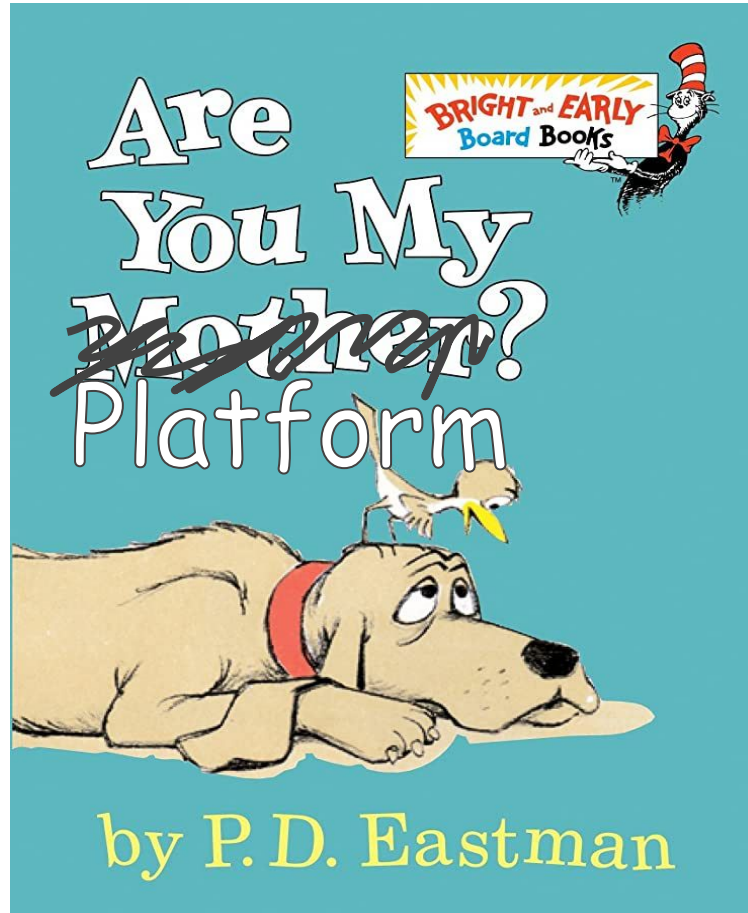




# The is on top of the complexity of the base components



Full of hope,  
we ask  
ourselves  
again...



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## And here we are, required to discuss nuance

Platform engineering improves developer experience and productivity by providing self-service capabilities with automated infrastructure operations



And here we are, required to discuss nuance

Platform engineering improves  
developer experience and productivity by  
**providing self-service capabilities** with  
**automated infrastructure operations**



# And here we are, required to discuss nuance

A high level  
**what**



Platform engineering improves developer experience and productivity by **providing self-service capabilities** with **automated infrastructure operations**



A version of  
**how**



# A commonly quoted (and more detailed) **what**



Evan Bottcher

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.



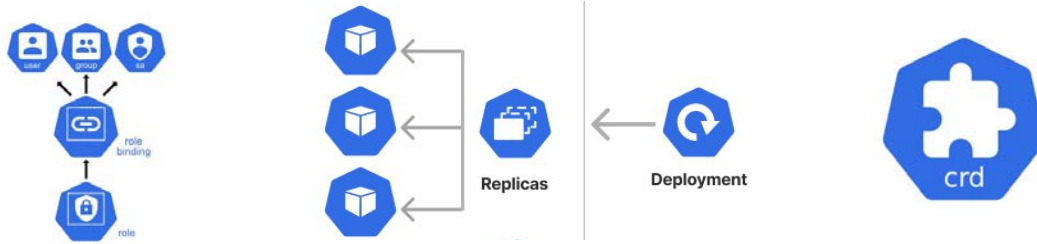
# Kubernetes as a base API

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# Kubernetes as the platform primitives

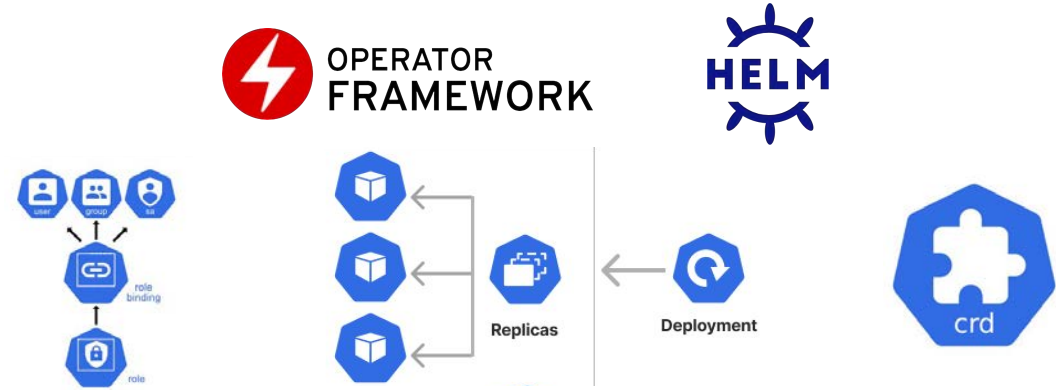


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# Kubernetes as a way to manage complex apps

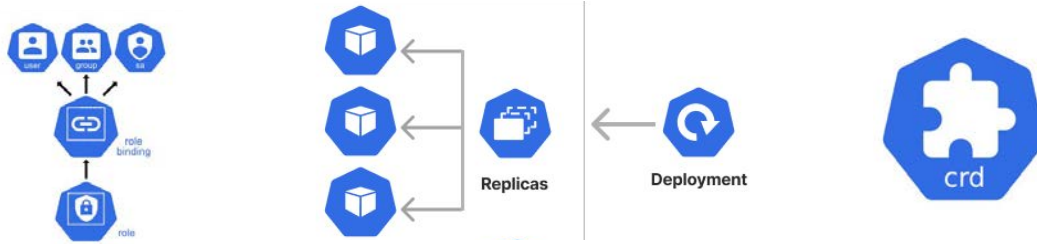


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# Kubernetes as a dashboard host



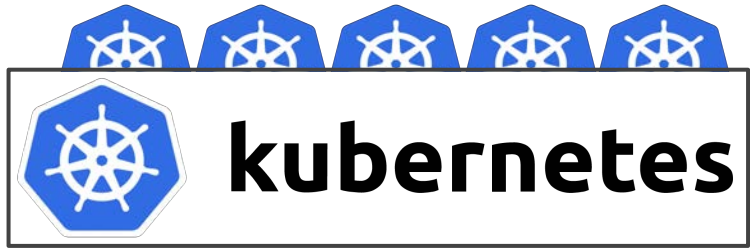
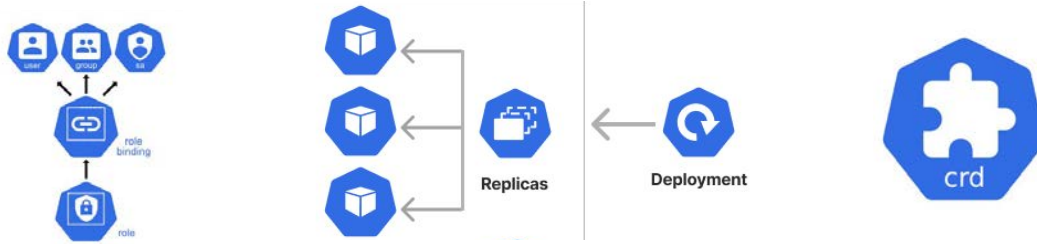
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# Kubernetes as a scaling solution



That requires engineering...  
**Platform Engineering**





# If you are truly platform engineering, you deserve better support

Kratix is an Open Source framework for designing as-a-Service offerings across diverse infrastructure including multi-cluster Kubernetes, SaaS products, on prem hardware and more.





# You define *your* platform services

```
apiVersion: platform.kratix.io/v1alpha1
kind: Promise
metadata:
  # Name of the Promise; what user will see in the Platform Cluster
  name: promise-name
spec:
  # Arbitrary key/value pairs that will be used for scheduling
  # Check the Scheduling docs for details
  clusterSelectors:
    key: value

  # Array of Kubernetes resources to be installed in the Worker Clusters
  workerClusterResources:
  - apiVersion: apps/v1
    kind: Deployment
    metadata:
      name: service-operator
  - #...
  - #...

  # CRD that a Platform User uses to request an instance of this Promise
  xaasCrd:
    apiVersion: apiextensions.k8s.io/v1
    kind: CustomResourceDefinition
    # ...

  # Ordered list of Docker containers
  # Executed in response to a Resource Request
  xaasRequestPipeline:
  - myorg/pipeline-image-1
  - myorg/pipeline-image-2
  - #...
```



# Want to learn more?

Deliver Your Platform in Three Easy Commands

1. Install Kratix  
`$> kubectl apply -f kratix.yaml`
2. Install a Promise  
`$> kubectl apply -f promise-postgres.yaml`
3. Request a resource from your Promise  
`$> kubectl apply -f request-postgres.yaml`

🎉 Your Promised Postgres is ready to use! 🎉

Follow our Quick Start on a Kubernetes cluster, then extend your platform by adding Promises and clusters.



<https://kratix.io>



# Want to learn more?

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<https://syntasso.io/blog>



```
+ environment-demo cat prod-env-request.yaml
---
apiVersion: example.promise.syntasso.io/v1
kind: environment
metadata:
  name: production
  namespace: default
spec:
  type: prod
+ environment-demo
+ environment-demo kubectl --context kind-platform apply -f prod-env-request.yaml
environment.example.promise.syntasso.io/production created
+ environment-demo
+ environment-demo # Check the env promise pipeline has executed
+ environment-demo kubectl --context kind-platform get pods -l kratix-promise-id-env-promise-default
NAME                                READY   STATUS    RESTARTS   AGE
request-pipeline-env-promise-default-2e2ef   0/1     Completed 0           22s
+ environment-demo
+ environment-demo # Check that, on the Production cluster, Crossplane is spinning up a PostgreSQL RDS ins.
+ environment-demo kubectl --context kind-prod get rdinstances.database.aws.crossplane.io
NAME                                READY   SYNCED   STATE   ENGINE   VERSION   AGE
my-postgres-production-ms4k-9q9s     True    True     Succeeded postgres 12.10    6s
```

The screenshot shows the Jenkins web interface. At the top, it says 'Jenkins superci'. Below that, there are tabs for 'Overview', 'Visualize Pipeline', 'Builds', 'Jobs', 'Dependencies', and 'Builds'. The 'Overview' tab is active, showing a summary of the pipeline and a 'Relations' section on the right. The 'Relations' section contains a red button labeled 'Add new relation' and a blue button labeled 'Add new Promise'. Below this, there is a 'Links' section with a 'Sign in' button and a 'Feedback' button. At the bottom, there is a 'Has subcomponents' section with a table that currently has no data.

# SYNTASSO

# Thank you!

Abby Bangser (she/her)

 [a\\_bangser](#)

 [abangser@hachyderm.io](mailto:abangser@hachyderm.io)

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