Large scale Continuous Delivery: Building a platform

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FIDUCIA GAD

What to focus on?

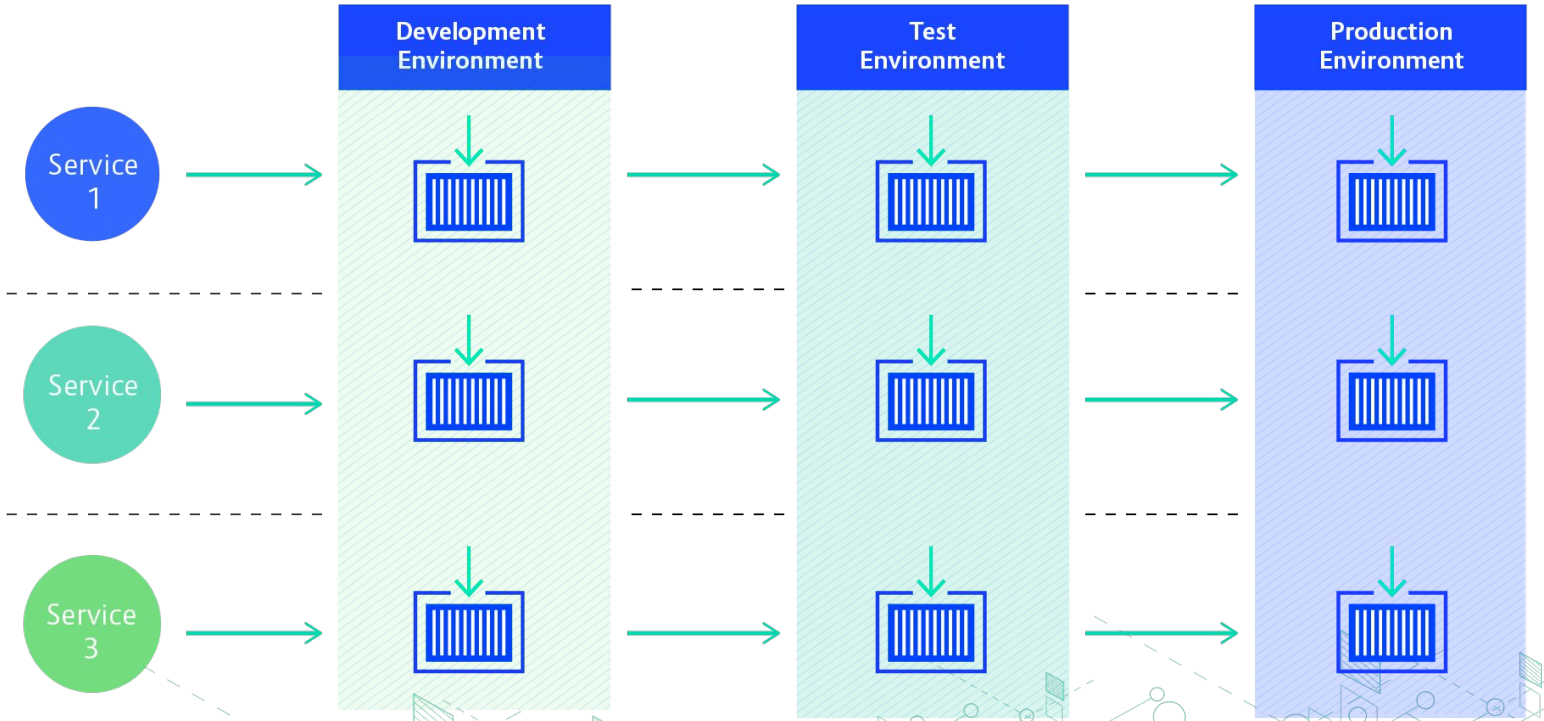
Continuous Delivery of Microservices

Security and auditing of changes

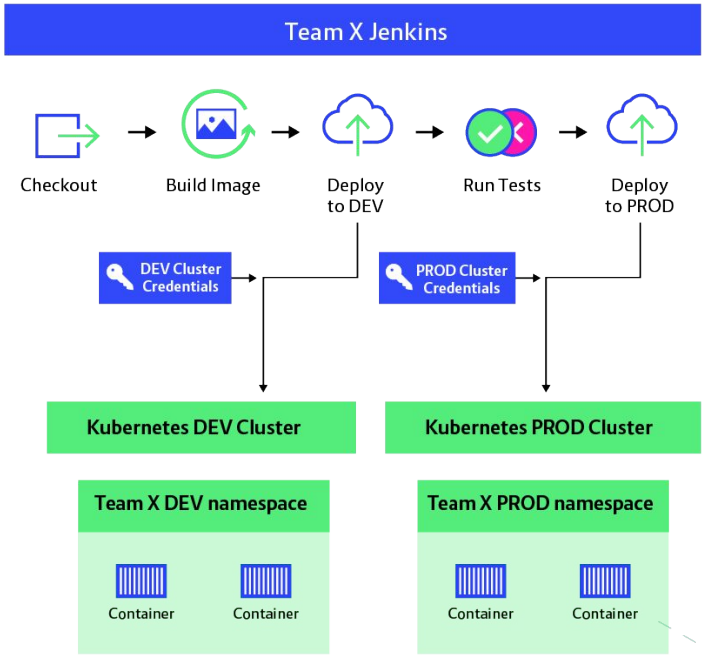
Developer Experience

Future evolution

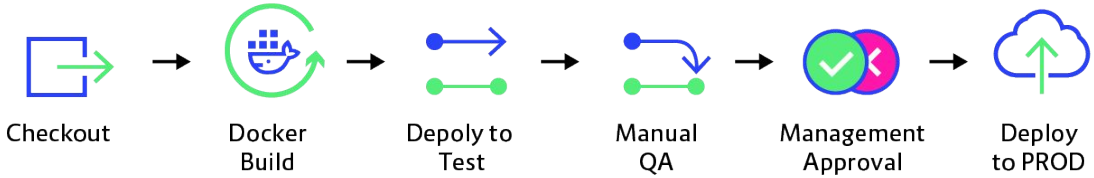
Continuously Delivering Microservices



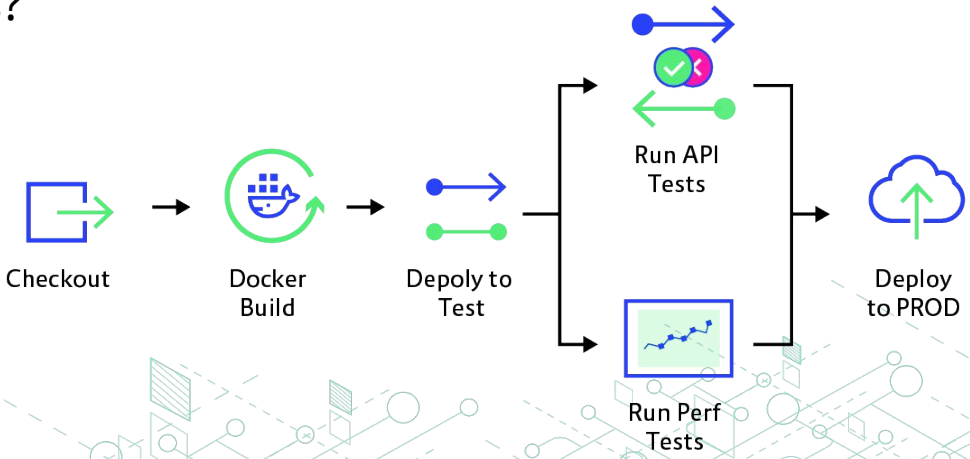
Security & auditing changes



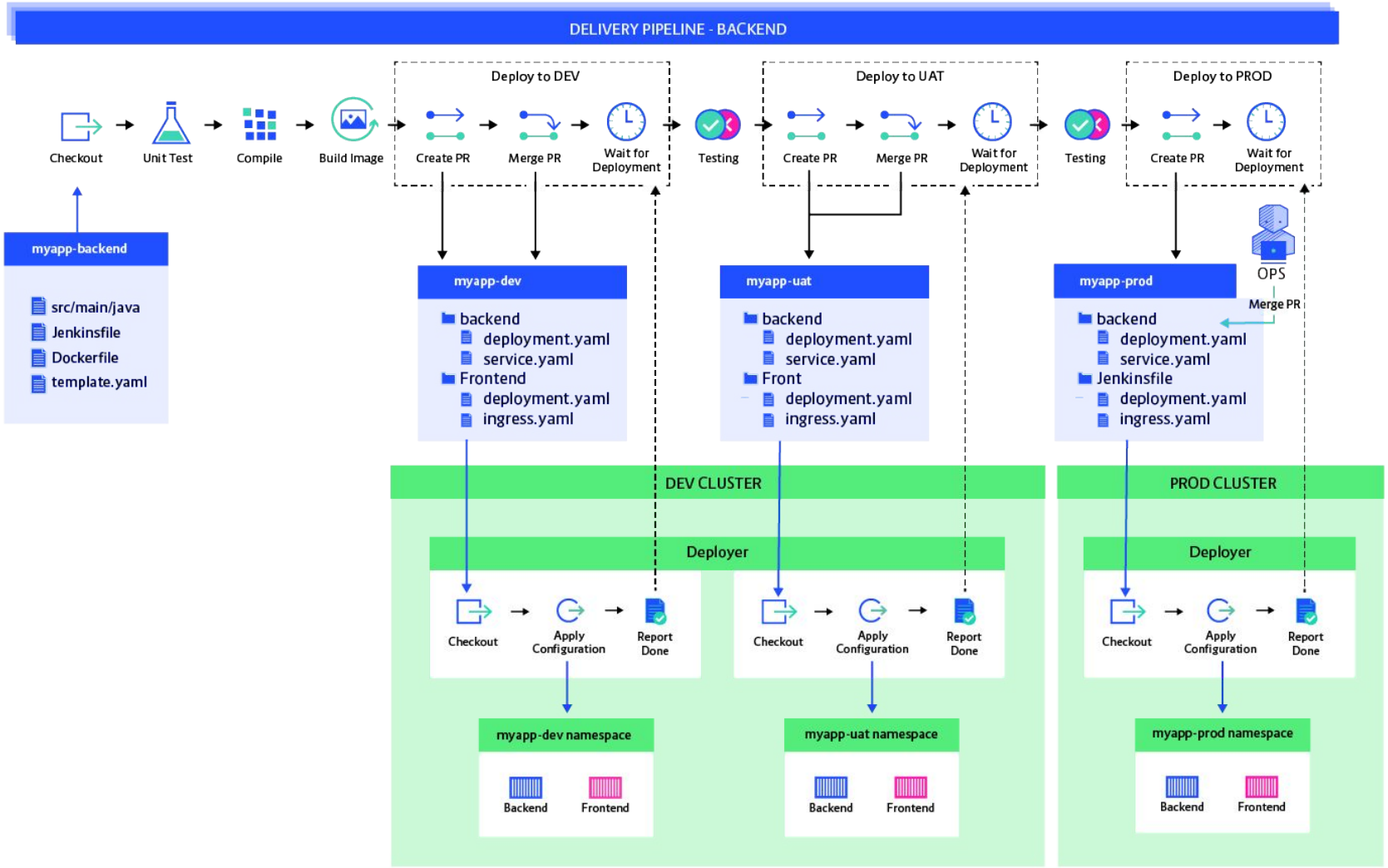
Dealing with uncertainty (and the future)



Which process?



So what did we build?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Deploy to DEV
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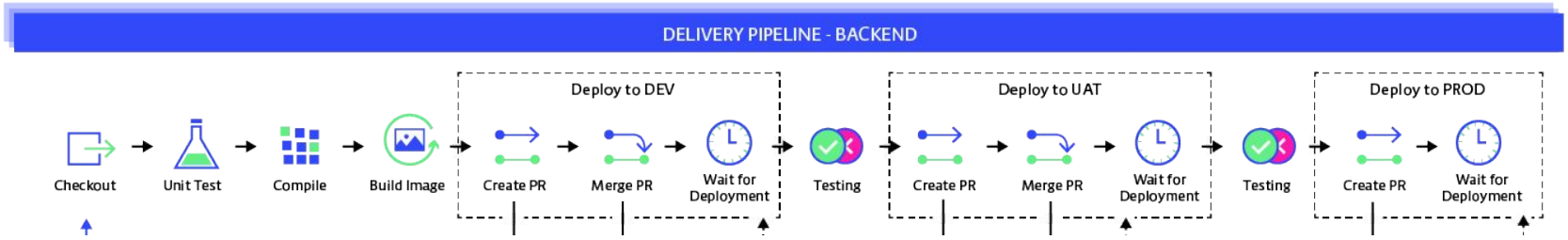
Modeling Continuous Delivery



Pipeline master

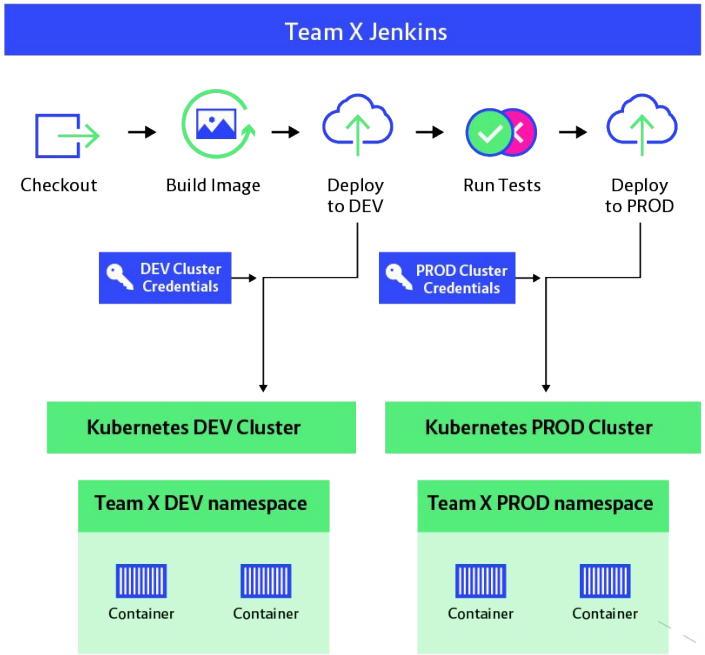
Full project name: cicd-workshop-api-delivery/master

Recent Changes

Stage View

	Declarative: Checkout SCM	Build	Deploy feature branch to ETU	Deploy ETU	Wait until deployed - ETU	Promote to ITU?	Deploy ITU	Wait until deployed - ITU
Average stage times: (Average full run time: ~40min 13s)	5s	1min 8s	NaNy NaNd	58s	300ms	1s	15s	140ms
0.0.2 Jun 11 11:23 — 65 commits	4s	53s		39s	421ms (paused for 53s)	4s (paused for 57min 28s) failed	68ms failed	53ms failed
0.0.1 Jun 04 12:05 — 1 commit	4s	53s		49s	270ms (paused for 2min 7s)	0ms (paused for 3d 3h) failed		
0.0.0 Jun 04 12:03 — 2 commits	4s	54s		41s	406ms (paused for 2min 15s)	0ms (paused for 3d 3h) failed		

Securing Deployments



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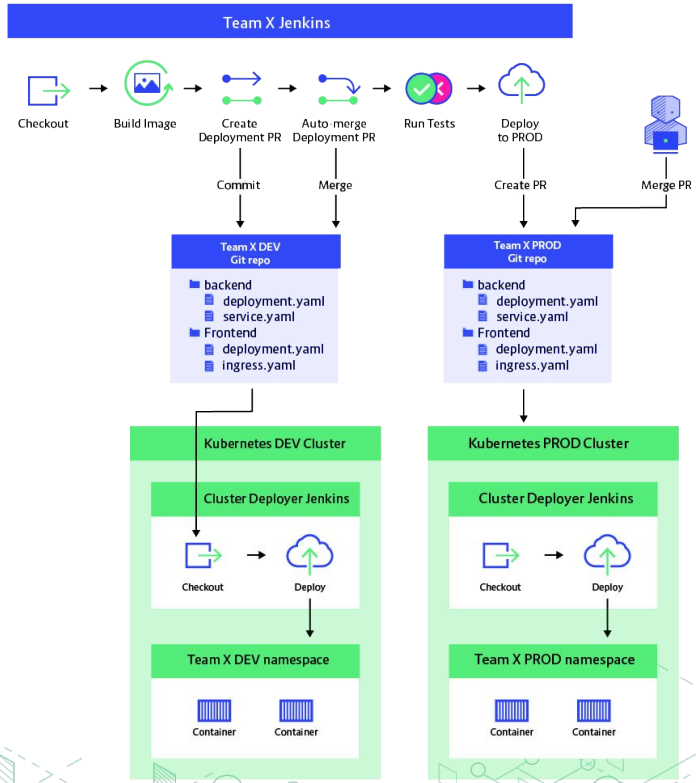
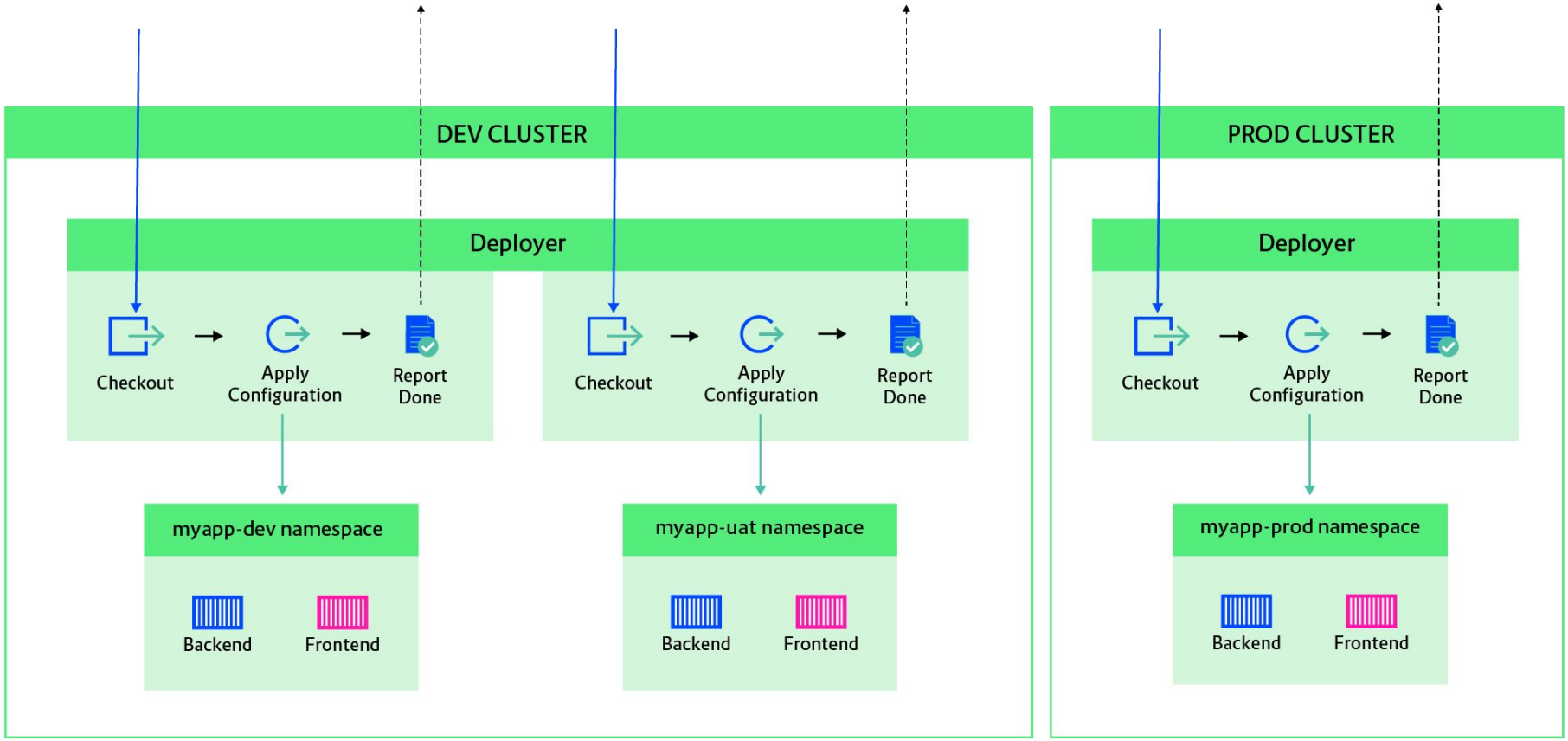


GitOps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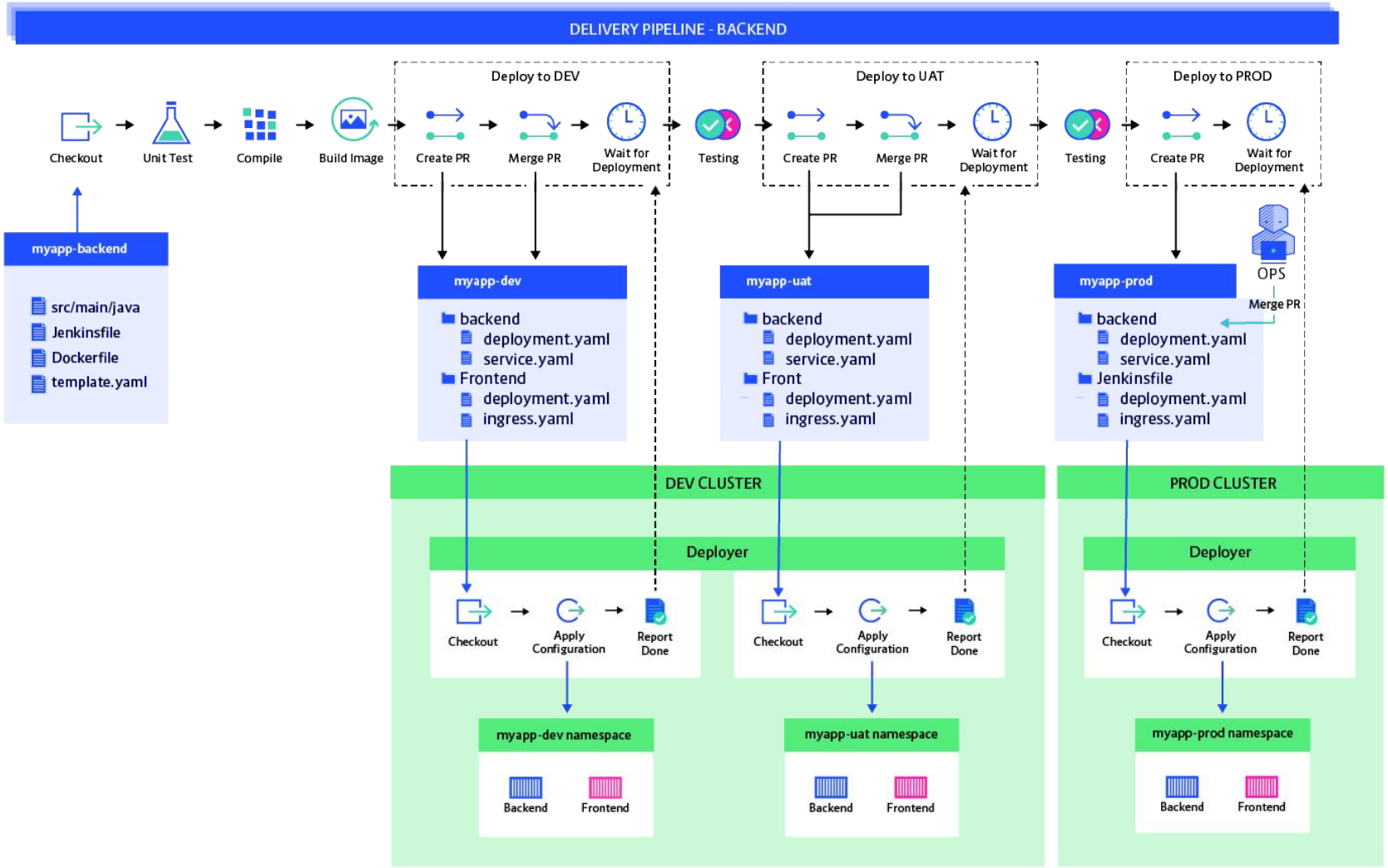
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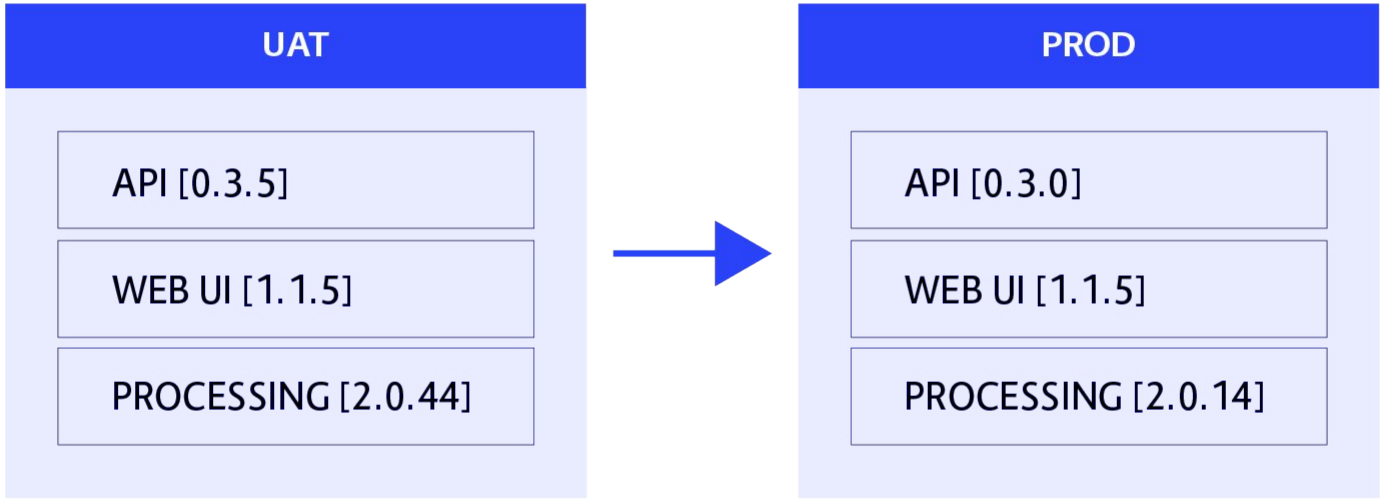
Monolithic Stage Promotion



Design Decisions

- Select per-microservice Continuous Delivery as default process
- Segregate deployment services from the software delivery pipeline using Gitops pattern
- Expose Docker and Openshift to developers
- Provide fallback for teams not ready to CD all the way

Thank you!

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Reach out:
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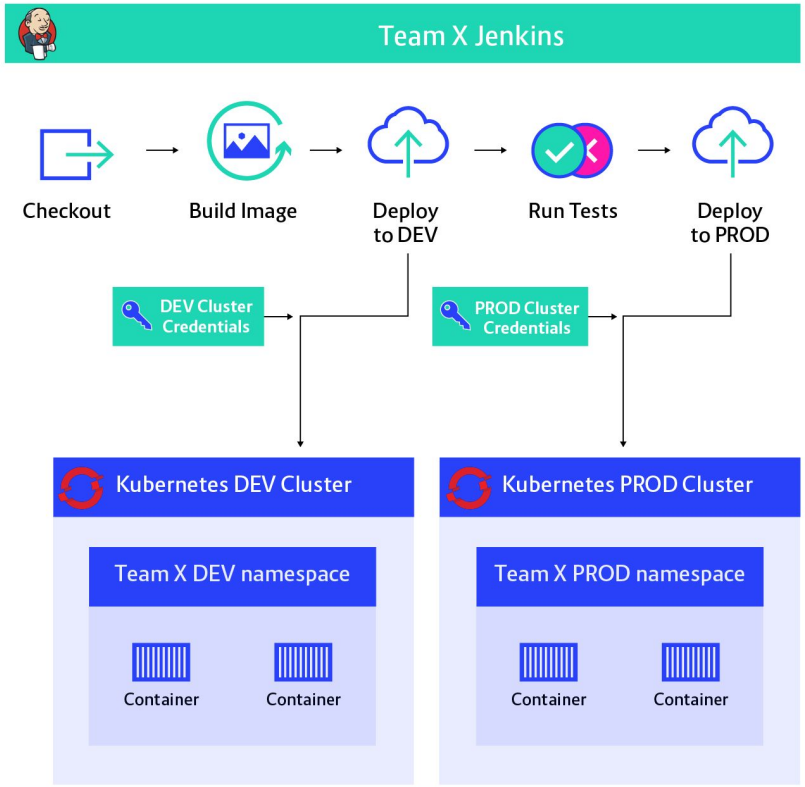
Read more:
https://tinyurl.com/gitopscd

Security & auditing changes



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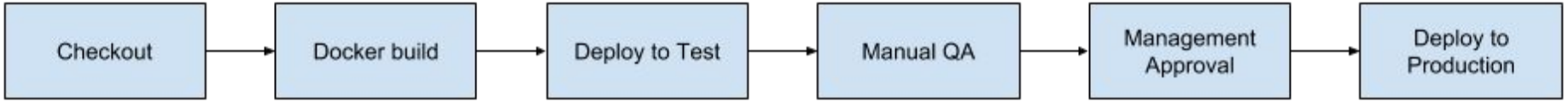

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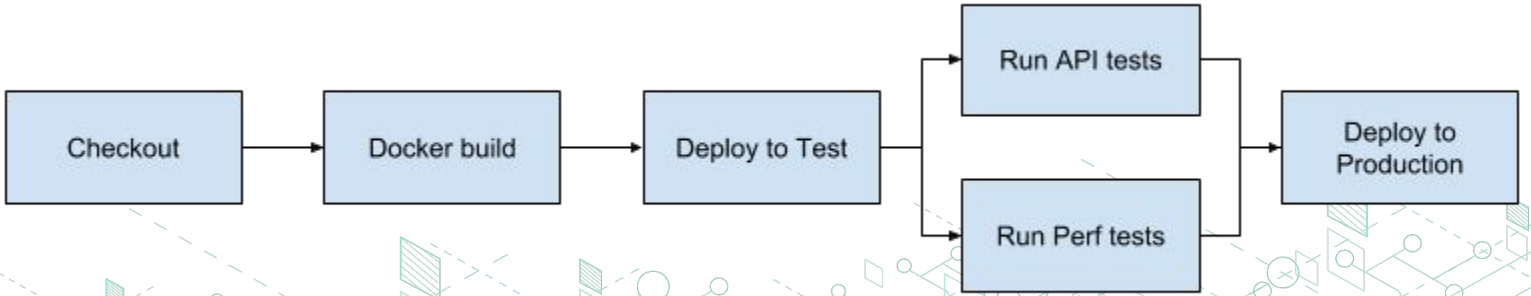

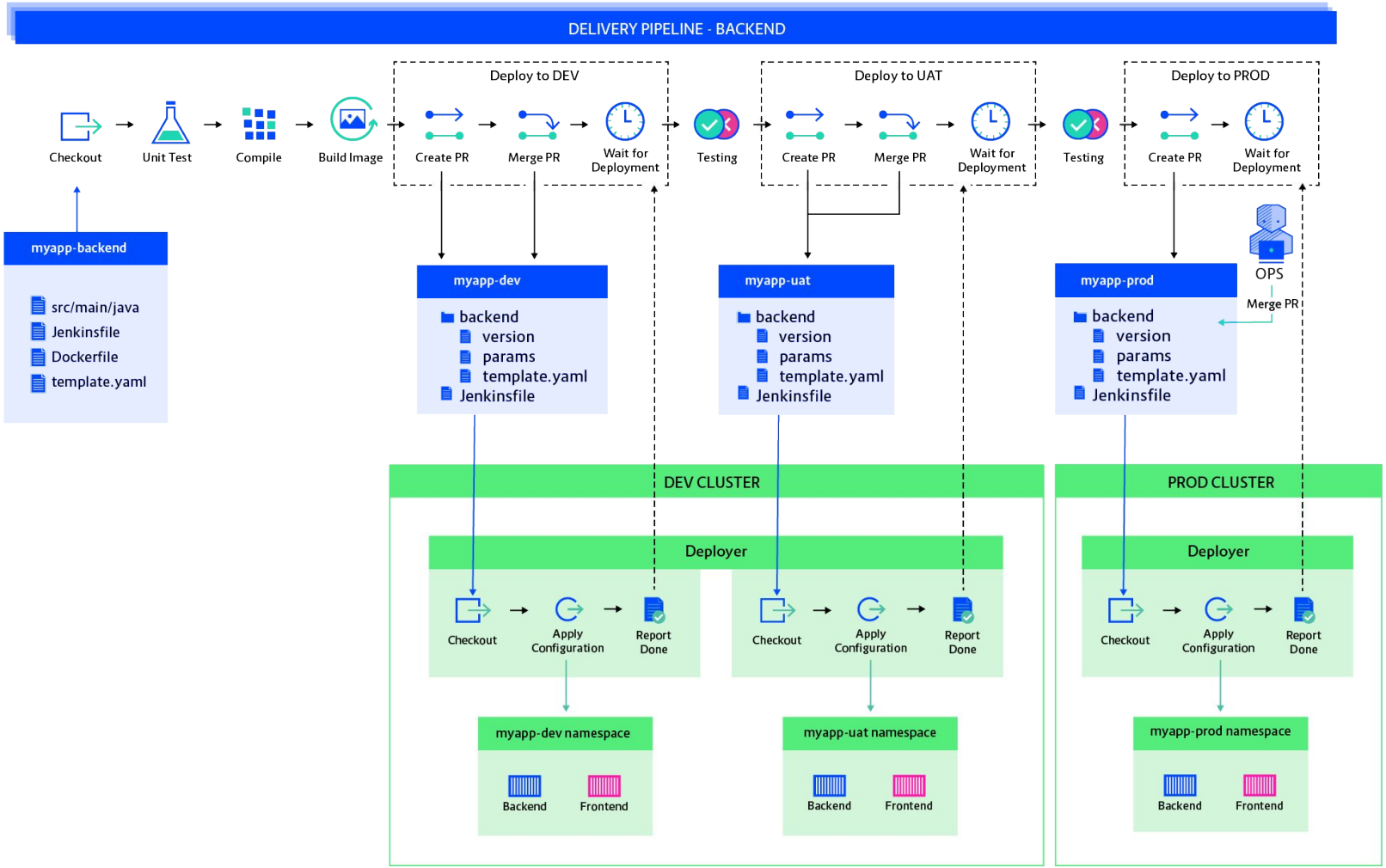
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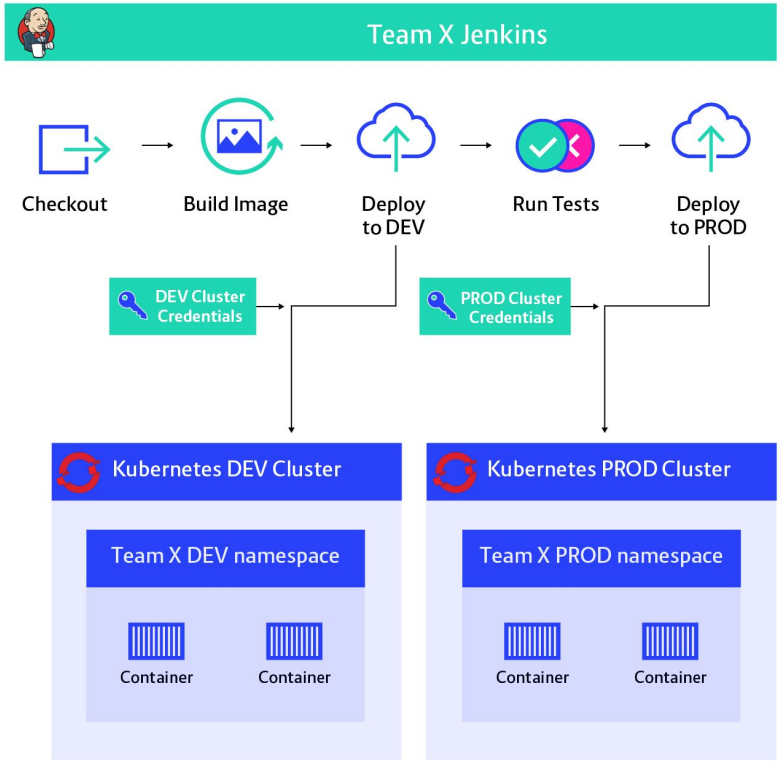

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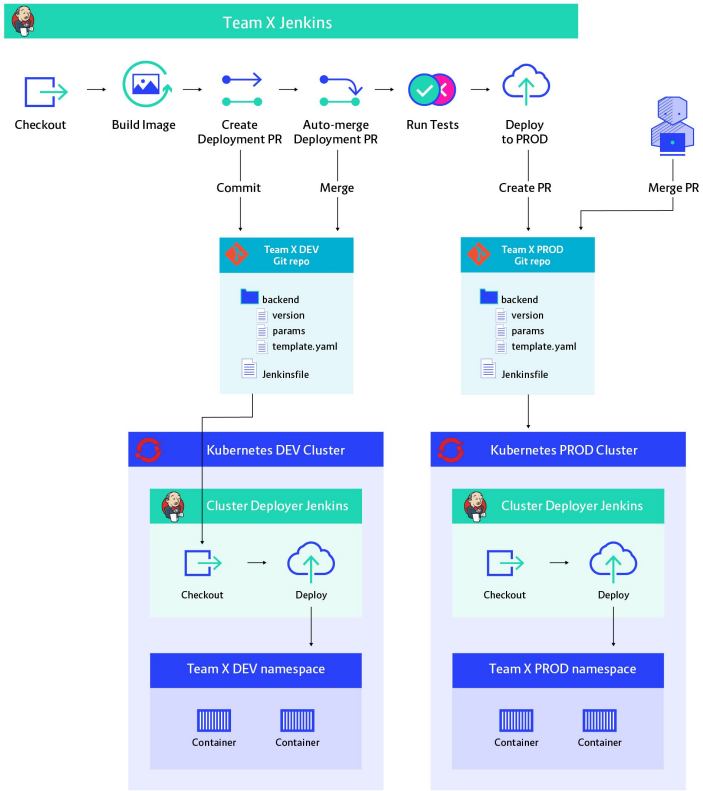

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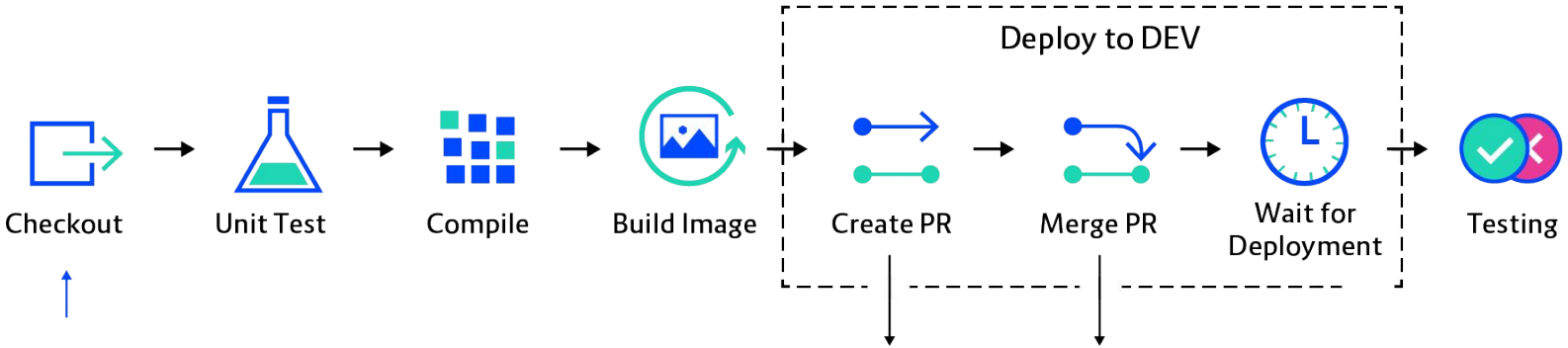

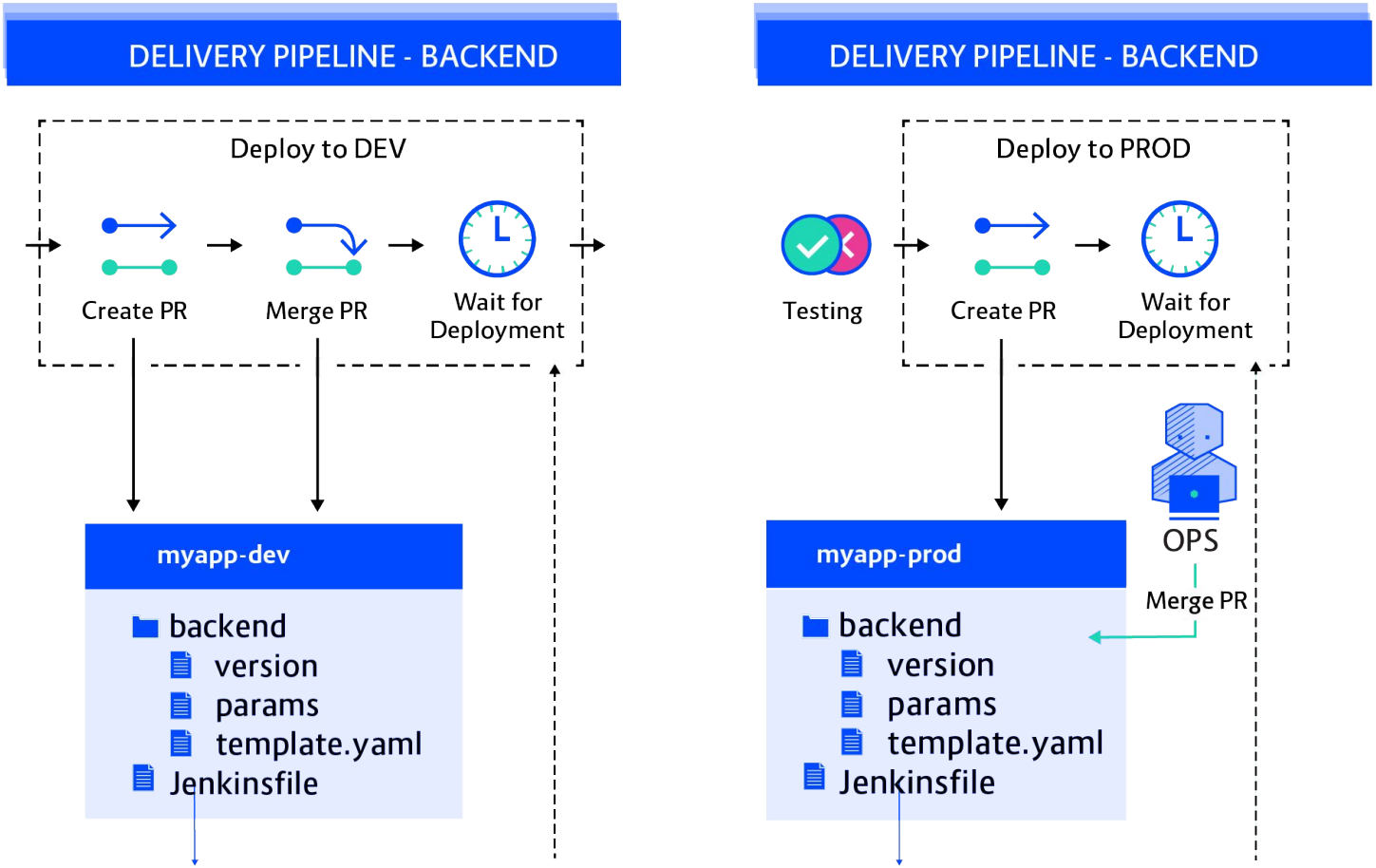
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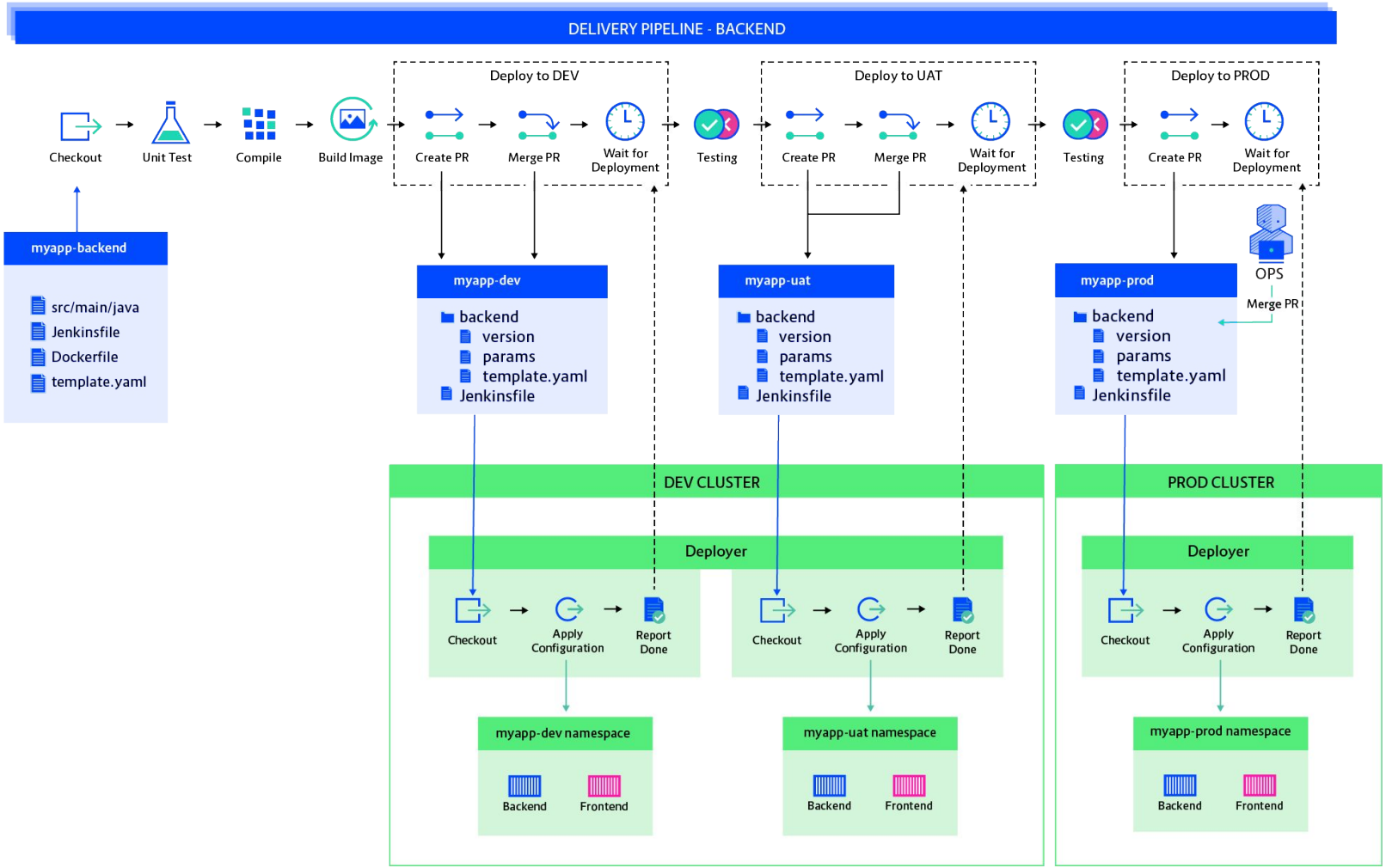
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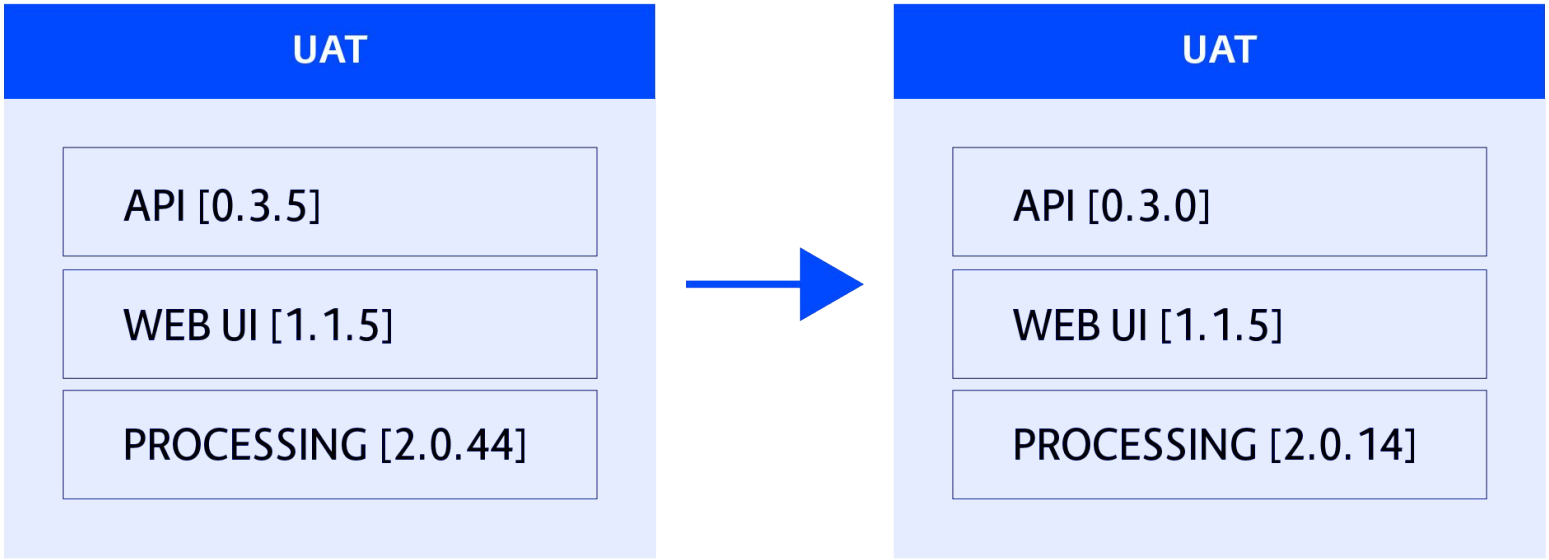


No Prod deploys yet

Hard to reach working state

Manual Provisioning

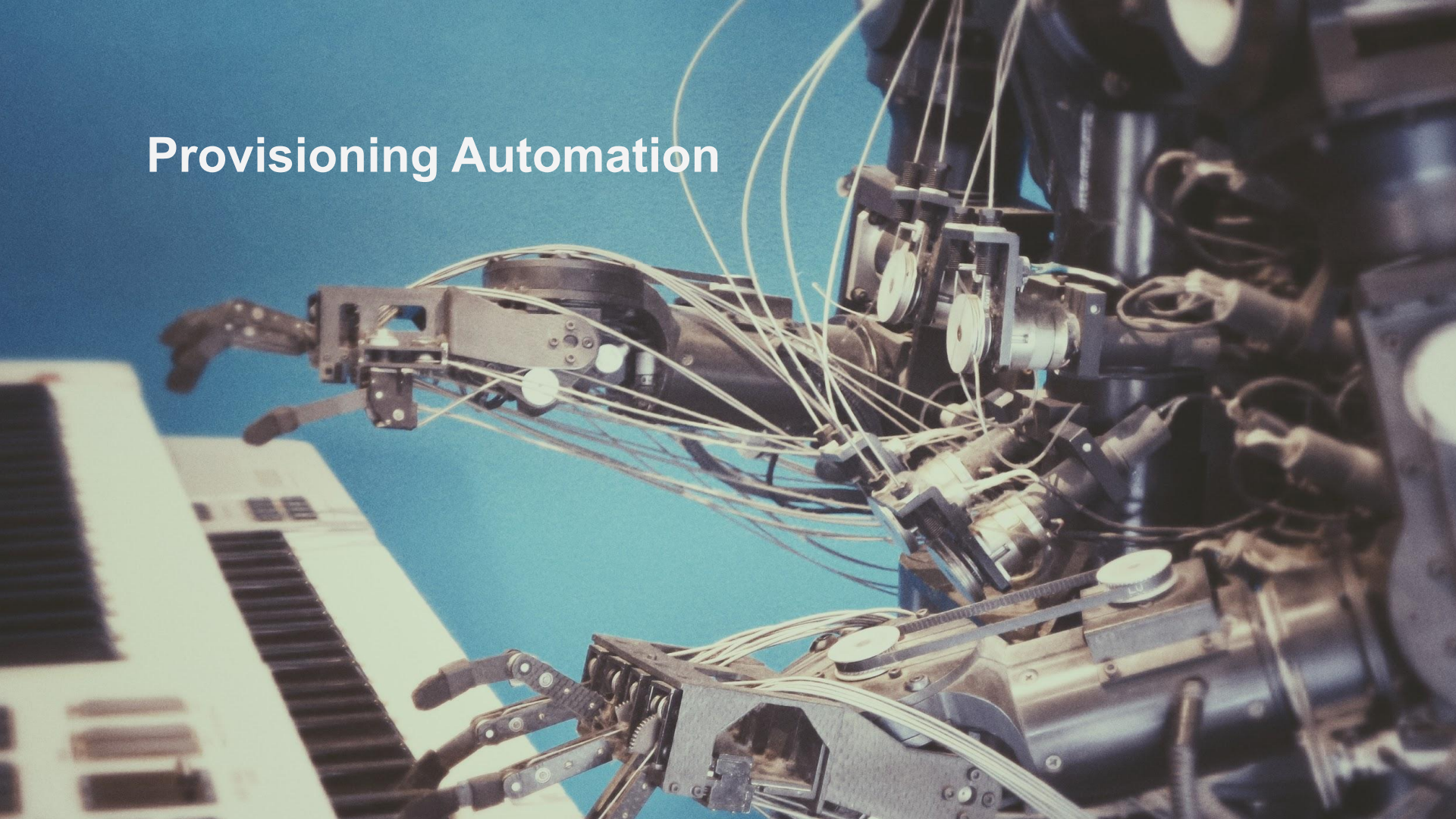
Photo by Jon Tyson on Unsplash

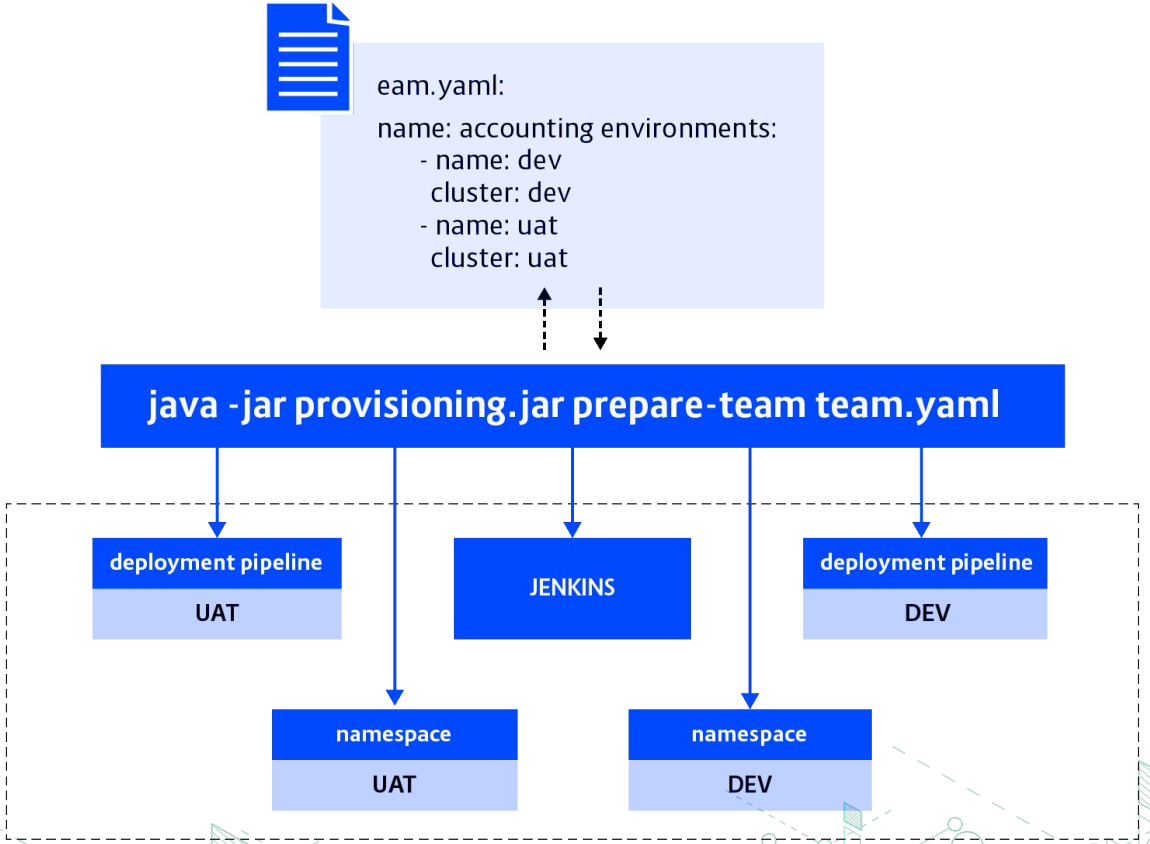
It works!

Devs can use it

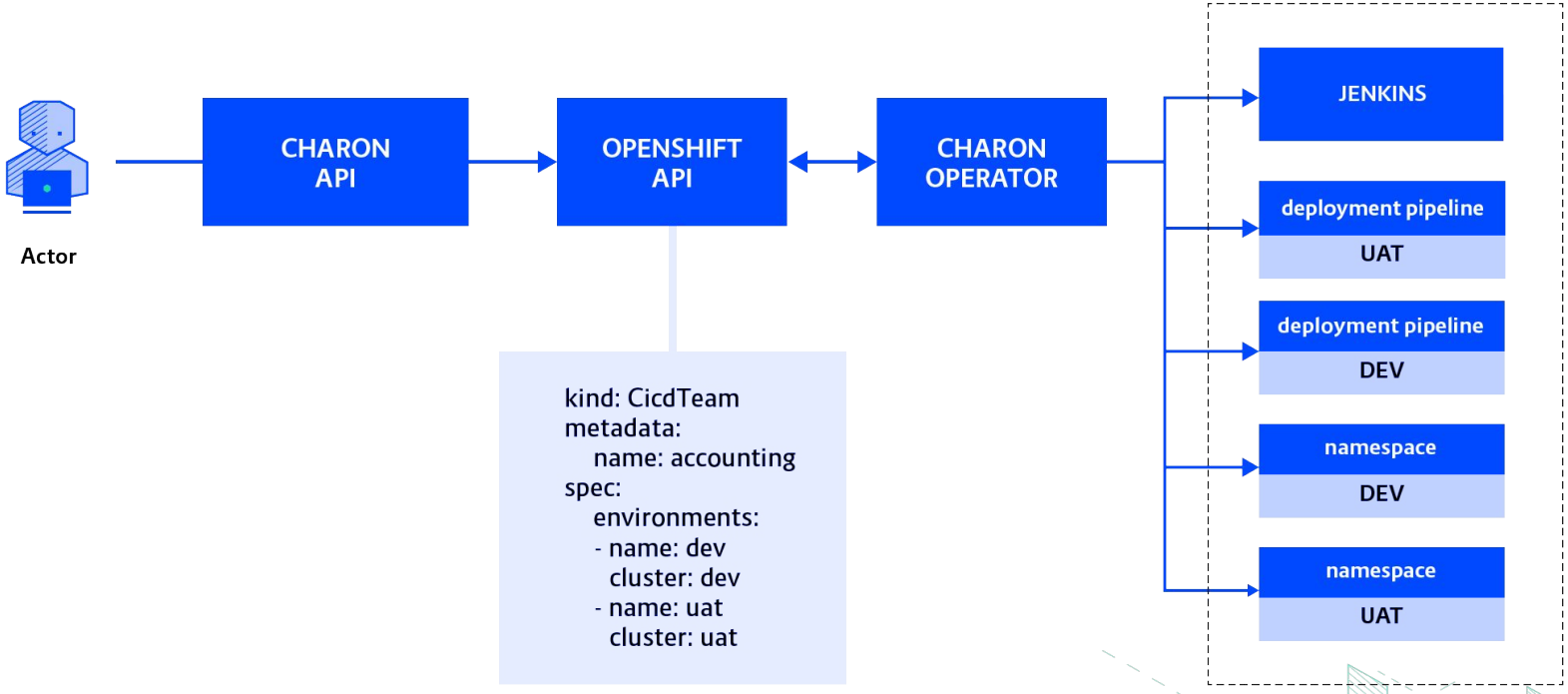
Security ppl are happy

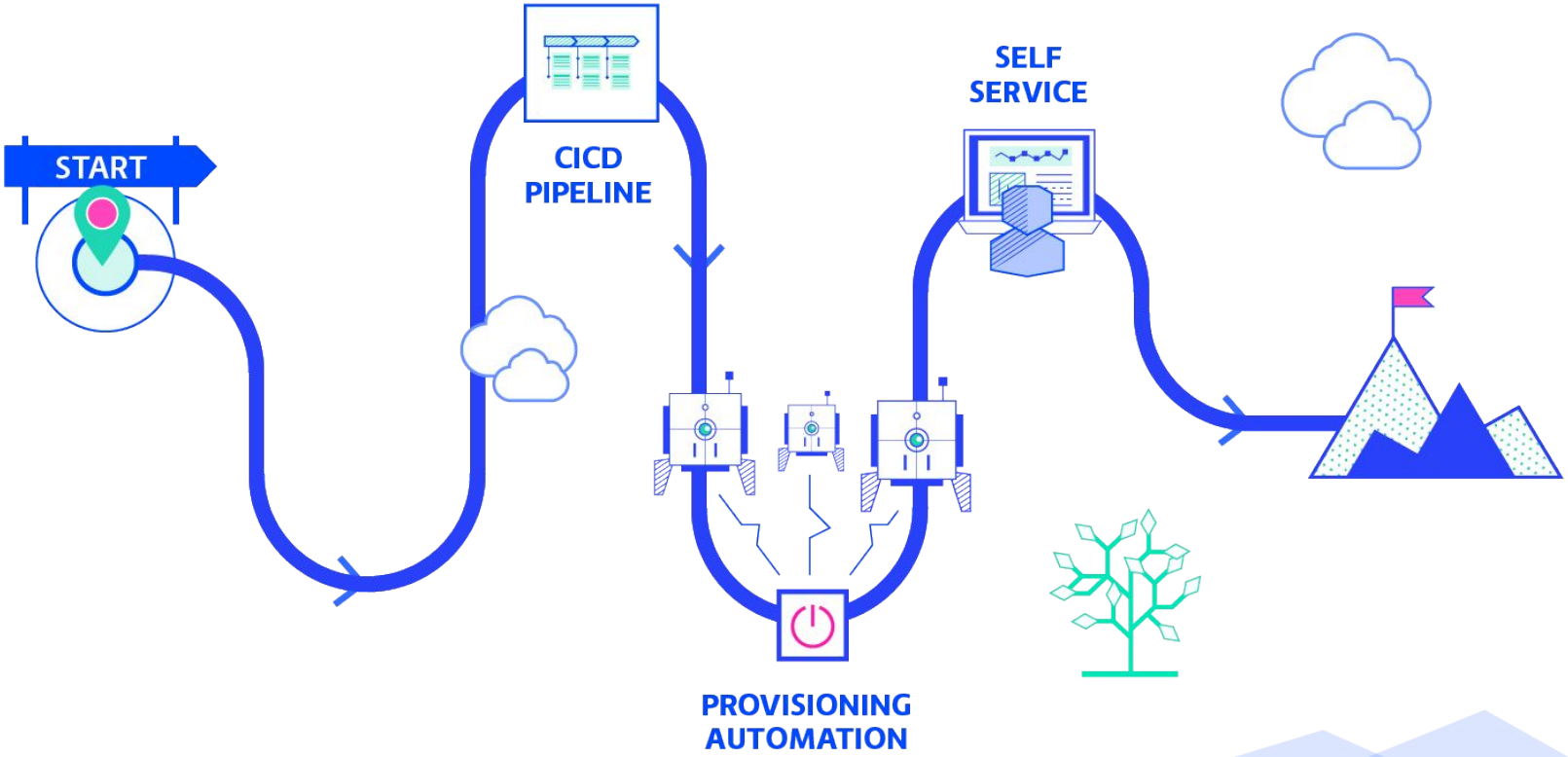
Provisioning Automation




eam.yaml:
name: accounting environments:
- name: dev
cluster: dev
- name: uat
cluster: uat
java -jar provisioning.jar prepare-team team.yaml
deployment pipeline
UAT
JENKINS
deployment pipeline
DEV
namespace
UAT
namespace
DEV


DHL
Tag & Nacht Pakete abholen und verschicken.
Einfach. Immer. Überall.
Diese Packstation ist alarmgesichert und videoüberwacht.
Das Anbringen von Plakaten und Werbung jeglicher Art
ist verboten und wird strafrechtlich verfolgt.


Actor
CHARON API
OPENSHIFT API
CHARON OPERATOR
JENKINS
deployment pipeline
UAT
deployment pipeline
DEV
namespace
DEV
namespace
UAT
kind: CicdTeam
metadata:
name: accounting
spec:
environments:
- name: dev
cluster: dev
- name: uat
cluster: uat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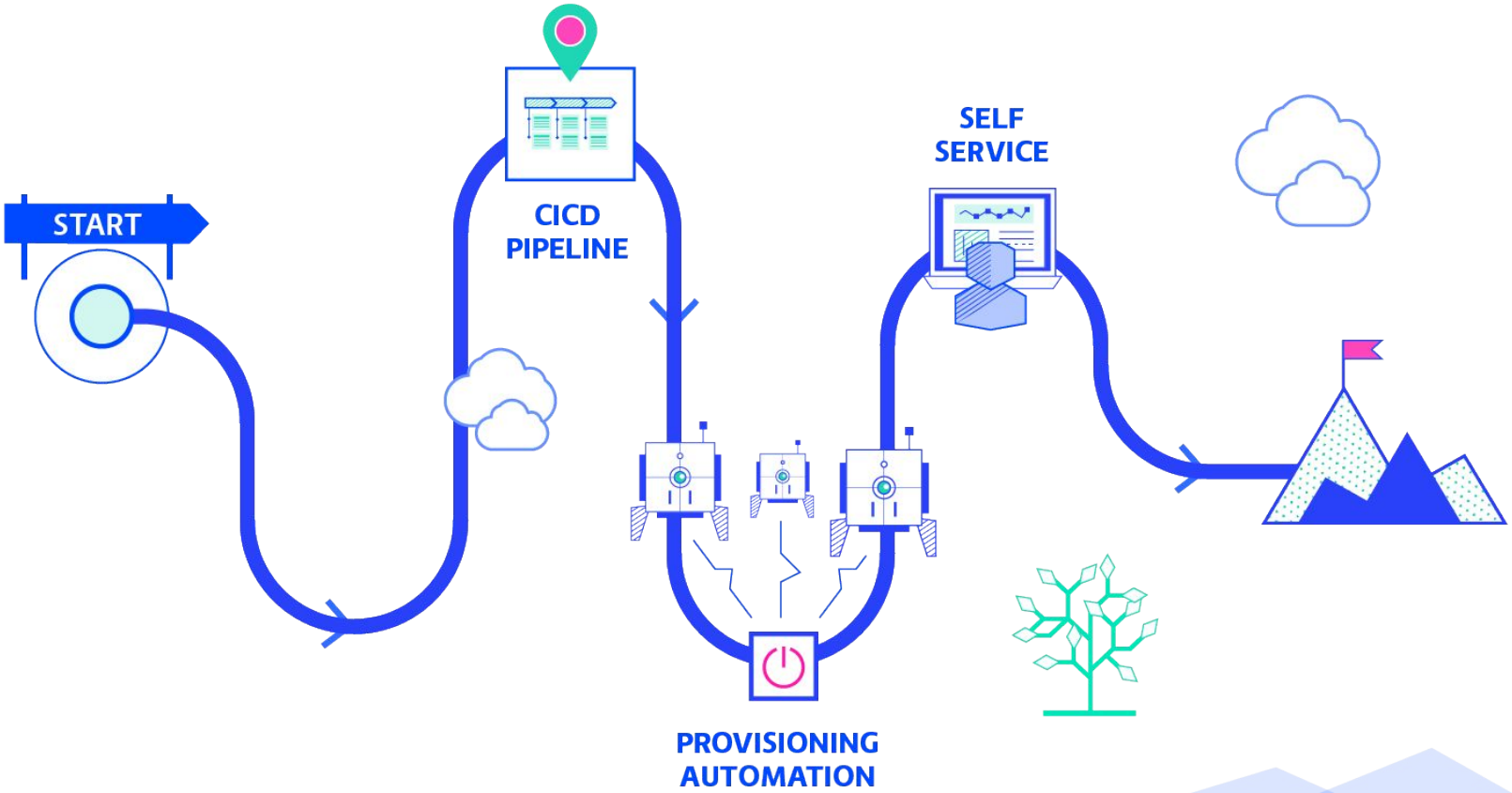
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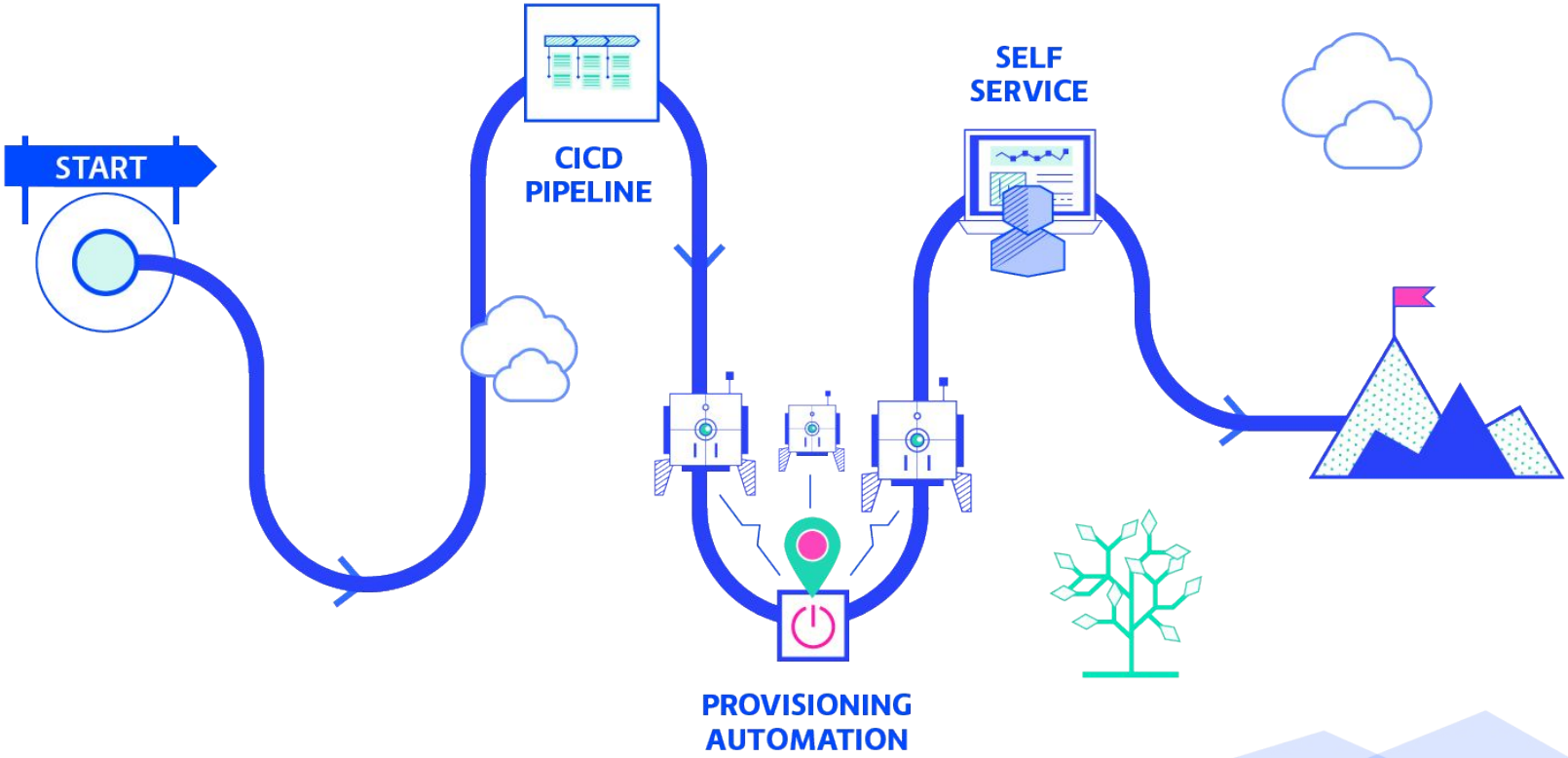
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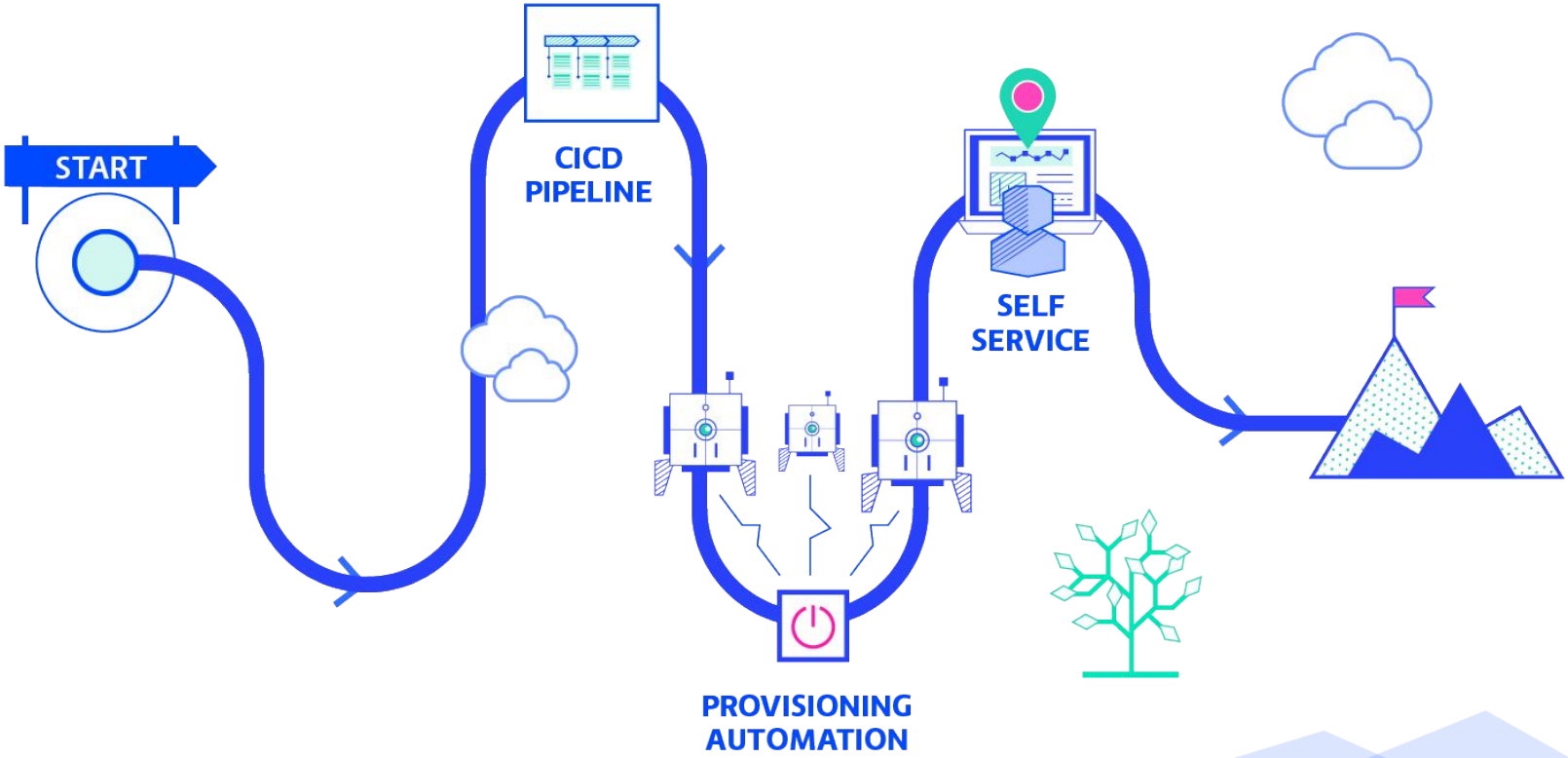
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