

Large scale Continuous Delivery: Building a platform

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What to focus on?

Continuous Delivery of Microservices

Secure and auditable deployments

Developer Experience

Future evolution

Continuous Delivery

Build

Deploy to Dev

Test on Dev

Deploy to Prod

Monitor

Build artifacts only once

Deploy the same way to every environment

Team decides when to Deploy

Keep environments similar

Cloud Native Continuous Delivery

Build

Deploy to Dev

Test on Dev

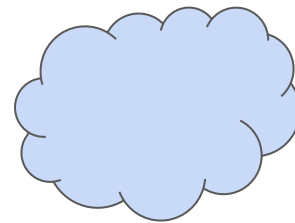
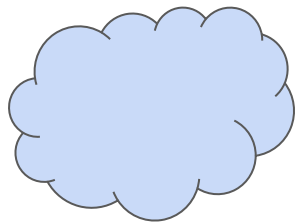
Deploy to Prod

Monitor

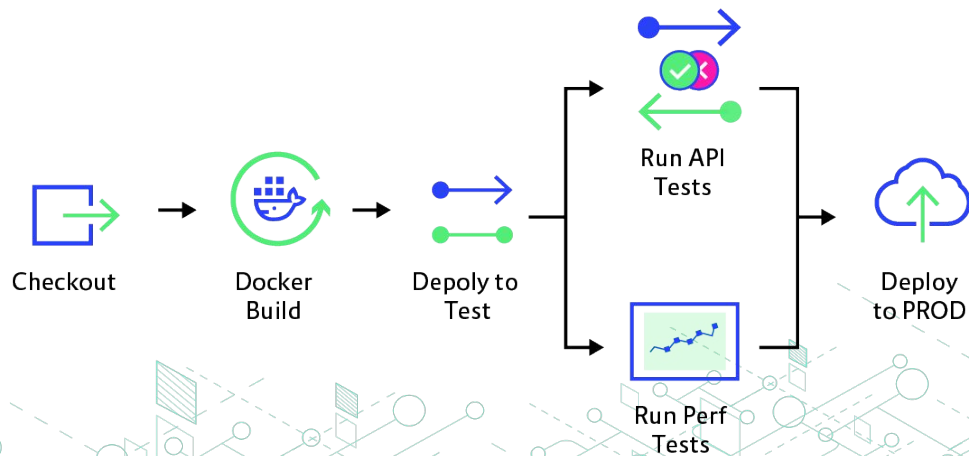
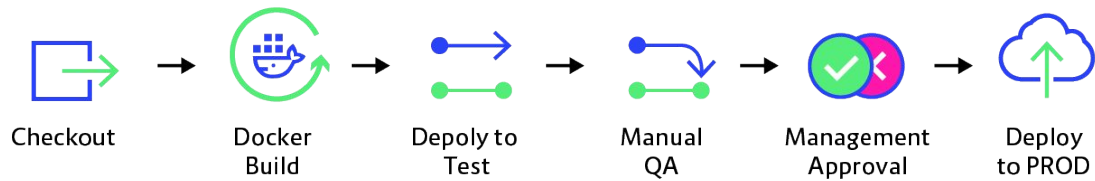
Configuration as Code

Versioned Configuration

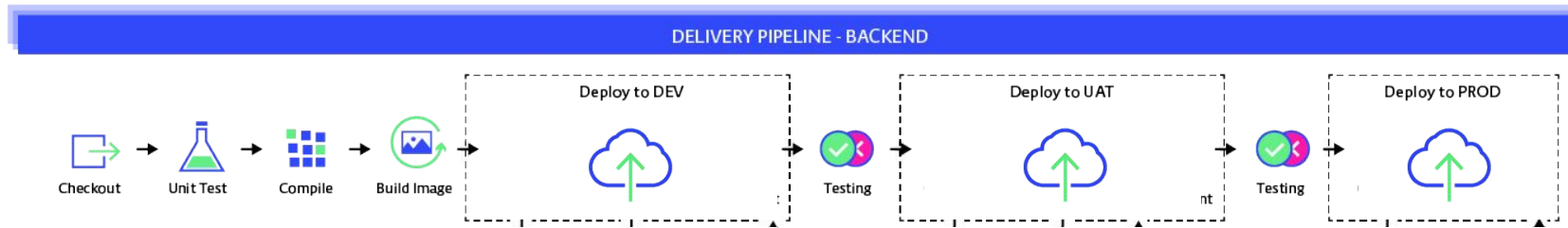
Ecosystem of (micro)Services



Dealing with uncertainty (and the future)



Modeling Continuous Delivery



Pipeline master

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

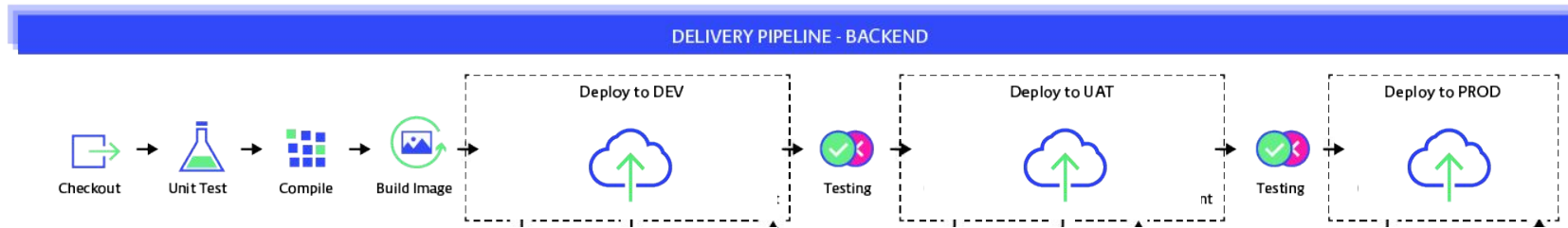


[Recent Changes](#)

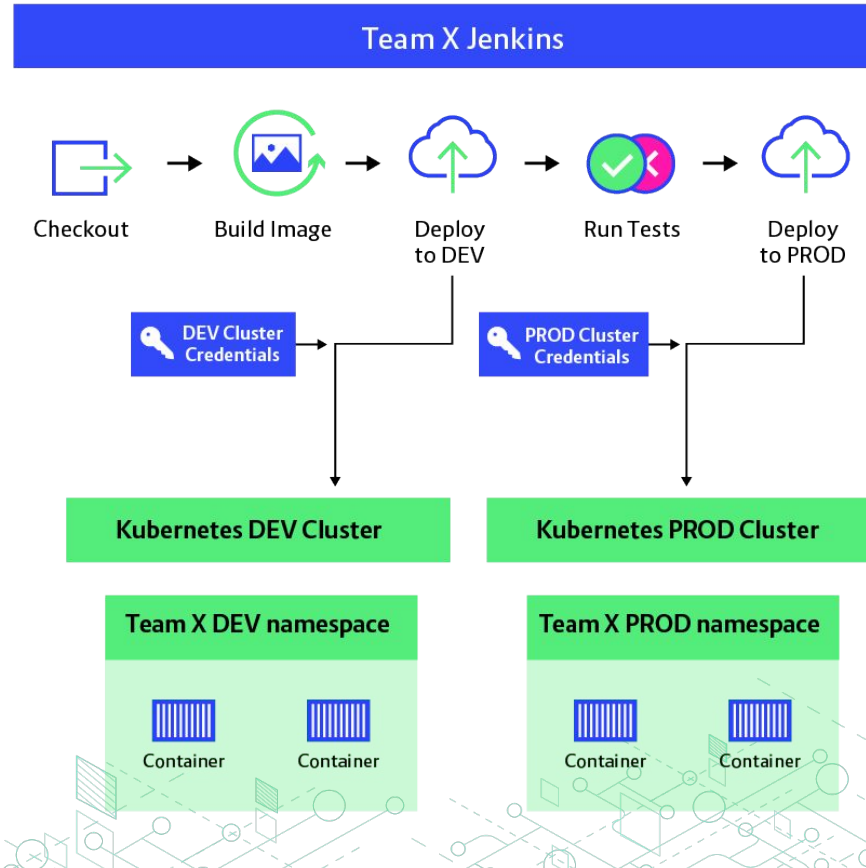
Stage View

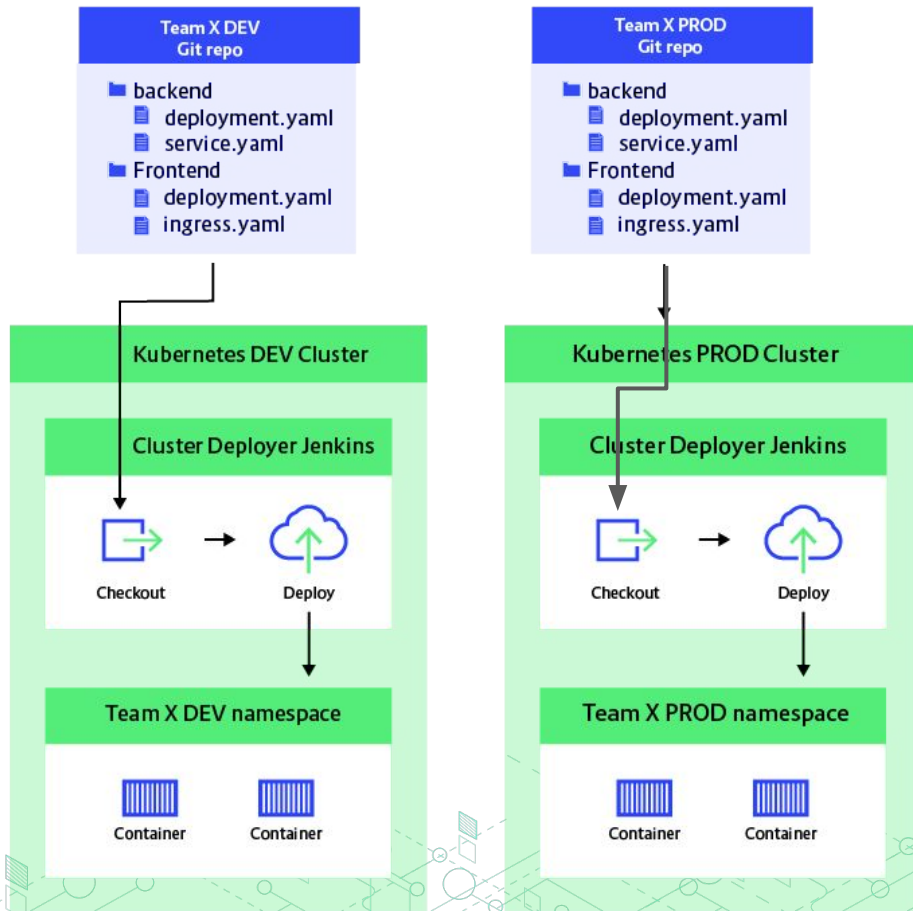
		Declarative: Checkout SCM	Build	Deploy feature branch to ETU	Deploy ETU	Wait until deployed - ETU	Promote to ITU?	Deploy ITU	Wait until deployed - ITU
Average stage times: (Average full run time: ~40min 13s)		5s	1min 8s	NaNy NaNd	58s	300ms	1s	15s	140ms
0.0.2 Jun 11 11:23 65 commits		4s	53s		39s	421ms (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		

Modeling Continuous Delivery



Securing Deployments





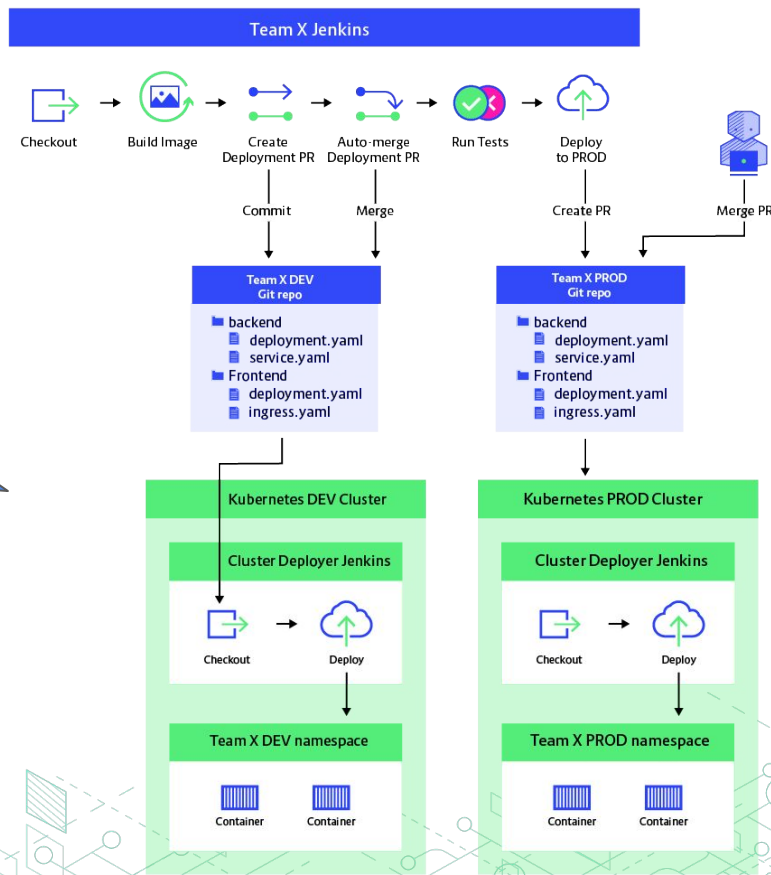
GitOps

Store all configuration in Git

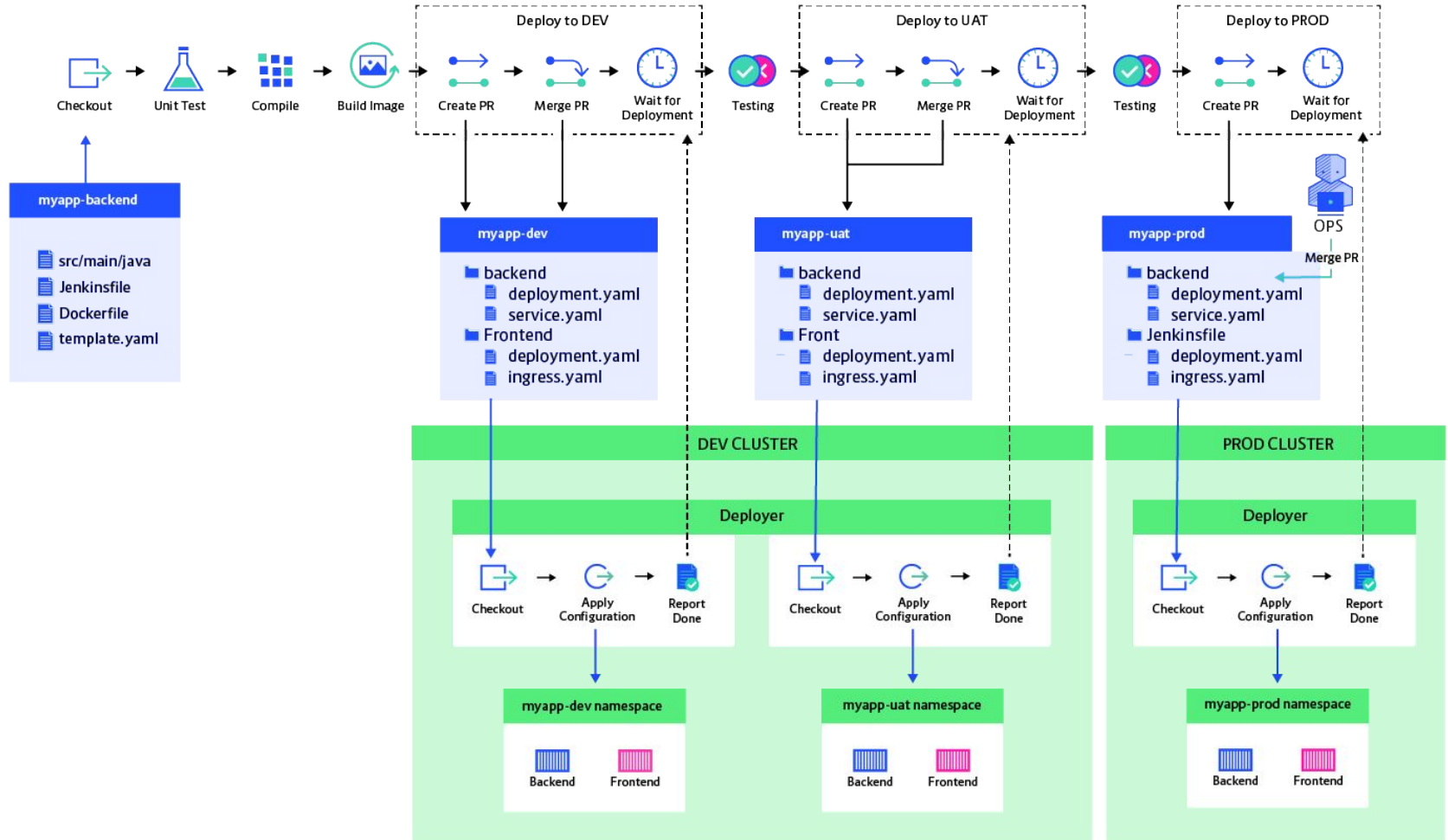
Execute a uniform automated process when the repo changes

Requires declarative configuration

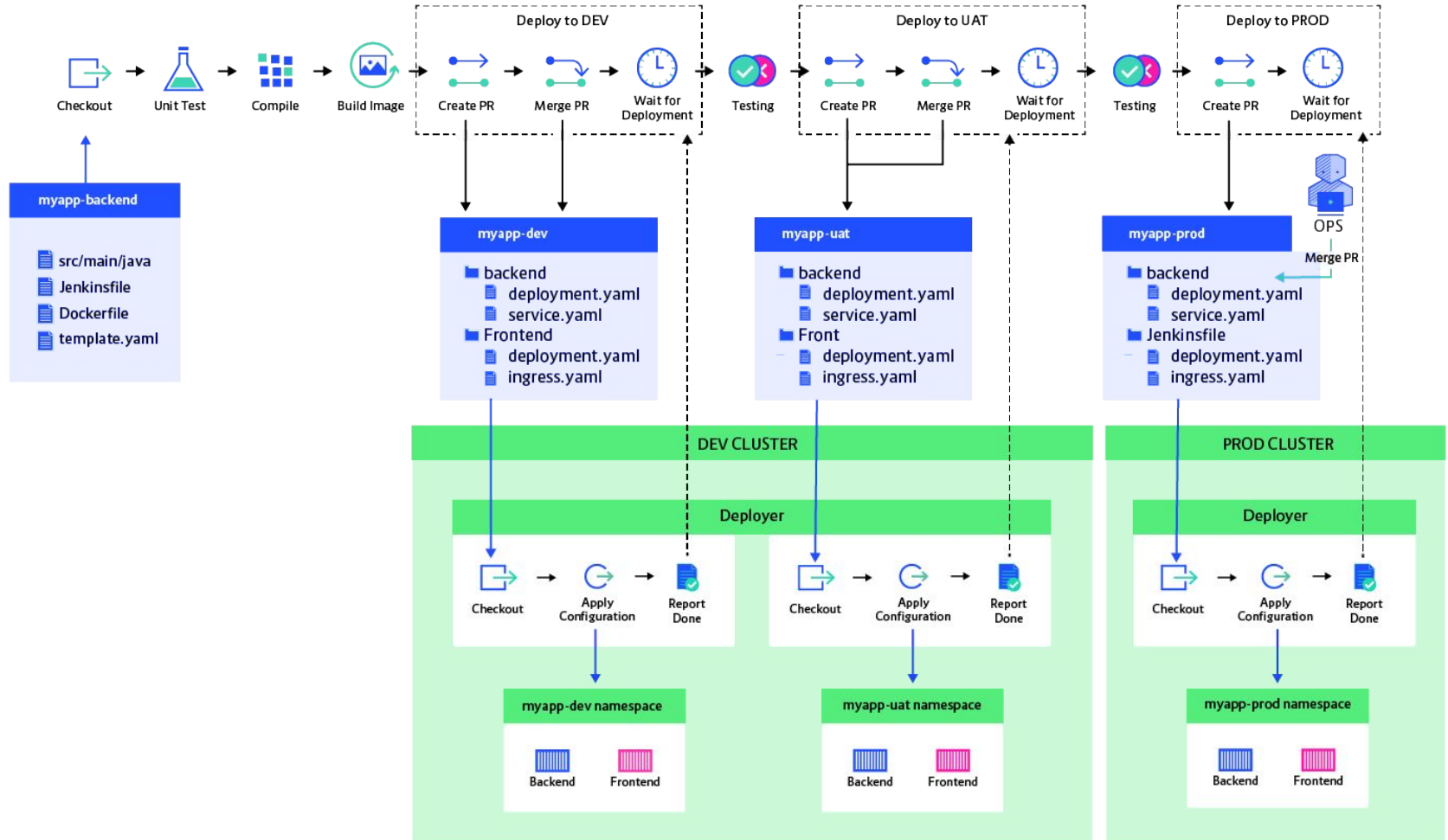
Securing Deployments



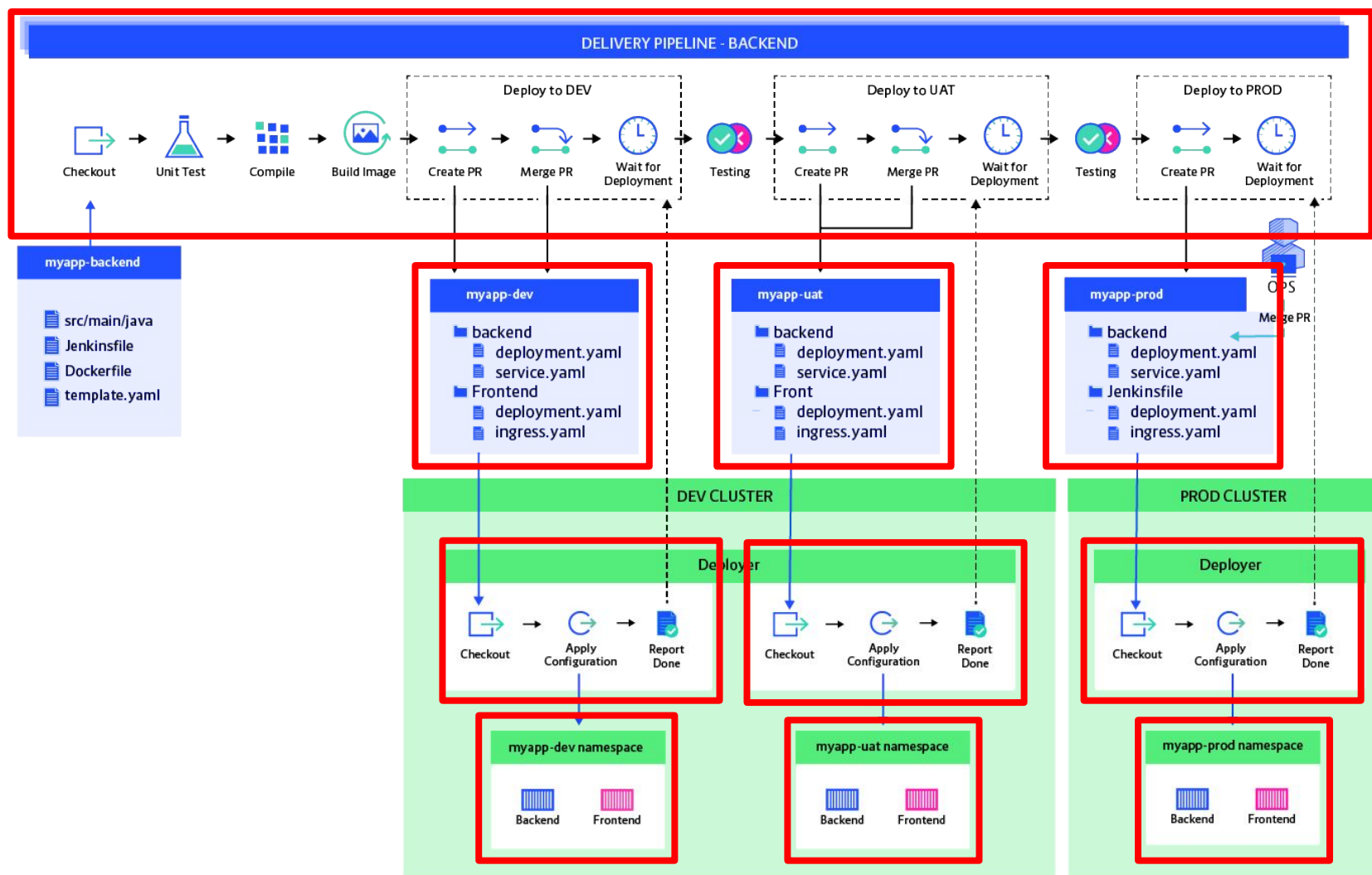
DELIVERY PIPELINE - BACKEND



DELIVERY PIPELINE - BACKEND



Provisioning



Taking inventory

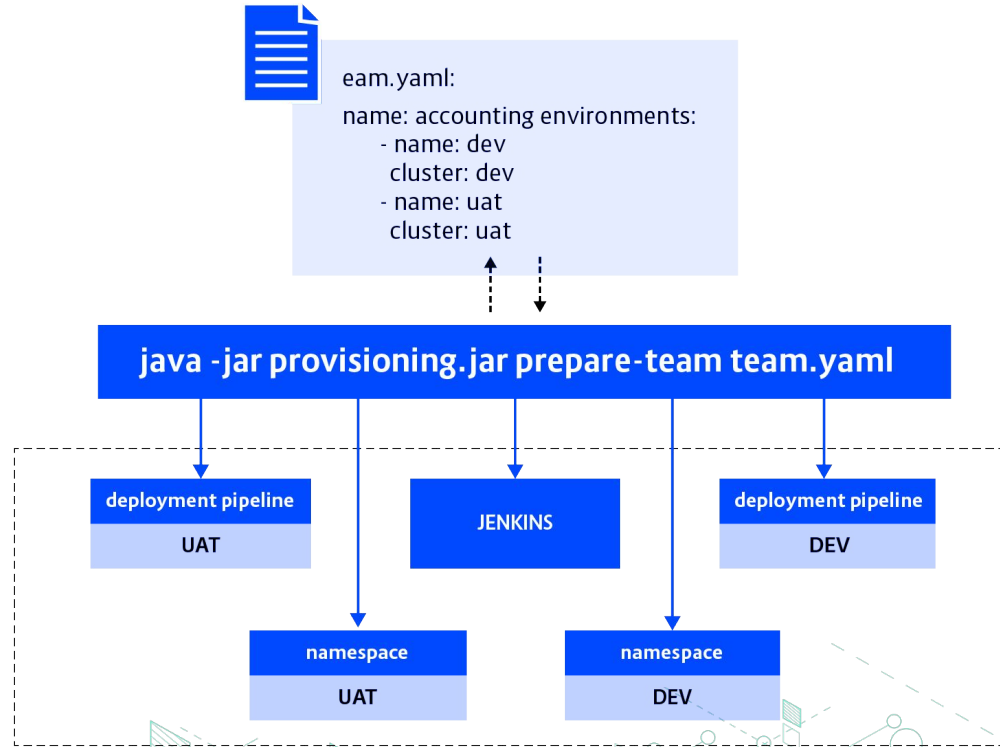
1x Jenkins

3x Namespace

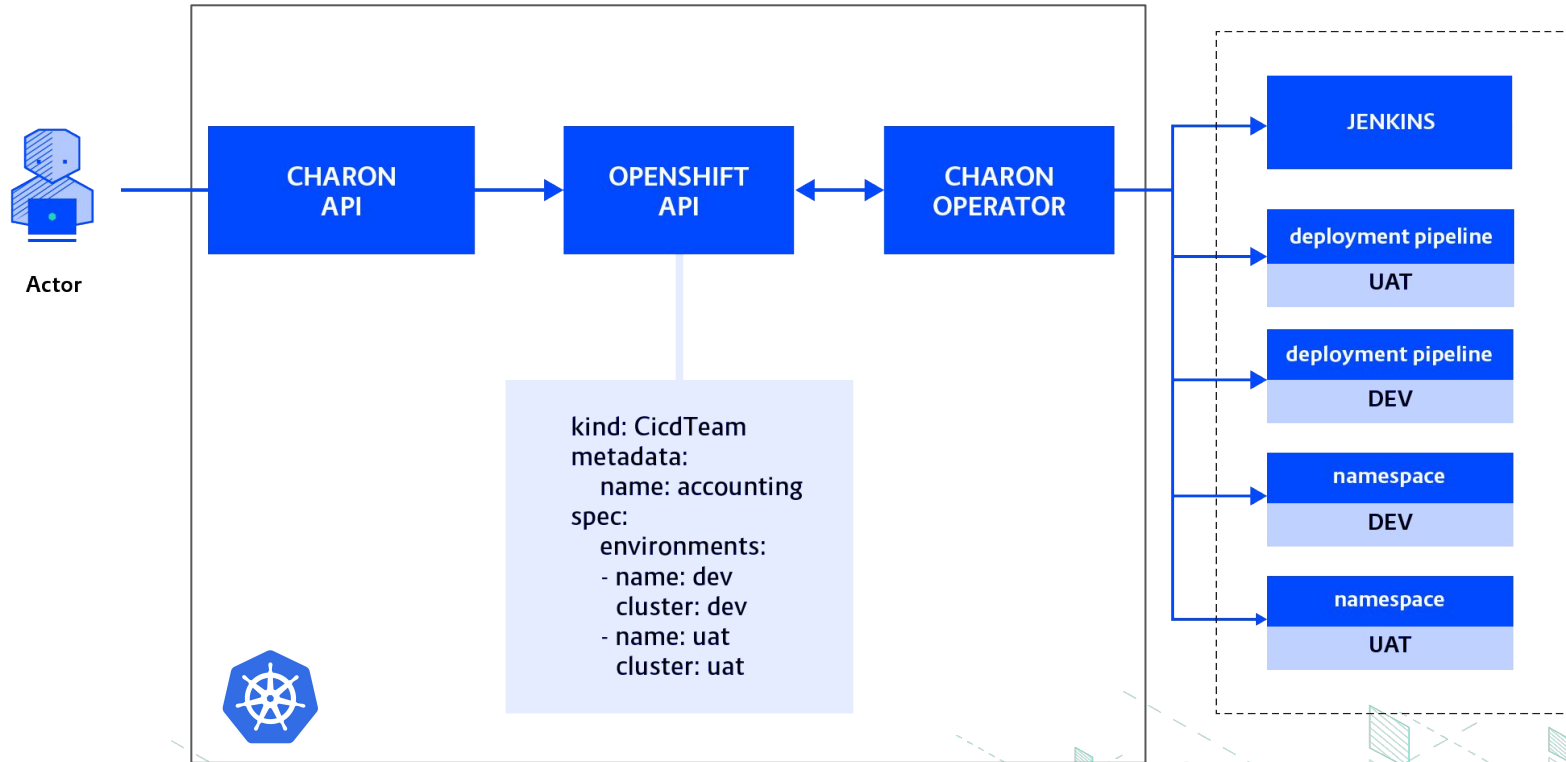
3x Ops Git Repo

3x Deployment Pipeline

Provisioning from CLI



Provisioning with Operators



Emerging technologies



Argo CD



Thank you!

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Read more:
<https://tinyurl.com/gitopscd>