
AWS
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NOV. 28 – DEC. 2, 2022 | LAS VEGAS, NV

STP205-R

A journey to increased developer productivity

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AWS

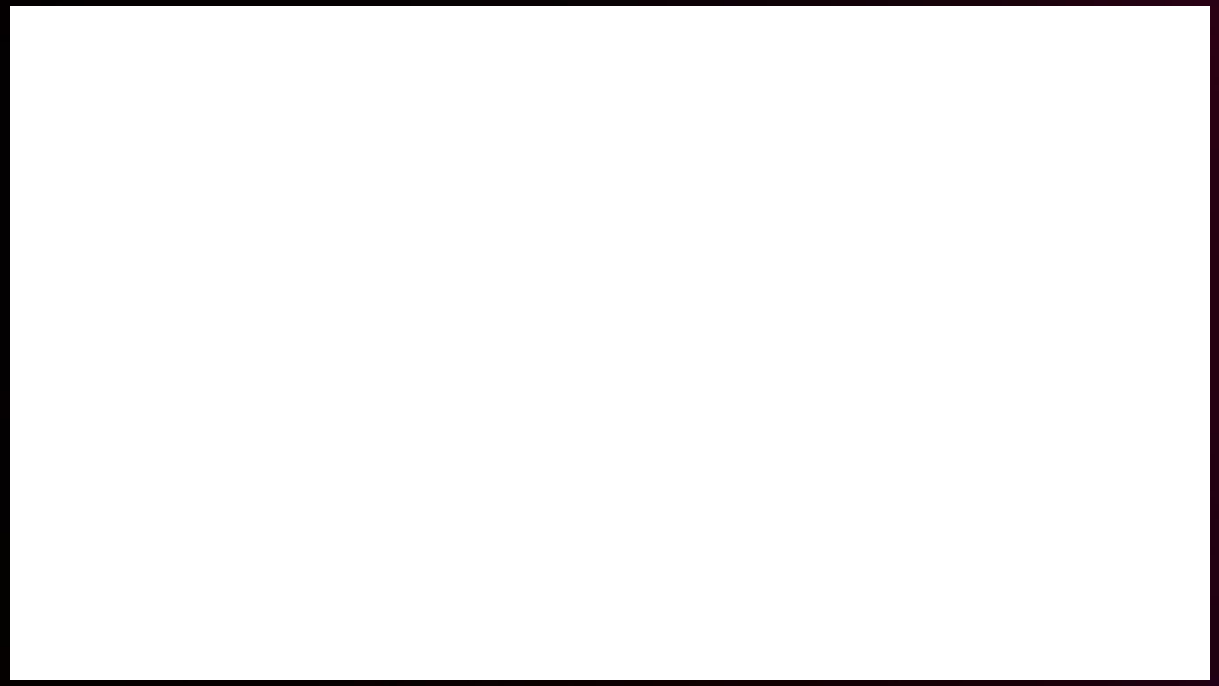
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Drift

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Agenda

- Drift overview
- DevOps
  - Cultural philosophy, practices, tools <-> Drift
  - DevOps journey: pipeline and architecture
  - Use case
  - Metrics and statistics
- Q&A

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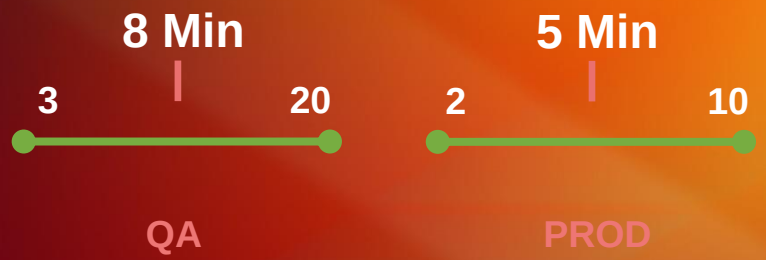
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Drift statistics

USERS	> 2,000,000 simultaneous connected users* (at peak load)
SERVICES	~150 backend services (API, message workers)
SERVICES	~ 600 deployments to production per month
ENGINEERS	>80
CLUSTERS/PODS	15 Amazon EKS clusters (1000 + Pods)

MESSAGES 5,000,000 Messages/day (avg)

DEPLOY TIME



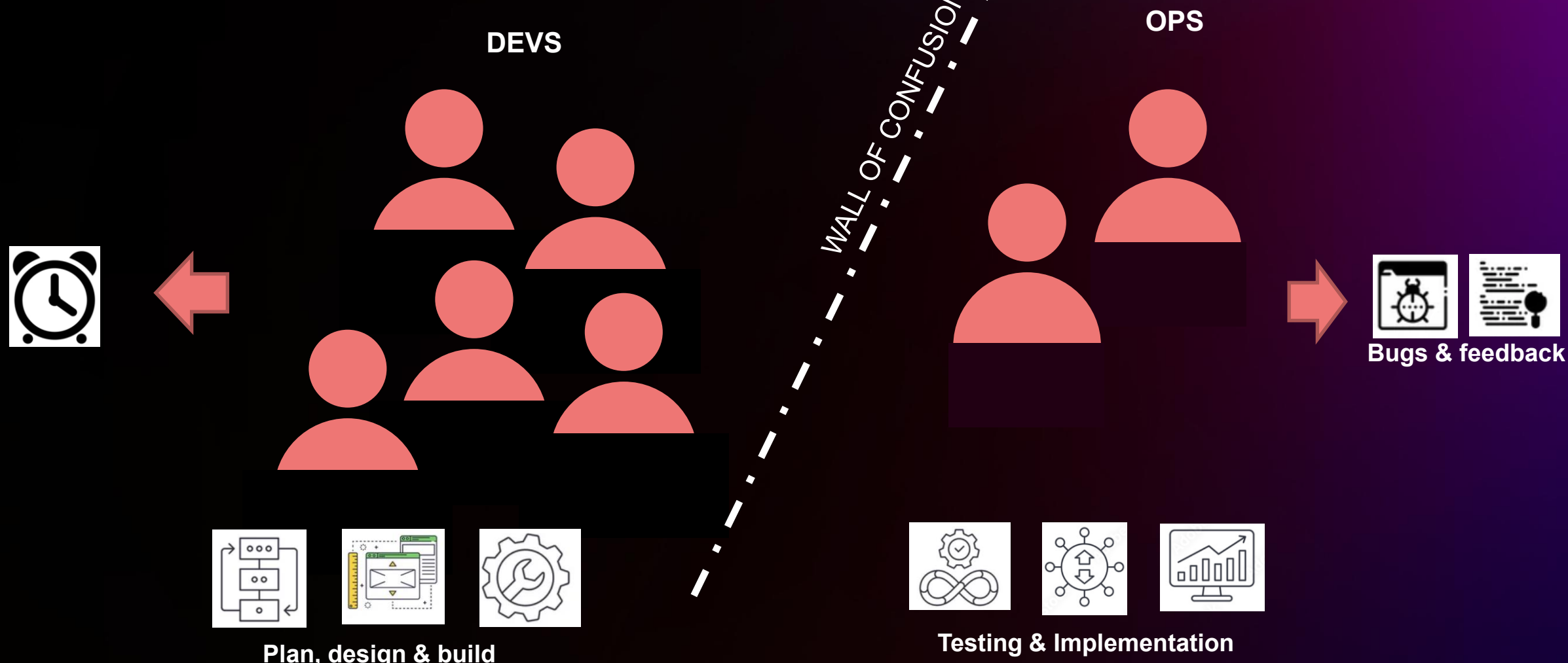
CPU UTILIZATION > 90 % (EKS)

DevOps engineers - 3

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Why DevOps?

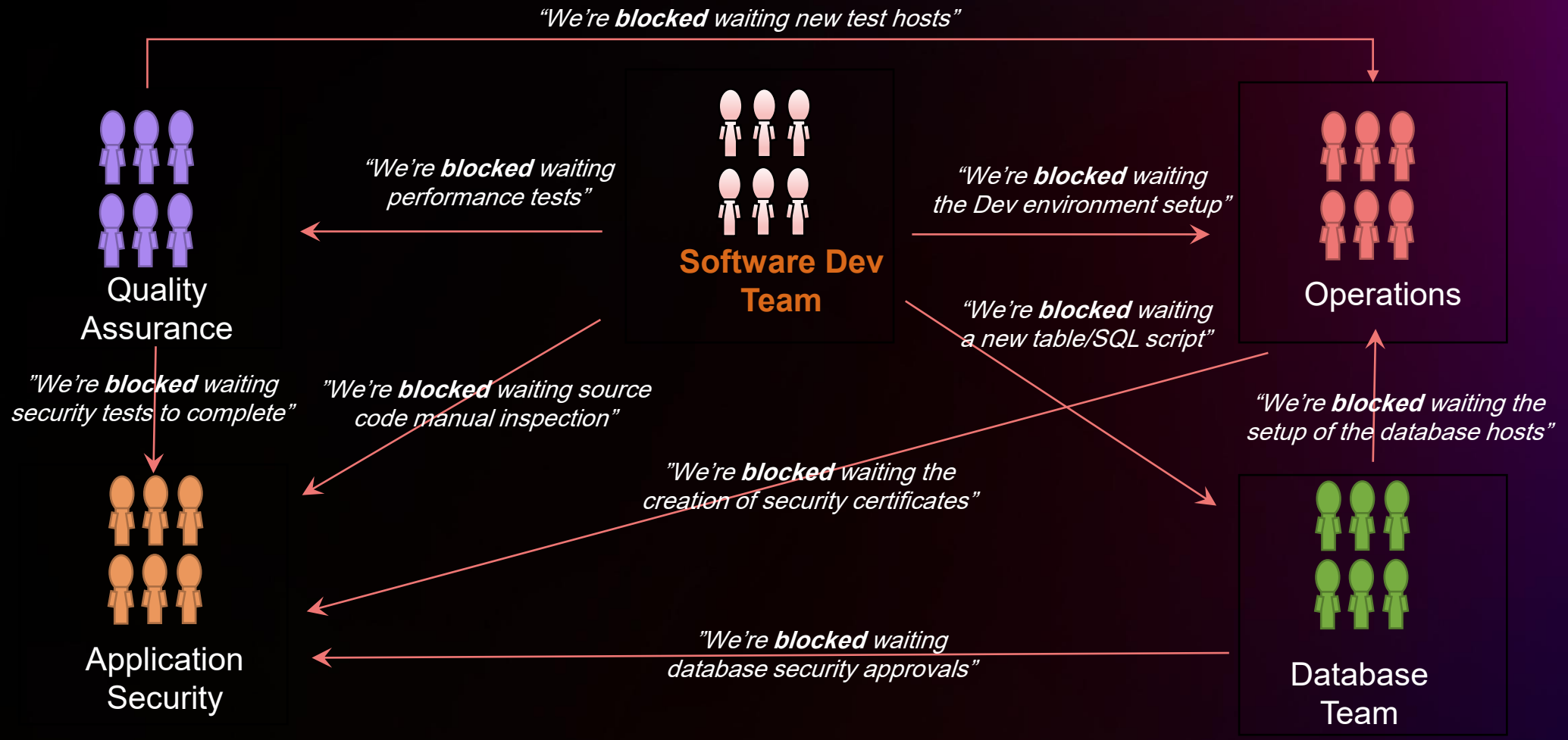
THE CYCLICAL PATH



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Discourage “silos” in the organization

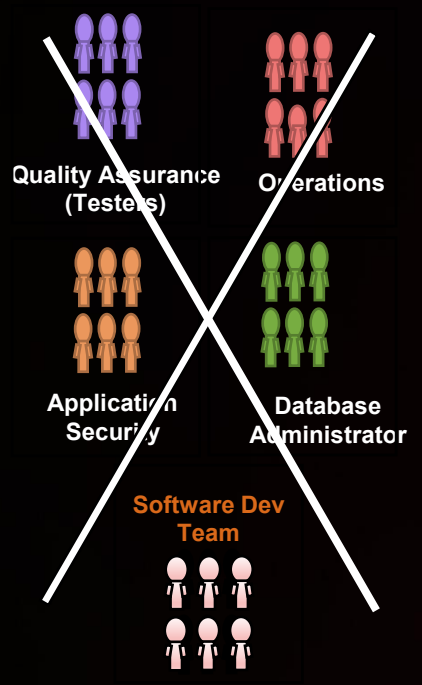
It leads to lack of Agility / Ownership

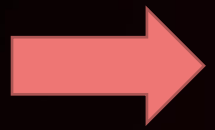


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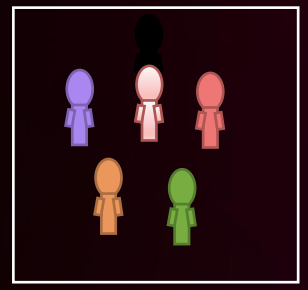
Instead teams should operate in a DevOps setting

Break the Silos





“Working together”

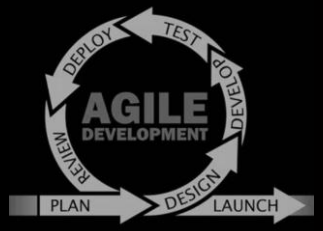


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What is DevOps?

Cultural philosophy + Practices + Tools



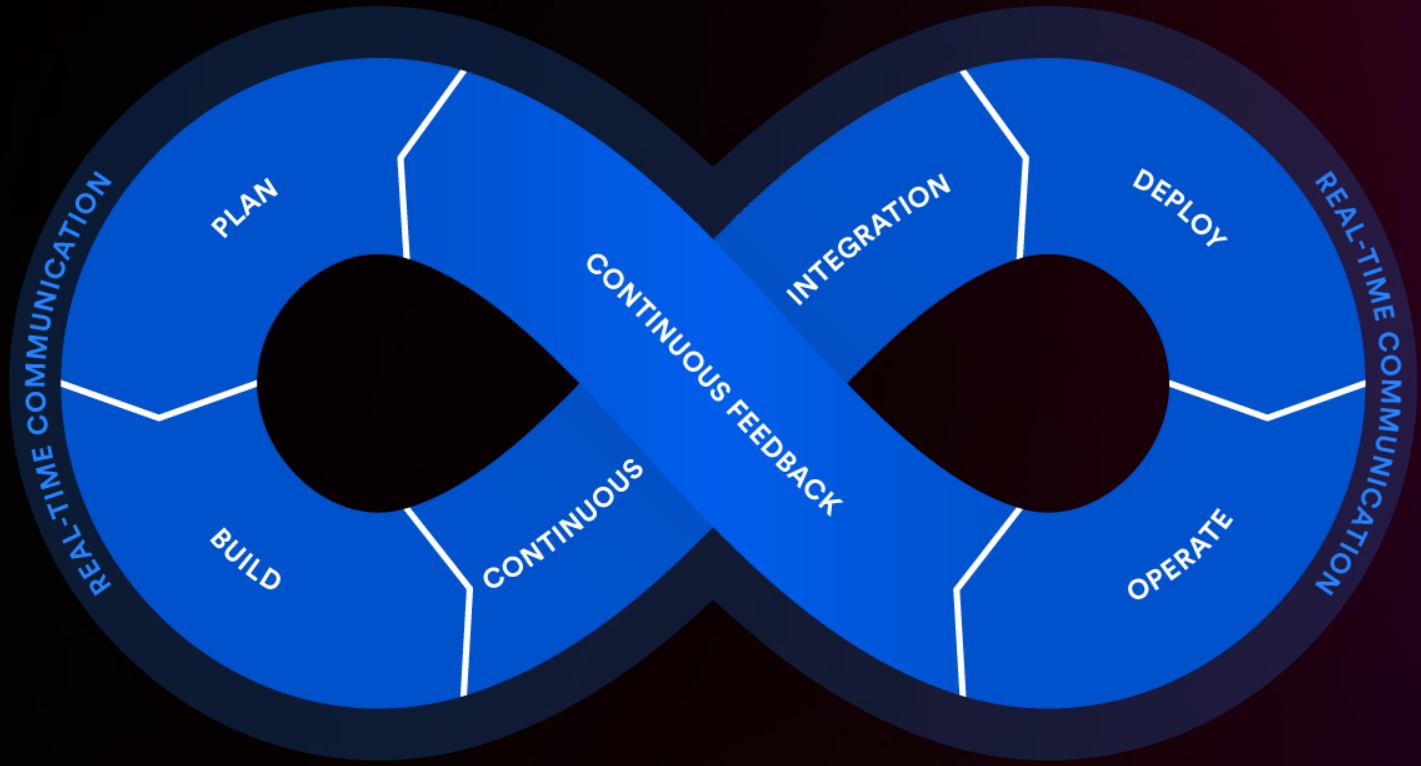




Image source: https://wac-cdn.atlassian.com/dam/jcr:325fff80-6aa7-4d46-a3f9-4db402f17a8d/devops-loop-illustrations.png

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What is DevOps?

Cultural philosophy

Practices

Tools



Tearing down barriers



Teamwork, trust, commitment



Empower people



You build it, you run it



Open mindset



Three C's: communication, collaboration and coordination



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What is DevOps at Drift?

Cultural philosophy

Practices

Tools

Drift Team Tenets

- It's always better to make doing the right thing easy than to make doing the wrong thing impossible
- Don't let yourself become a bottleneck
- If you're doing the same thing thrice, think of how you could automate the process
- Prefer general solutions and broadly shared standards
- Always be able to explain and justify ***why***
- Teams own their products from end to end

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What is DevOps?

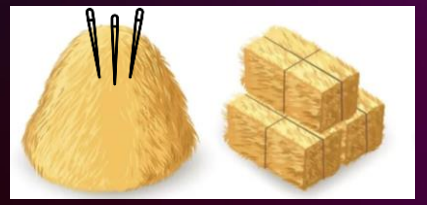
Cultural philosophy

Practices

Tools



Continuous integration



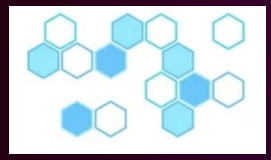


Continuous delivery





Microservices

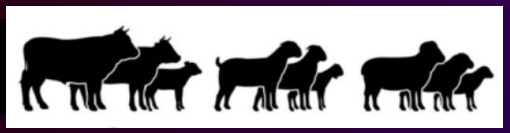




Infrastructure as code (IAC)



VS





Monitoring & logging







DevSecOps









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What is DevOps?

Cultural philosophy

Practices

Tools

Drift's practices

- Small teams
- Continuous integration
- Automation
- Mainline
- "Micro"-services
- Shared modules
- Team flexibility

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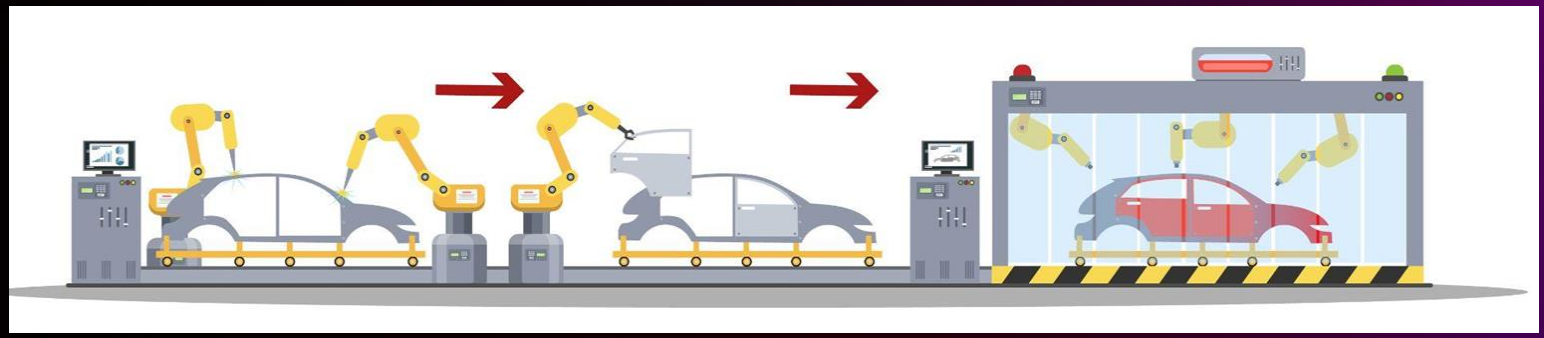
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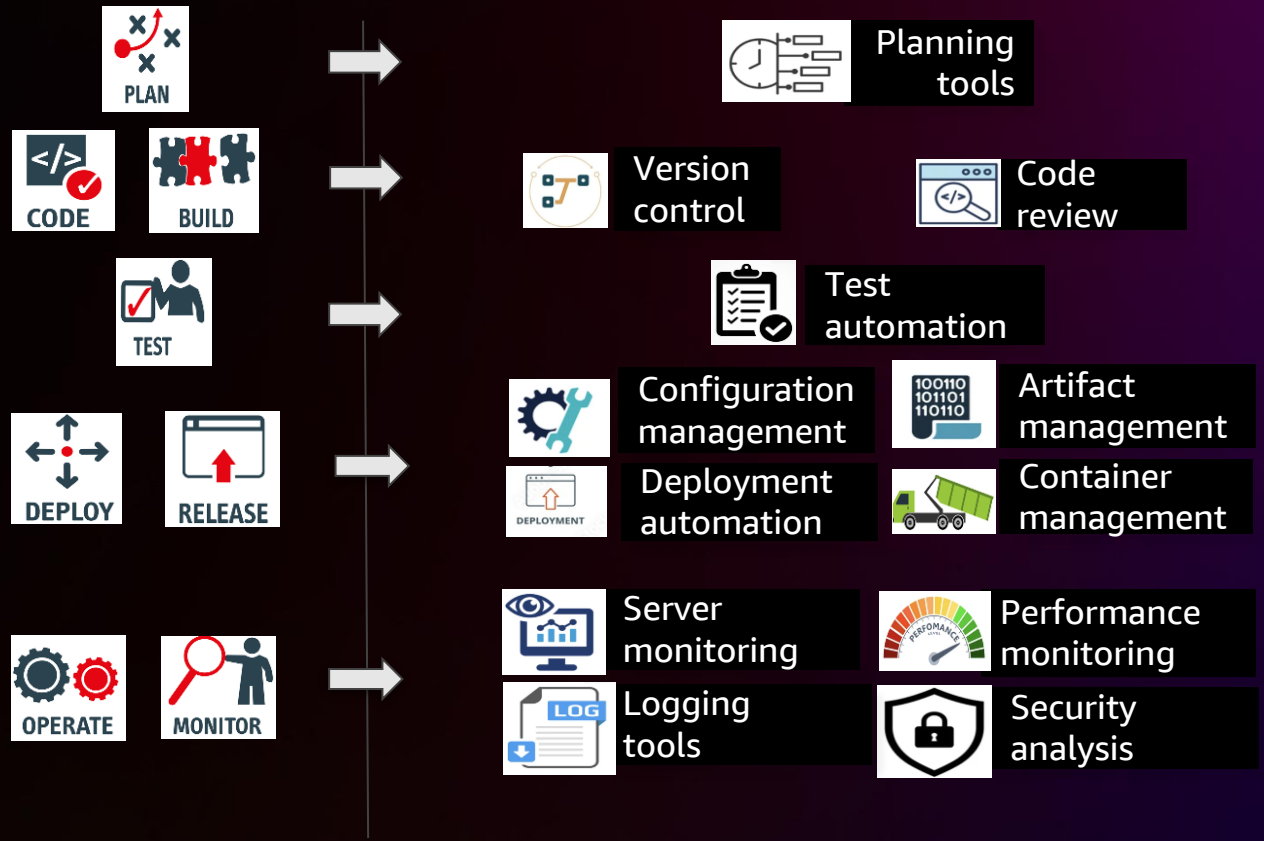
What is DevOps?

Cultural philosophy

Practices

Tools





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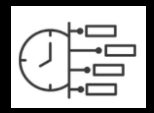
What is DevOps?

Cultural philosophy

Practices

Tools

Drift's tools


Planning tools


Version control


Code review


Build automation


Test automation


Configuration management


Artifact management


Deployment automation


Container management


Server monitoring


Performance monitoring

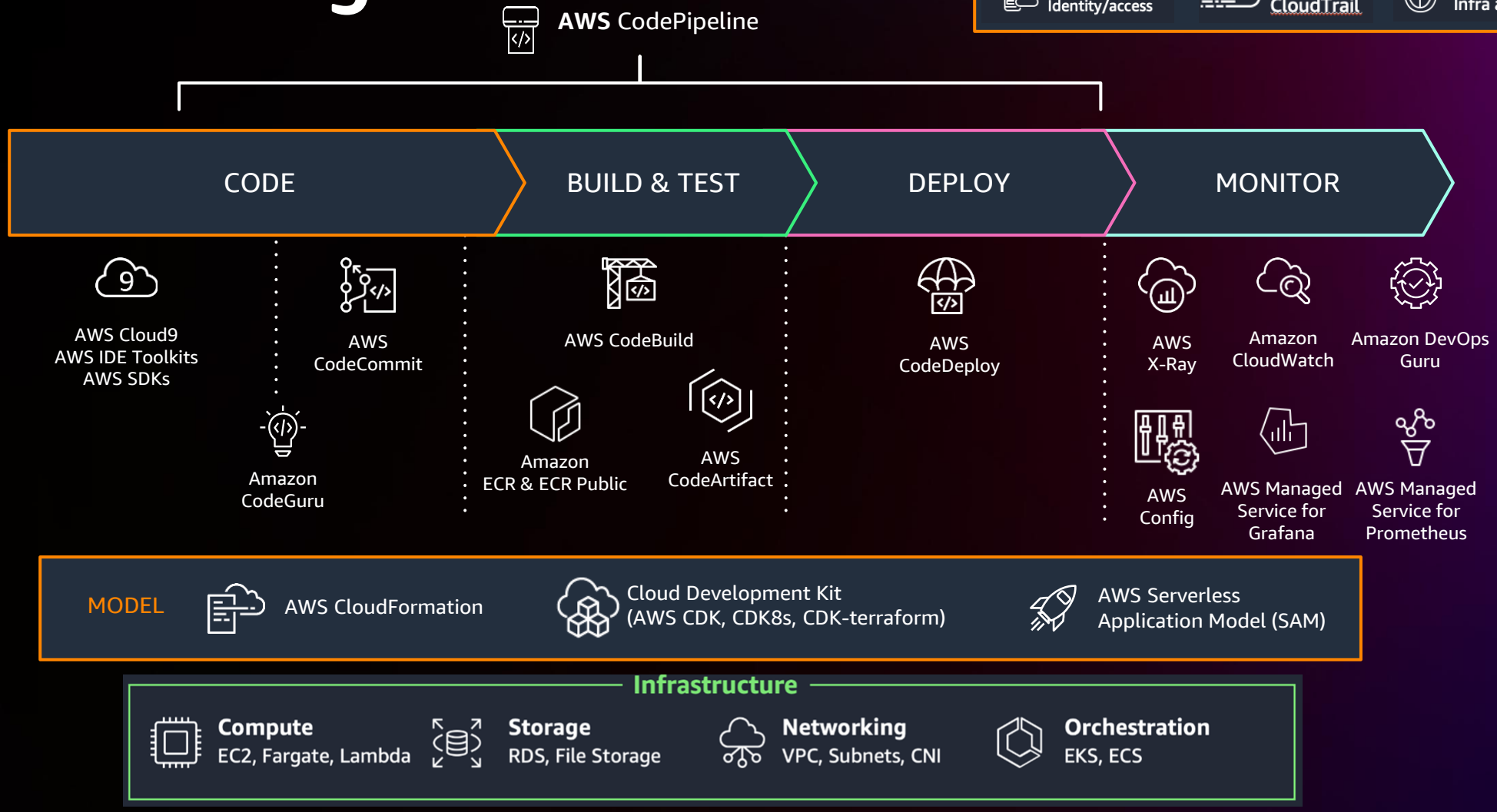

Logging tools


Security analysis

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AWS Services: End-to-end solution helps organizations go faster



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Drift's software development lifecycle

Local

Plan

- Proposals, Planning
- Resource allocation
- Design

GOALS DELEGATE

Code

- Independent Features
- IAC
- Tool integrations

Git Terraform IntelliJ

Build

- Branch
- Code Review
- Integration Environment

Signoff Master ECR

Shared QA/Staging

Test

- Git Hash/Build ID
- No Customer Data
- Continuous Testing(Automated/Manual)

ELK Grafana EKS

Monitoring /Alerts → Slack

Security IAM Amazon VPC Learning Hackathons Tech Talks Orchestration Lambda

Production

Deploy

- Early access, Gated code
- Deployment Triggers
- Configurations (regions,..)

Slack EKS ArgoCD

Monitor

- Logs, Metrics
- Transparency
- Alerts & SLO

Cloudwatch Athena PagerDuty Grafana ELK

Run, Operate

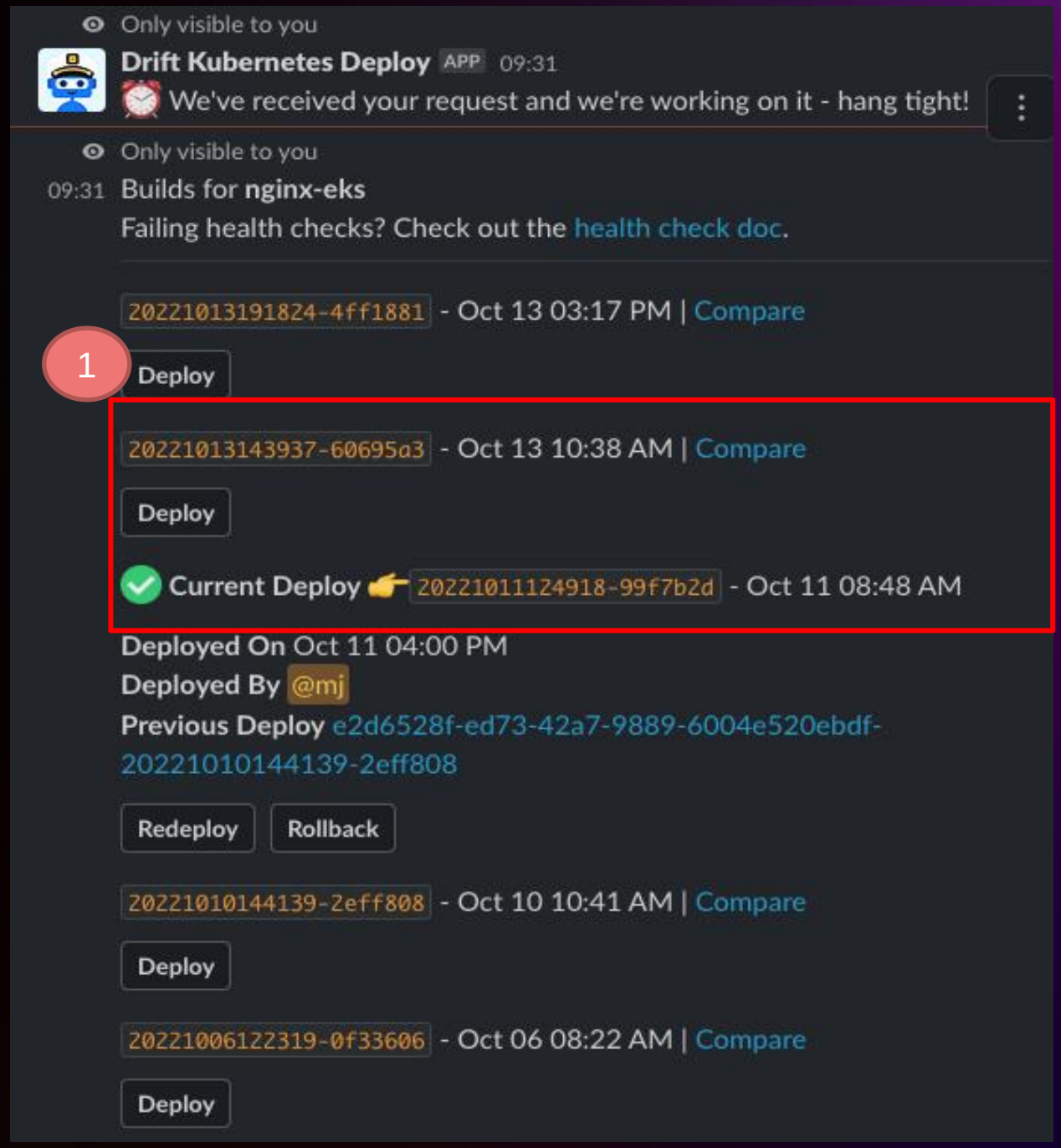
- Auto Scaling
- DR/HA
- Backups

EKS Backups S3 DynamoDB auto scaling

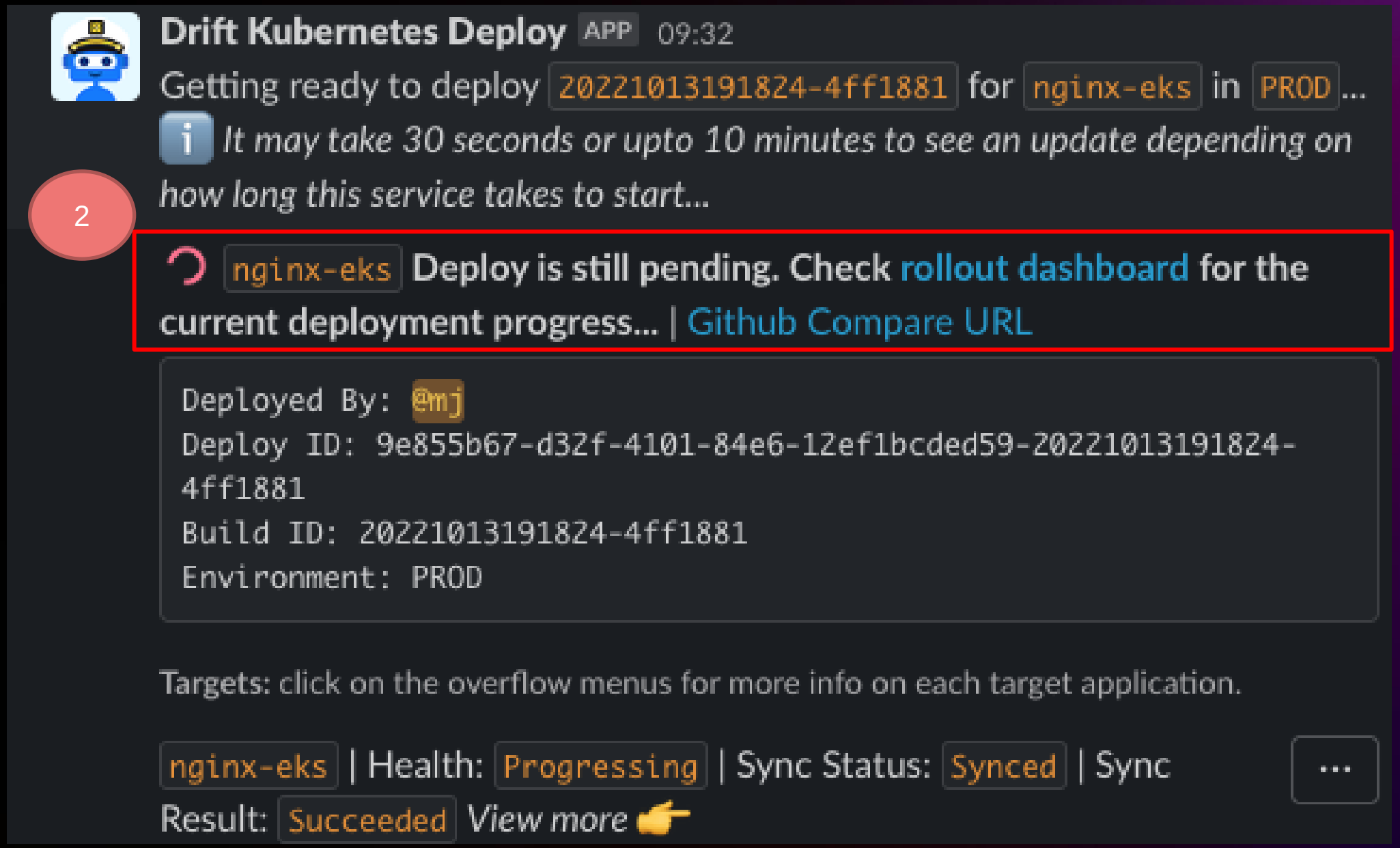
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Deploy at your fingertips!

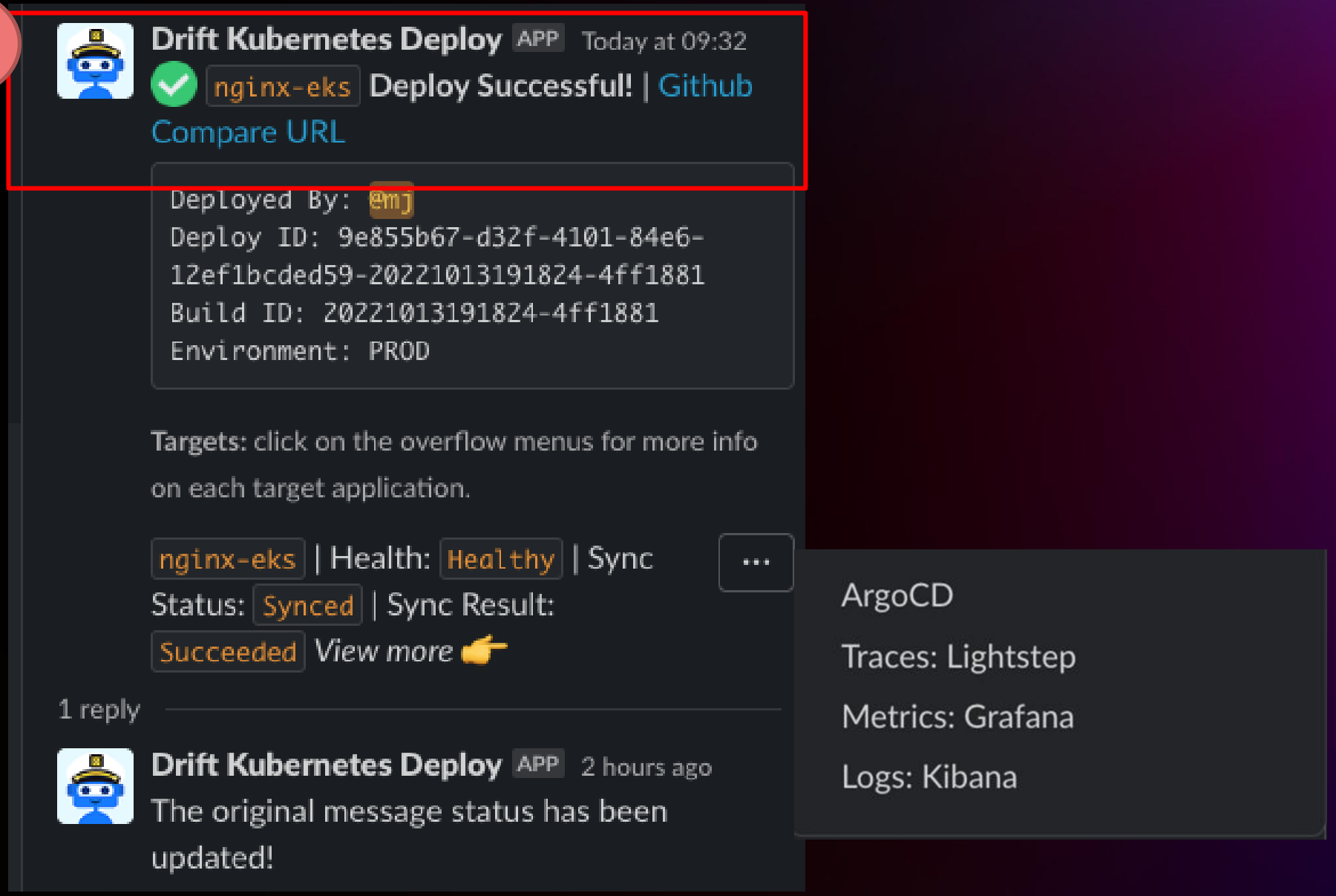


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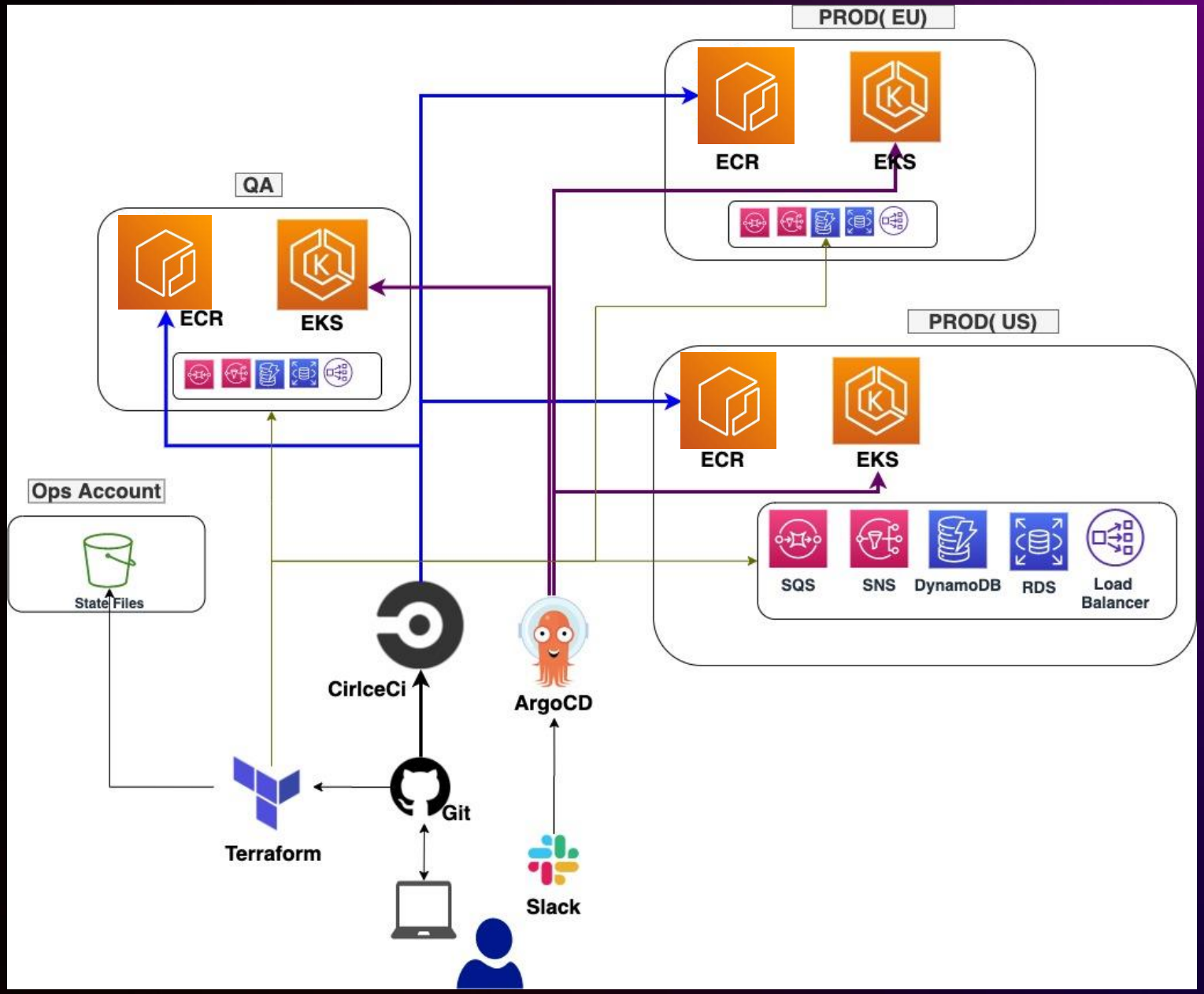
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Drift deploy architecture



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Continuous assessment

Index

1. Continuous code improvement
2. Continuous deployment
3. Continuous monitoring
4. **Continuous assessment**

Improve resilience and performance

Uncover hidden issues

Expose blind spots
Monitoring, observability, and alarm

And more





Chaos Engineering



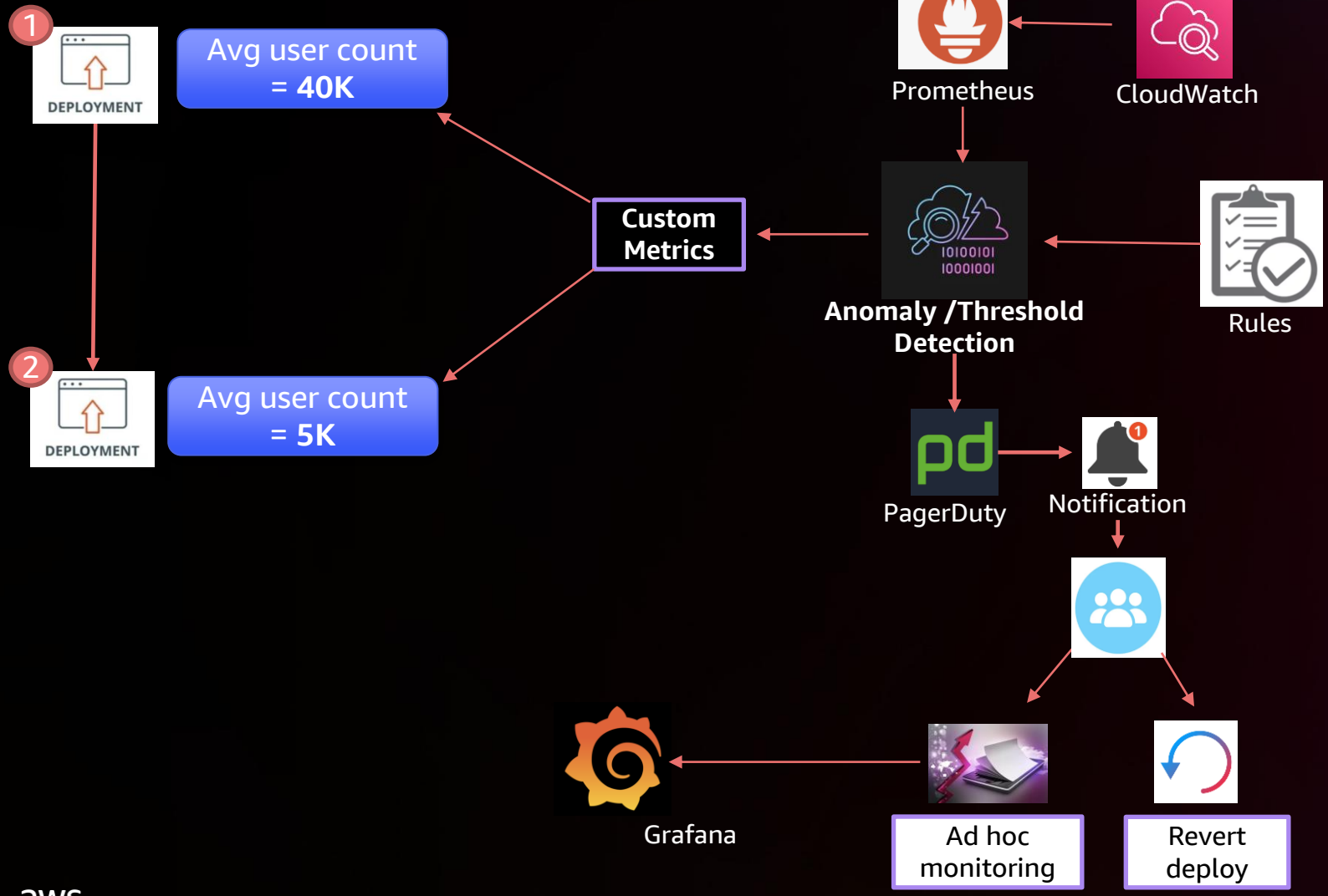
AWS GameDay

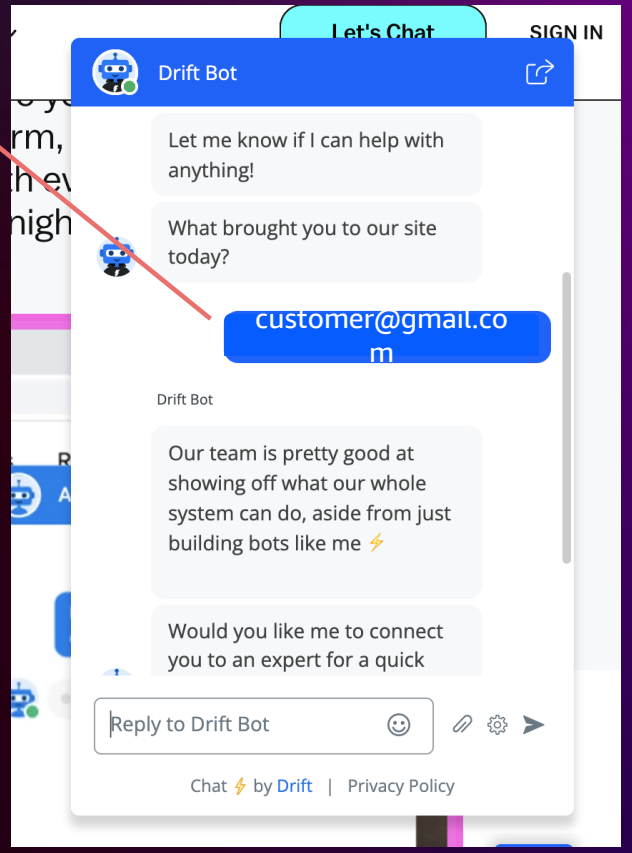


AWS Fault Injection Simulator

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Drift - Use case







- Customer impact
- Propensity to engage
- Potential client identification

**- fictionalized

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How does DevOps benefit?

5x

Lower change failure rates

440x

Faster from commits to deploy

46x

More frequent deployments

44%

More time spent on new features and code

Source: Puppet 2017 State of DevOps Report

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Each enterprise is unique



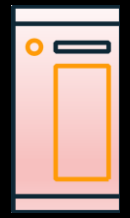
Different legacies



Different goals



Different risks



Different workloads



Different performance & scalability requirements

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Teams that adopt modern software practices are more efficient and faster

	Traditional	Early CI/CD	Drift
DEPLOYMENT FREQUENCY	Weekly–monthly	Multiple per day	500-600 deployments/month
CHANGE LEAD TIME	1–6 months	1–7 days	minutes
CHANGE FAILURE RATE	16–30%	0%–15%	<2%

Source: 2019 DORA State of DevOps report

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Q&A

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Thank you!

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