

AWS re:Invent

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

Build a complete DevSecOps pipeline on AWS

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Agenda

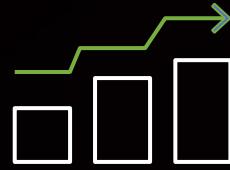
1. DevSecOps and shift left overview
2. Our DevSecOps tools
3. Workshop architecture
4. Start building!

Why AWS Cloud Operations?



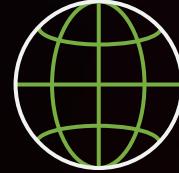
Return on Investment (ROI)

241% ROI over 3 years*



Staff productivity

62% more efficient IT infrastructure staff



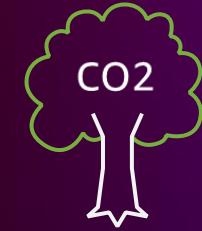
Operational resilience

57% decrease in downtime



Business agility

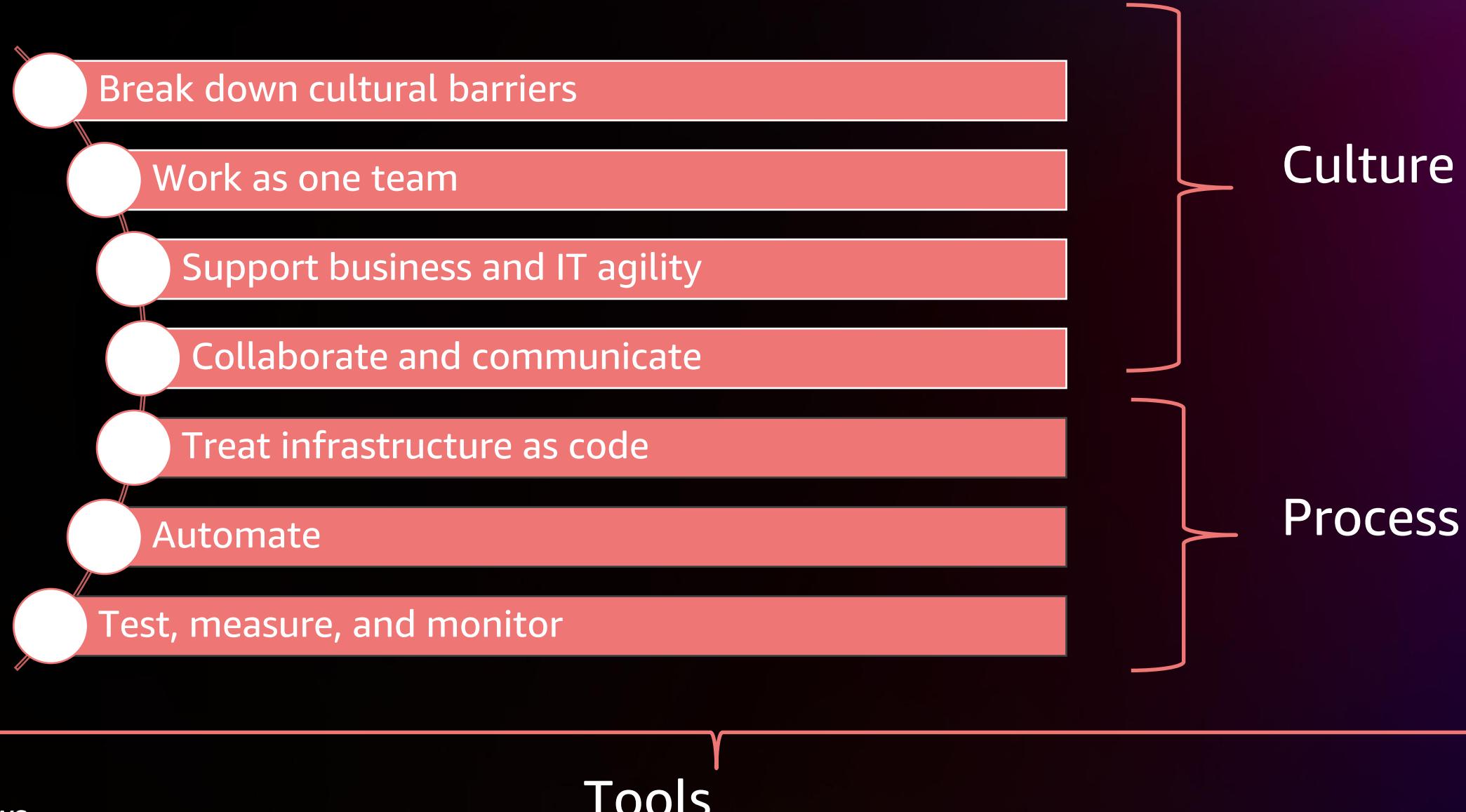
37% decrease in time to market



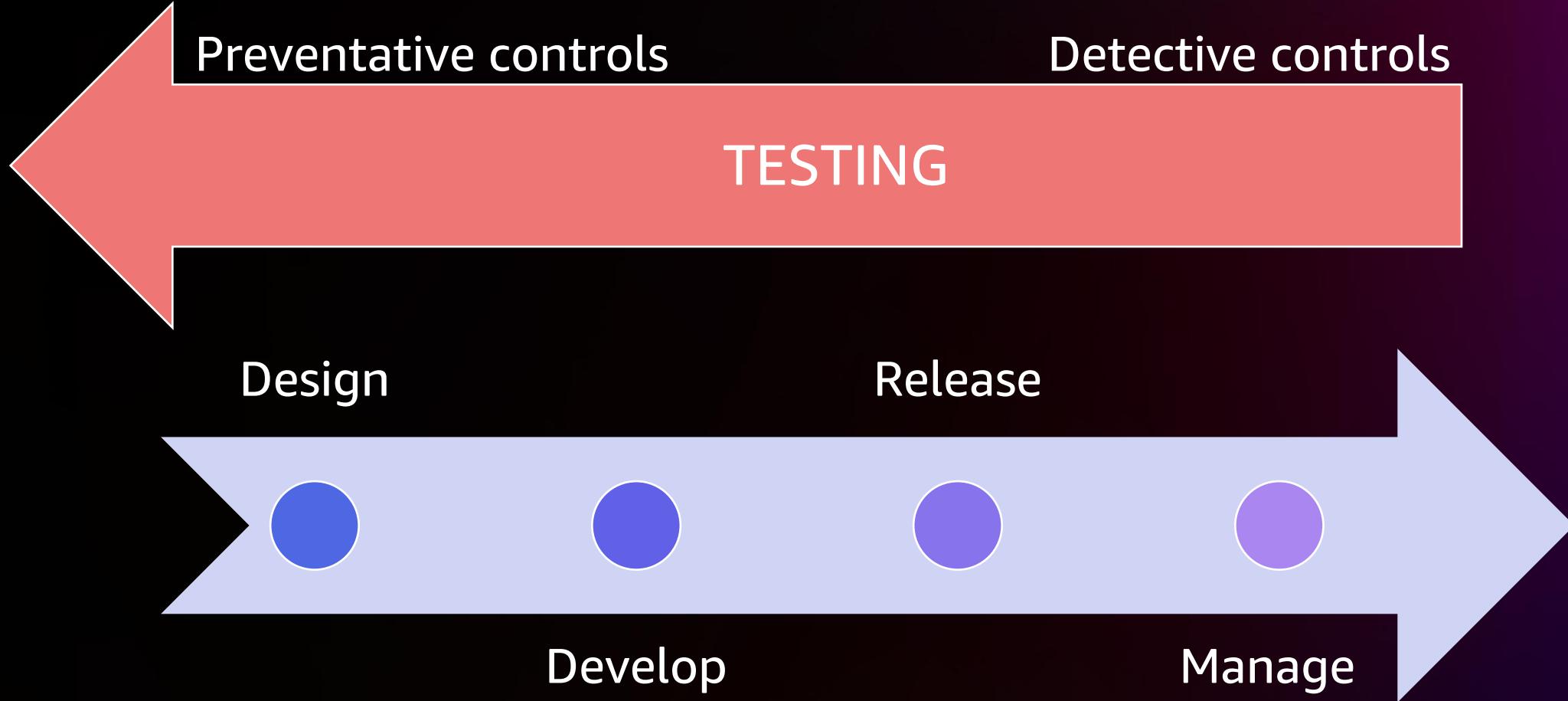
Carbon savings

88% reduction in carbon footprint of IT operations

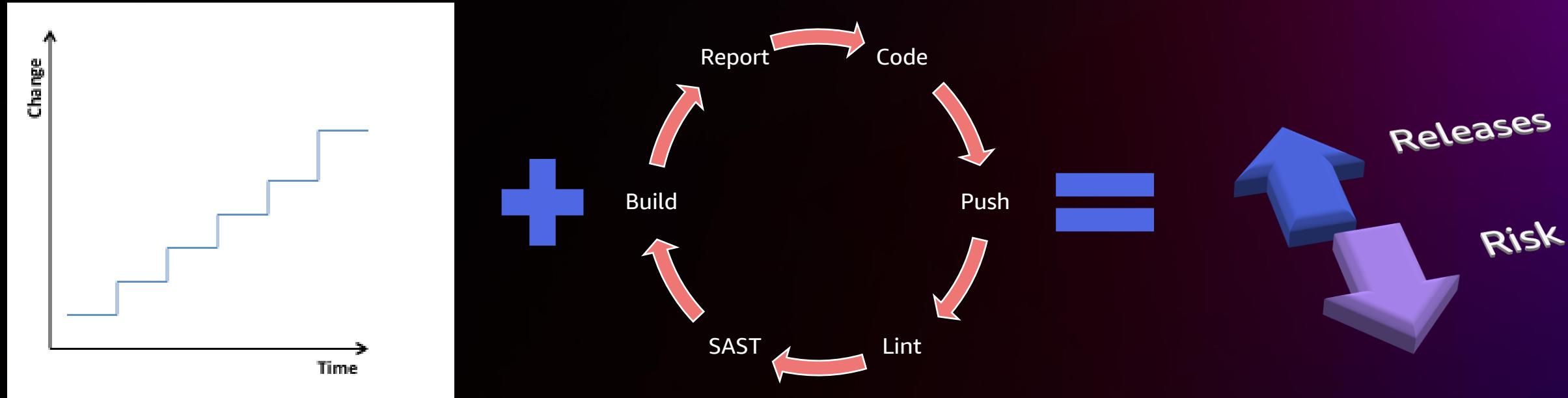
DevSecOps and shift left overview



DevSecOps and shift left overview



DevSecOps formula for success



AWS CloudFormation Guard – Policy as code

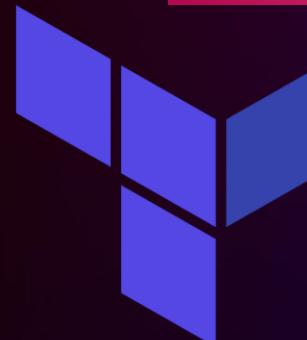
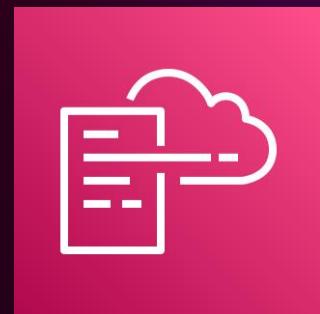
Open source policy-as-code tool

- <https://github.com/aws-cloudformation/cloudformation-guard>

A policy-as-code domain-specific language (DSL)

Current version 2.1.3

- Any JSON- or YAML-formatted configuration data, such as:
 - **Terraform state files**
 - **Kubernetes configurations**



AWS CloudFormation Guard Rules Registry

Open source library of rule templates and rule sets

<https://github.com/aws-cloudformation/aws-guard-rules-registry>

aws-cloudformation / **aws-guard-rules-registry** Public

Code Issues 39 Pull requests Discussions Actions Projects 1 Wiki Security Insights

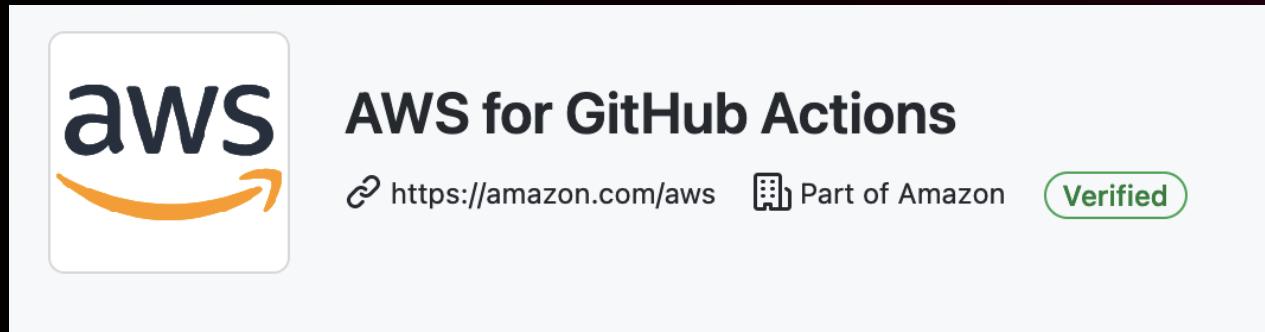
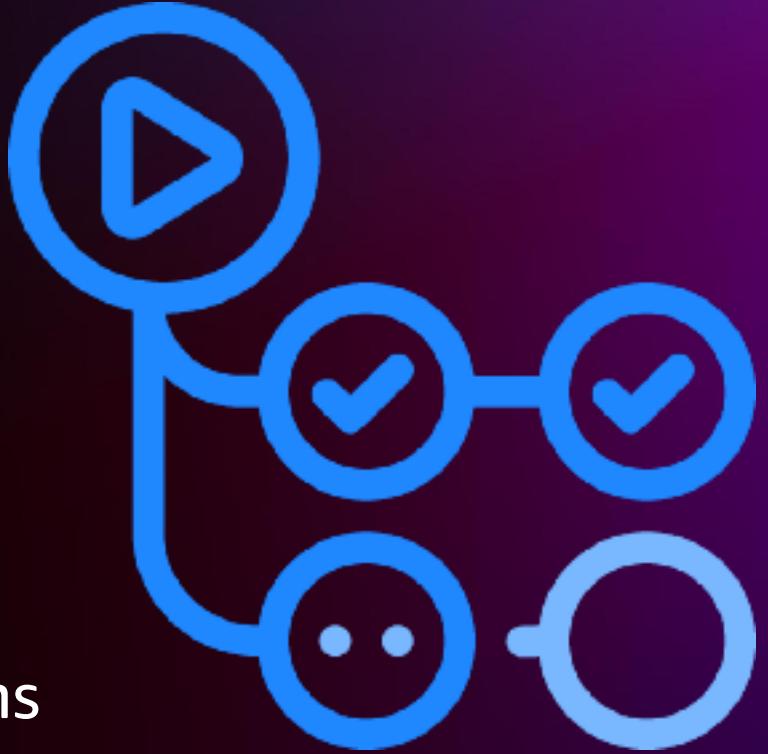
main 3 branches 3 tags Go to file Add file Code

 grolston	feat: elb cloudfront (#227)	...	✓ 4e83476 1 hour ago	⌚ 56 commits
📁 .github	feat: resource map (#222)		last month	
📁 docker	feat: Make docker image work with non-root users (#219)		last month	
📁 docs	feat: resource map (#222)		last month	
📁 mappings	feat: elb cloudfront (#227)		1 hour ago	
📁 rules/aws	feat: elb cloudfront (#227)		1 hour ago	
📄 .gitignore	feat: ec2 (#191)		5 months ago	
📄 CODE_OF_CONDUCT.md	Initial commit		11 months ago	



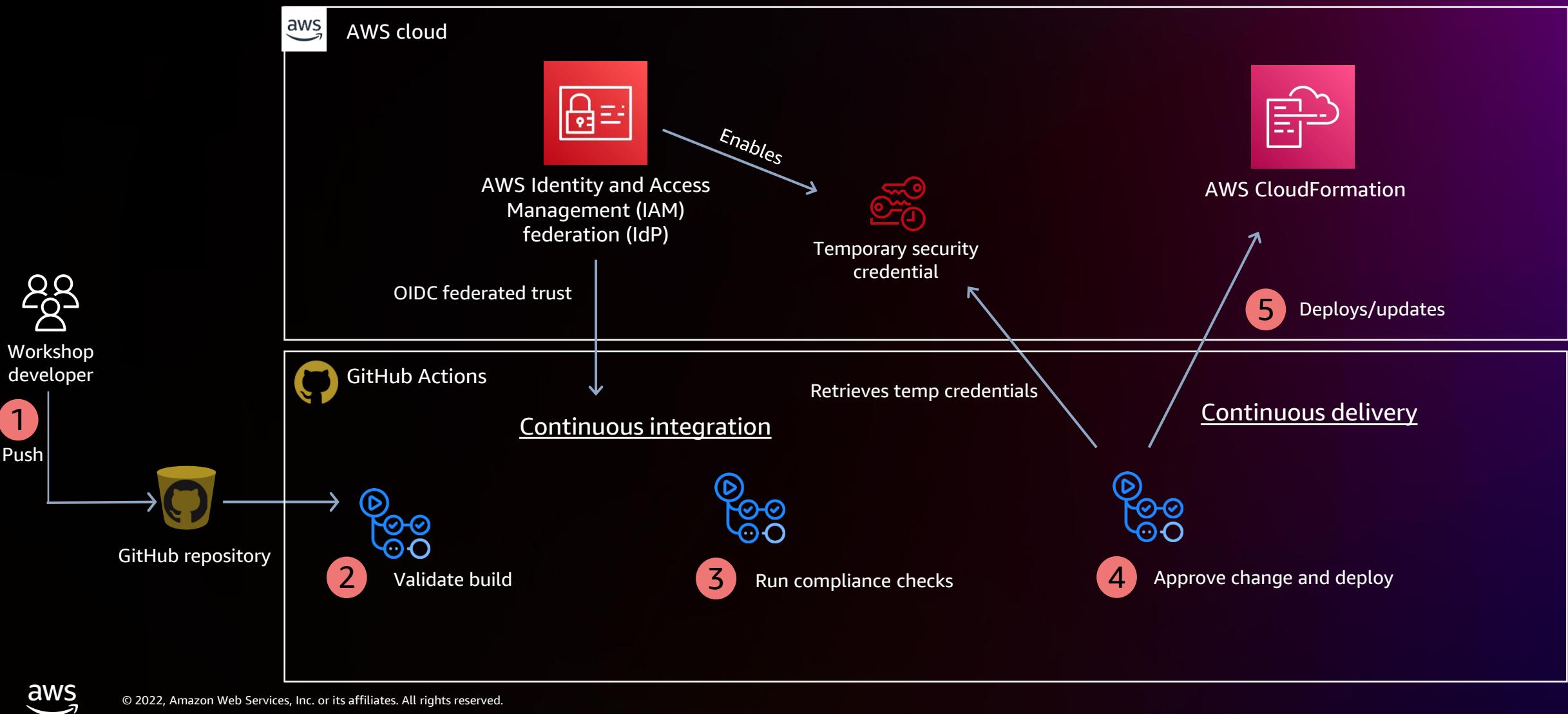
GitHub Actions

- CI/CD services
 - Built into GitHub
 - Similar to GitLab CI
- Supported in GitHub.com and Enterprise GitHub
- AWS GitHub Actions – <https://github.com/aws-actions>



Workshop architecture

Architecture overview



Let's start building



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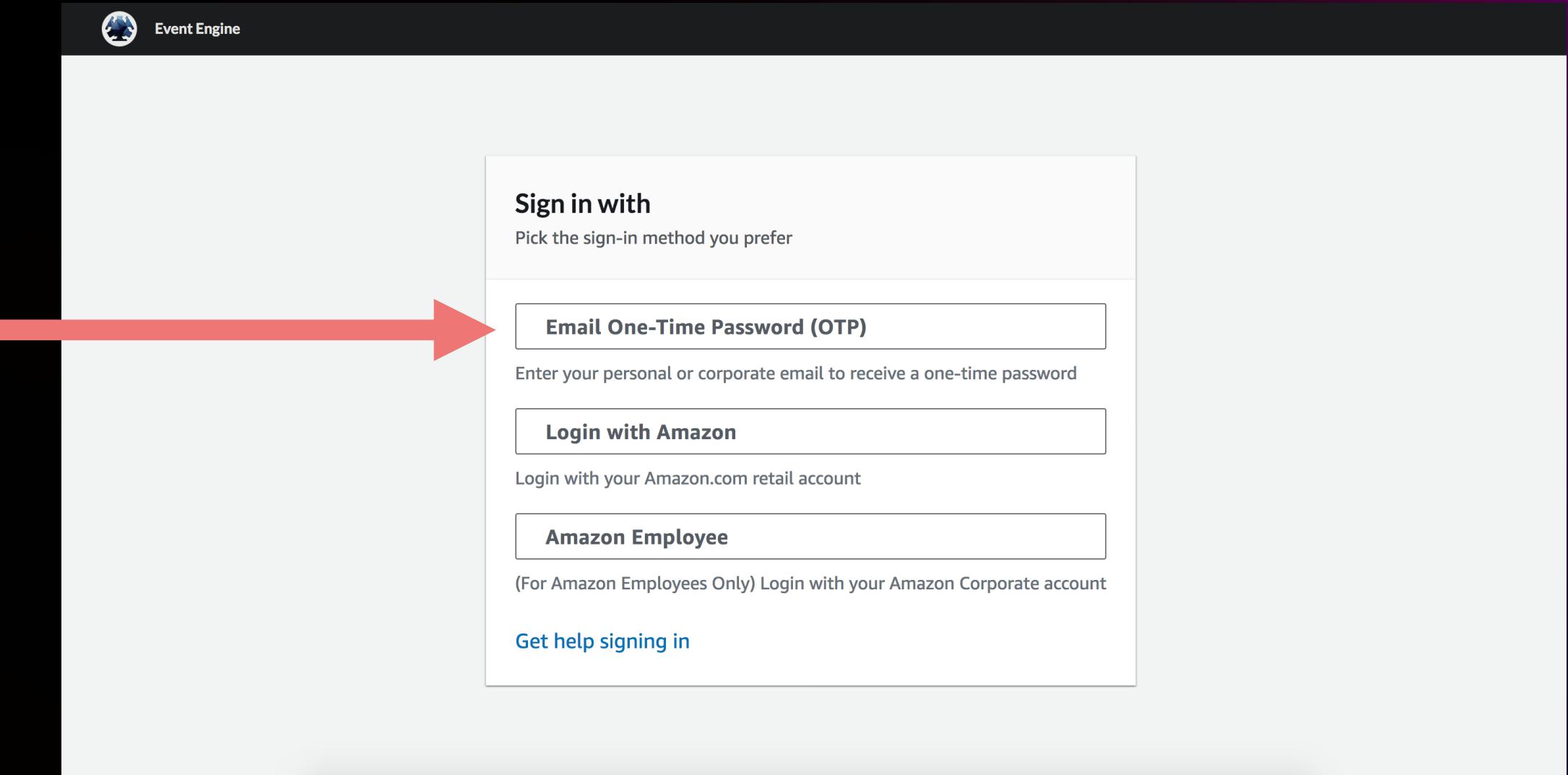
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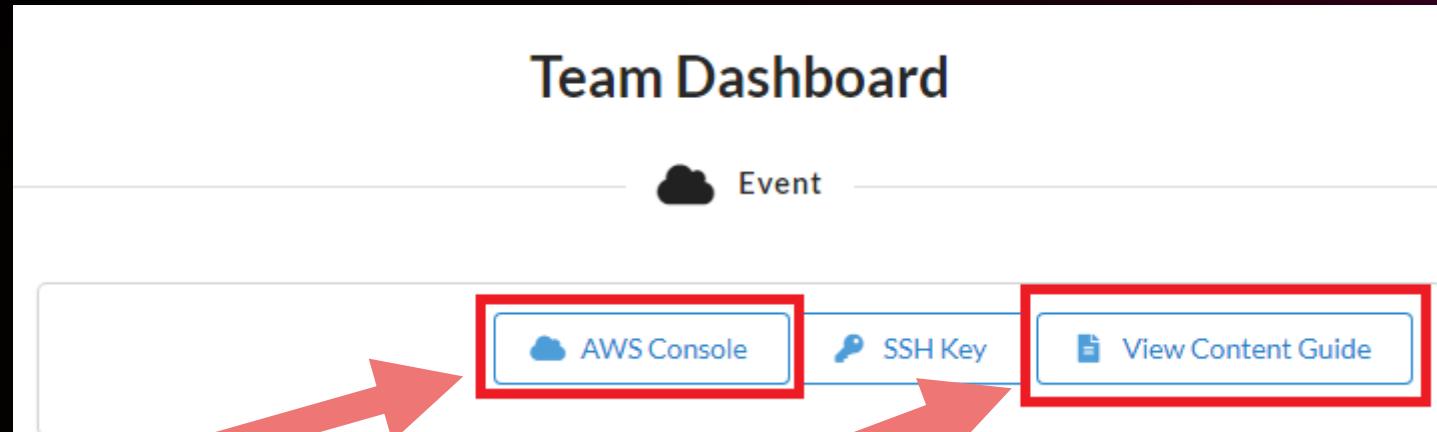
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Workshop Outline

- Introduction
- Environment Setup
- CI/CD Account Aware Pipeline
- Deploy Template
- Summary

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kiosks in the
AWS Village Expo



Find related sessions
in our re:Invent blog



Cloud foundations and multi-account strategy sessions

Architecture



ARC205 (breakout) Establishing your cloud foundation on AWS – beyond your landing zone

ARC321 (chalk talk) Using a multi-account strategy to enable hyperscale

ARC318 (chalk talk) Best practices for disaster recovery of workloads on AWS

COP305 (breakout) Best practices for organizing and operating on AWS

Implementation



COP325 (chalk talk) Best practices for automating AWS account migration

ARC319 (chalk talk) Designing a multi-account environment for disaster recovery

DOP322 (chalk talk) Optimizing runtime performance with AWS X-Ray and Amazon CodeGuru Profiler

DOP402-R (chalk talk) Implementing DevSecOps pipelines with compliance in mind

Discussion



COP324 (chalk talk) Extend your multi-account governance with automation

ARC317-R (chalk talk) Architecting security and governance across your multi-account environment

COP323-R (chalk talk) Delegating access in a multi-account environment with IAM Identity Center

Hands-on



COP206-R (workshop) Build a complete DevSecOps pipeline on AWS

ARC301-R (workshop) Building a monitoring strategy

Thank you!

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