
AWS
re:Invent
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DOP324-R

Building CI/CD pipelines with AWS

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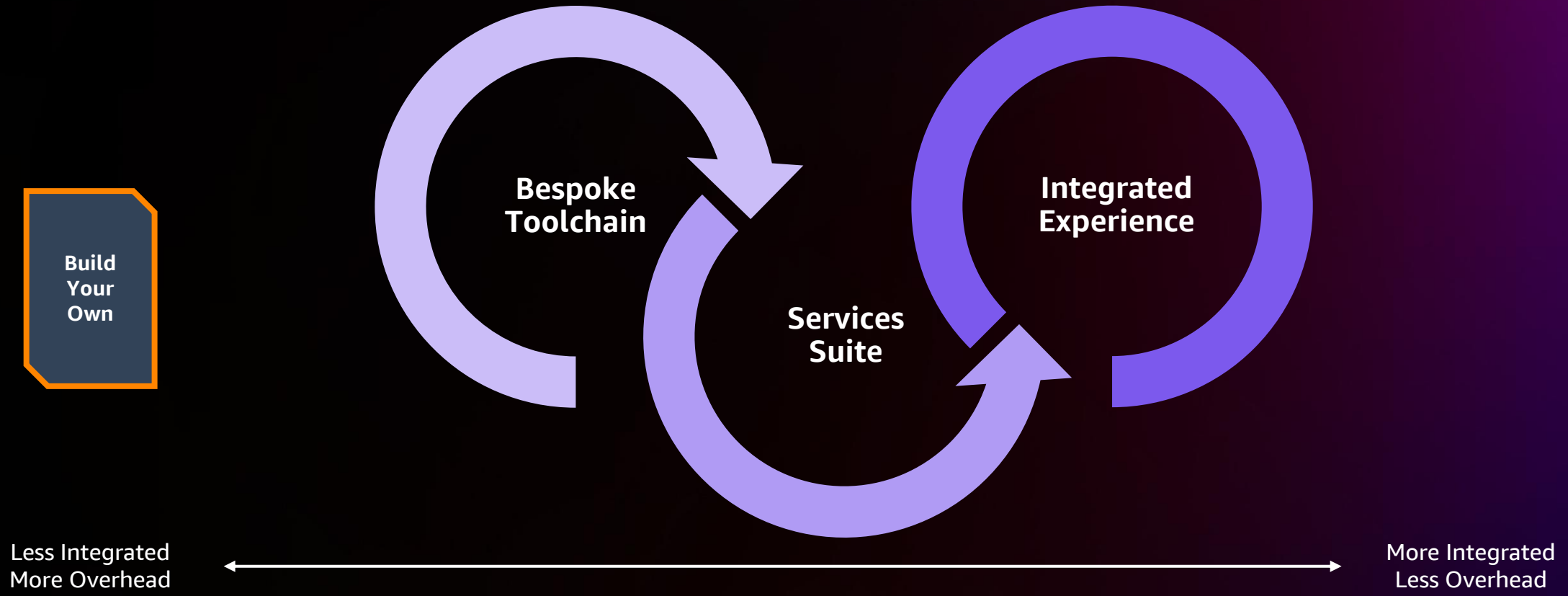
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Agenda

- Introducing Amazon CodeCatalyst
- What is a workflow?
- How is a workflow defined?
- Demo
- Building and testing code
- Securely deploying code to AWS
- Getting started with CodeCatalyst workflows

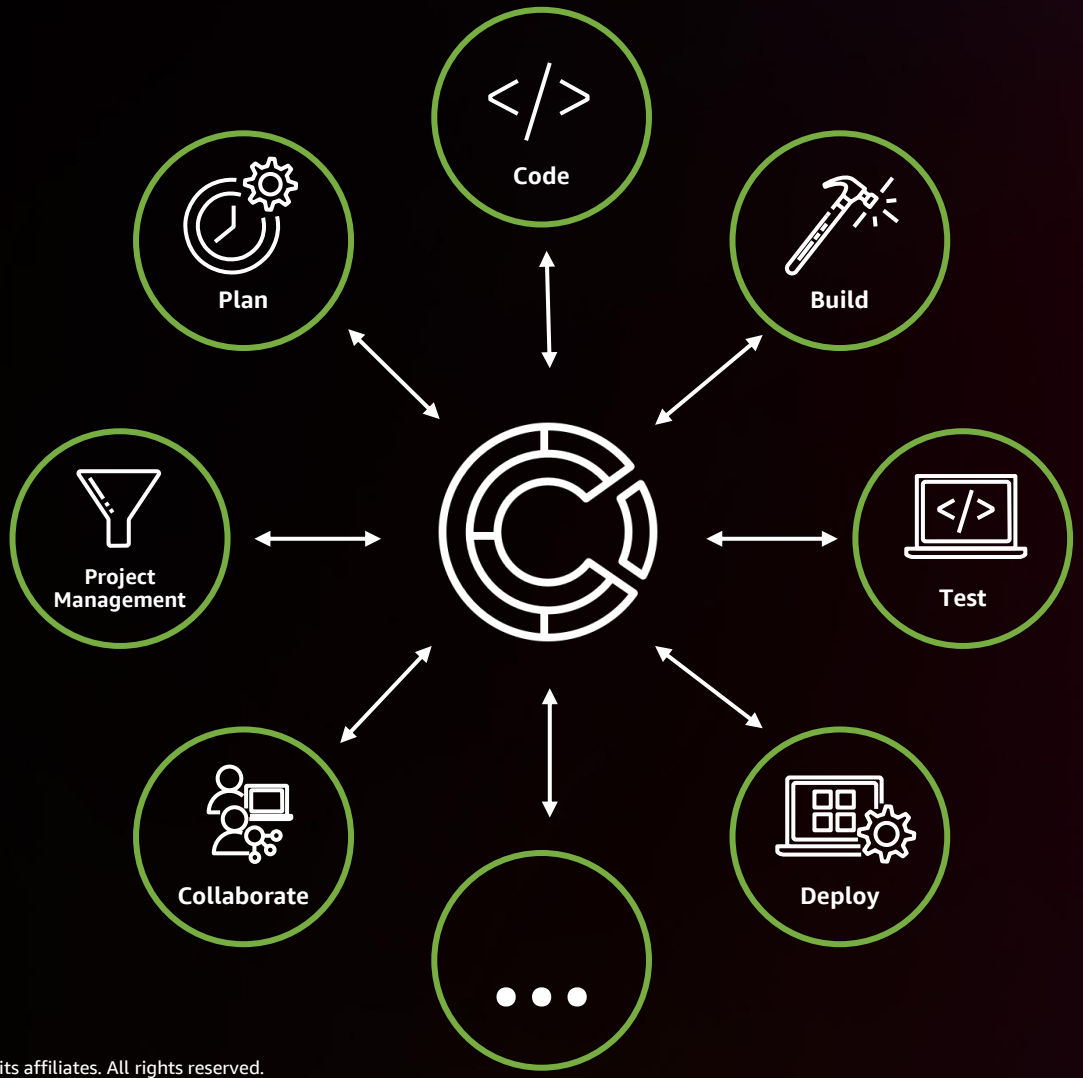
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Organizations increasingly seek integrated tools so they can focus on their business



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Amazon CodeCatalyst:
Integrated DevOps Service



- ✓ Managed
- ✓ All-in-one
- ✓ Integrated
- ✓ Secure
- ✓ Flexible
- ✓ **And More**

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Amazon CodeCatalyst: Benefits



Accelerate Project Setup



Automate Daily Workflows



Automate Environments

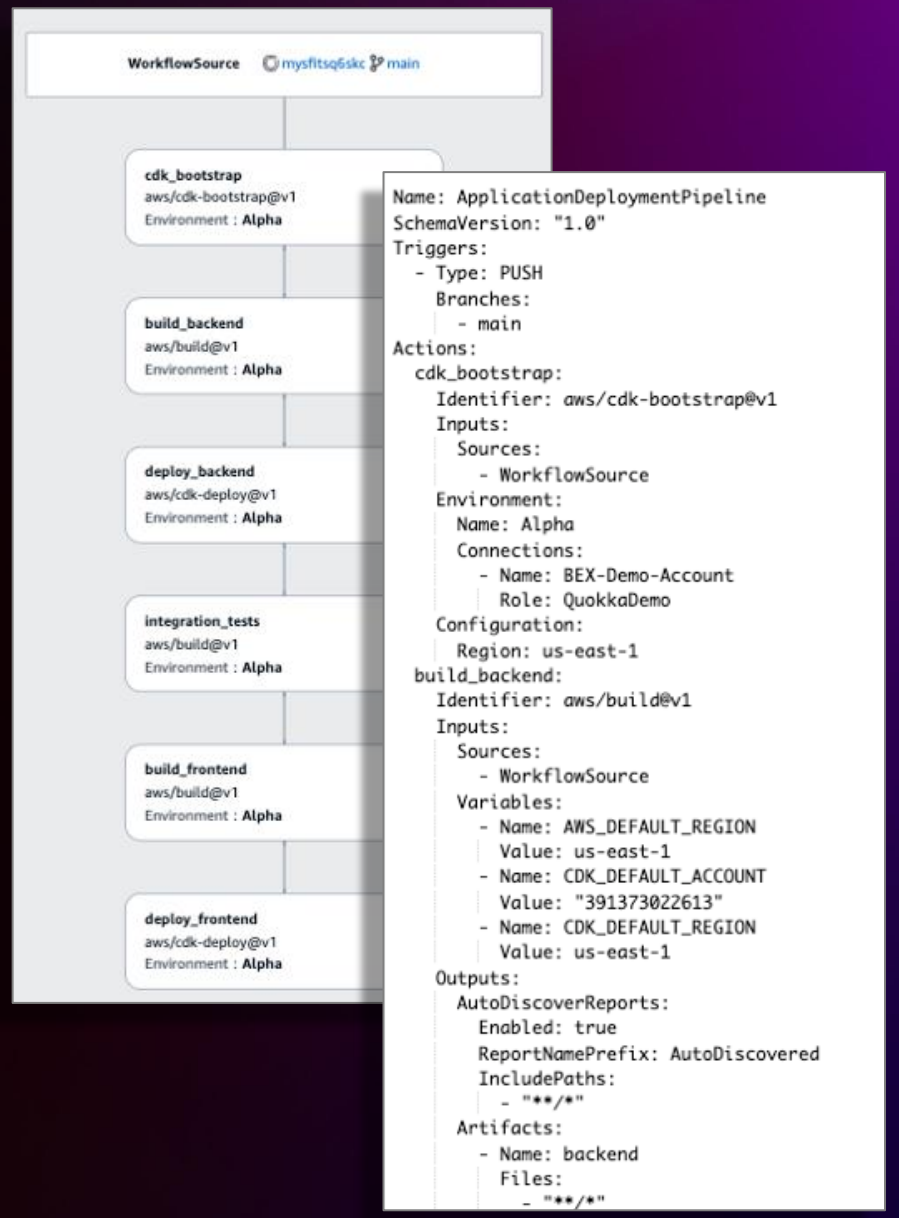


Collaborate Fluidly

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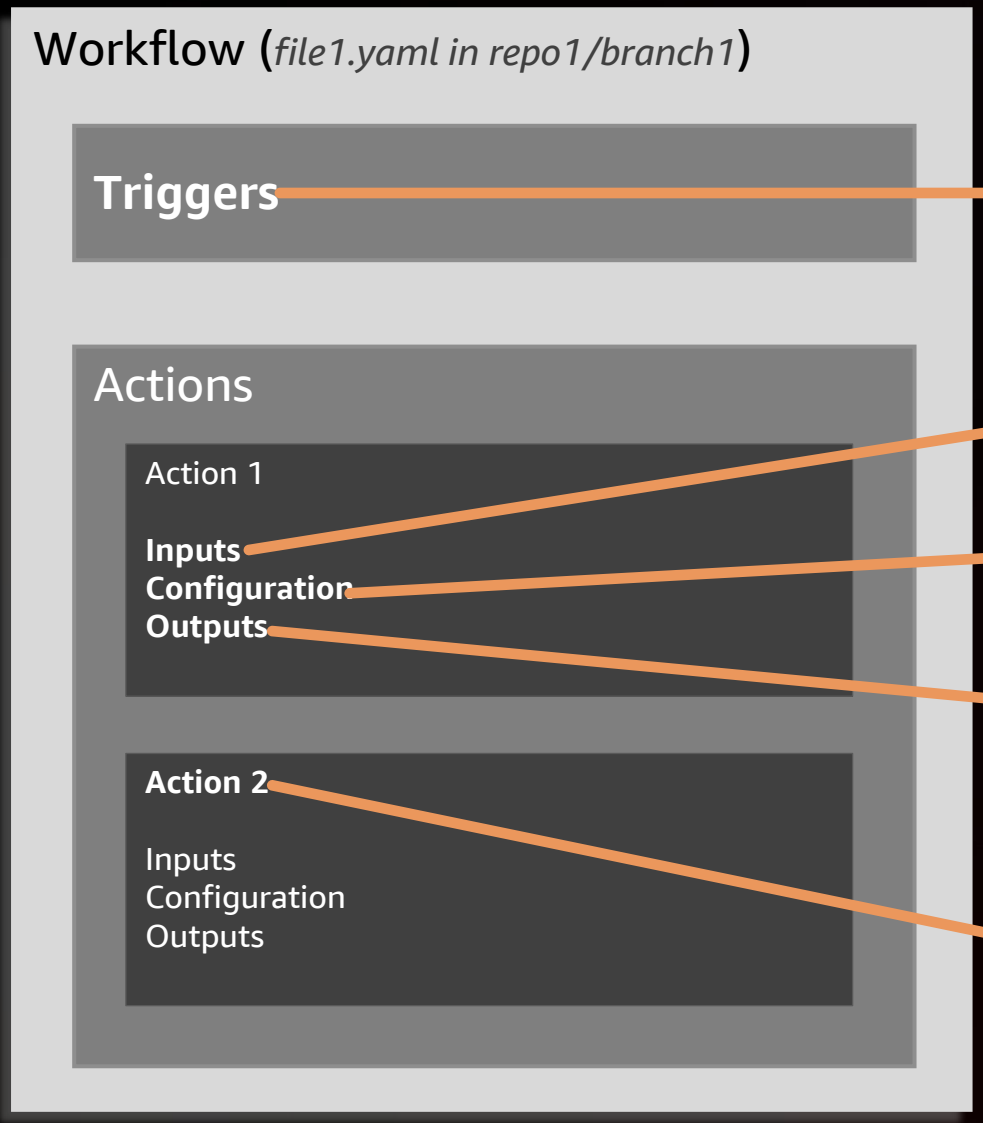
What is a workflow?

- Series of steps (actions) to build, test & deploy code
- Definition stored as YAML in source repo
- Create a workflow using Visual or YAML editor
- Actions are organized based on dependencies
- Each action runs on AWS compute



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Workflow concepts



Define events that will start a workflow **run** (ex: Push, PR). Any workflow can also be run manually

Defines the dependencies – includes **sources**, **artifacts**, and **variables**

Action specific configuration parameters

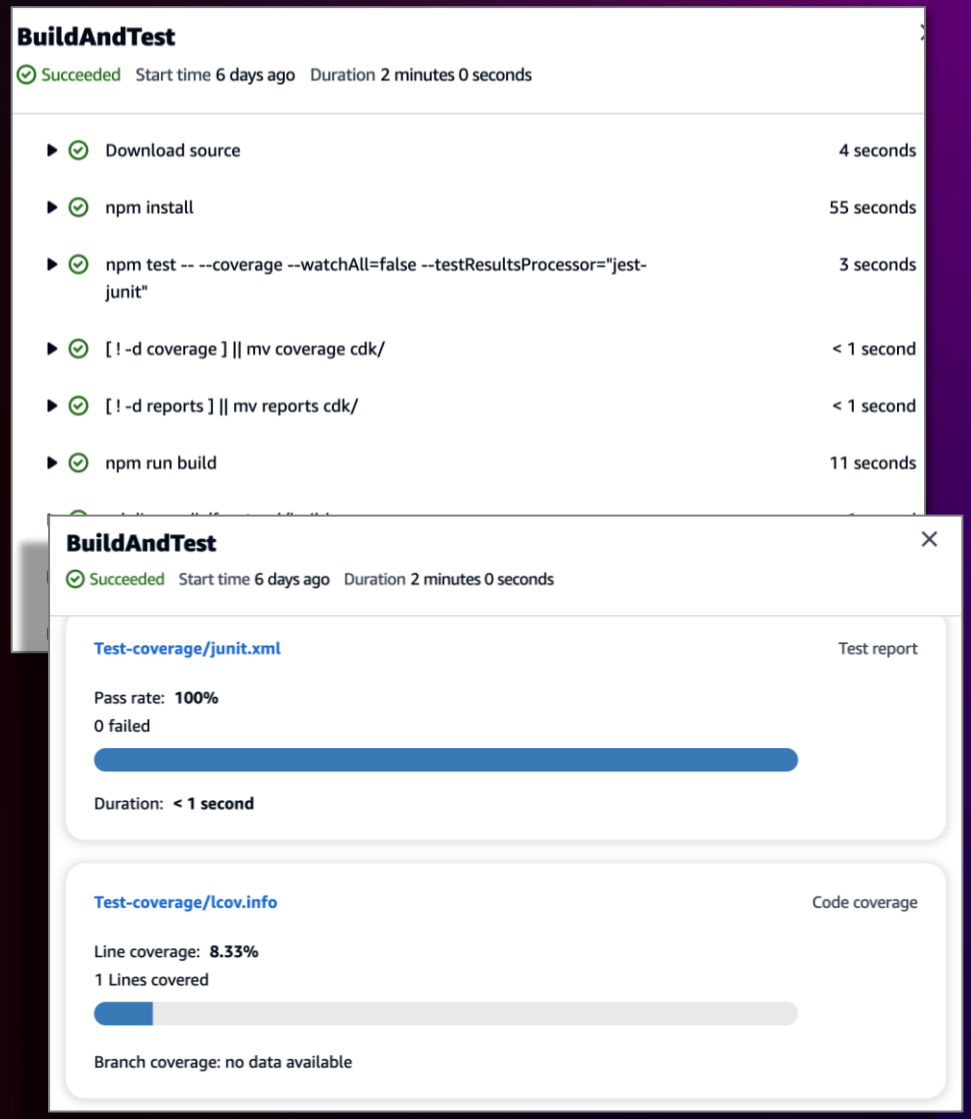
Defines outputs to generate – includes artifacts, **reports**, and variables. Some actions have predefined outputs

Each action runs in a container on AWS **compute**. Will run in sequence or in parallel based on dependencies the action has.

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Build and testing code

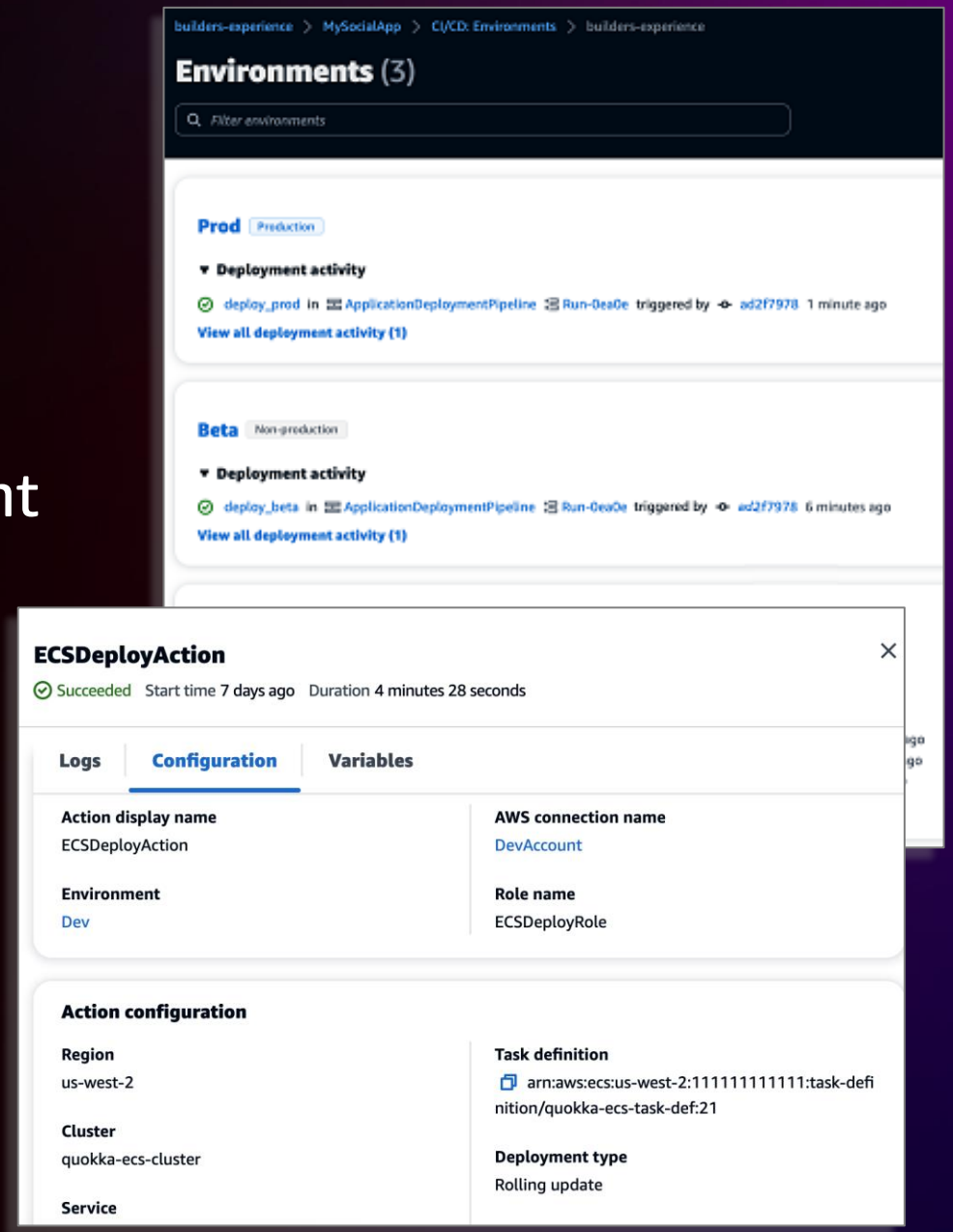
- Out-of-the-box actions to build and test code
- Automatically generate reports and artifacts
- Optimize runtime using custom image
- Reduce startup time using provisioned fleets
- Run builds faster using Lambda vs. Amazon EC2



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Secure deployments to AWS

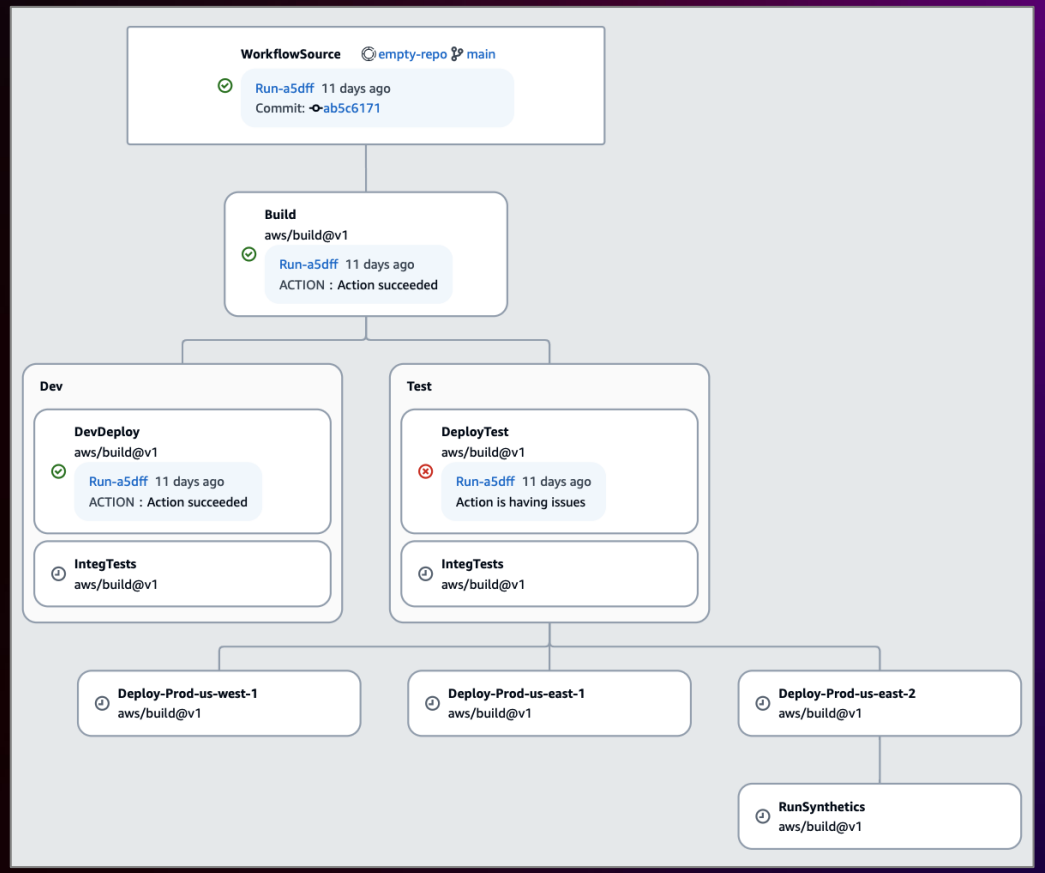
- Out-of-the-box support for AWS deployment targets
- Use trusted service principal and IAM policies
- Deploy to AWS account through an Environment
- Track deployment from within CodeCatalyst
- Simple cross-Region and account deployments



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Release application safely

- Gate releases using automated criteria checks
- Release changes in order or skip to latest
- Lock deployments for shared environments
- Automatically rollback on Amazon CloudWatch alarm



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Getting started with workflows

- Set up an Amazon CodeCatalyst account
- Create a project using a blueprint
- Customize an included workflow to match your CI/CD process

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Thank you!

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