

The background of the image features a dark blue gradient on the left, transitioning into a large, vibrant, abstract shape on the right. This shape is composed of overlapping curved segments in shades of orange, pink, and purple, creating a dynamic, modern aesthetic.

AWS re:Invent

NOV. 27 – DEC. 1, 2023 | LAS VEGAS, NV

D O P 3 1 0 - R

Better together: GitHub Actions, Amazon CodeCatalyst, or AWS CodeBuild

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Agenda

Introduction (10 minutes)

GitHub Actions with GitHub-hosted runners (10 minutes)

GitHub Actions with self-hosted runners (10 minutes)

GitHub Actions with AWS CodeBuild (10 minutes)

GitHub Actions with Amazon CodeCatalyst (10 minutes)

Summary (10 minutes)

Overview of GitHub Actions

YAML

```
name: learn-github-actions
run-name: ${ github.actor } is learning GitHub Actions
on: [push]
jobs:
  check-bats-version:
    runs-on: ubuntu-latest
    steps:
      - uses: actions/checkout@v4
      - uses: actions/setup-node@v3
        with:
          node-version: '14'
      - run: npm install -g bats
      - run: bats -v
```

Event

on: push

Runner: ubuntu-latest

Job: check-bats-version

Step 1: Check out repository

- uses: actions/checkout@v3

Step 2: Install Node.js

- uses: actions/setup-node@v3

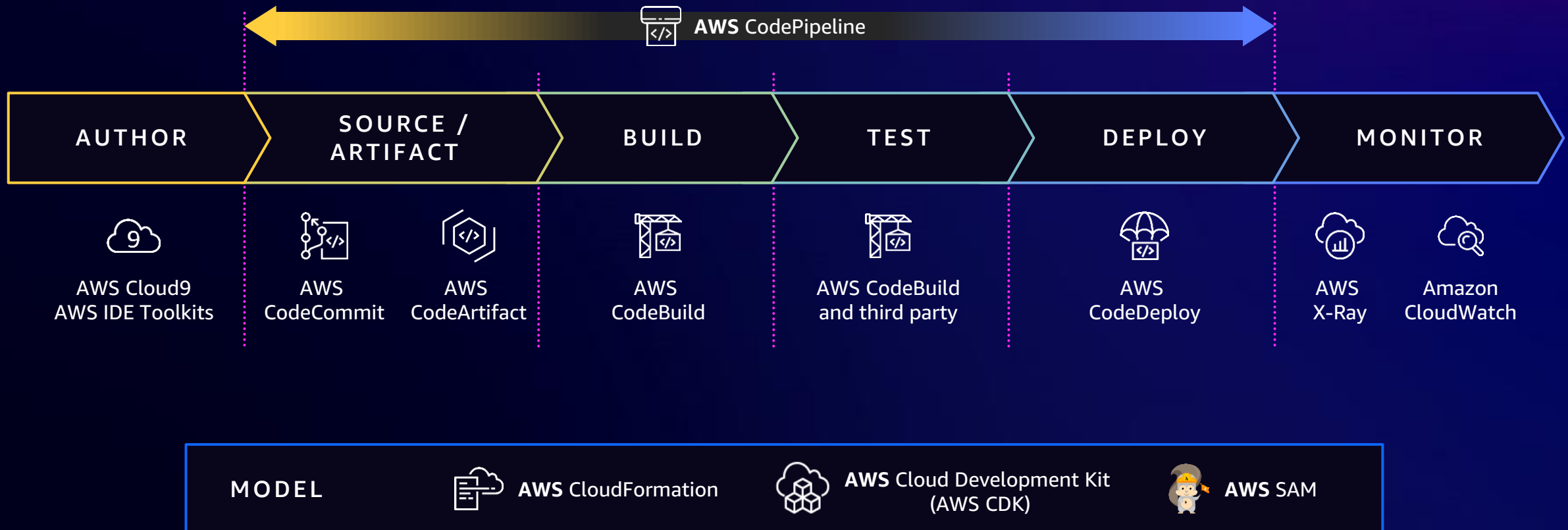
Step 3: Install bats

- run: npm install -g bats

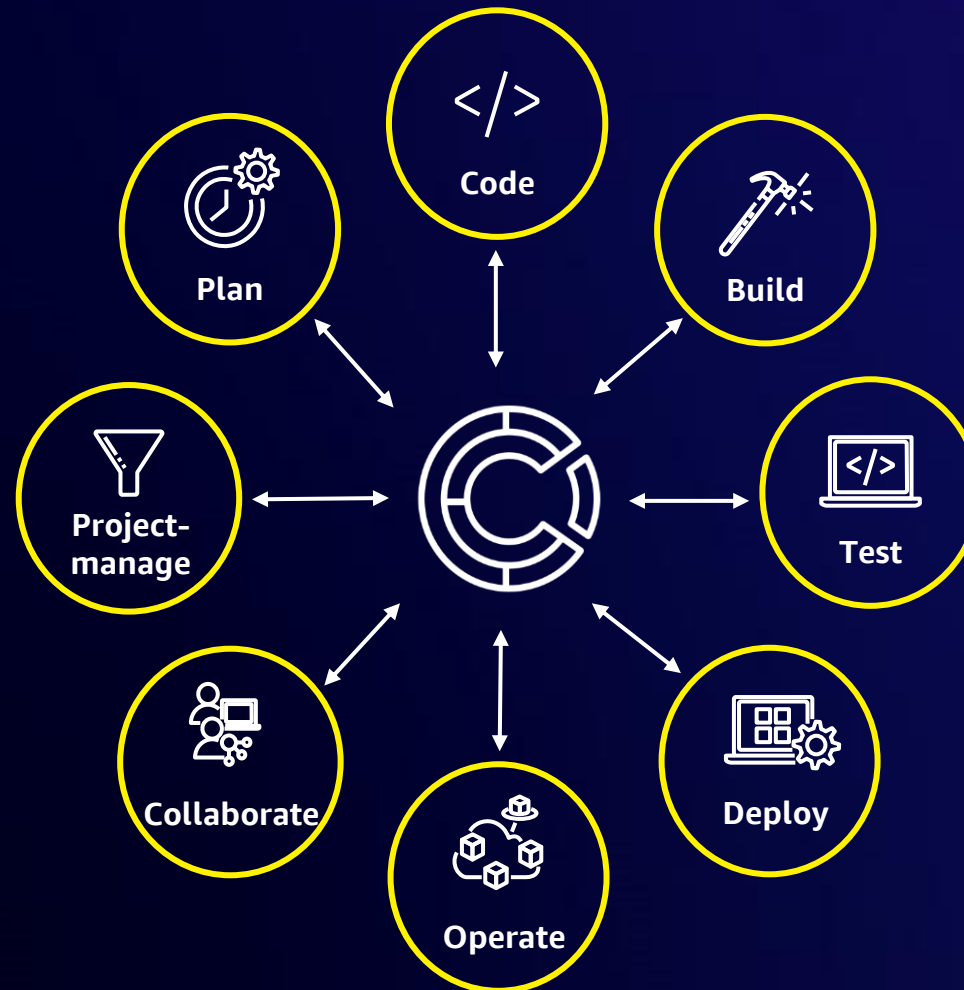
Step 4: Run bats

- run: bats -v

CodeBuild and the developer tools



CodeCatalyst: Unified software development service




- ✓ Managed
- ✓ All-in-one
- ✓ Integrated
- ✓ Security-focused
- ✓ Flexible

GitHub Actions with GitHub-hosted runners




Demo

Deploy a CloudFormation stack using a GitHub-hosted runner




GitHub Action


AWS CloudFormation "Deploy CloudFormation Stack" Action for GitHub Actions

 v1 Latest version

AWS CloudFormation "Deploy CloudFormation Stack" Action for GitHub Actions

 Package

passing

 License

MIT

Deploys AWS CloudFormation Stacks.

Features of GitHub-hosted runners


- Serverless
- Access to private actions
- **No** IAM role support
- **No** Private VPC access
- Logs written to GitHub
- Secrets are stored in GitHub

GitHub Actions with self-hosted runners



Demo

Deploy Helm to private Amazon EKS cluster using a self-hosted runner



GitHub Action

Deploy Helm to EKS

v1.2.5 Latest version

EKS deployments with Helm

GitHub action for deploying to AWS EKS clusters using helm.

Note: If your EKS cluster administrative access is in a private network, you will need to use a self hosted runner in that network to use this action.

Pros and cons of self-hosted runners


- Servers to manage
- Access to private actions
- **No** IAM role support
- Private VPC access
- Logs written to GitHub
- Secrets are stored in GitHub

GitHub Actions with AWS CodeBuild




Demo

Update private Amazon Aurora cluster using a CodeBuild-hosted runner



GitHub Action

Liquibase Update Action

 v4.23.2 Latest version

Liquibase Update Action

Official GitHub Action to run Liquibase Update in your GitHub Action Workflow. For more information on how update works visit the [Official Liquibase Documentation](#).

Pros and cons of CodeBuild-hosted runners


- Serverless
- No access to private actions
- IAM role support
- Private VPC access
- Logs written to Amazon CloudWatch Logs
- Secrets are stored in AWS Secrets Manager

GitHub Actions with Amazon CodeCatalyst




Demo

Deploy Serverless Framework app using a CodeCatalyst hosted runner



GitHub Action

Serverless

 v1.53.0 Latest version

Github Action for Serverless

This Action wraps the [Serverless Framework](#) to enable common Serverless commands.

Pros and cons of CodeCatalyst-hosted runners

- Serverless
- No access to private actions
- IAM role support
- Private VPC access
- Logs written to CodeCatalyst
- Secrets are stored in CodeCatalyst secrets

Summary

Summary of features

	GitHub-hosted	Self-hosted	CodeBuild	CodeCatalyst
Serverless	Yes	No	Yes	Yes
Private VPC access	No	Yes	Yes	Yes
Managed IAM credentials	No	No	Yes	Yes
Support private actions	Yes	Yes	No	No
Secrets	GitHub	GitHub	Secrets Manager	CodeCatalyst
Logs	GitHub	GitHub	CloudWatch	CodeCatalyst

Learn more

[CodeCatalyst Documentation](#)

[CodeBuild Documentation](#)

[Running GitHub Actions in a private Subnet with AWS CodeBuild](#)

[Serverless Framework with Amazon CodeCatalyst](#)

[Using Amazon CodeCatalyst with Amazon Virtual Private Cloud](#)



Thank you!



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