DevOps with Amazon Web Services

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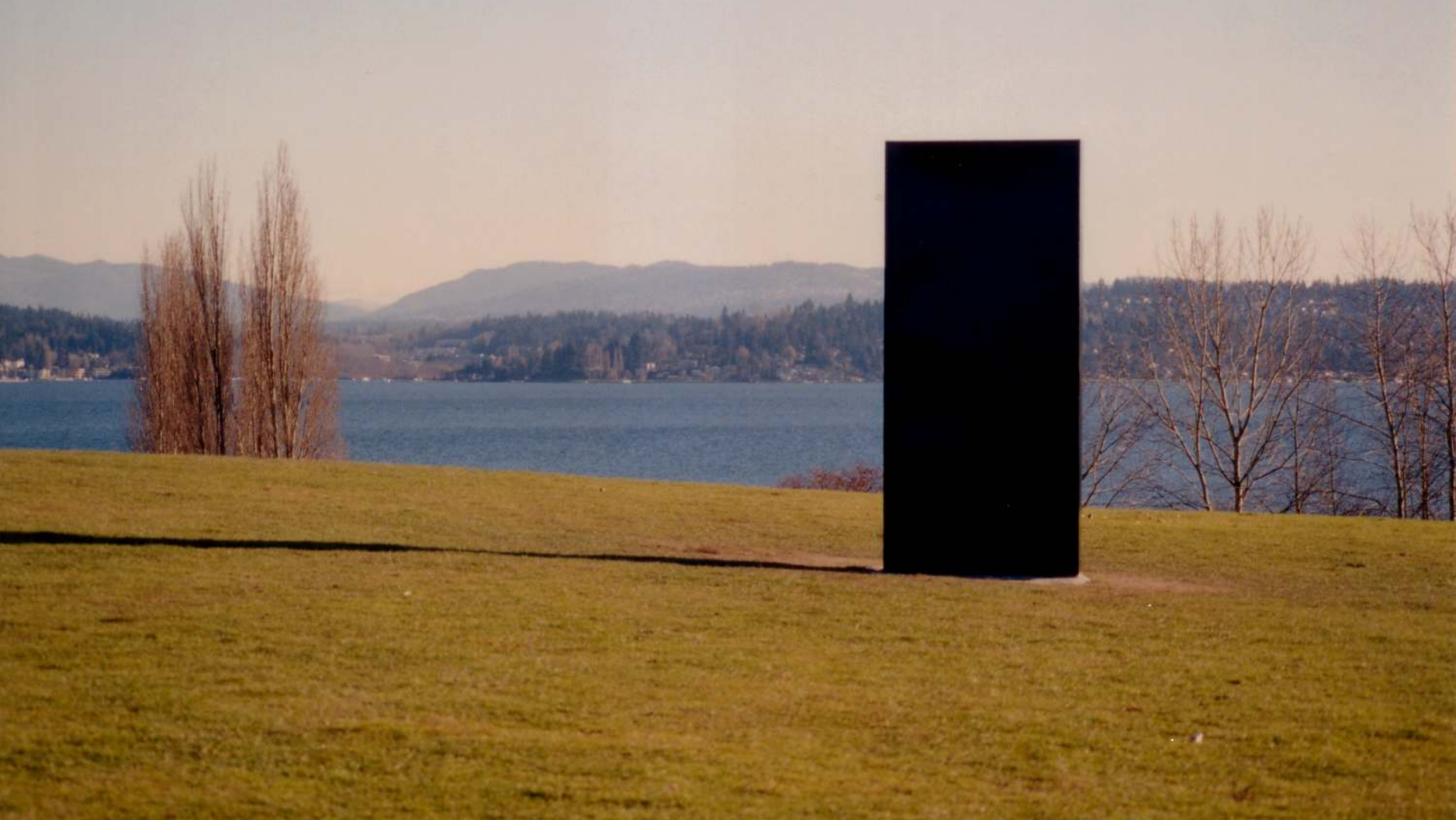
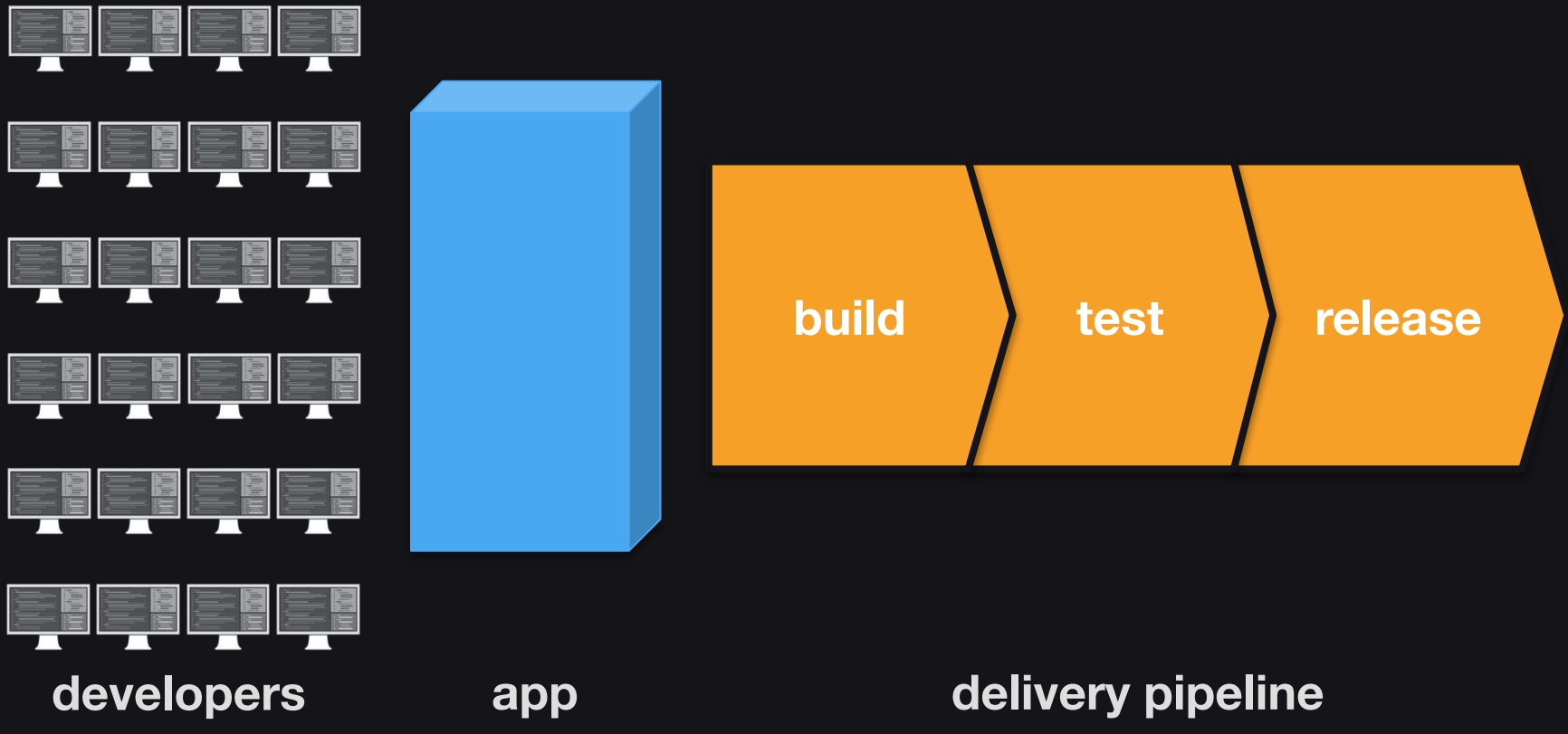
amazon web services



Monolith development lifecycle



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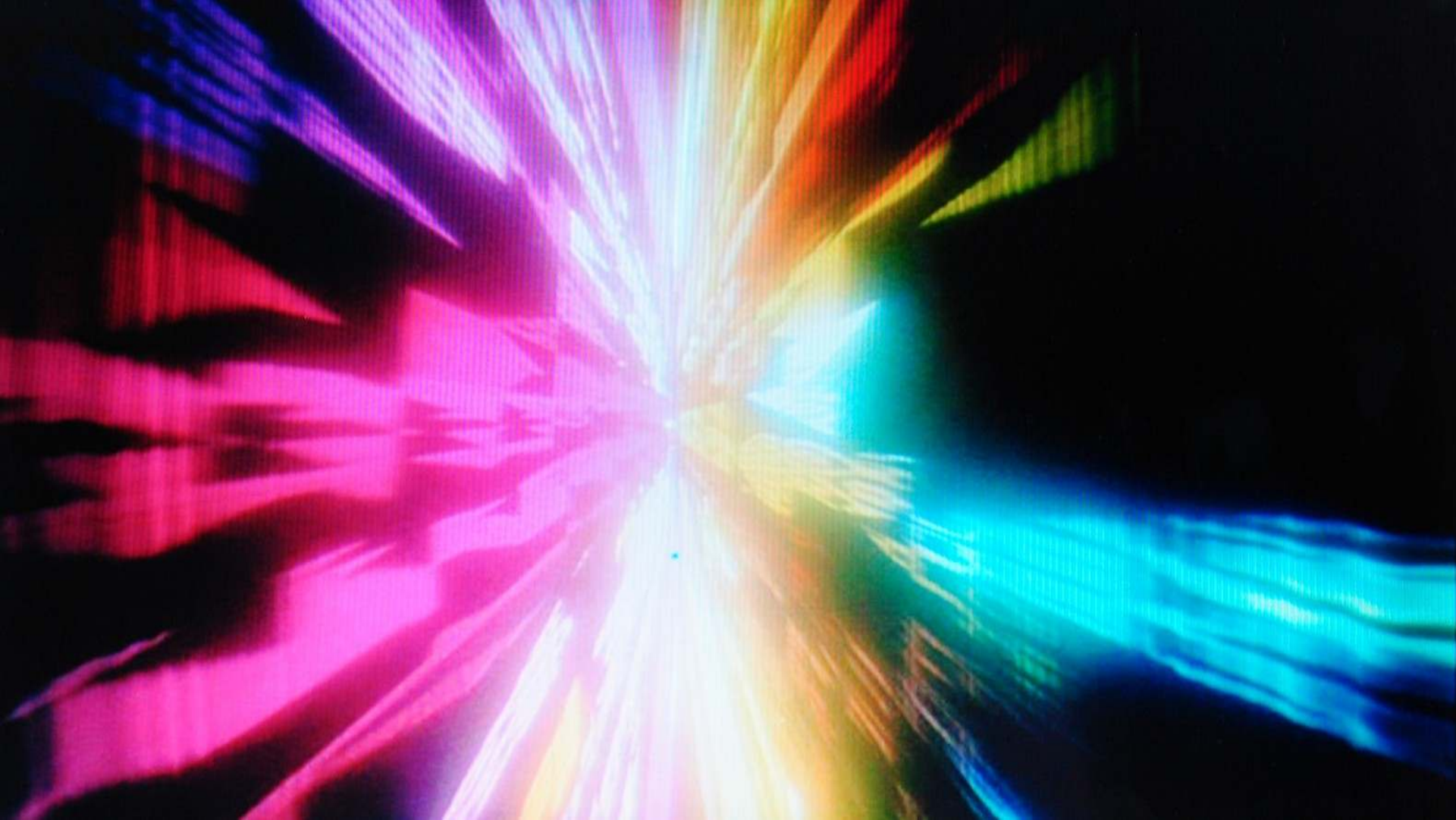
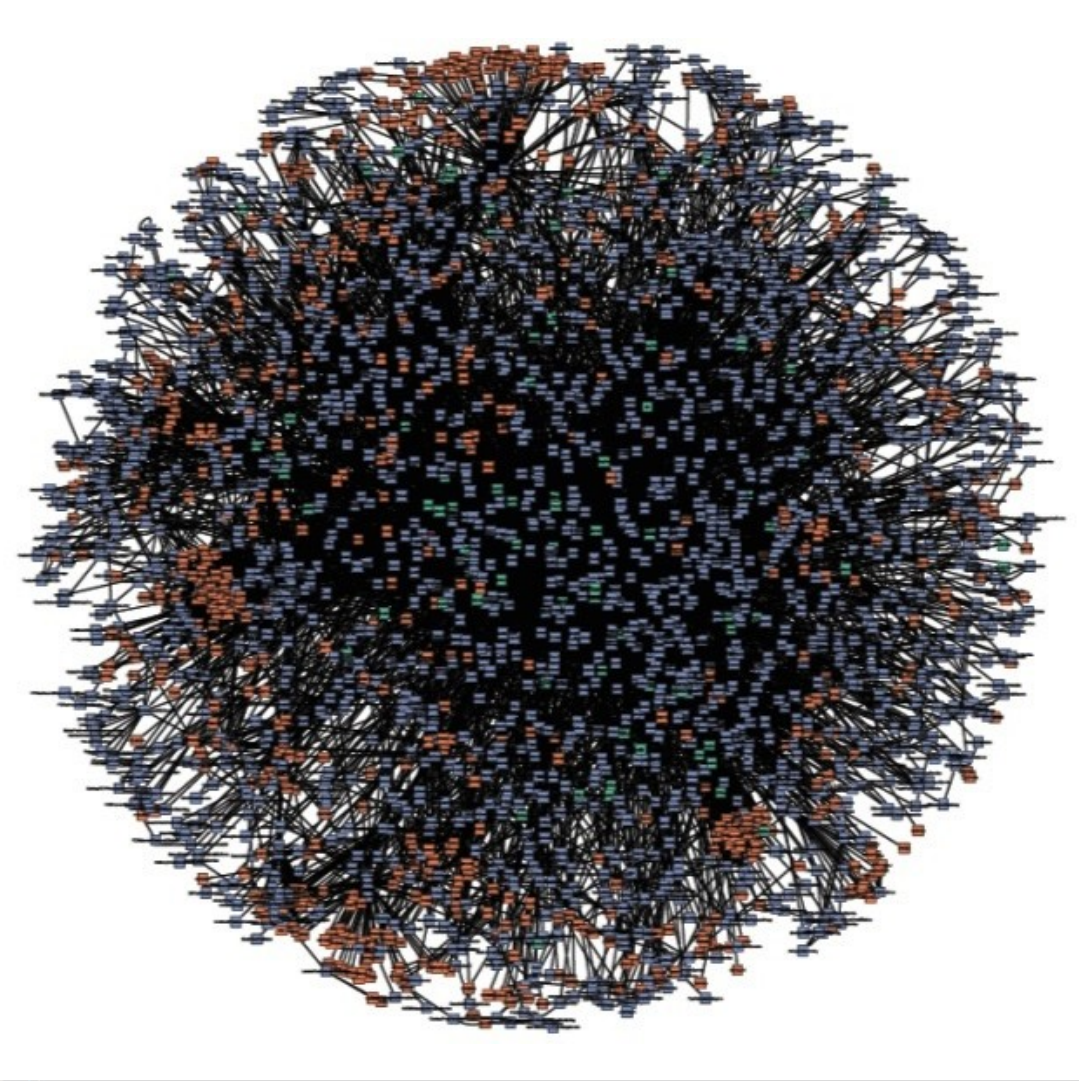




Service-Oriented Architecture (SOA)

Single-purpose

Connected through APIs

Highly decoupled

“Microservices”

Two-pizza teams

Full ownership

Full accountability

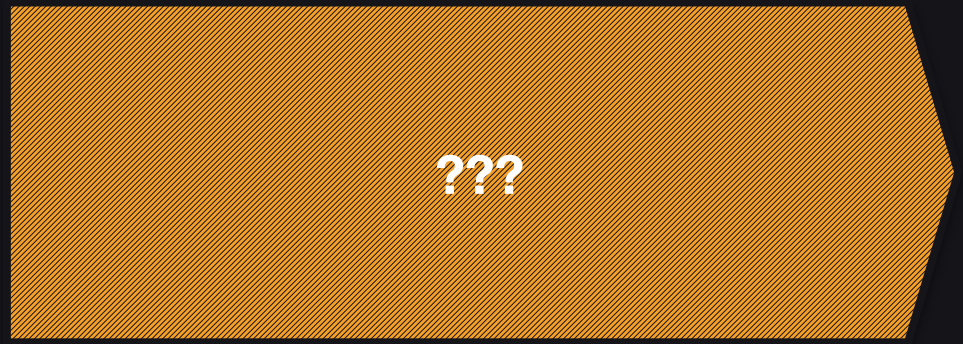
Aligned incentives

“DevOps”

Missing tools

developers

services



delivery pipeline

Self-service

Technology-agnostic

Encourage best practices

Single-purpose services

Deployment service

No downtime

Health tracking

Versioned artifacts

Rollbacks

Pipelines

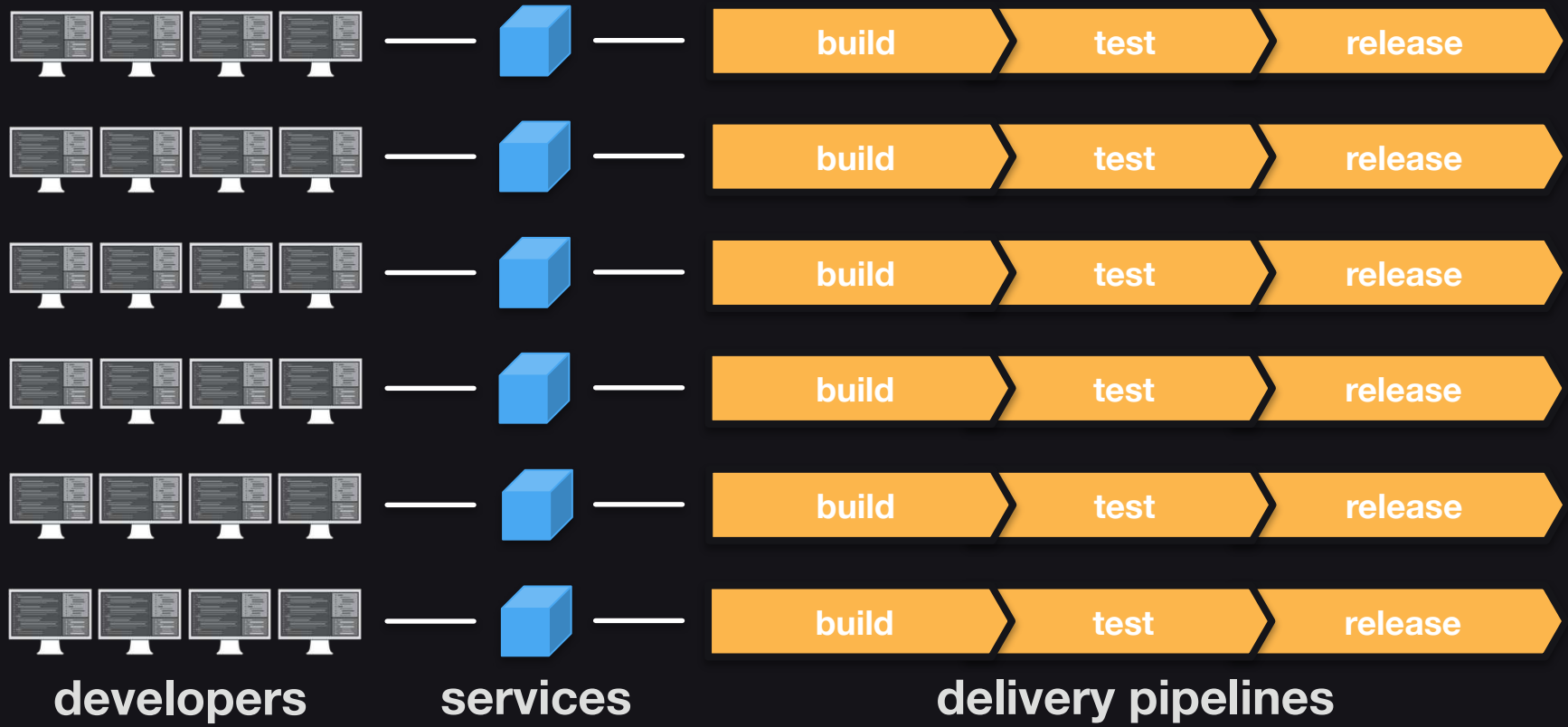
Continuous delivery

Automated release process

Faster and more reliable releases

Used by >90% of teams

DevOps development lifecycle



Thousands of teams

× Microservice architecture

× Continuous delivery

× Multiple environments

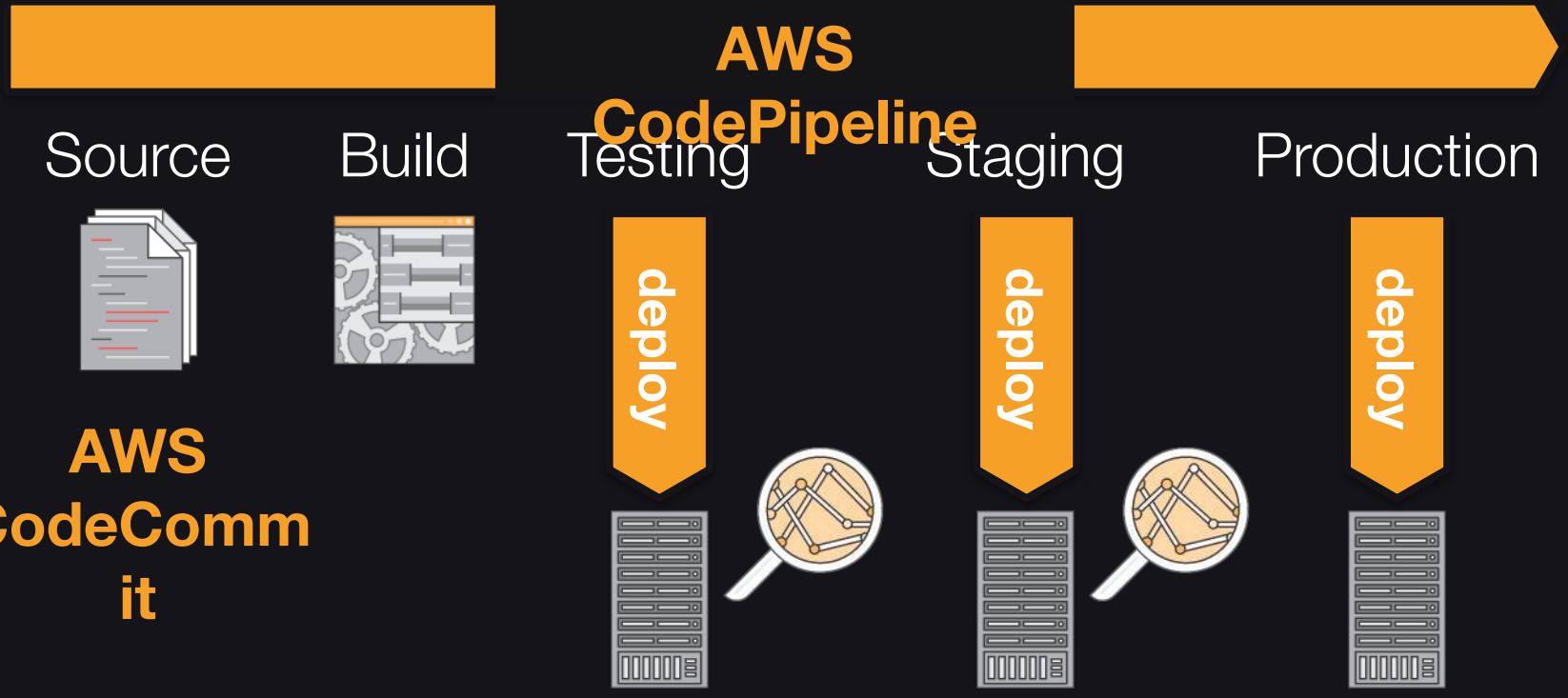
= 50 million deployments a year

(1.5 deployment every second)

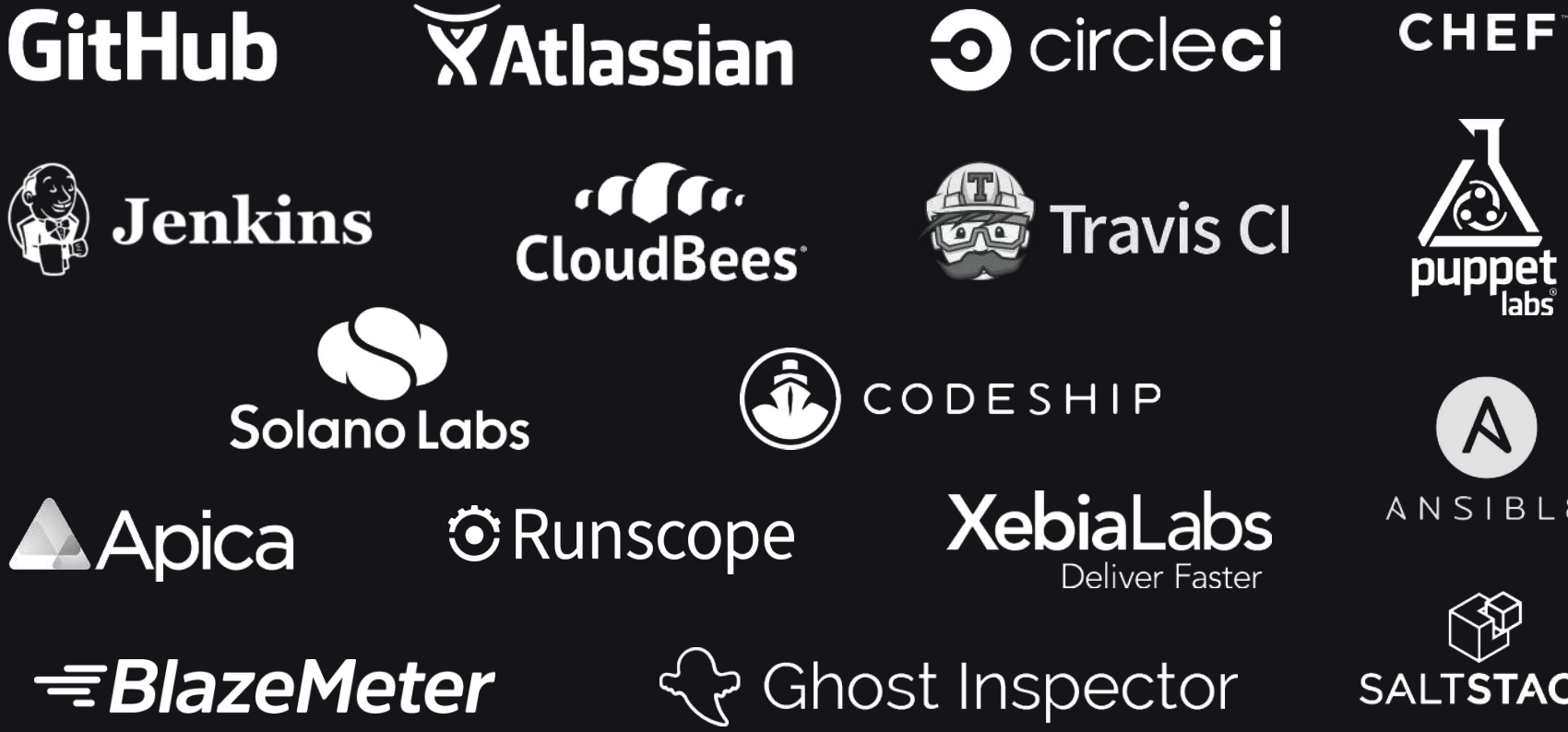
Science Fiction becomes reality

How can we help others do this?

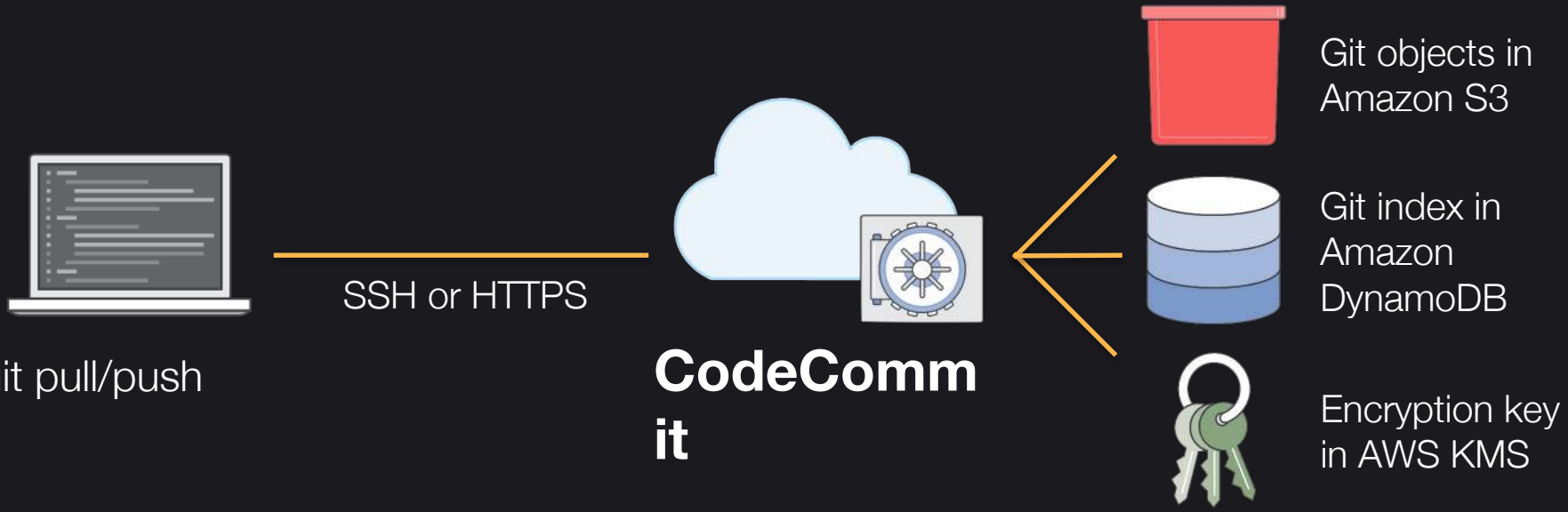
Setting up a delivery pipeline



AWS Code* partners



AWS CodeCommit

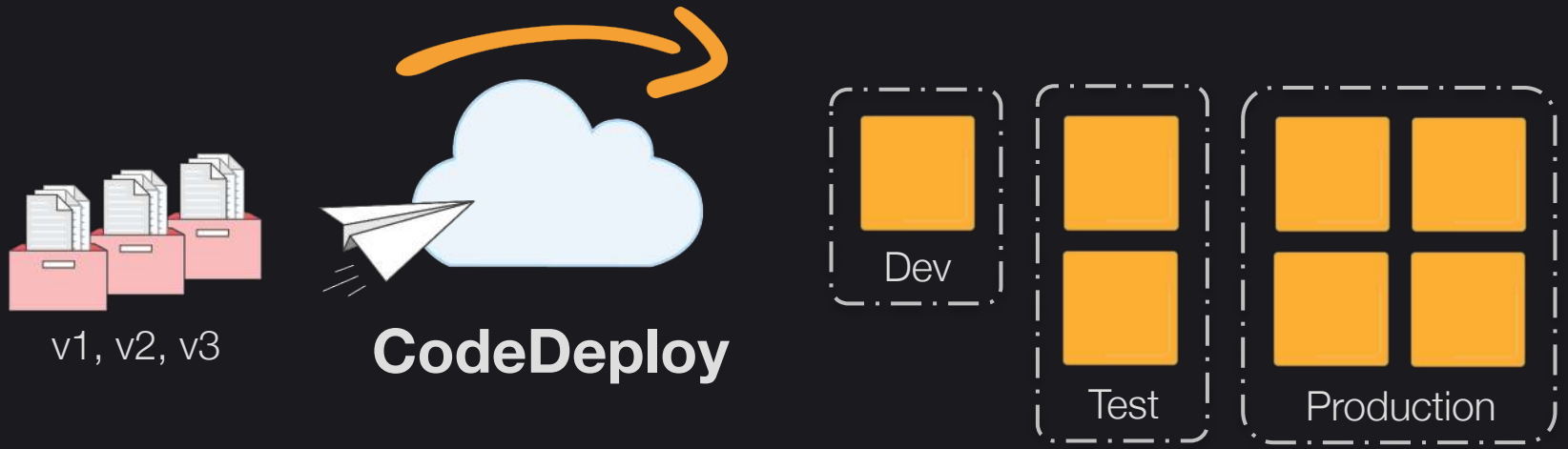


Use standard Git tools

Scalability, availability and durability of Amazon S3

Encryption at rest with customer-specific keys

AWS CodeDeploy

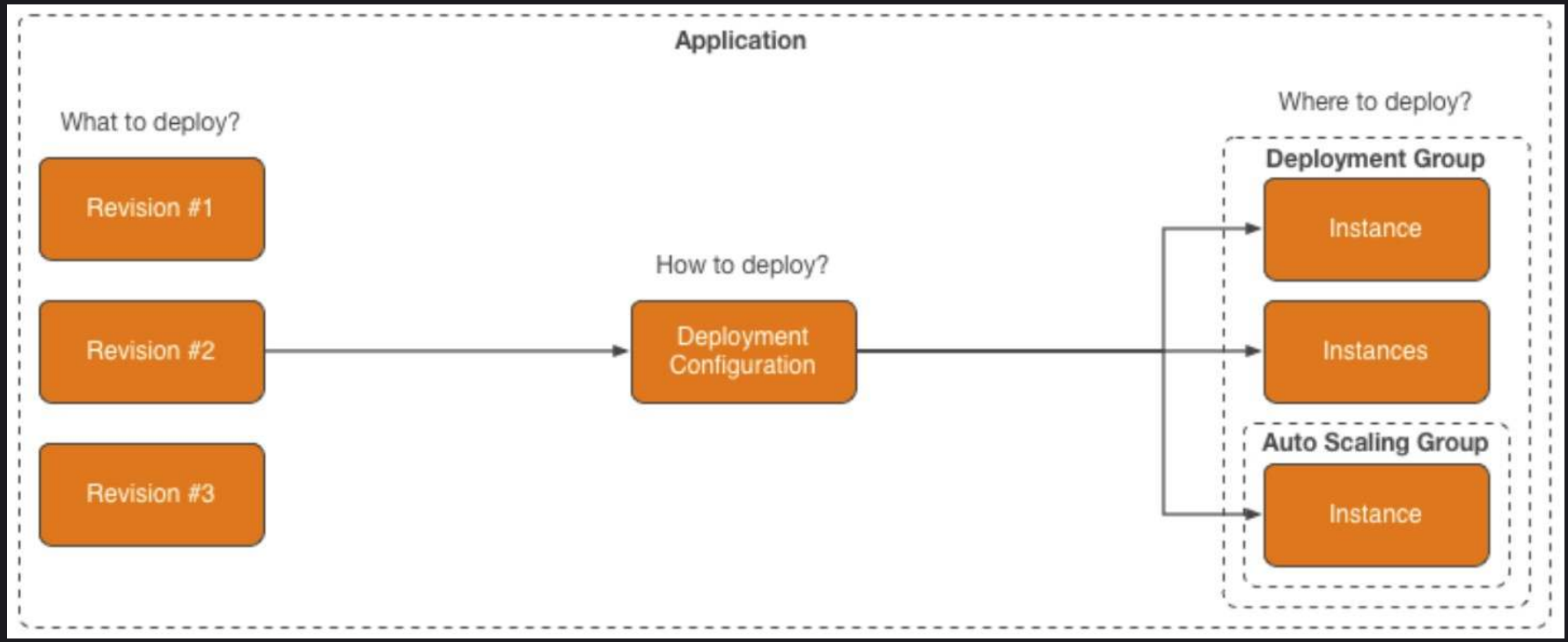


Easy and reliable deployments (zero downtime, rollbacks)

Scale with ease (support for Auto Scaling groups)

Deploy to any server (Linux / Windows, EC2 / on-premise)

AWS CodeDeploy Key Components



AWS CodePipeline

Source	Build	Deploy	Approve	Deploy
1) Pull	1) Build 2) Unit test	1) Deploy 2) QA	SNS	1) Deploy canary 2) Deploy prod

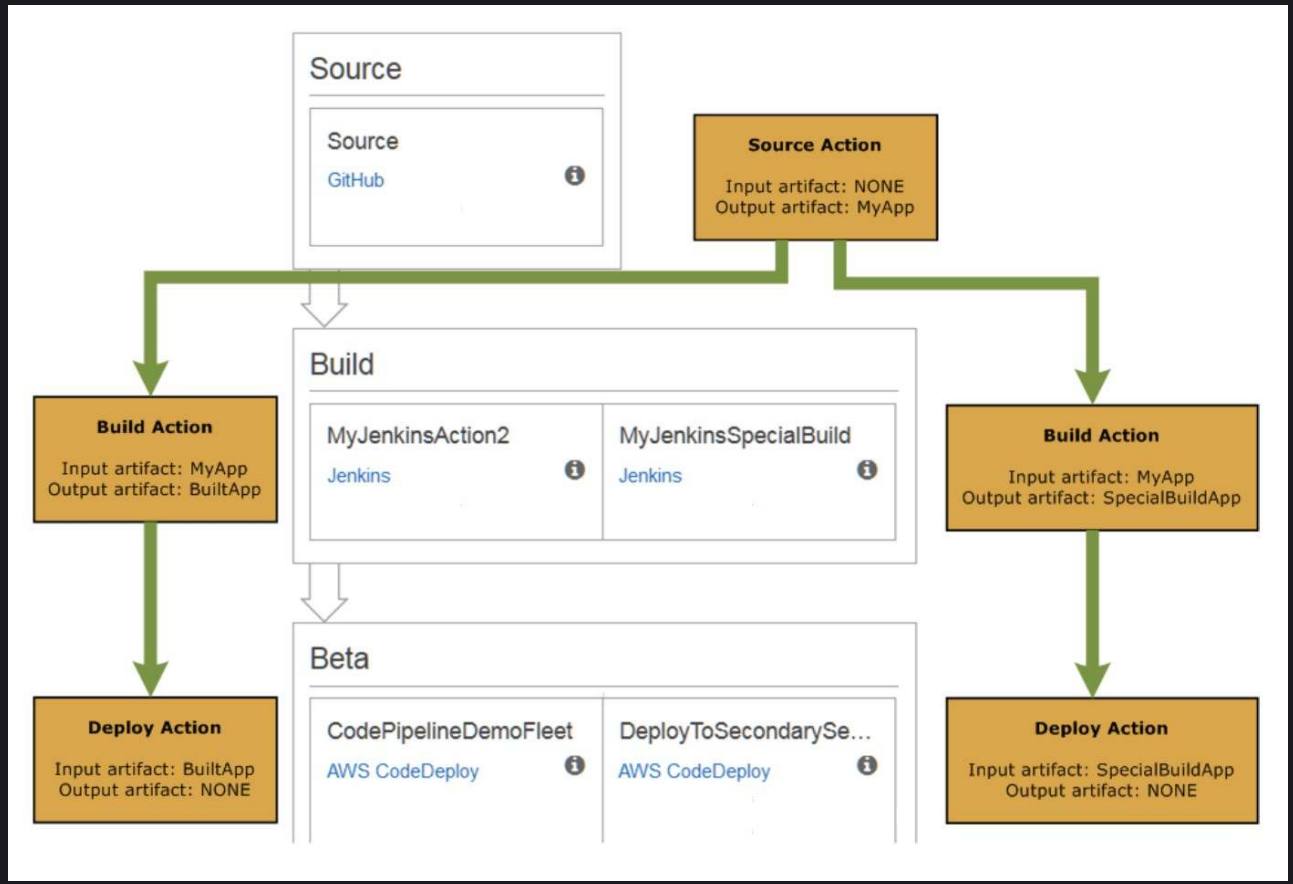
Define stages: Source, Build, Test, Deploy, Invoke, Approve

Connect to best-of-breed tools

Accelerate your release process

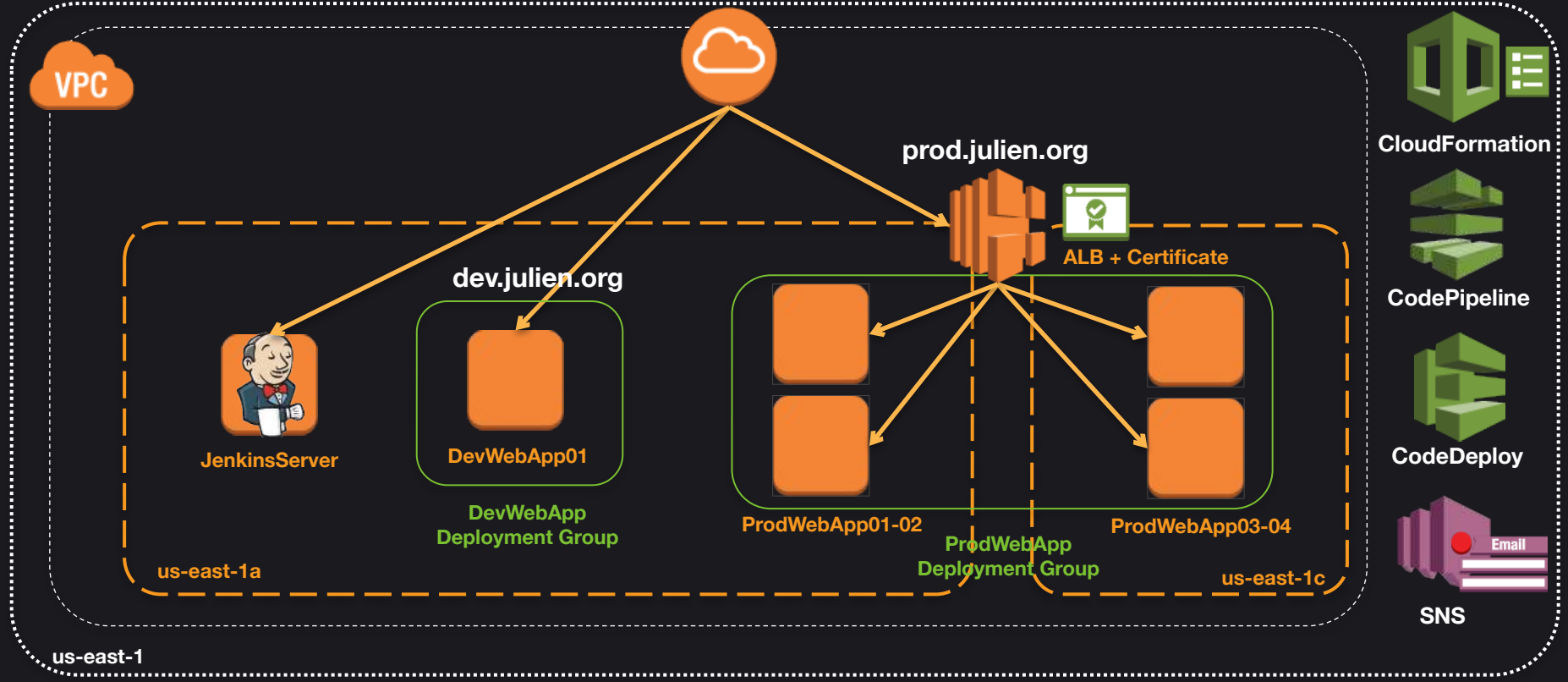
Consistently verify each release

AWS CodePipeline Key Components



AWS Code* demo

Source (GitHub) → Build (Jenkins) → Deploy Dev (CodeDeploy) → Approve (SNS Email) → Deploy Prod (CodeDeploy)



APPROVAL NEEDED: AWS CodePipeline app-name-Pipeline for action My_Approval

Email JS 11:15

Hello,

The following Approval action is waiting for your response:

--Pipeline Details--

Pipeline name: app-name-Pipeline
Stage name: Approval
Action name: My_Approval
Region: us-east-1

--Approval Details--

Content to review: http://dev.julien.org
Approve or reject: https://console.aws.amazon.com/codepipeline/home?region=us-east-1#/view/app-name-Pipeline/Approval/My_Approval/approve/0bba2e19-4c19-4a74-87de-cdc1f9612613
Additional information: Please review this deployment
Deadline: This review request will expire on 2016-10-12T09:15Z

Sincerely,
Amazon Web Services

Next steps

LEARN MORE

http://aws.amazon.com/awscode

http://blogs.aws.amazon.com/application-management

http://blogs.aws.amazon.com/application-management/post/Tx2CIB02ZO05ZII/Explore-Continuous-Delivery-in-AWS-with-the-Pipeline-Starter-Kit

https://aws.amazon.com/about-aws/whats-new/2016/11/aws-codepipeline-introduces-aws-cloudformation-deployment-action/

GET STARTED

http://aws.amazon.com/free

http://console.aws.amazon.com

More sessions

~~7/11, 15:00 Hands-on with AWS IoT~~

~~8/11, 10:00 A 60-minute tour of AWS Compute~~

~~9/11, 10:00 Deep Dive: DevOps on AWS~~

9/11, 11:00 Running Docker clusters on AWS

21/11, 11:00 Move fast, build things with AWS

22/11, 11:00 Deep Dive: Amazon RDS

Danke sehr!

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