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

BOA330

Cloud backends for frontend developers

Ana Cunha (she/her)

Sr. Developer Advocate
Amazon Web Services

Memo Döring (he/him)

Head of Developer Relations, LATAM
Amazon Web Services

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

How to create a full-stack app?



Build



Ship

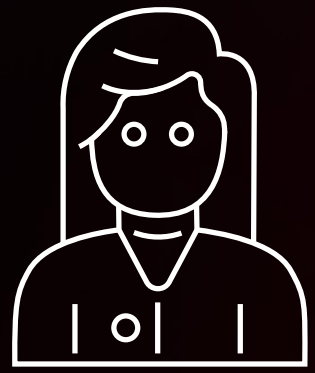


Scale

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Move away from one-stop shop



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Building components



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

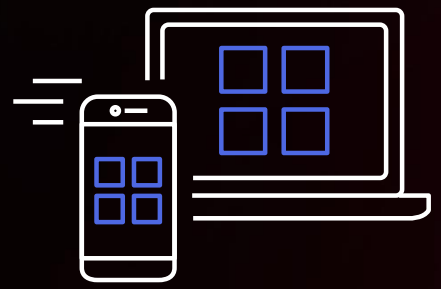
How to create a full-stack app?



Build

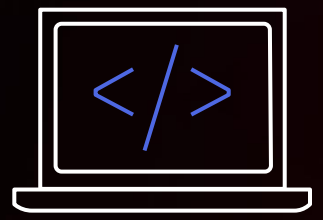
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

User interface



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Code

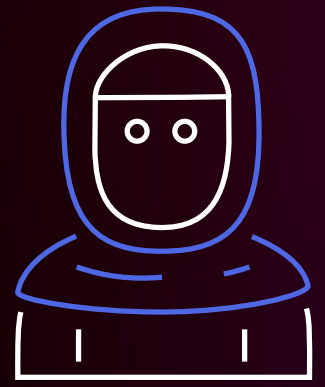


© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Personas that build



UX designer



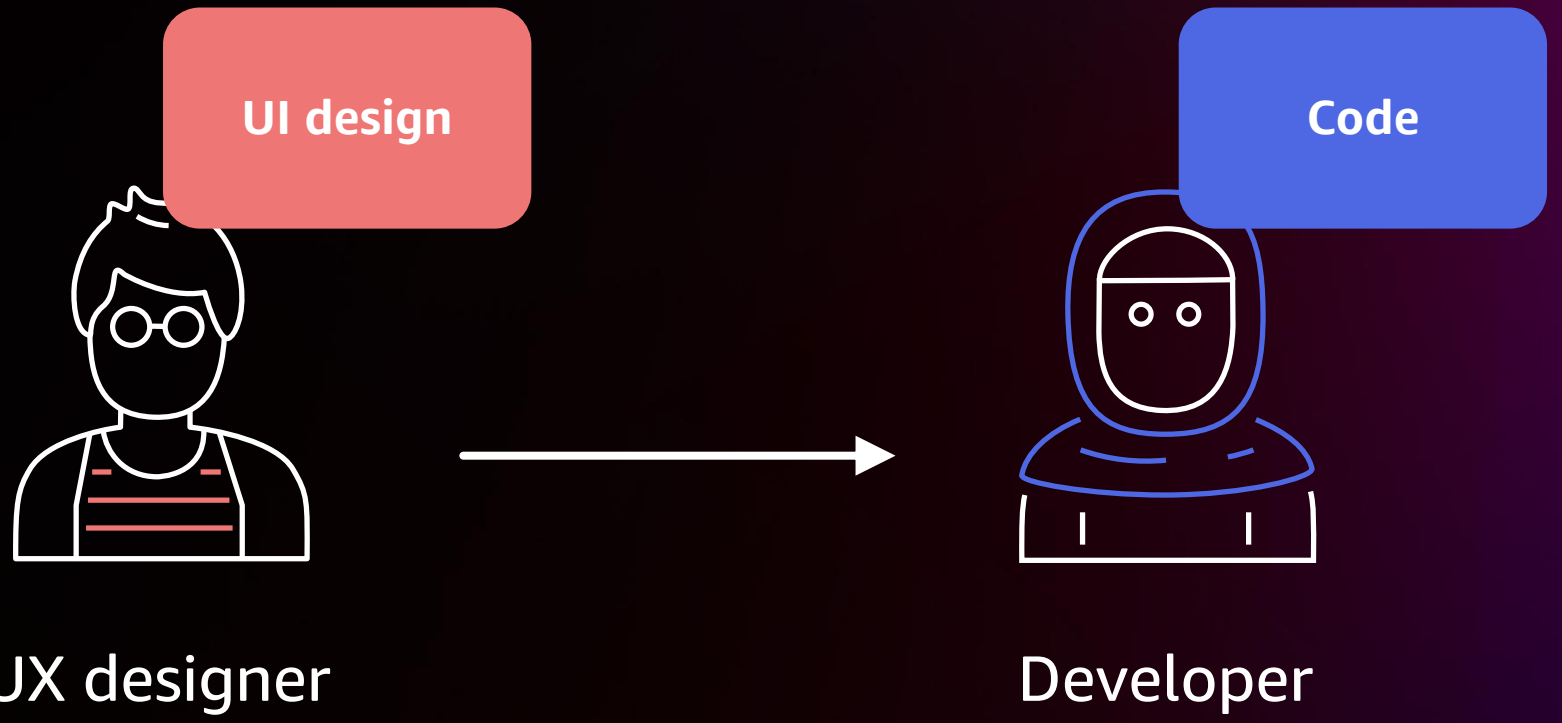
Developer

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Build frontend

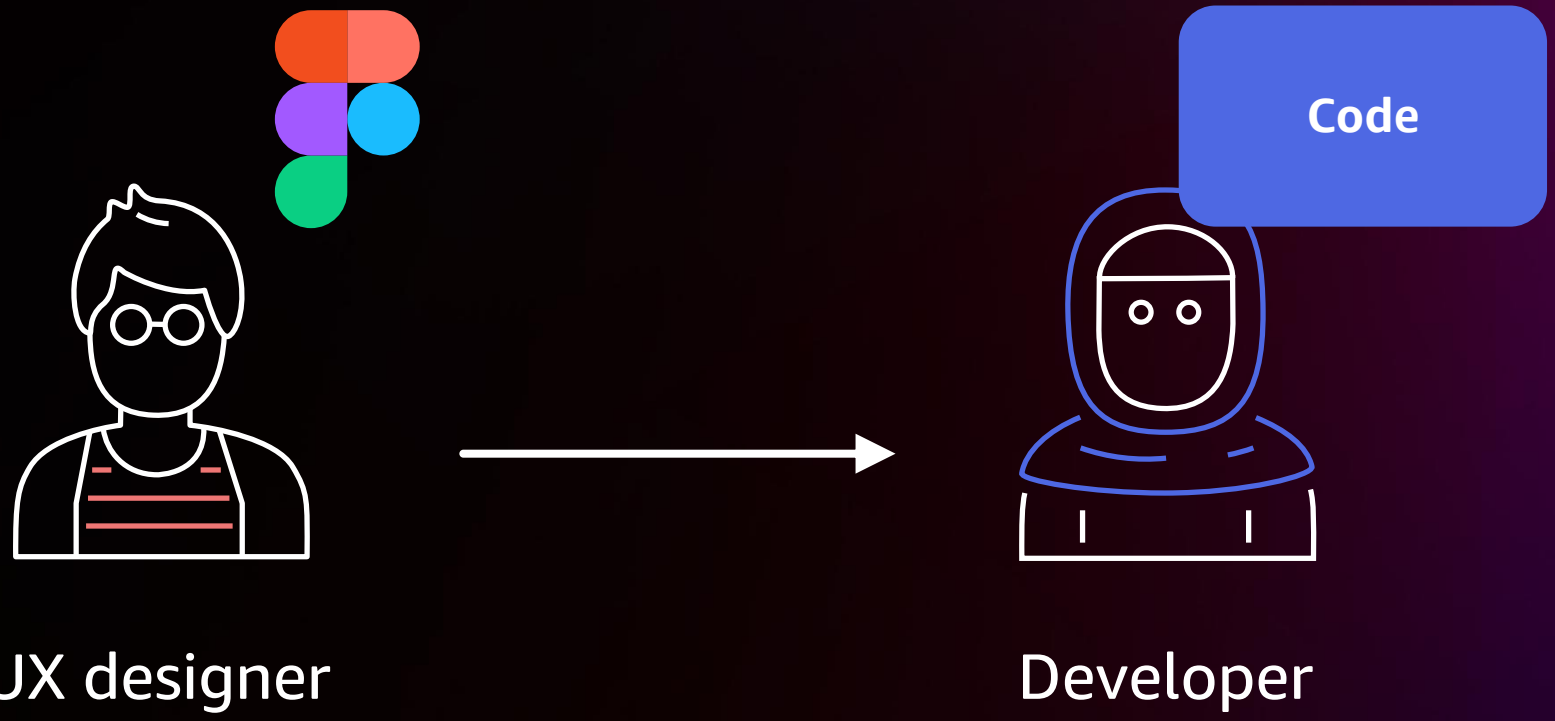
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Design to code



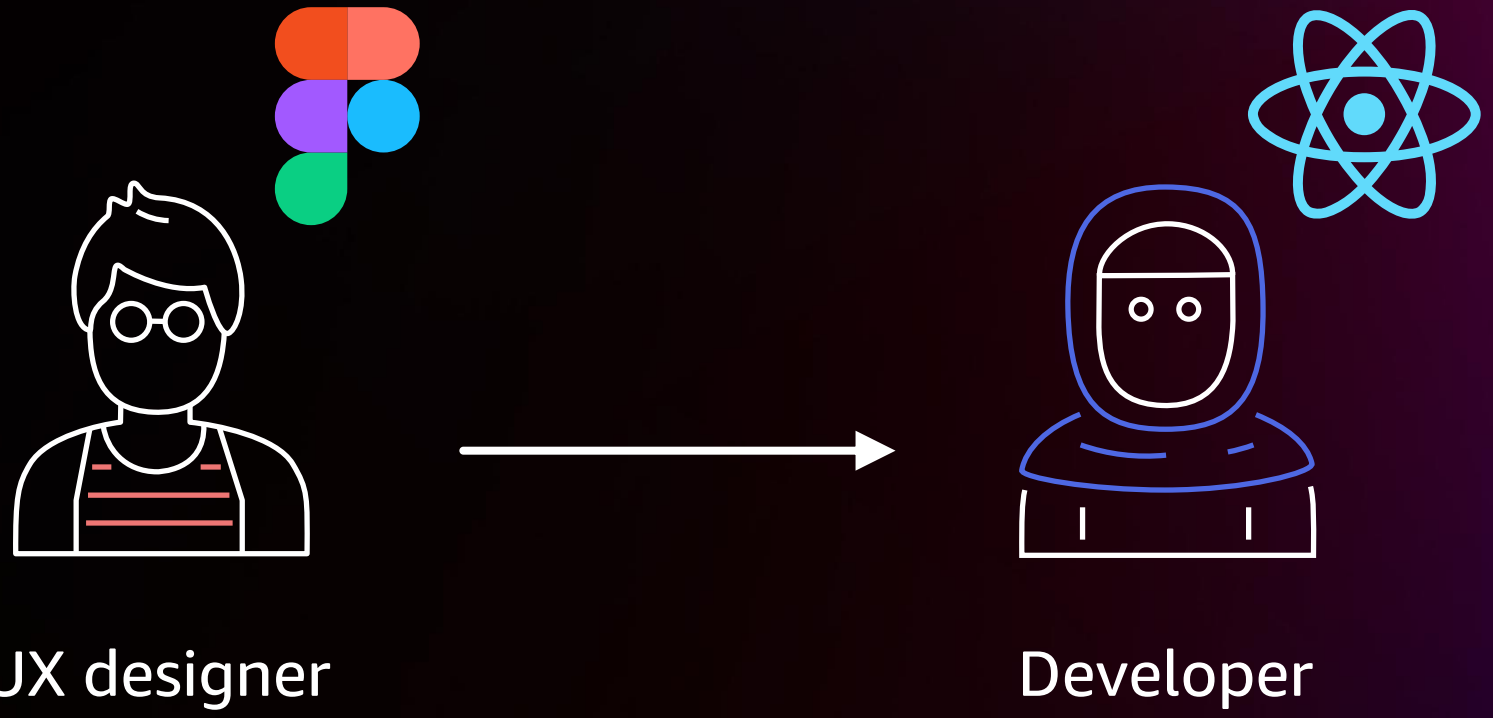
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Design to code



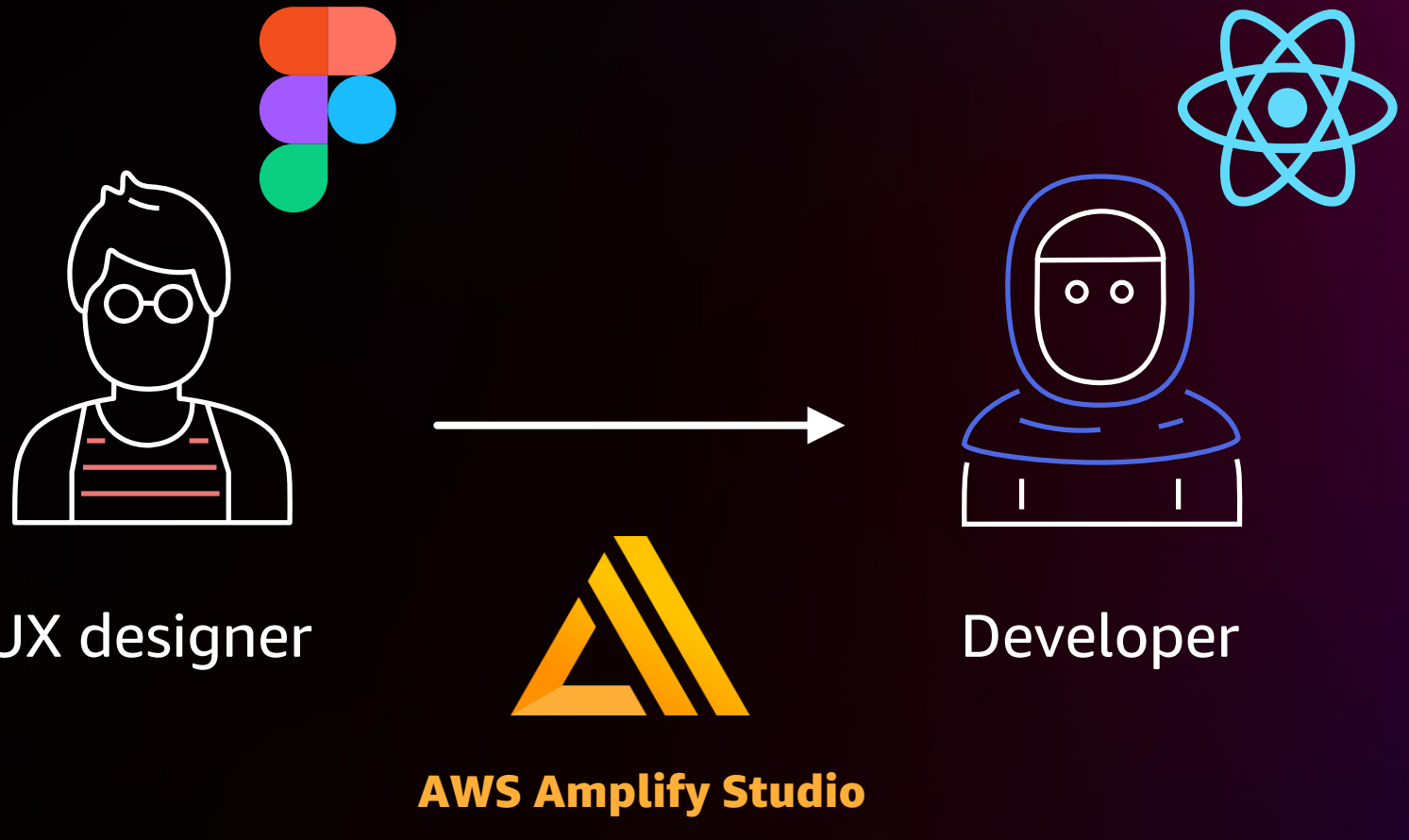
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Design to code

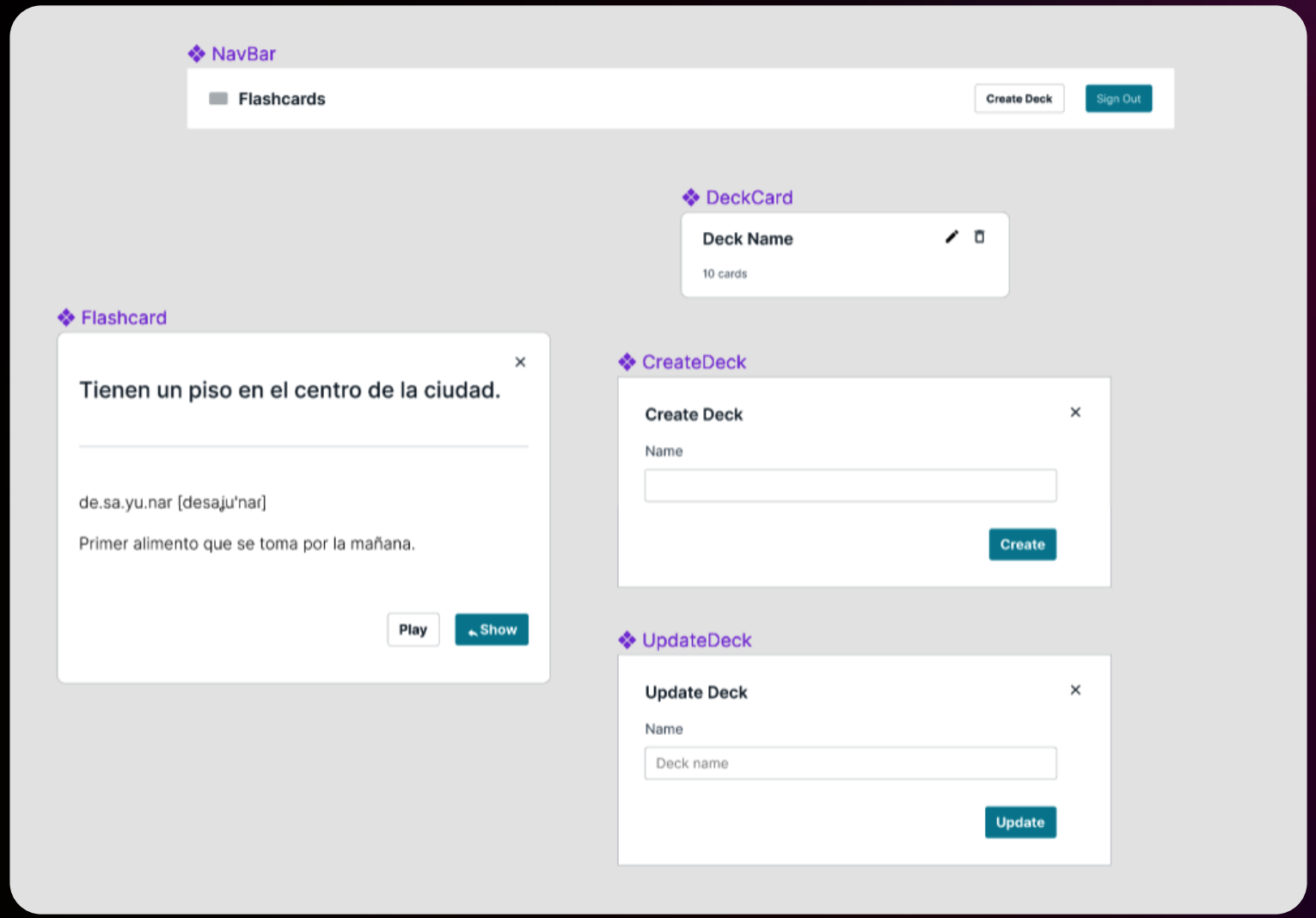


aws
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

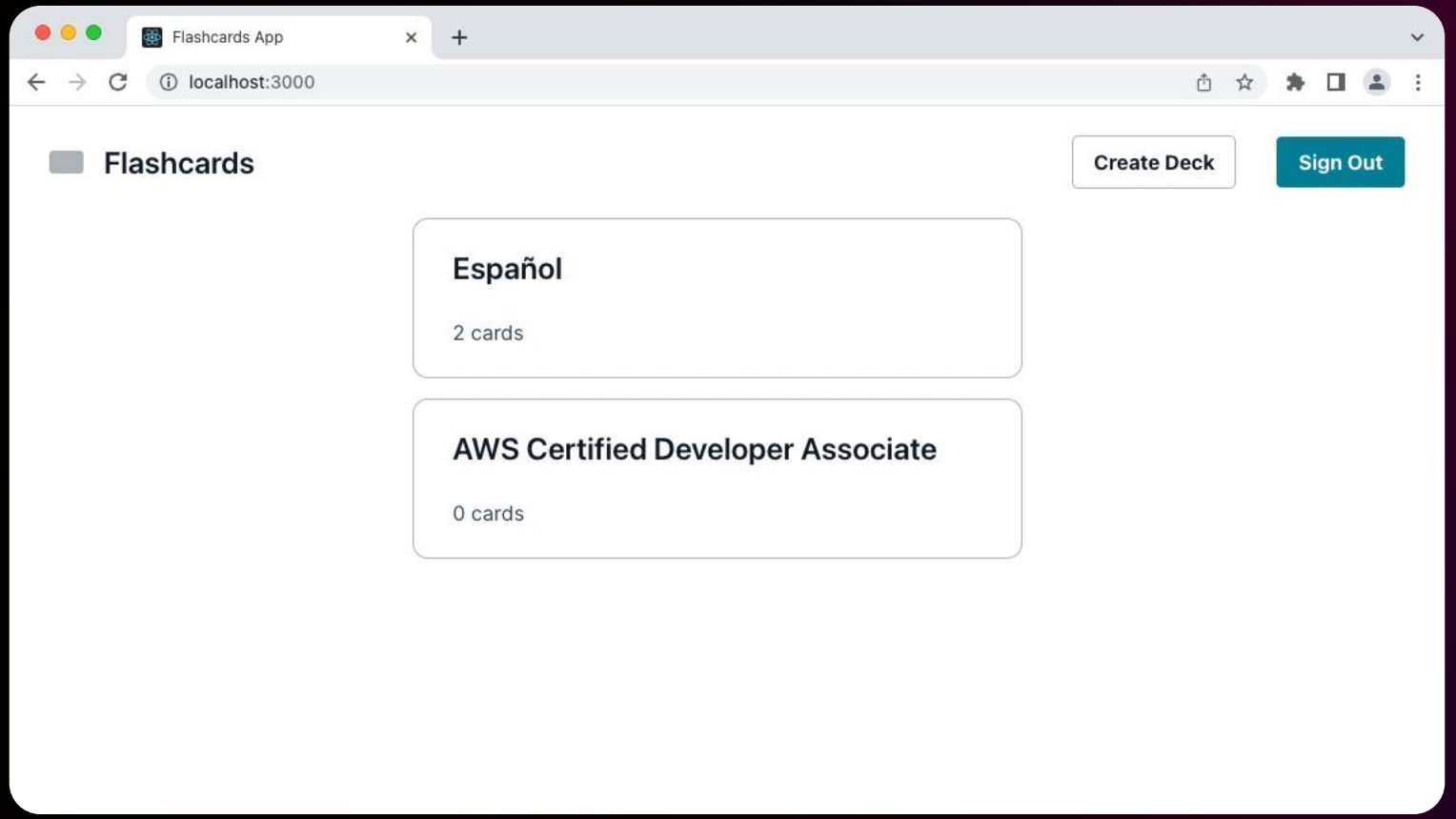
Design to code



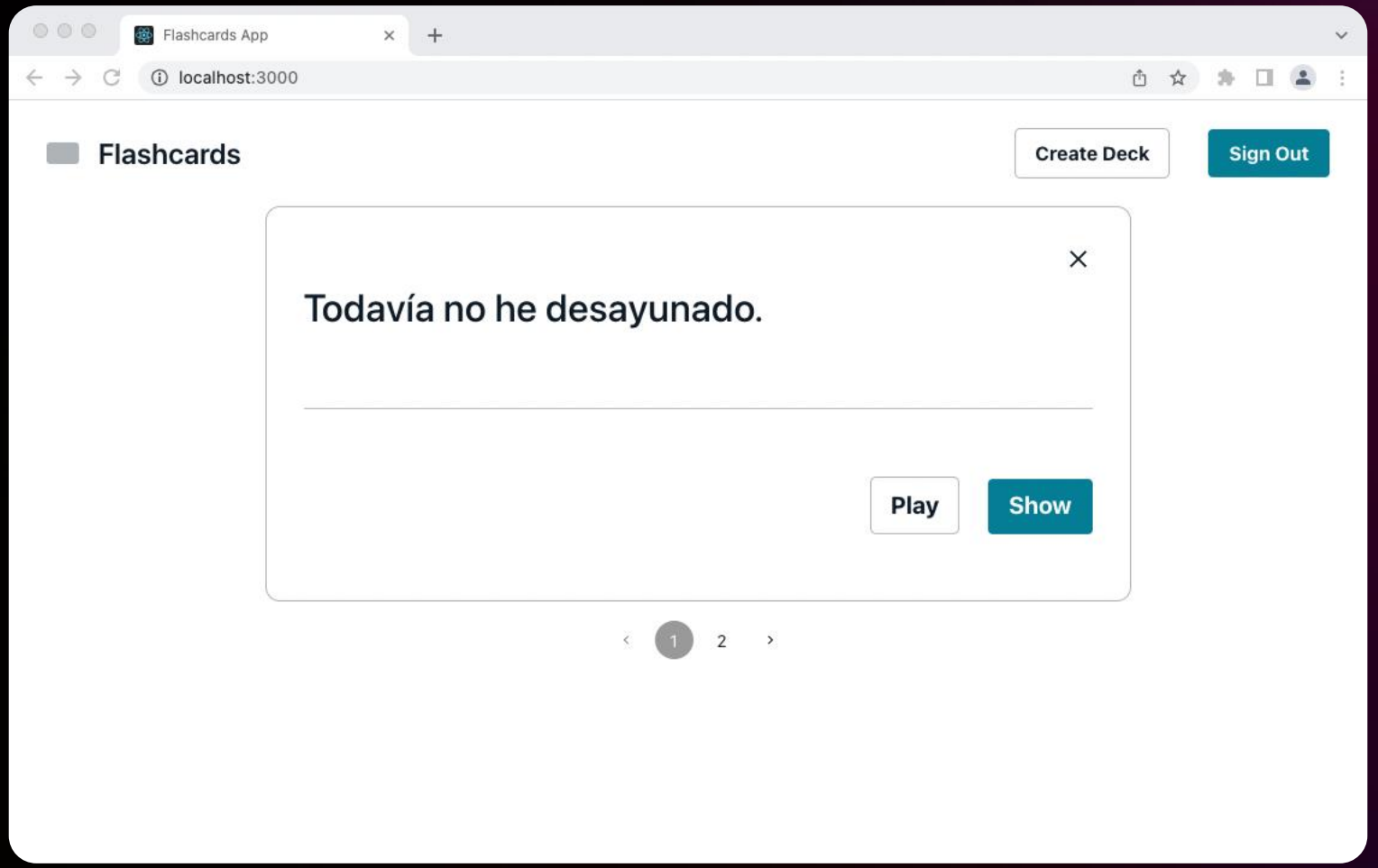
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.



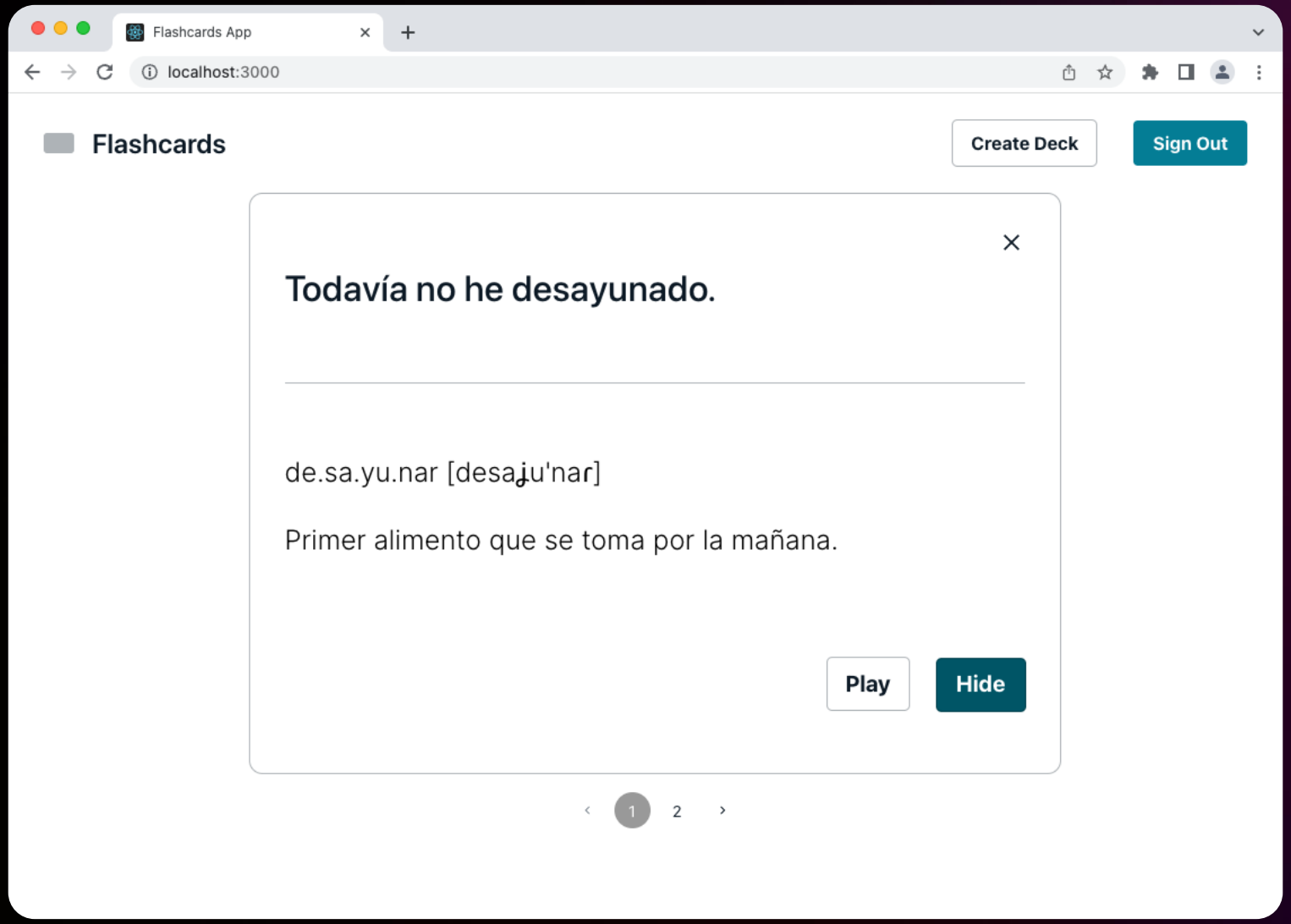
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Build backend

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

AWS Amplify



A set of tools and services that make it easy to build full-stack web and mobile applications on AWS

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Everything that Amplify does

Analytics

API (GraphQL)

API (REST)

Authentication

Data

Functions

Geo

Interactions

Predictions

PubSub

Push notifications

Storage

XR

Extensibility

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Everything that Amplify does...

Analytics

API (GraphQL)

API (REST)

Authentication

Data

Functions

Geo

Interactions

Predictions

PubSub

Push notifications

Storage

XR

Extensibility

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Authentication

AMPLIFY CLI

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Authentication

AMPLIFY CLI



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Authentication

AMPLIFY CLI

```
$ amplify add auth

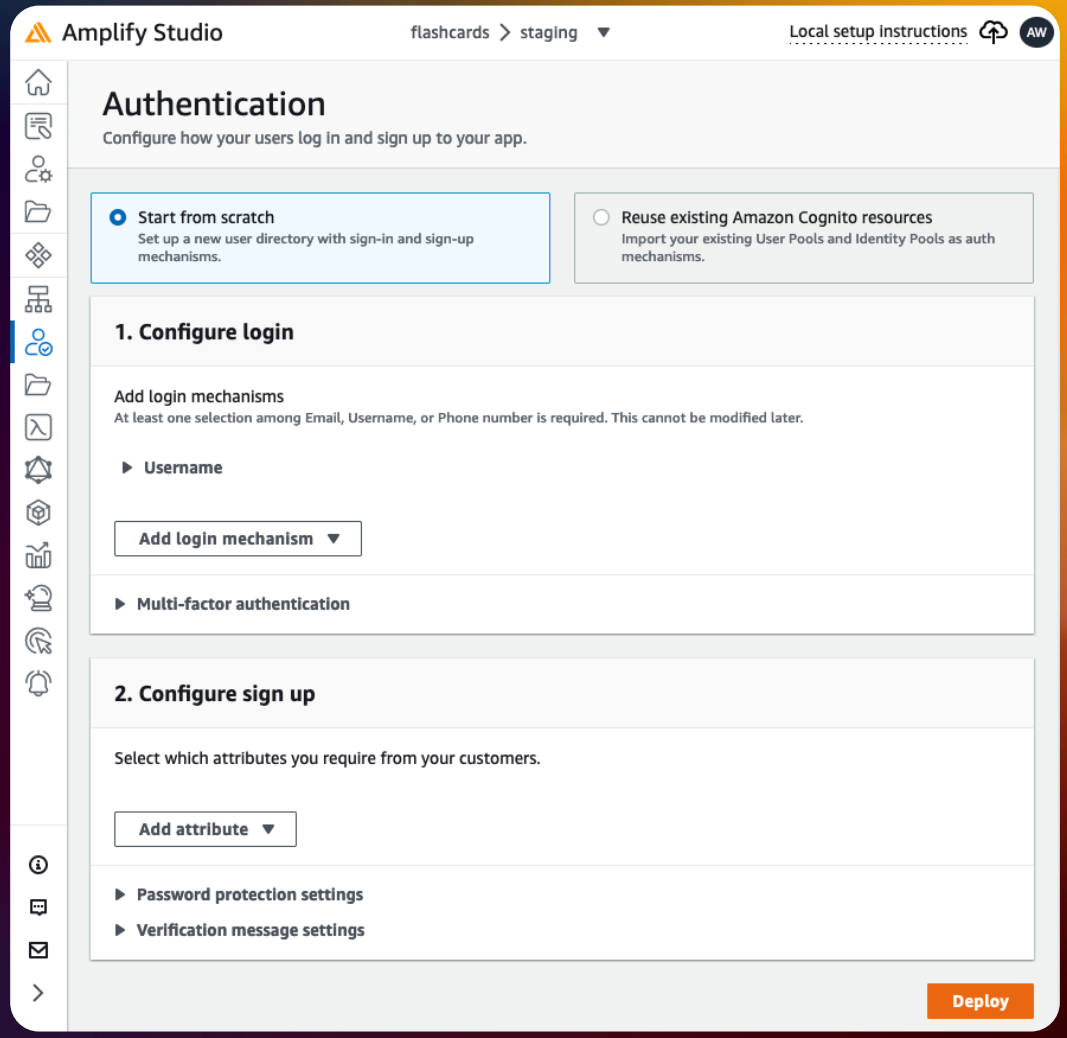
Using service: Cognito, provided by: awscloudformation

 Do you want to use the default authentication and security configuration? Default configuration
 How do you want users to be able to sign in? Username
 Do you want to configure advanced settings? No, I am done.

✅ Successfully added auth resource flashcards locally

$ amplify push
```

AMPLIFY STUDIO



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Data

AMPLIFY CLI

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Data

AMPLIFY CLI



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Data

AMPLIFY CLI

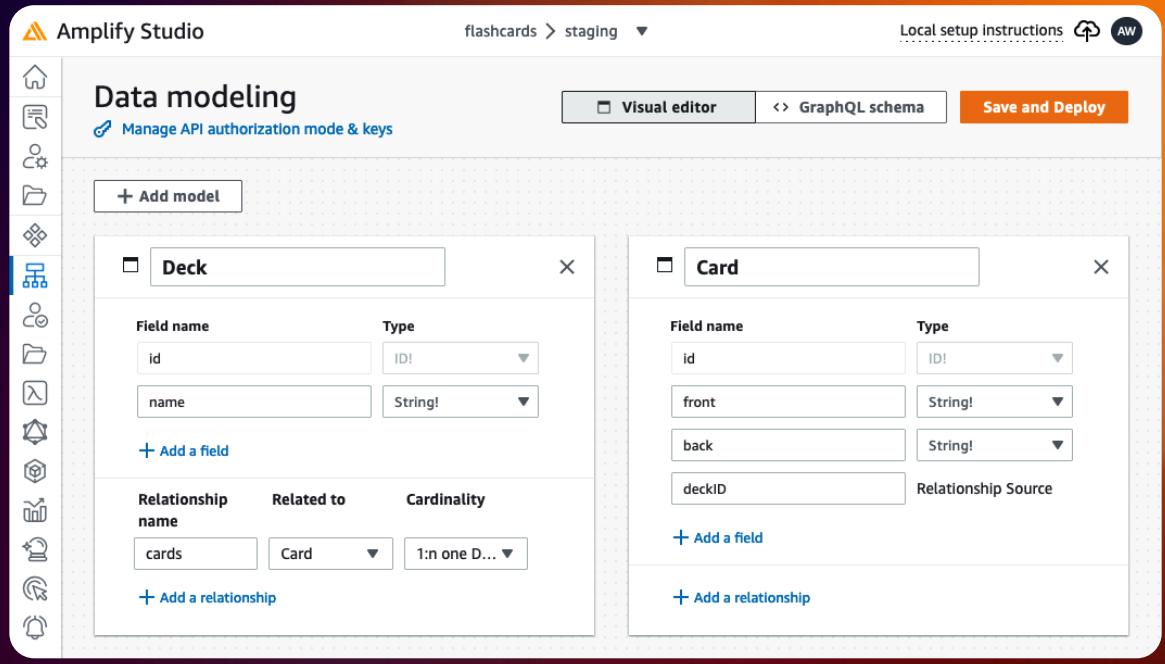
```
$ amplify add api

 Select from one of the below mentioned services: GraphQL
 Choose the default authorization type for the API Amazon Cognito User Pool
 Enable conflict detection? Yes
 Select the default resolution strategy Auto Merge
 Choose a schema template: Blank Schema

✅ Successfully added resource flashcards locally

$ amplify push
```

AMPLIFY STUDIO



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Shipping components



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

How to create a full-stack app?



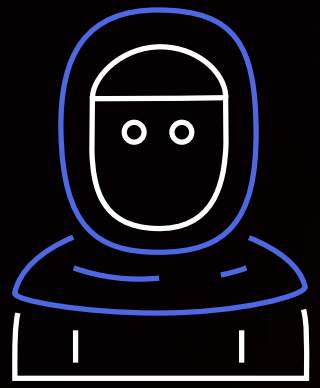
Build



Ship

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Personas that ship



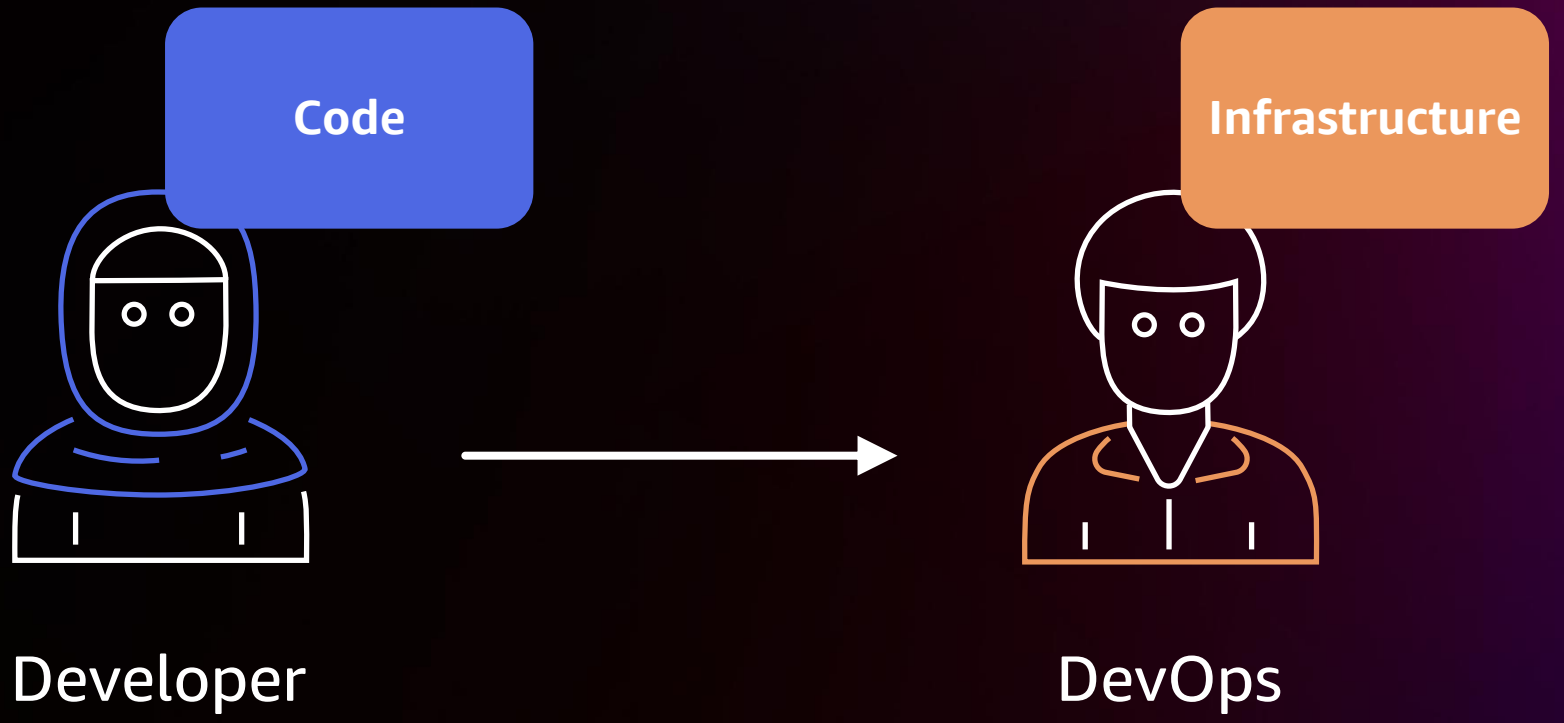
Developer



DevOps

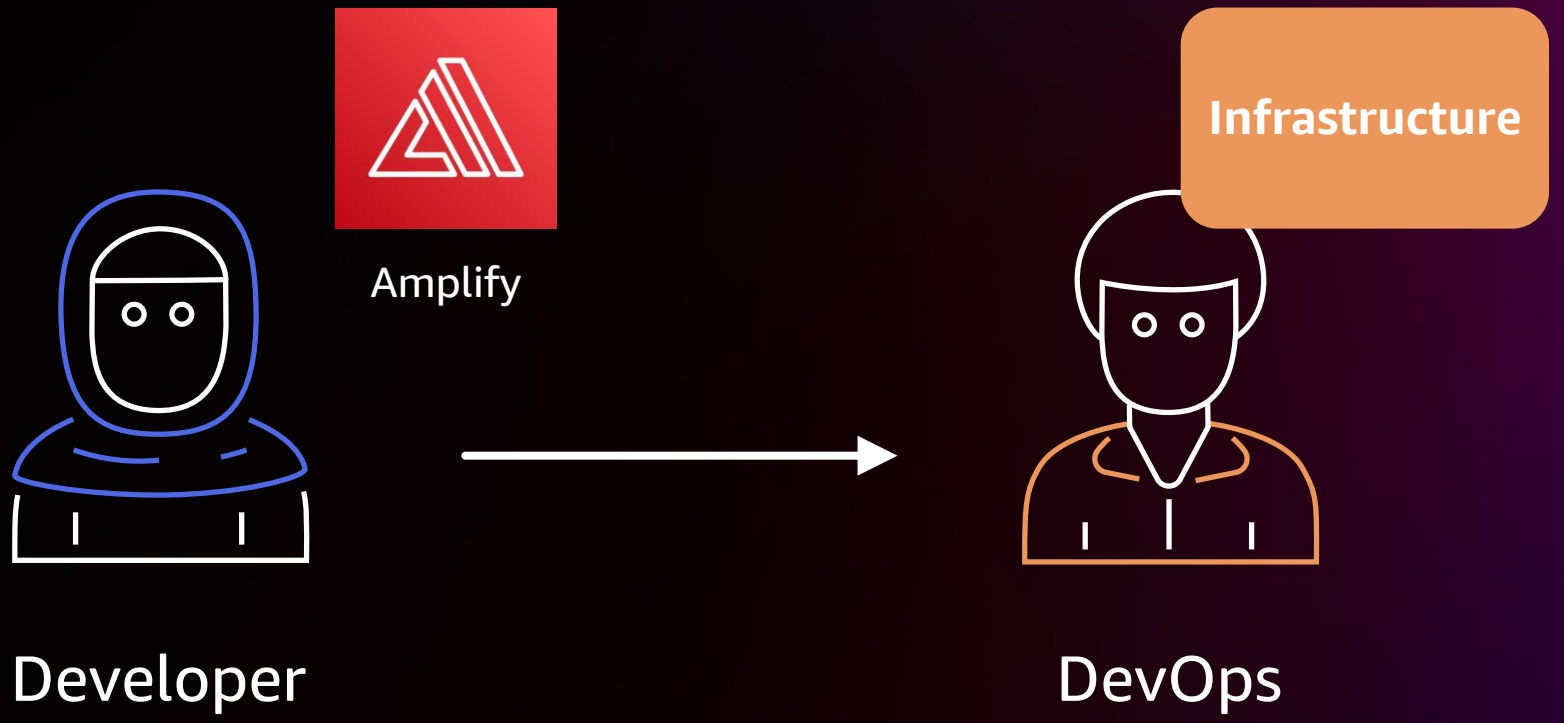
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Delivering software



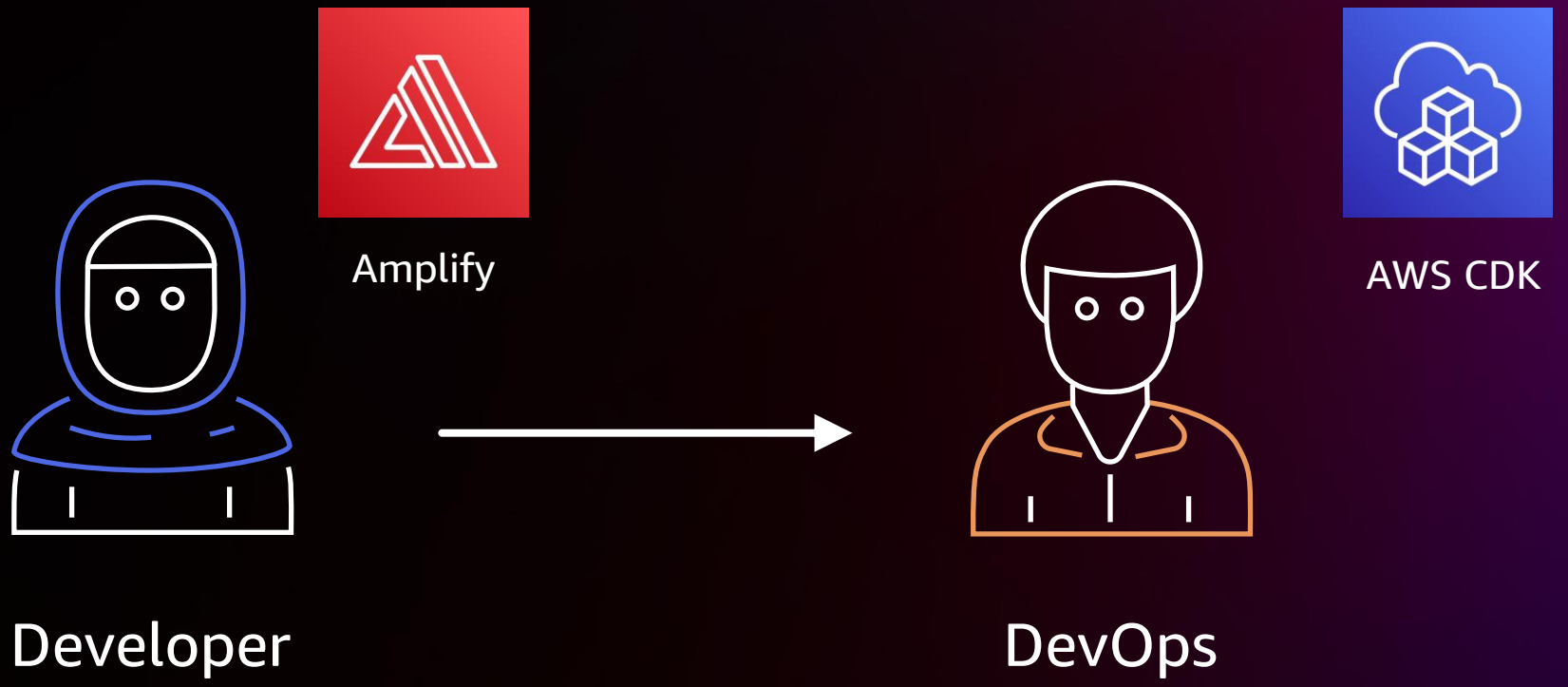
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Delivering software



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Delivering software

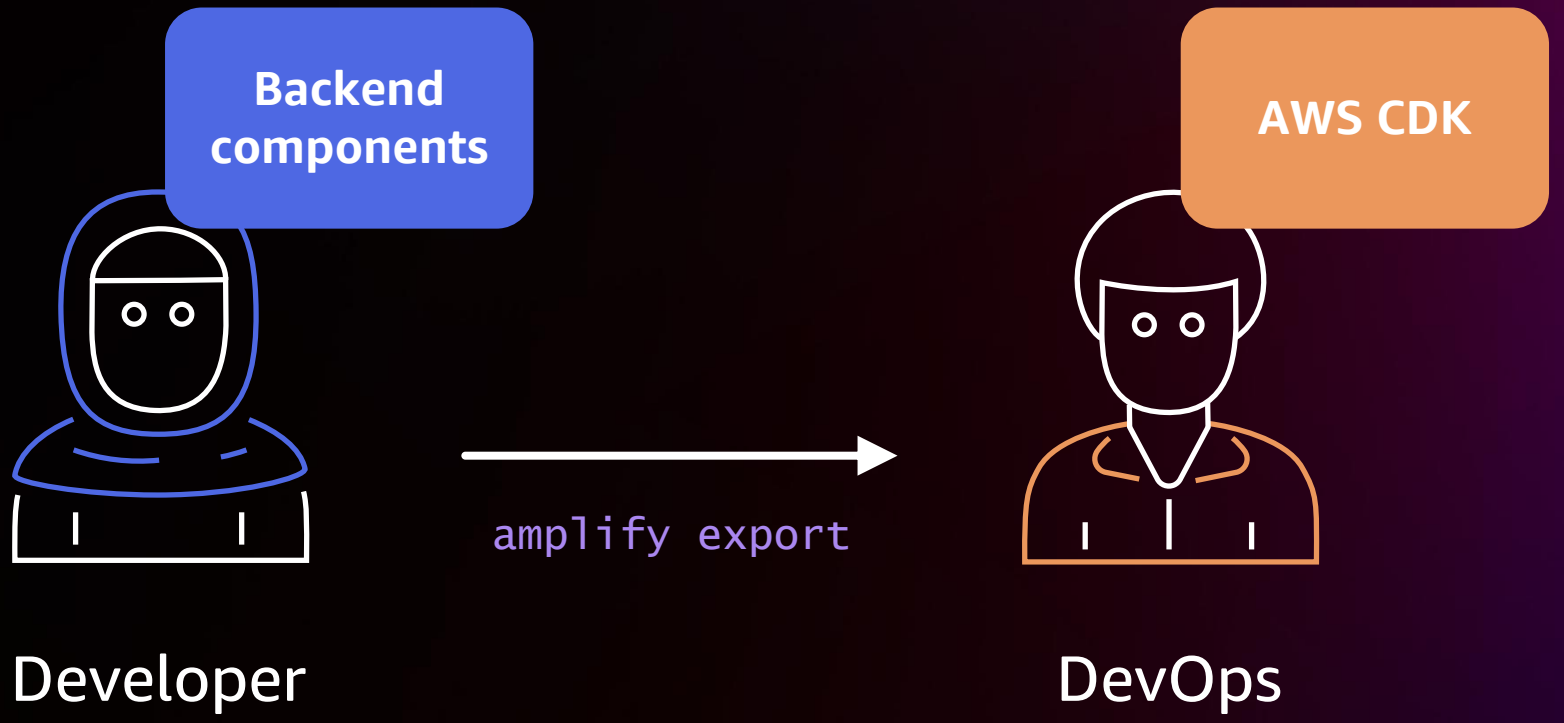


© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

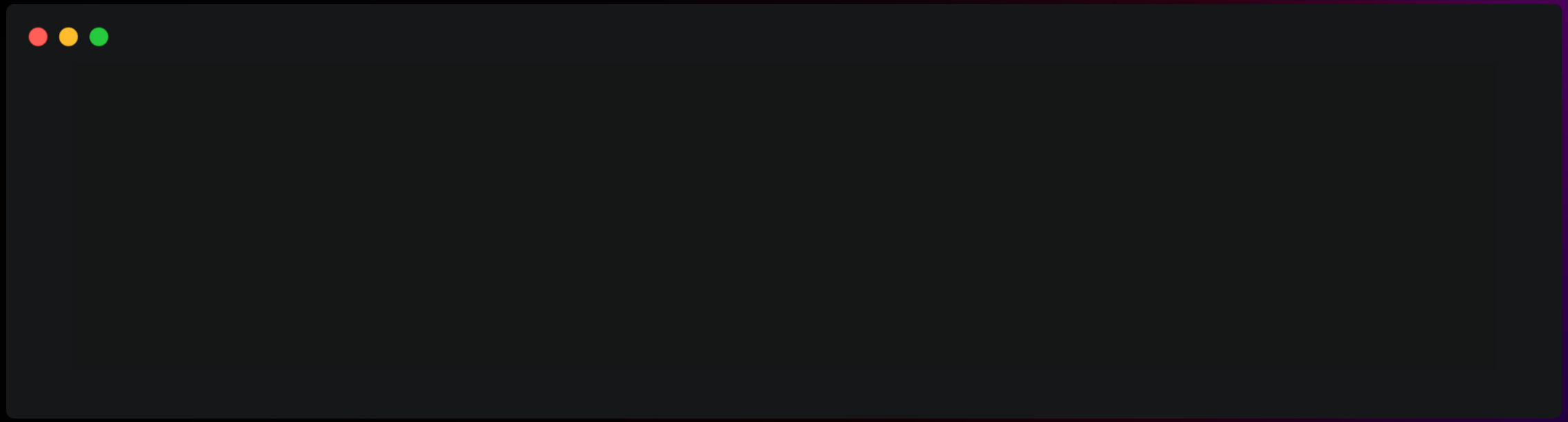
Ship backend

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Ship backend



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

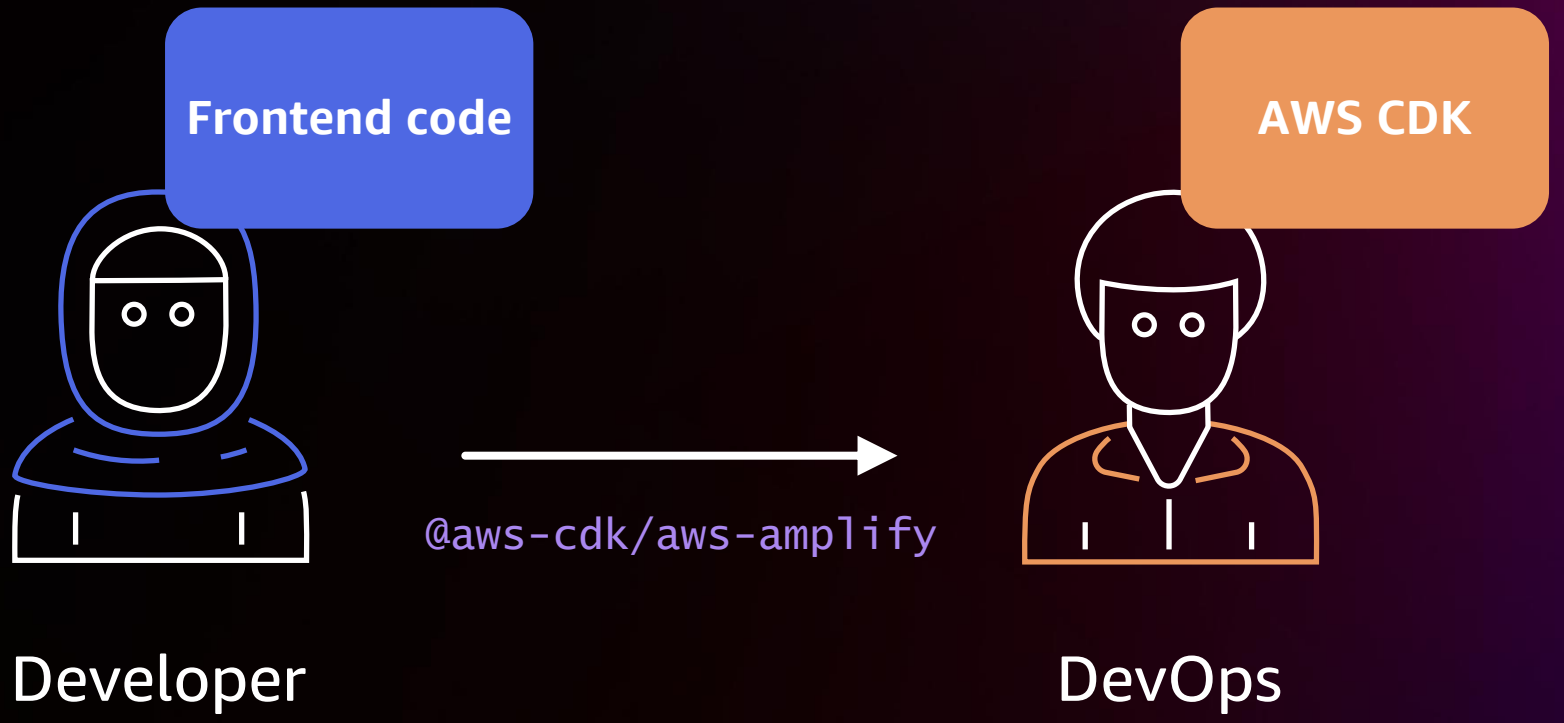


© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

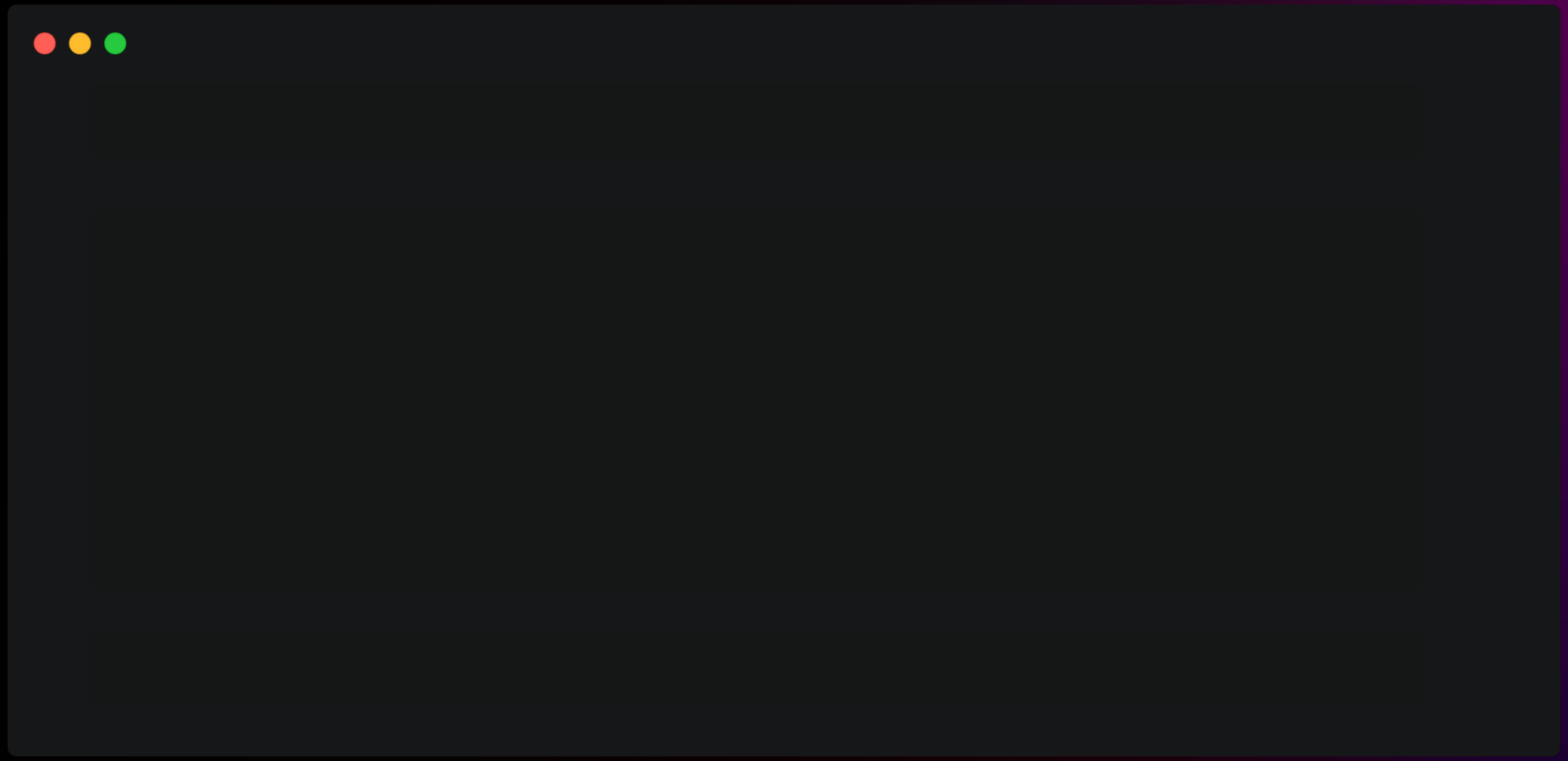
Ship frontend

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Ship frontend



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

GitHub Actions

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

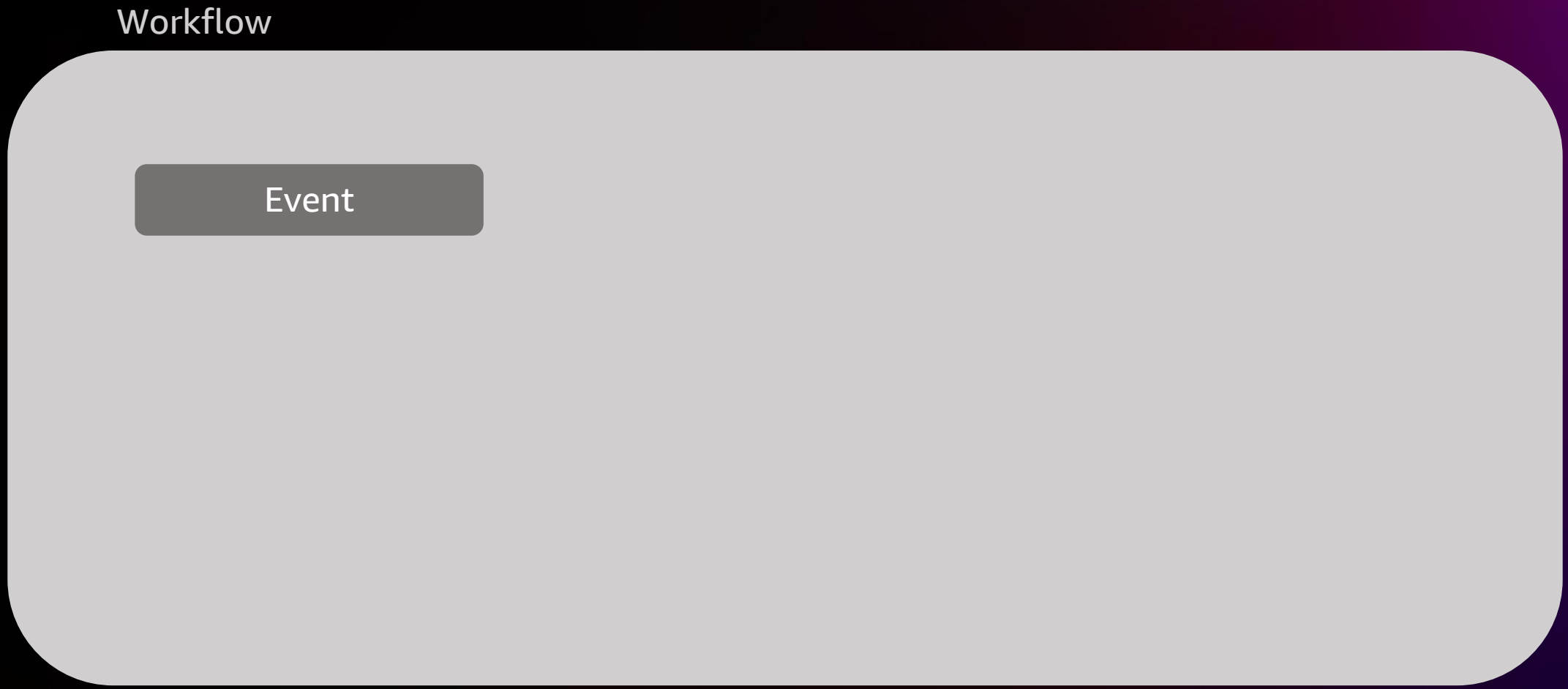
GitHub Actions

Workflow



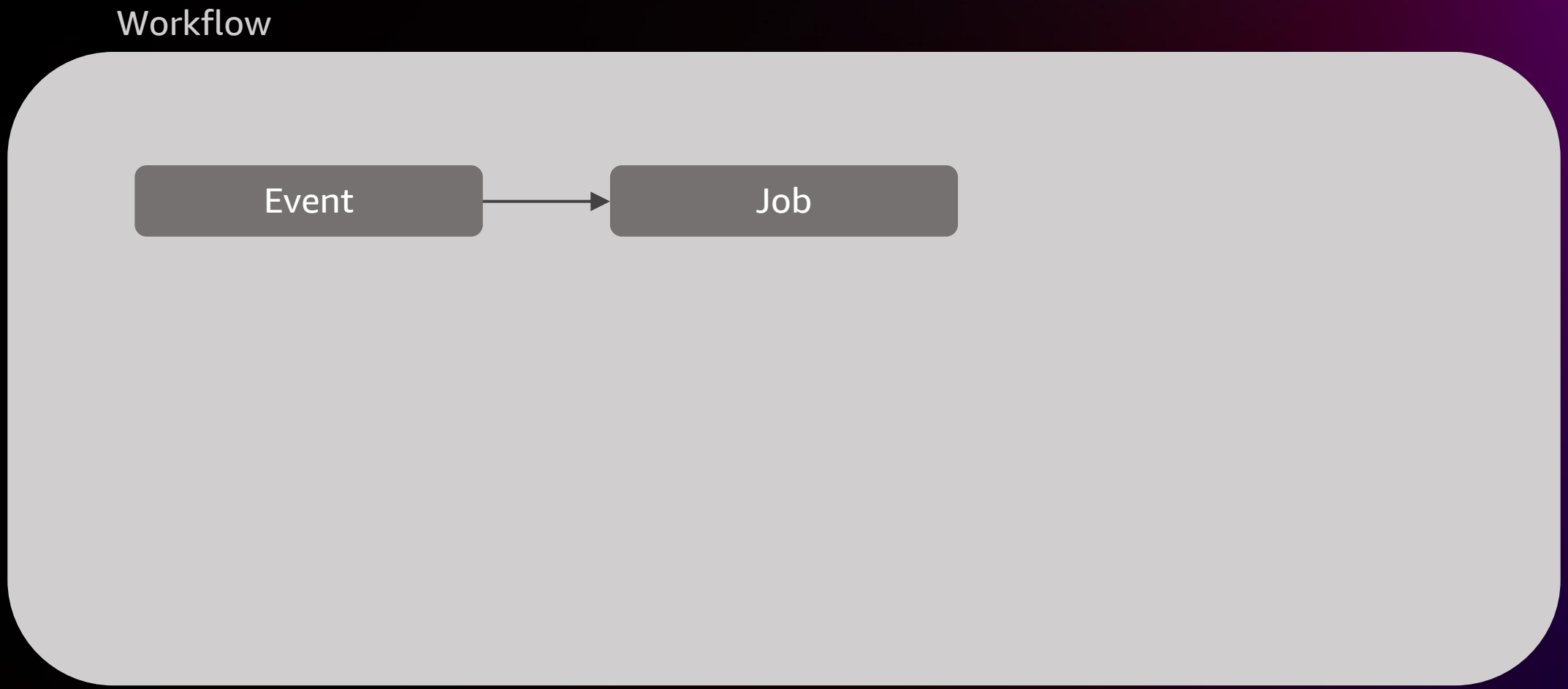
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

GitHub Actions



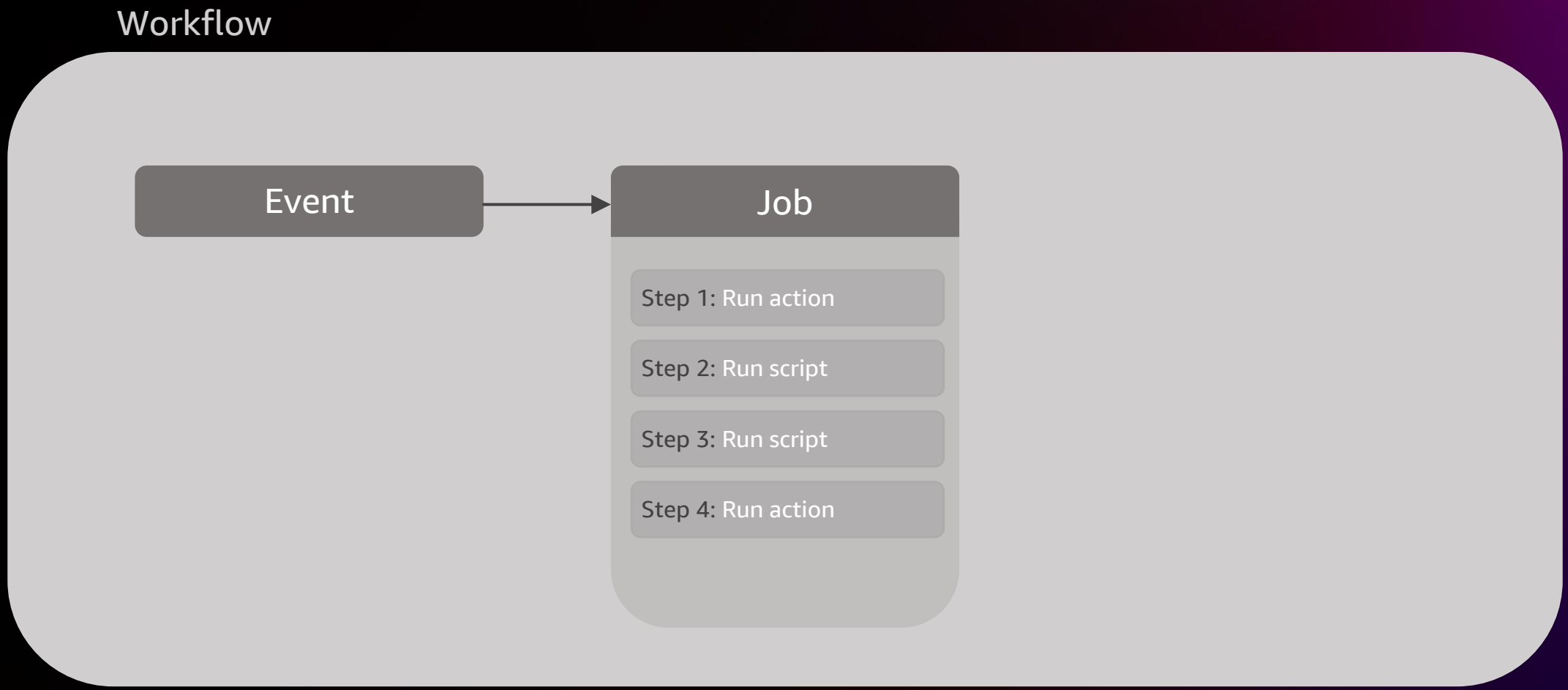
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

GitHub Actions



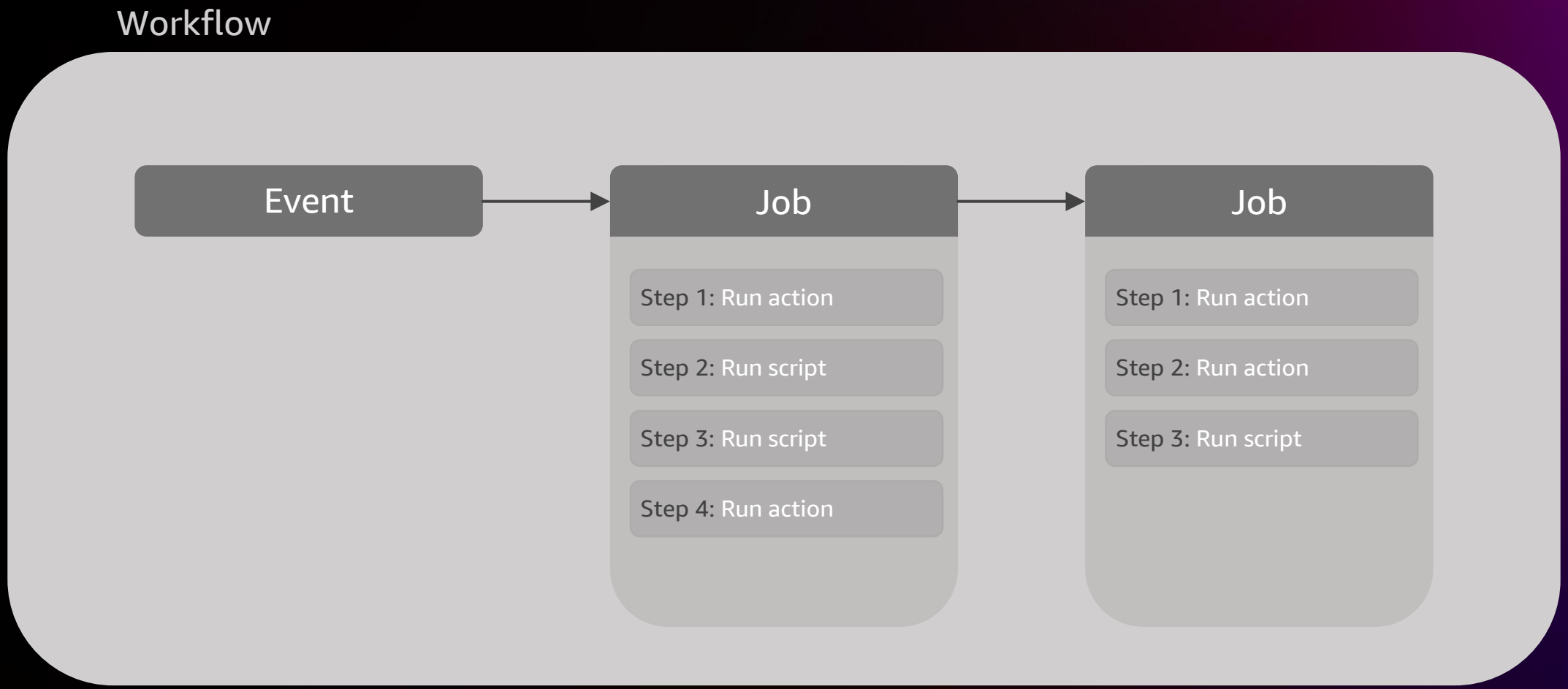
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

GitHub Actions



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

GitHub Actions



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Deploy Amplify with AWS CDK & GitHub Actions



Frontend code



AWS Amplify



AWS CDK

Backend resources











Application repo

GitHub API



`repository_dispatch`

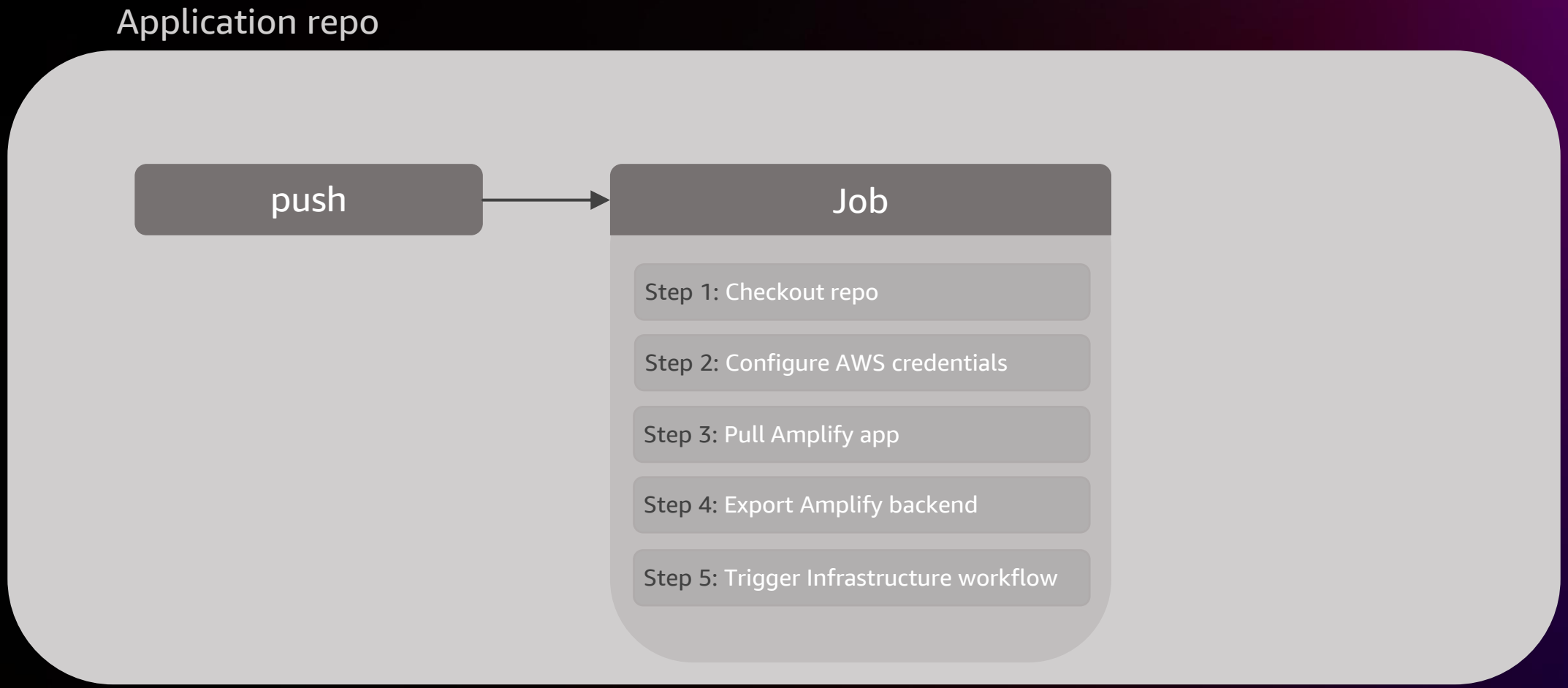


Infrastructure repo

aws

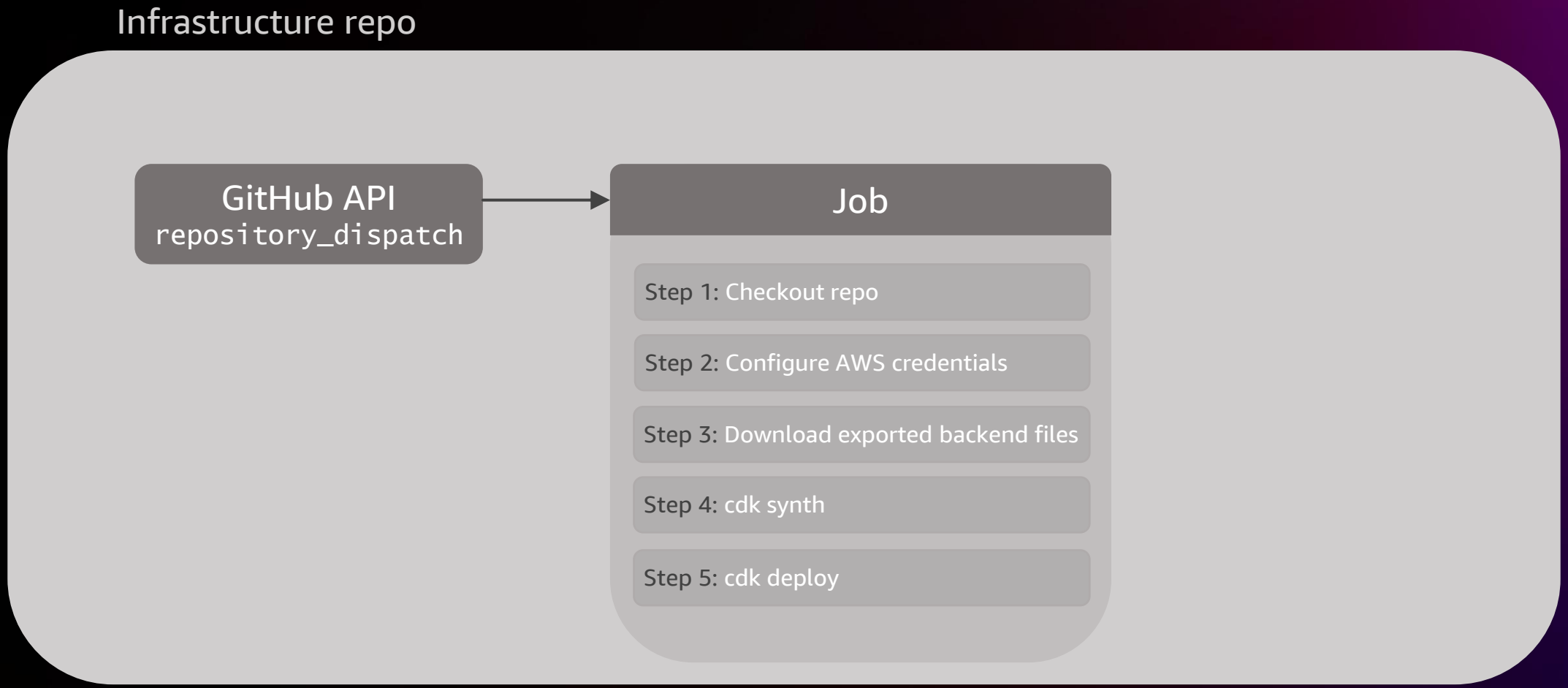
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Deploy Amplify with AWS CDK & GitHub Actions



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Deploy Amplify with AWS CDK & GitHub Actions



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Scaling components



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

How to create a full-stack app?



Build



Ship



Scale

aws

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

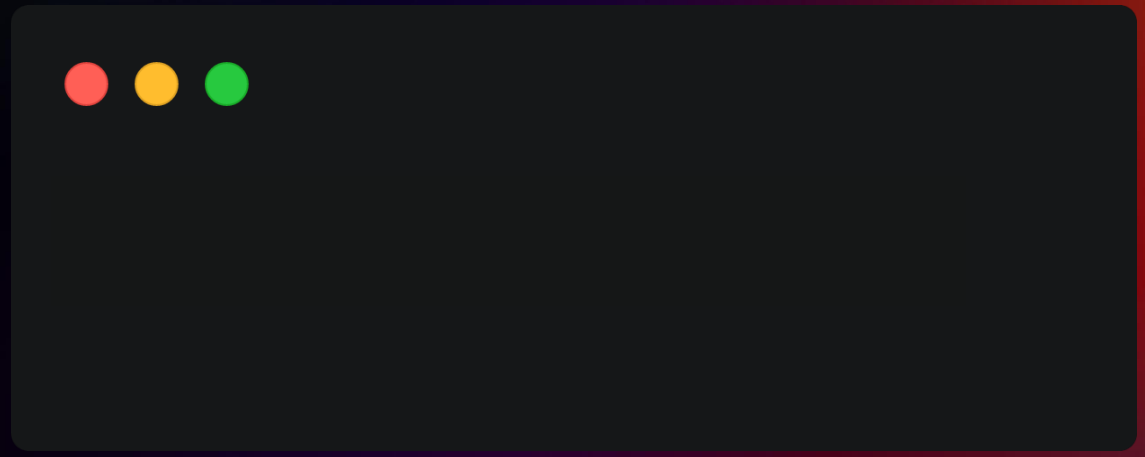
Modify infrastructure

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Modify Amplify-generated infrastructure

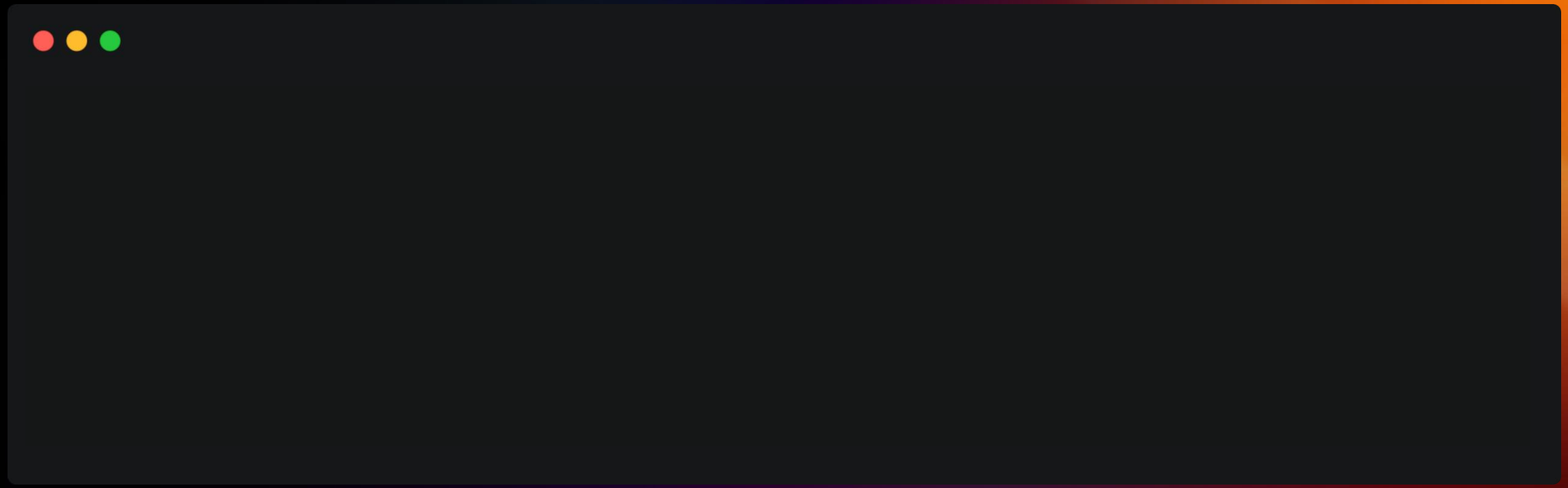
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Modify Amplify-generated infrastructure



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Modify Amplify-generated infrastructure



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

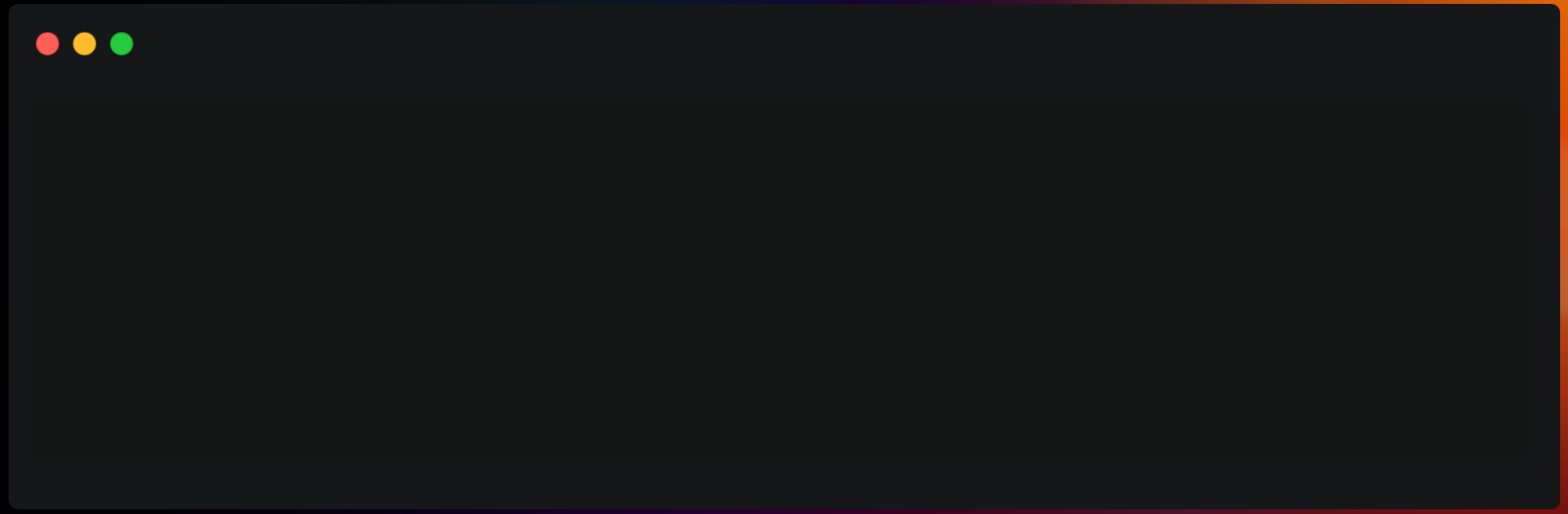
Add custom resources

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Add any AWS resources with AWS CDK

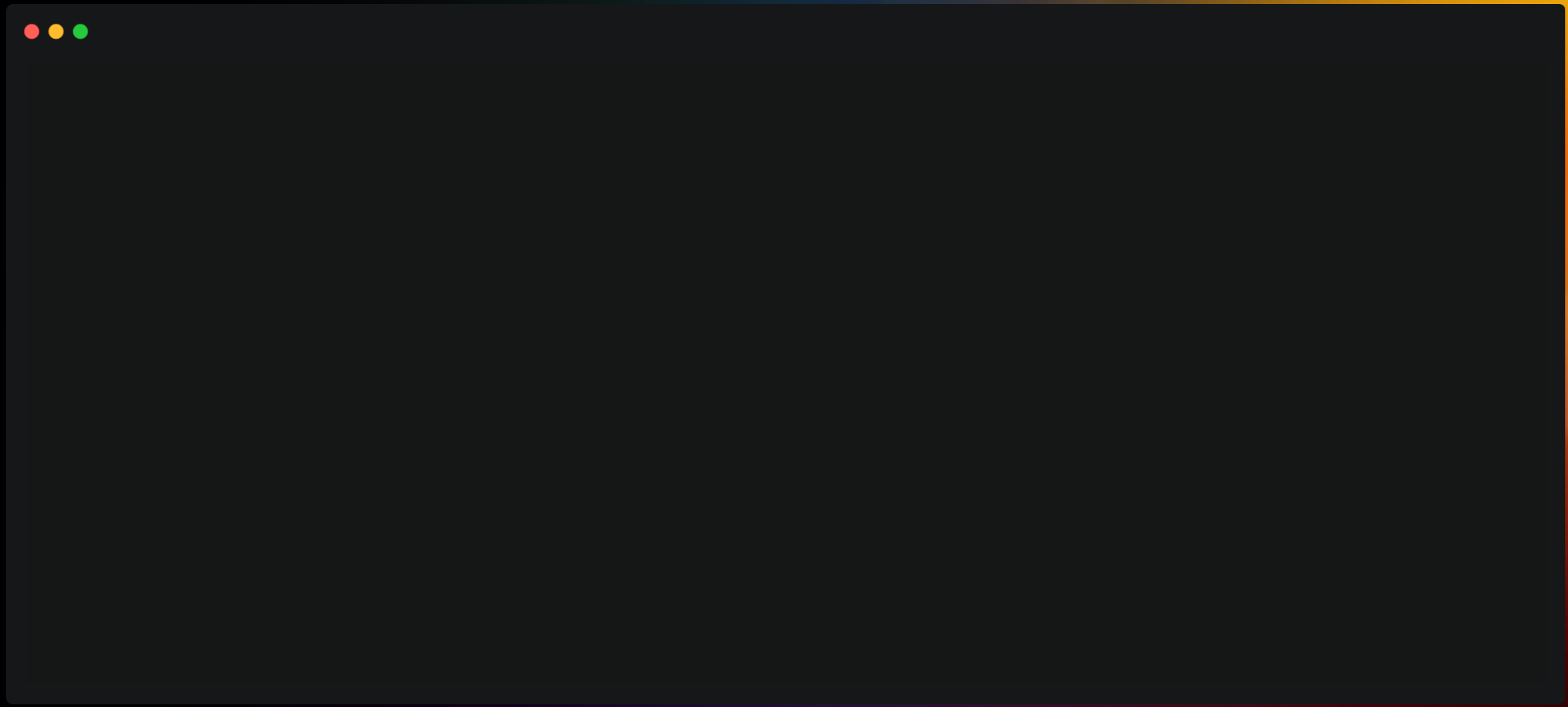
© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Add any AWS resources with AWS CDK



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Add any AWS resources with AWS CDK



© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Do it yourself 

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Create a full-stack app



Build



Ship



Scale

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Resources

Application code

Infrastructure code

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.

Thank you!

Ana Cunha
@mcunhaana

Memo Döring
@memodoring



Please complete the session survey in the **mobile app**

© 2022, Amazon Web Services, Inc. or its affiliates. All rights reserved.