

# AWS Amplify

**The fastest, easiest way to develop mobile and web apps that scale**



# Agenda

- Overview of AWS Amplify  
Adding Authentication: Amazon Cognito
- Adding Data: AWS AppSync
- Storing Content: Amazon S3
- Adding Intelligent Chatbots: Amazon Lex
- Adding Intelligent Comprehension: Amazon Comprehend
- Recap

# What are we going to build today?

The screenshot shows a user interface for a retail store. At the top left is a circular logo with a yellow triangle icon. To its right are three small icons: a menu, a shopping cart with '0' items, and a user profile. Below the header is a section titled 'Recommended' featuring five product cards:

- Acoustic Guitar**: An acoustic guitar leaning against a brick wall. Rating: ★★★★★. Price: \$323.99.
- Blue Suit**: A blue striped suit jacket and trousers. Rating: ★★★★★. Price: \$100.
- Easter Plastic Egg**: A white wicker basket filled with colorful Easter eggs. Rating: ★★★★★. Price: \$21.99.
- Dark Slate Gray Sneakers**: A dark slate gray high-top sneaker. Rating: ★★★★★. Price: \$127.99.
- Light Gray Sofa**: A light gray sofa in a living room setting. Rating: ★★★★★. Price: \$781.99.

At the bottom center, the text 'My Retail Store' is displayed next to the AWS logo with the tagline 'powered by aws'. Below this, a note states: 'The Retail Demo Store is a demo application. All content displayed in the Retail Demo Store is fictitious and for demonstration purposes only.' and 'All images shown are from Unsplash.'

# What is AWS Amplify?

Amplify is a set of tools and services that makes it easy for frontend and full-stack developers to build scalable web and mobile apps faster



# AWS Amplify

## Amplify libraries



Use case-centric libraries to build cloud-powered mobile and web apps

Amplify libraries are powered by AWS services and can be used with new backends created with the Amplify CLI and Amplify Studio or your existing AWS backend

## Amplify CLI



Toolchain to configure and maintain your app backend from your local desktop

Configure cloud functionality using the CLI's interactive workflow and intuitive use cases such as authentication, storage, and API

## Amplify Studio



Visual interface for setting up your app backend

**New:** Visually build UI components and generate React code; integrates with Figma to improve designer and developer collaboration

## Amplify Hosting



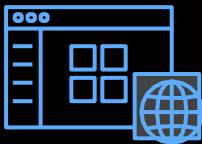
Fully managed CI/CD and hosting service for fast, secure, and reliable static and server-side rendered apps that scale with your business

Supports modern web frameworks such as React, Angular, Vue, Next.js, Gatsby, Hugo, Jekyll, and more

# Amplify use case 1: Create an app backend

# Build your app backend with Amplify

CREATE A BACKEND FOR YOUR IOS, ANDROID, FLUTTER, WEB, OR REACT NATIVE APP IN A FEW CLICKS



## Amplify Studio

Visual backend builder  
(powered by Amplify CLI)

Configure authentication

Data model designer  
provisions GraphQL API  
with Amazon DynamoDB  
tables

Manage application  
data and users

Build UI components  
and bind to data



## Amplify CLI

Full-stack CI/CD

Feature branch deployments

Team workflows

Transform schema definition to  
GraphQL API with Amazon  
DynamoDB tables

Codegen generates code for  
Swift (iOS), Java (Android), and  
JavaScript



## Amplify + CDK

Customize AWS resources

Add 175+ AWS resources

Export as CDK

Use Amplify with existing  
DevOps tools or in-house  
deployment systems

# Amplify use case 2: Build a frontend UI

# Build your app frontend with Amplify

VISUALLY BUILD A FRONTEND UI

Saves time

Minimizes coding

Is fully customizable



Choose from dozens  
of UI components



Import US designs from Figma  
as clean React code



Improves designer and  
developer collaboration

Pixel-perfect designs with less  
coding; maintain full control  
over code

# Amplify use case 3: Host a web app

# Host your app with Amplify Hosting

EASILY DEPLOY TO THE FAST, SECURE, AND RELIABLE AWS CONTENT-DELIVERY NETWORK

## How it works

1

Connect your repository



AWS CodeCommit

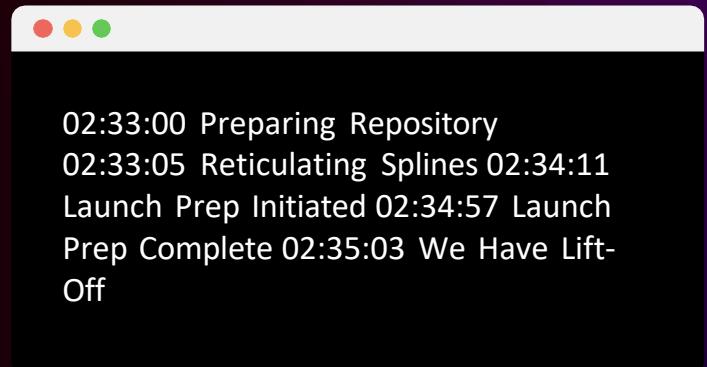
2

Configure build settings



3

Deploy your app



# What we will build – Andy's Pizza and Subs!

Home Menu Account ▾



Order an Item

Find

## Weekly Special!

Ultimate Large Pizza only \$8.59!



## Your Current Cart

TOTAL: \$13.99

Item Name	Options	Price
Large Pizza	Qty: 1 Pepperoni	\$5.99
Large Pizza	Qty: 1 Ham, Green Pepper	\$7.99

© 2020,

Checkout

## ANDY'S PIZZA AND SUBS

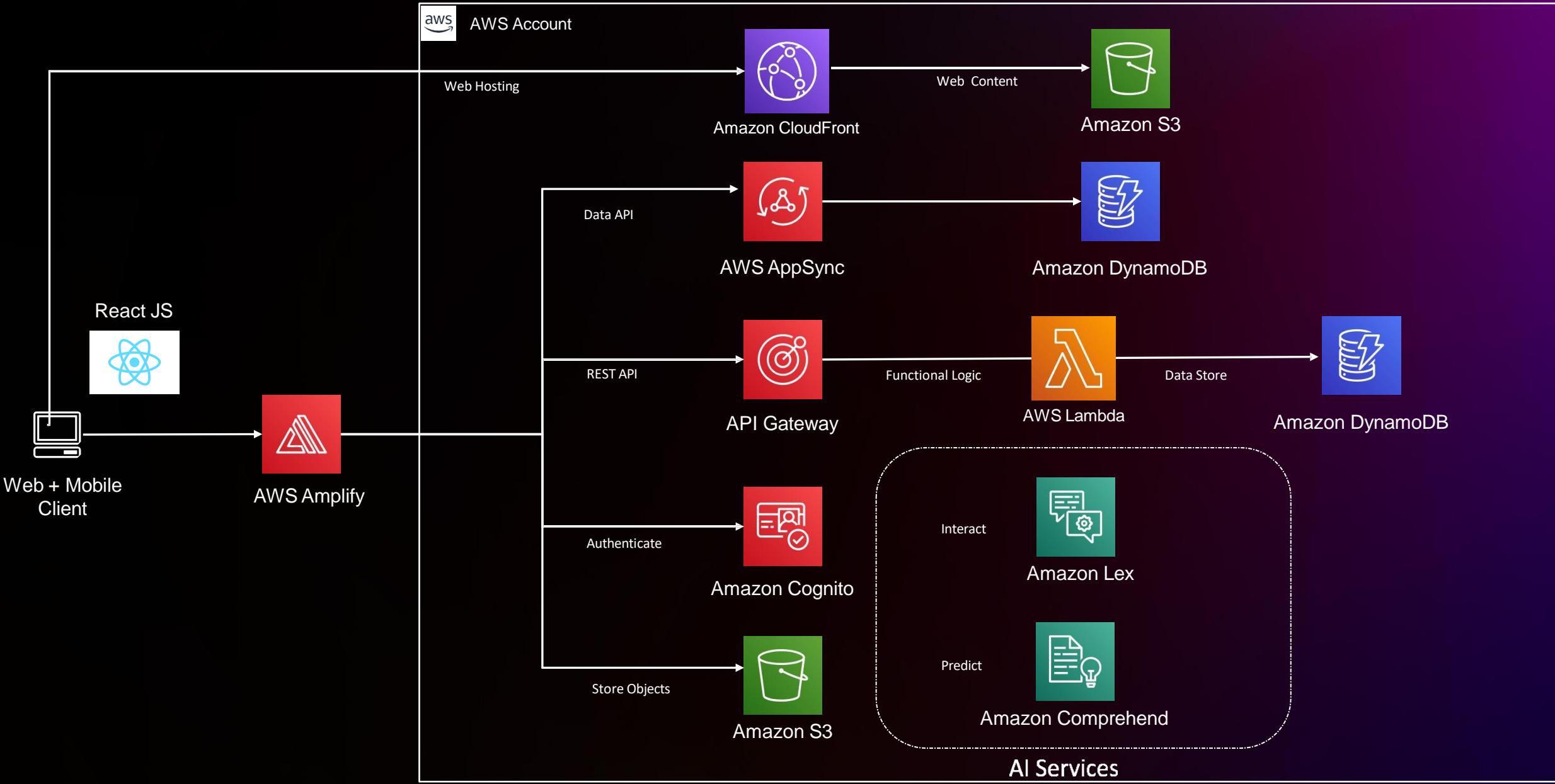
### Check out our latest creations!

Our new Ultimate Pizza brings together all the flavor of classic pepperoni and old-style New York!

ORDER NOW!



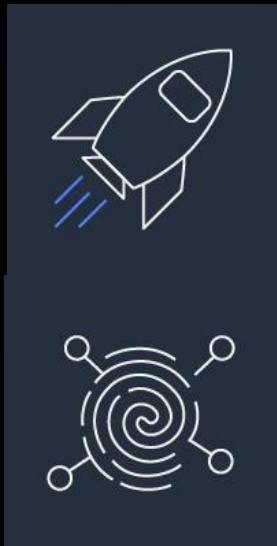
# Component Architecture – Core Features



# Front-End Web & Mobile on AWS

## Developer Requirements

---



Agility



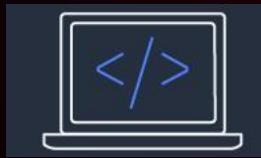
Innovation &  
Differentiation



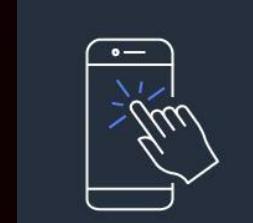
Production Grade &  
Flexible

## AWS Front-End Solutions

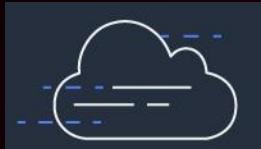
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Easy to Use



Comprehensive



Scalable

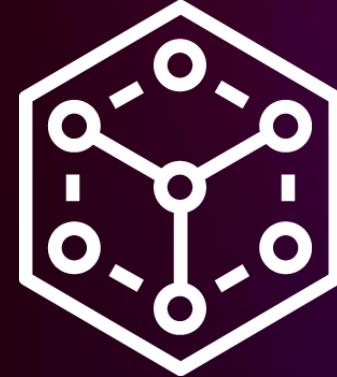
# AWS Solutions for Front-end Development



AWS Amplify



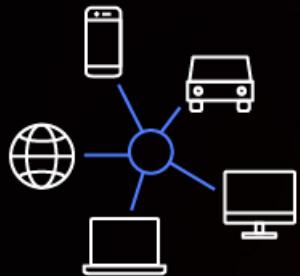
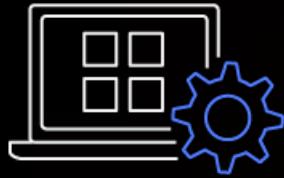
AWS AppSync



AWS Device Farm

# AWS Amplify: Benefits across the entire app lifecycle

## DEVELOP



Configure AWS backends fast

Seamlessly connect frontends

## DELIVER



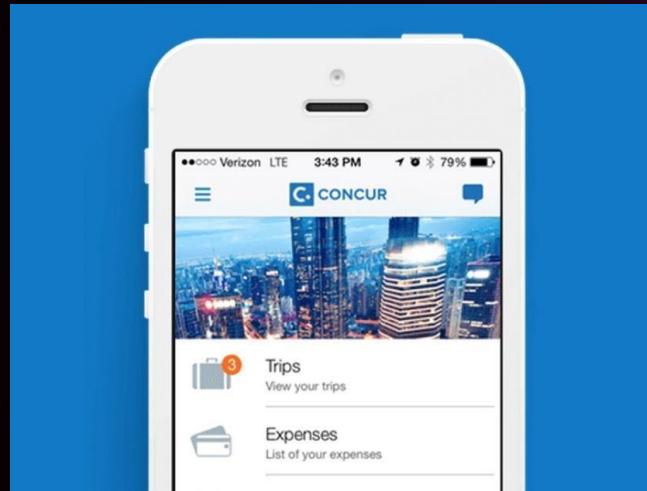
Deploy your app frontend and backend

## MANAGE

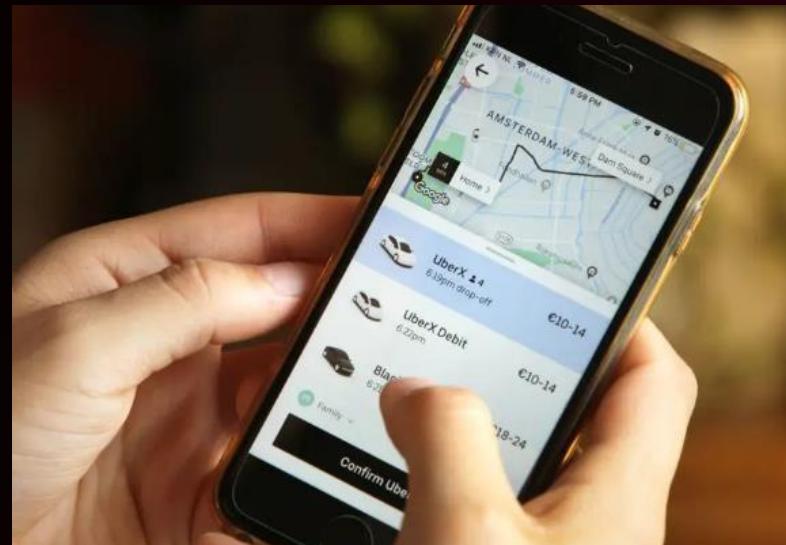
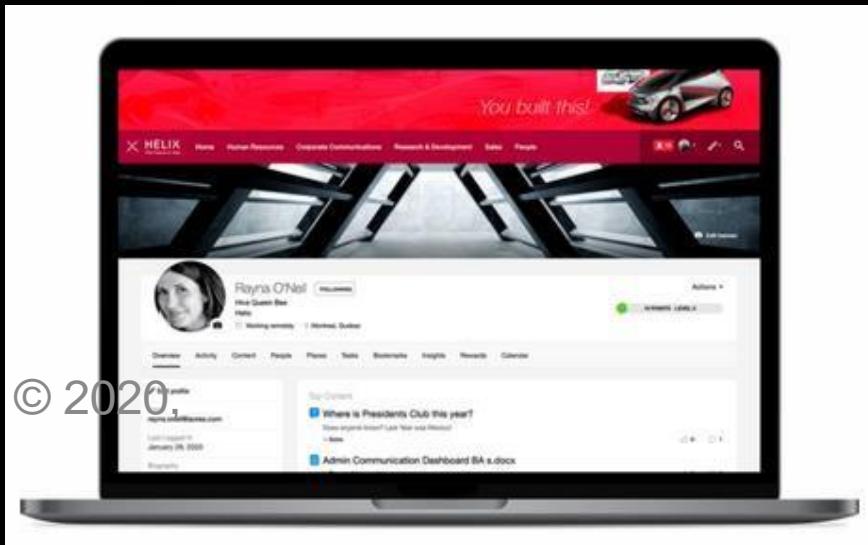


Easily manage users & content

# ...to accelerate the development of all types of apps



Access your account from anywhere

A black smartphone displays a mobile application for managing a car fleet. The screen shows a car listing for a '2009 NISSAN ALTIMA 2.5/2.5 S' with '2 more cars'. It includes sections for 'Coverage' (with rates like '\$2750M | \$500M | \$250M') and 'Payment' (with a total amount of '\$640'). A 'Policy Renewal' button is also visible. The top of the screen shows the text 'Access your account from anywhere'.

# What is AWS Amplify?



Develop

Deliver

Manage

# AWS Amplify: Tools & Services to get it done

## DEVELOP

- Authentication
- DataStore
- Storage
- API
- Functions
- Analytics
- PubSub
- Predictions
- Interactions
- Notifications

Configure  
backends



CLI



Admin UI

Connect  
frontends



Libraries

NEW!

## DELIVER

- Static Web Hosting
- Fully managed
- Full stack deployments
- CI/CD built in
- Pull request previews

## Tools



CLI



Console

## MANAGE

- Authentication
- Manage users & groups
- DataStore
- Manage data content

NEW!



Admin UI

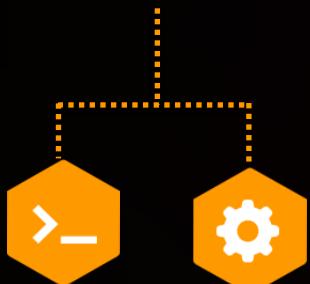


# DELIVER with AWS Amplify: Managed hosting and full-stack deployment with CI/CD

## DELIVER



Deploy your app frontend  
and backend



CLI

Console

## Services & Features

### Static web hosting

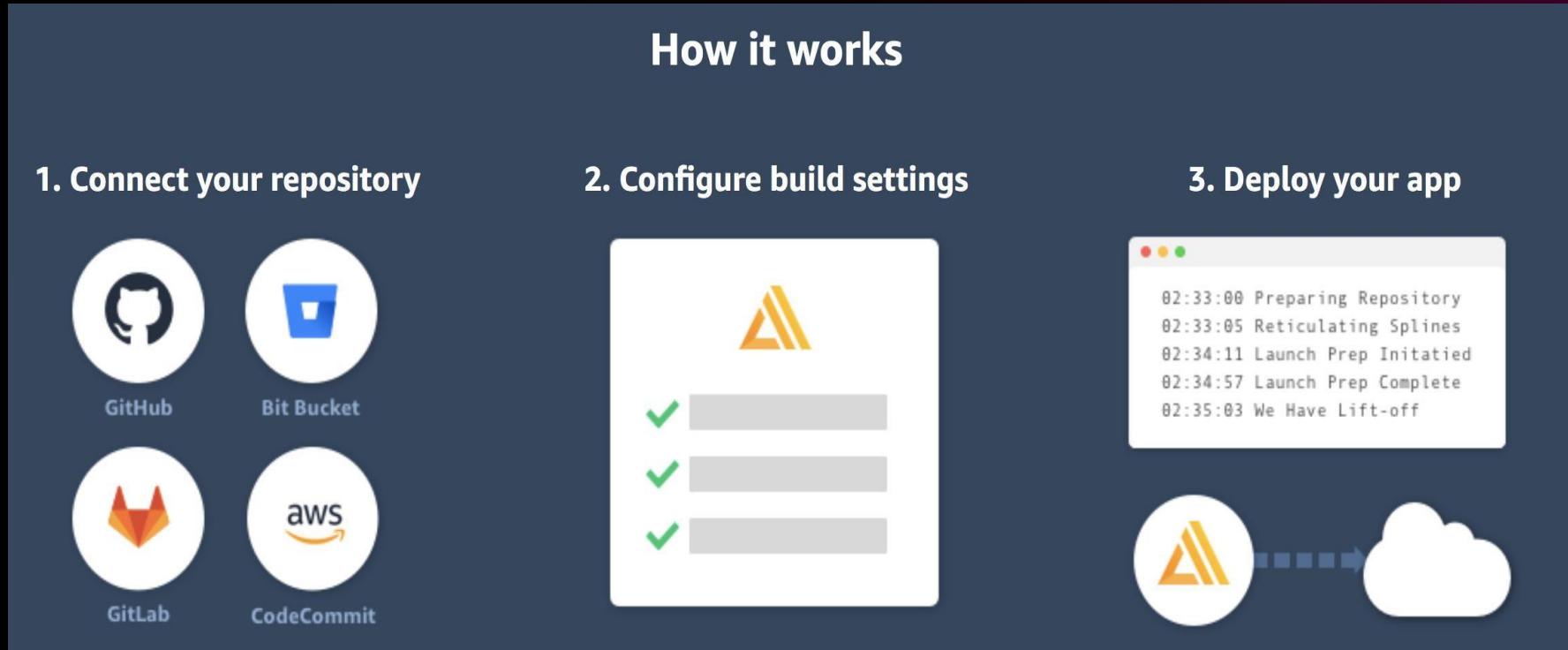
- Fully managed hosting service for static web apps
- Easy custom domain setup

### Full-stack continuous deployments

- Both Amplify CLI and admin UI generate infrastructure as code (IAC)
- Deploy via the CLI or console



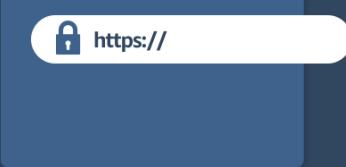
# Amplify Web Hosting



# AWS Amplify: Build and Host Web Apps



Globally available



Easy custom domain setup



Simplified continuous workflows



Feature branch deployments



Atomic deployments



Password protection

# DELIVER with AWS Amplify: Managed hosting and full-stack deployment with CI/CD

Frontend environments    Backend environments

This tab lists all connected branches, select a branch to view build details.

**dev**  
Continuous deploys set up with [devs](#) backend ([Edit](#))

  
<https://dev...amplifyapp.com>



Last deployment 10/13/2020, 9:24:05 AM	Last commit This is an autogenerated message   Auto-build   <a href="#">GitHub - dev</a>	Previews Disabled
---	---	----------------------

**Connect branch**

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# Amplify Web Hosting: Full-stack deployments

The screenshot shows the AWS Amplify web hosting console for the 'amplify' app under 'quick-notes'. The navigation bar at the top includes 'All apps > quick-notes > amplify'. The main interface has tabs for 'Overview', 'Authentication', 'API' (which is selected), 'File storage', 'Analytics', and 'Functions'. On the left, a sidebar shows 'Categories added' (Authentication, API) and 'Latest deployment activity' (two entries from 11/14/2019). The 'API' section displays a GraphQL API configuration with a 'View in AppSync' button. The 'Data sources' section lists a 'NoteTable' with a 'View' button. Below these, a table shows deployment logs:

Time	Name	Status	Details
11/14/2019, 11:32:47 AM	apiquicknotes (api)	CREATE_IN_PROGRESS	Resource creation Initiated
11/14/2019, 11:31:08 AM	apiquicknotes (api)	CREATE_IN_PROGRESS	-
11/14/2019, 11:31:07 AM	authquicknotes9506fafe (auth)	CREATE_COMPLETE	-

# DEVELOP with AWS Amplify: Full-stack developer experience across multiple feature categories

## DEVELOP



Configure AWS backends fast



Seamlessly connect frontends

© 2020

CLI

Admin UI

Libraries &  
UI Components

NEW!

## Feature Categories

Authentication

DataStore

Storage

API (GraphQL & REST)

Functions

Analytics

PubSub

Predictions

Interactions

Notifications

*Powered by AWS services such as  
AWS AppSync (GraphQL API) and Amazon Cognito (Authentication)*

# What Does it Do?



# CLI

Creates & configures AWS services

> amplify init

Powered by Amazon CloudFormation



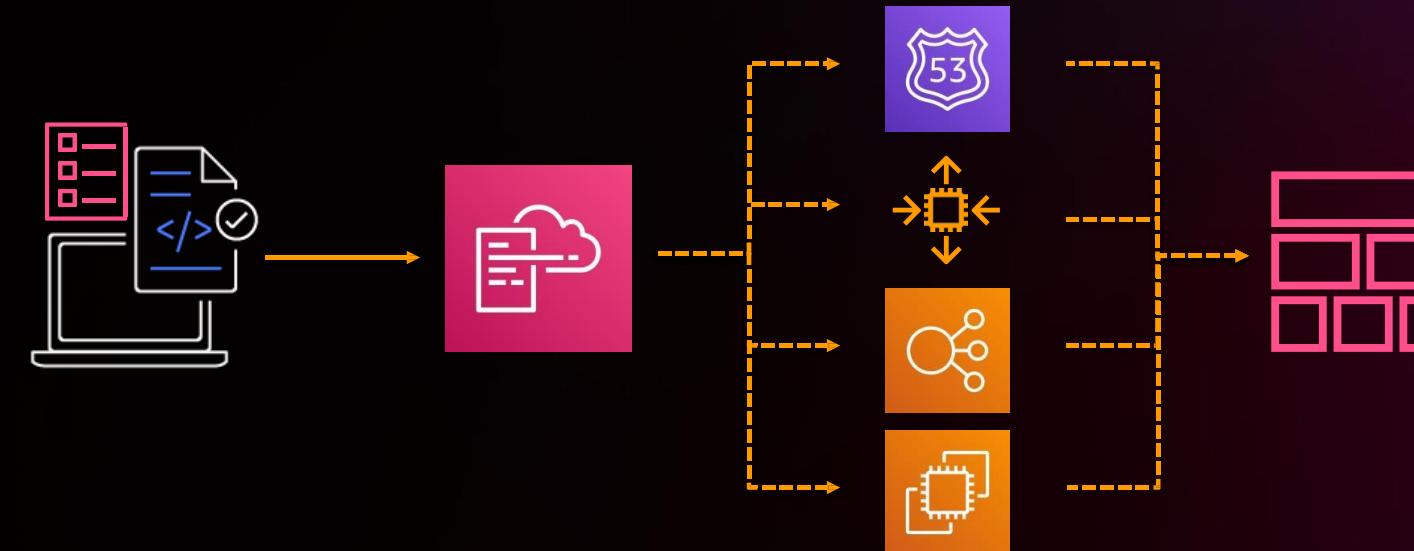
AWS CloudFormation

# What is AWS CloudFormation?

- Simplified way to create and manage a collection of AWS resources
- Enables orderly and predictable provisioning and updating of resources
- Enables version control of your AWS infrastructure
- Deploy and update stacks using the AWS Management Console, the AWS Command Line Interface (CLI), or the AWS API
- Only pay for the resources you create



# CloudFormation Overview



Code in YAML or JSON  
directly or use sample  
templates

Upload local files or  
from an S3 bucket

Create stack  
using API via AWS  
CloudFormation

Stacks and resources are  
provisioned as a running  
environment

- JSON/YAML format template
  - Presents template to AWS CloudFormation
  - AWS CloudFormation translates it to an API request
  - Forms a stack of resources
- 
- FREE – you only pay for resources
  - All regions
  - APIs are called in parallel
  - Manages **dependencies/relationships**

# AWS CloudFormation syntax

- JSON – JavaScript object notation
- Attribute-value pairs
- Similar to XML

```
{  
  "AWSTemplateFormatVersion": "2010-09-09",  
  "Parameters": {  
    "S3NameParam": {  
      "Type": "String",  
      "Default": "mybucket",  
      "Description": "Name for your AWS S3 bucket",  
      "MinLength": 5,  
      "MaxLength": 30  
    }  
  },  
  "Resources": {  
    "S3Bucket": {  
      "Type": "AWS::S3::Bucket",  
      "Properties": {  
        "AccessControl": "PublicRead", "BucketName":  
          {"Ref" : "S3NameParam"}  
      },  
      "DeletionPolicy": "Retain"  
    }  
  },  
  "Outputs": {  
    "Bucketname": {  
      "Description": "Name of AWS S3 Bucket"  
    }  
  }  
}
```

# Amplify CLI: Quickly add Cloud Services

\$ amplify init	Initialize a project and environment
\$ amplify add auth	Add an Amazon Cognito user pool
\$ amplify add analytics	Create an Amazon Pinpoint application
\$ amplify add api	Provision an API and data infrastructure
\$ amplify push	Deploy via AWS CloudFormation

```
edlima@AWS ~/TechSummit2018 => amplify init  
? Please enter a name for the project myproj  
? Please choose the type of app that you're building javascript  
Please tell us about your project  
? What javascript framework are you using angular  
? Source Directory Path: src  
? Distribution Directory Path: dist  
? Build Command: npm run-script build
```

≡ .amplifyrc ×

```
1  [ ]  
2      "providers": {  
3          "amplify-provider-awscloudformation": {  
4              "AuthRoleName": "myproj-20180805162556-authRole",  
5              "UnauthRoleArn": "arn:aws:iam::[REDACTED]:role/myproj-20180805162556-unauthRole",  
6              "AuthRoleArn": "arn:aws:iam::[REDACTED]:role/myproj-20180805162556-authRole",  
7              "Region": "ap-southeast-2",  
8              "DeploymentBucketName": "myproj-20180805162556-deployment",  
9              "UnauthRoleName": "myproj-20180805162556-unauthRole",  
10             "StackName": "arn:aws:cloudformation:ap-southeast-2:[REDACTED]:stack/myproj-20180805162556/5e64c54",  
11             "StackId": "myproj-20180805162556"  
12         }  
13     }  
14 }
```

## App Details

Some next steps:

"amplify status" will show you what you've added already and if it's locally configured or deployed

"amplify <category> add" will allow you to add features like user login or a backend API

"amplify push" will build all your local backend resources and provision it in the cloud

"amplify publish" will build all your local backend and frontend resources (if you have hosting category added) and provision it in the cloud

ck to add notes

Pro tip:

Try "amplify add api" to create a backend API and then "amplify publish" to deploy everything

Notes

Comments

# AWS Amplify



“ This CLI & toolchain for the client greatly lowers the barrier to entry for developers & companies looking to build full-stack applications allowing them to not only iterate & experiment quickly, but also giving them the ability to do so at a lower cost. ”

What Does it Do?

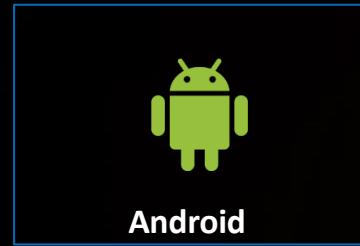


# JavaScript Library

Connects your front-end application to cloud services

# DEVELOP with AWS Amplify:

## Connect to your backend with UI components & libraries



Android



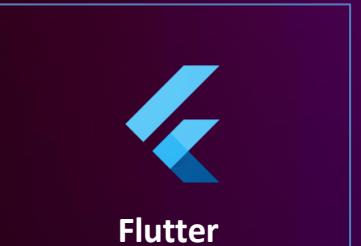
iOS



React Native



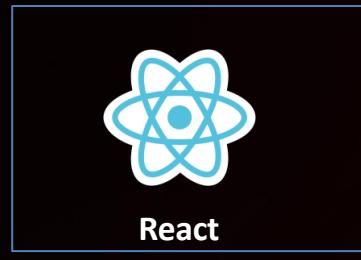
Ionic



Flutter



Javascript



React



Angular



Vue



## What kind of services?

- ✓ Database
- ✓ API
- ✓ Lambda / Serverless
- ✓ Authentication
- ✓ Analytics
- ✓ Hosting
- ✓ Storage

# Auth

> amplify add auth

Powered by Amazon Cognito



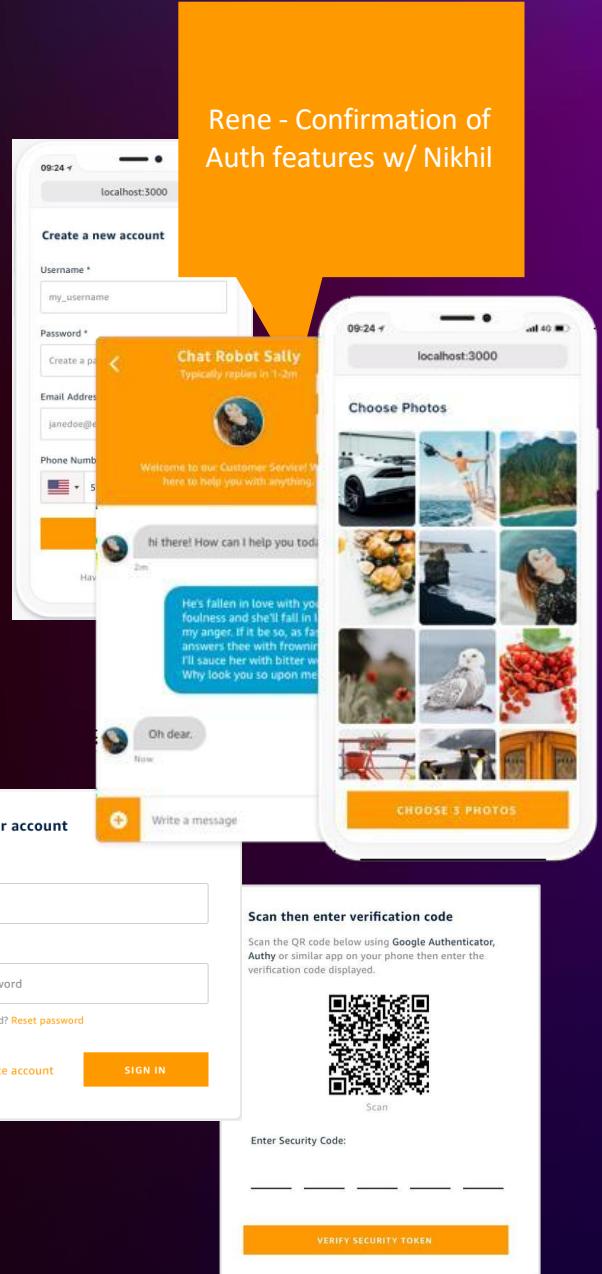
# Amplify Auth: Simple, Secure, Scalable

## Drop in UI Components

- Built-in UI for sign-up, sign out, and other common auth workflows
- Styled experience out of the box
- Flexible and customizable
- Multi-factor auth

## Libraries

- Out of the box social log-in functionality FB, Google or Amazon
- Automatic integration with existing AWS Cognito resources
- Custom auth flow, ie captcha



# DEVELOP with AWS Amplify:

## *Example – Add sign-up/sign-in flows using the React UI component*

```
const App = () => (  
  <AmplifyAuthenticator>  
    <div>  
      My App  
      <AmplifySignOut />  
    </div>  
  </AmplifyAuthenticator>  
) ;
```



Create a new account

Username \*

Password \*

Email Address \*

Phone Number \*

+1 ▾ (555) 555-1212

Have an account? [Sign in](#)

**CREATE ACCOUNT**

# Amplify Auth: Powered by Amazon Cognito



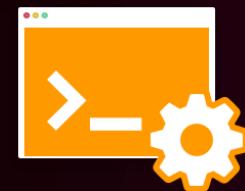
Secure and  
scalable user  
directory



Wide enterprise and  
social identity  
federation support



Multi factor  
authentication and  
full encryption



Access control  
for all AWS  
resources



Standards base  
authentication

# Amplify Auth: Amazon Cognito Services



## User Pools

- Fully-managed, secure, scalable and flexible user management service
- Scales to hundreds of millions of users
- Sign-up, Sign-in, Sign-out = Authentication
- Multi-factor option, password policy, user group, customized auth flow



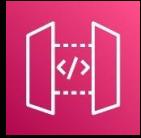
## Identity pools

- Provide temporary credentials to access to AWS resources
- Delegate authentication to external identity providers
- Support guest access for unauthenticated user
- Can manage a person with multiple devices/accounts as "Identity"

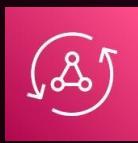
# APIs

> amplify add api

Powered by:  
Amazon API Gateway  
Amazon AppSync



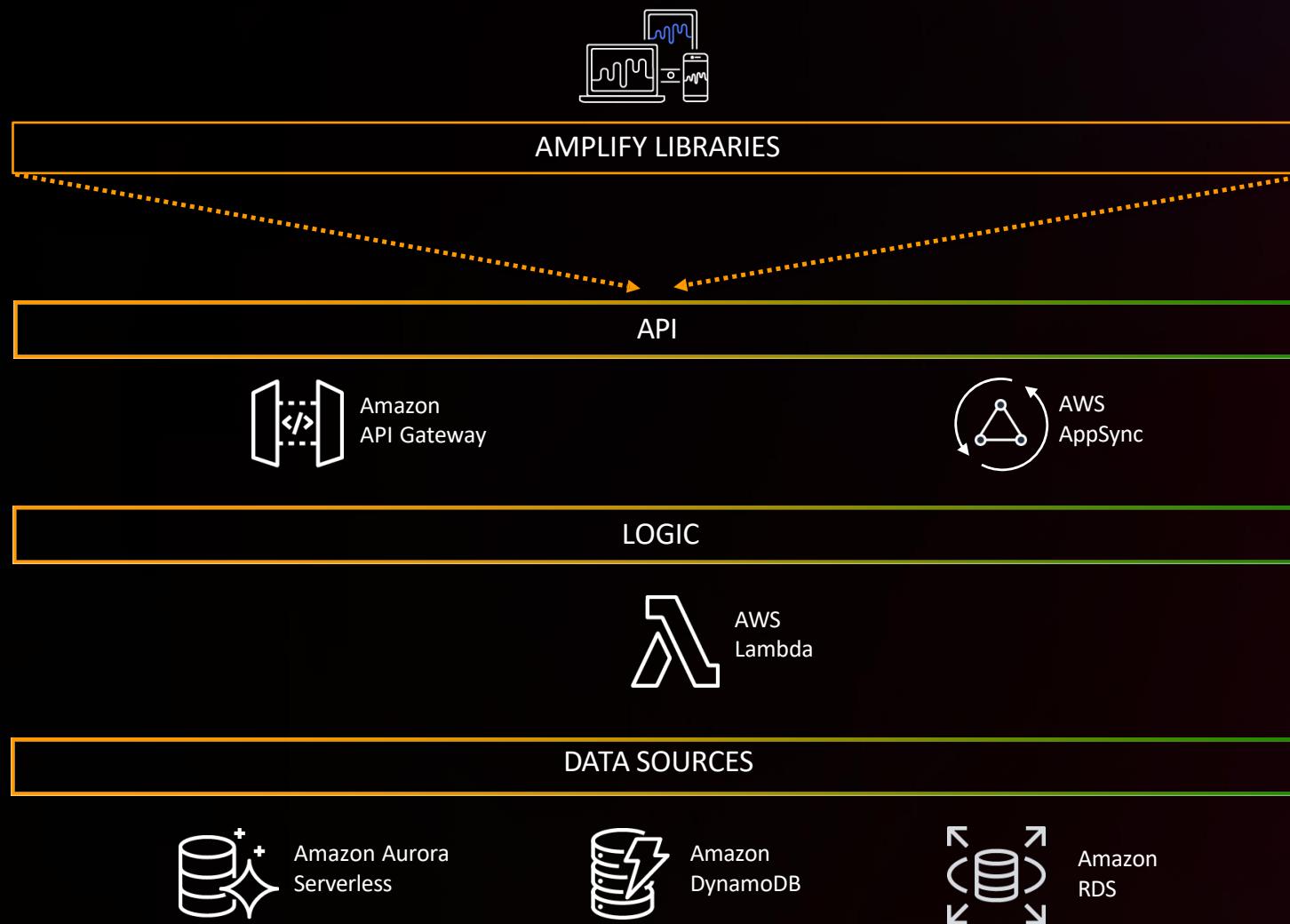
Amazon API Gateway



AWS AppSync



# API Architectures: Integrate with Existing Services



On prem, SaaS,  
Existing APIs,  
VPCs integrations

# APIs

> amplify add api

Backend Powered by:  
AWS Lambda  
Amazon DynamoDB



AWS Lambda



Amazon DynamoDB

# Storage

> amplify add  
storage



Amazon DynamoDB

Powered by:  
Amazon DynamoDB  
Amazon S3



Amazon Simple Storage  
Service (Amazon S3)





NoSQL database

Seamless scalability

Zero admin

Single-digit millisecond latency

Multi-Master

Multi-Region

# Functions

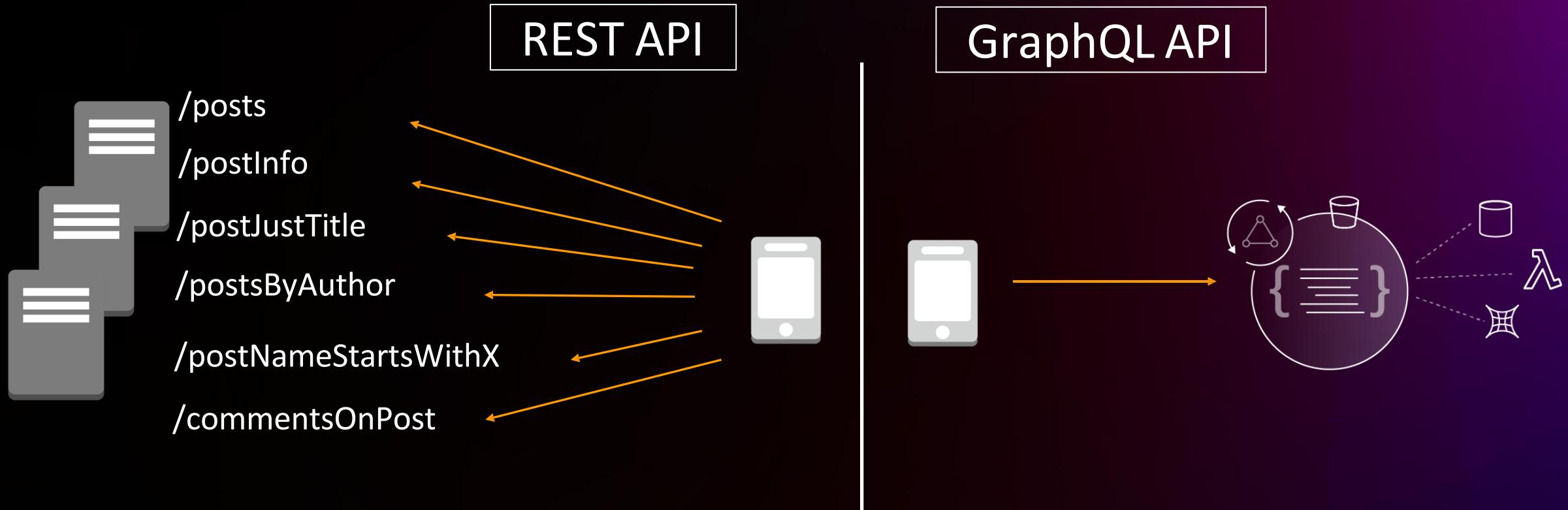
> amplify add function

Powered by:  
AWS Lambda

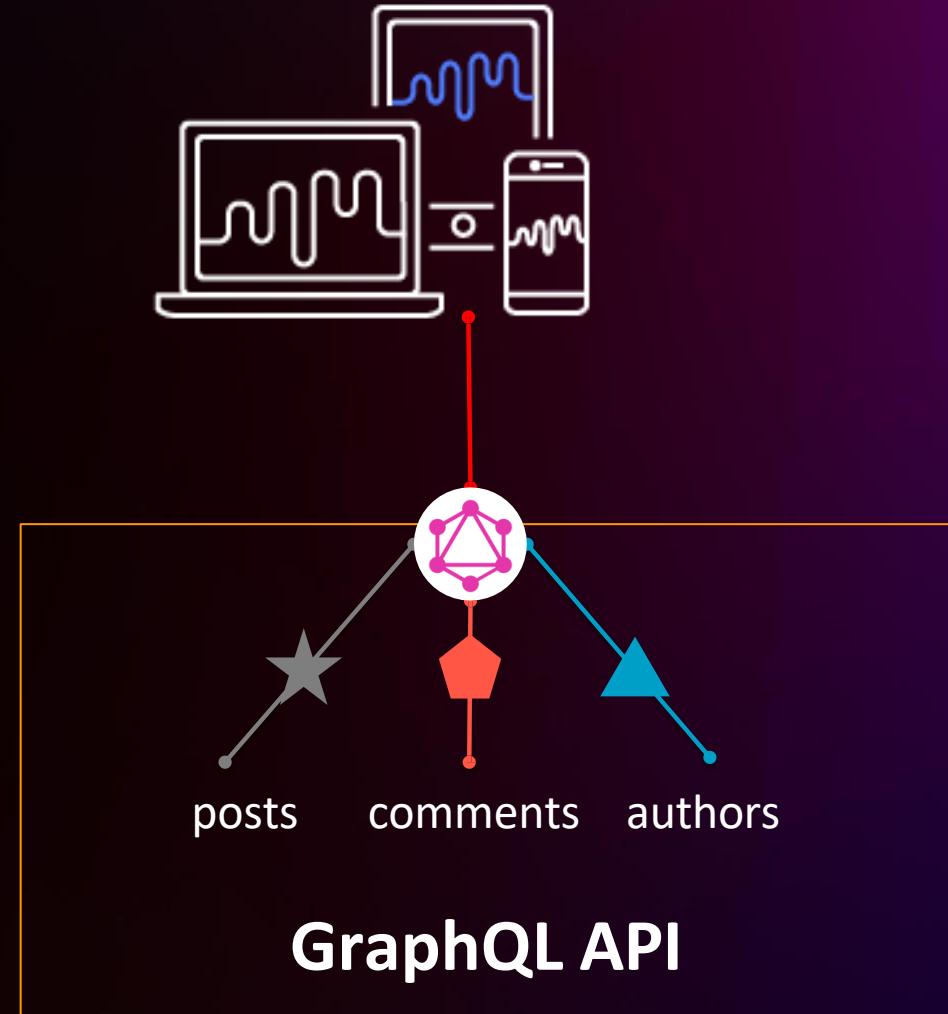
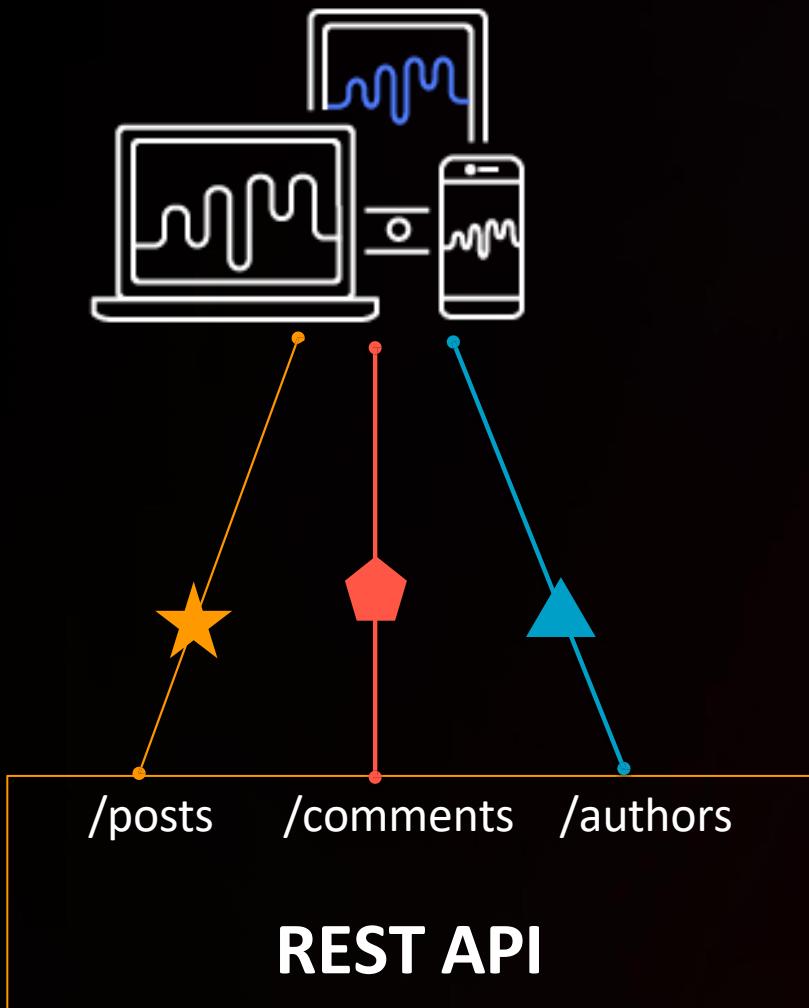


AWS Lambda

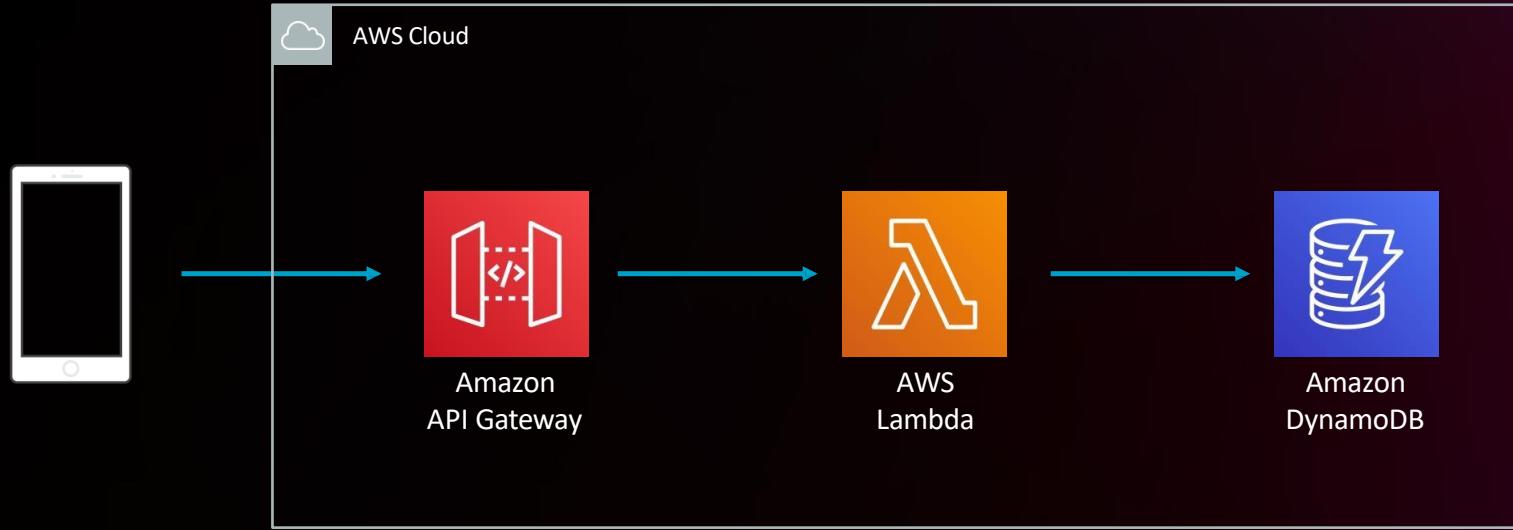
# API Architectures: Choose Your API



# API Architectures: Choose Your API



# API Gateway is a front door for managing REST APIs



# High-level APIs with best practices built-in

```
import { API } from 'aws-amplify'
```

```
Import { listTodos } from './graphql/queries'
```

```
const todos = await API.graphql(graphqlOperation(listTodos));
```

# Storage

```
> amplify add  
storage
```



Amazon DynamoDB

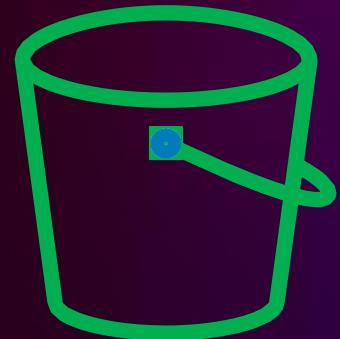
Powered by:  
Amazon DynamoDB  
Amazon S3



Amazon Simple Storage  
Service (Amazon S3)

# Amazon S3 (Simple Storage Service)

- Web accessible object store (through API or HTTPS)
- Highly durable (99.99999999% design)
- Limitlessly scalable
- Multiple Tiers to match your workload
- Data Lifecycle Rules
- Static Website Hosting
- Security, Compliance, and Audit capabilities
- Standard Storage Pricing (us-east-1) - \$0.023 per GB



# APIs

> amplify add api

Powered by:  
Amazon API Gateway  
Amazon AppSync

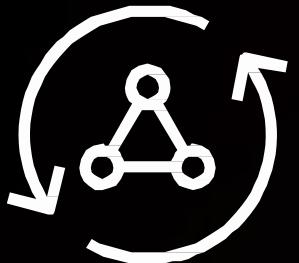


Amazon API Gateway



AWS AppSync

# AWS AppSync: Managed GraphQL Service



Managed serverless  
GraphQL service



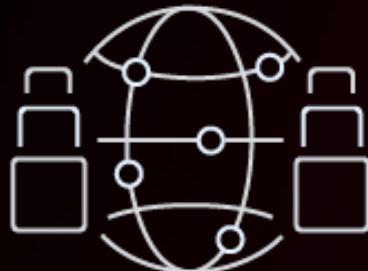
Connect to data sources in  
your account



Add data sync, real-time, and offline  
capabilities for any data source or  
API



GraphQL facade for any AWS  
service



Conflict detection and  
resolution in the cloud



Enterprise security features:  
IAM, Amazon Cognito, OIDC,  
API keys

# AppSync: Common Use Cases

- **GraphQL microservices**
- **Field service apps where offline support is critical**
- **IoT dashboards**
- **Unified API for accessing data from data lake**
- **Retail product catalogs, in-store shopping experience**
- **Shopping cart checkout**
- **Real-time currency changes, stock prices, account balance**
- **Chat and second screen communication within live broadcast**
- **Display live tv and video metadata**
- **High throughput real-time fanout to millions of clients**

# Interactions

> amplify add interactions

Chatbots Powered by:  
Amazon Lex



Amazon Lex

# Amazon Lex

Build conversational interfaces using voice and text



Easy to use



High quality text and speech language understanding



Seamlessly deploy and scale



Built-in integration with the AWS platform

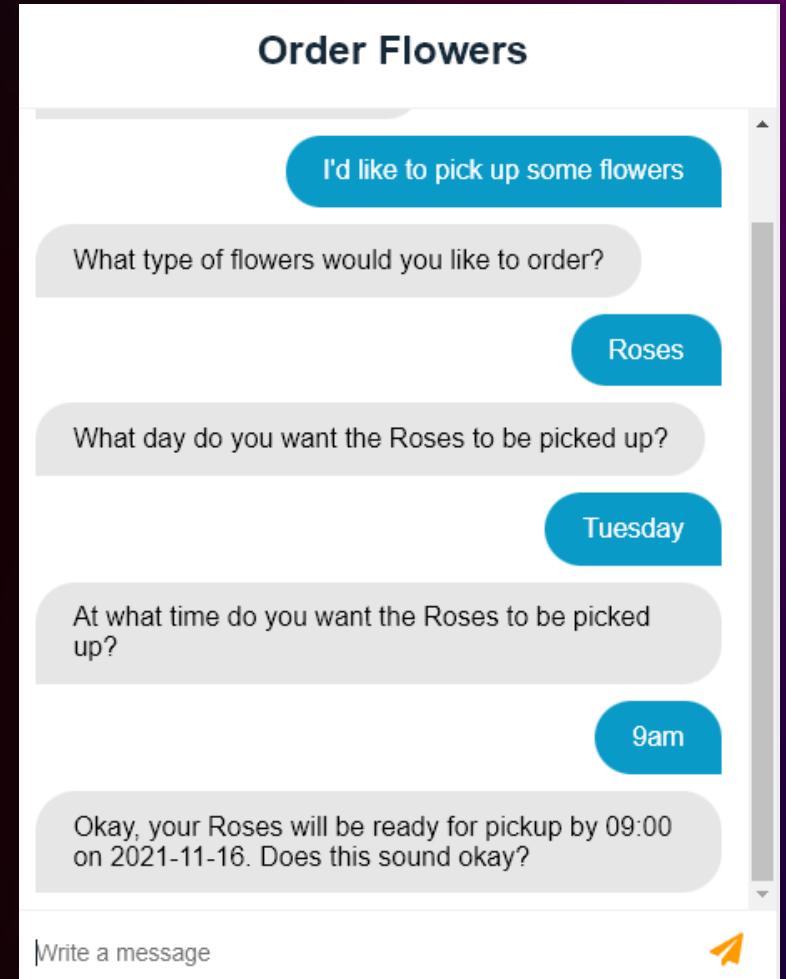


Cost effective

# DEVELOP with AWS Amplify:

## *Example – Add Chatbot with React UI Component*

```
<AmplifyChatbot  
  botName="OrderFlowers_dev"  
  botTitle="Order Flowers"  
  welcomeMessage="Hello, how can I help you?"  
/>
```



# Predictions

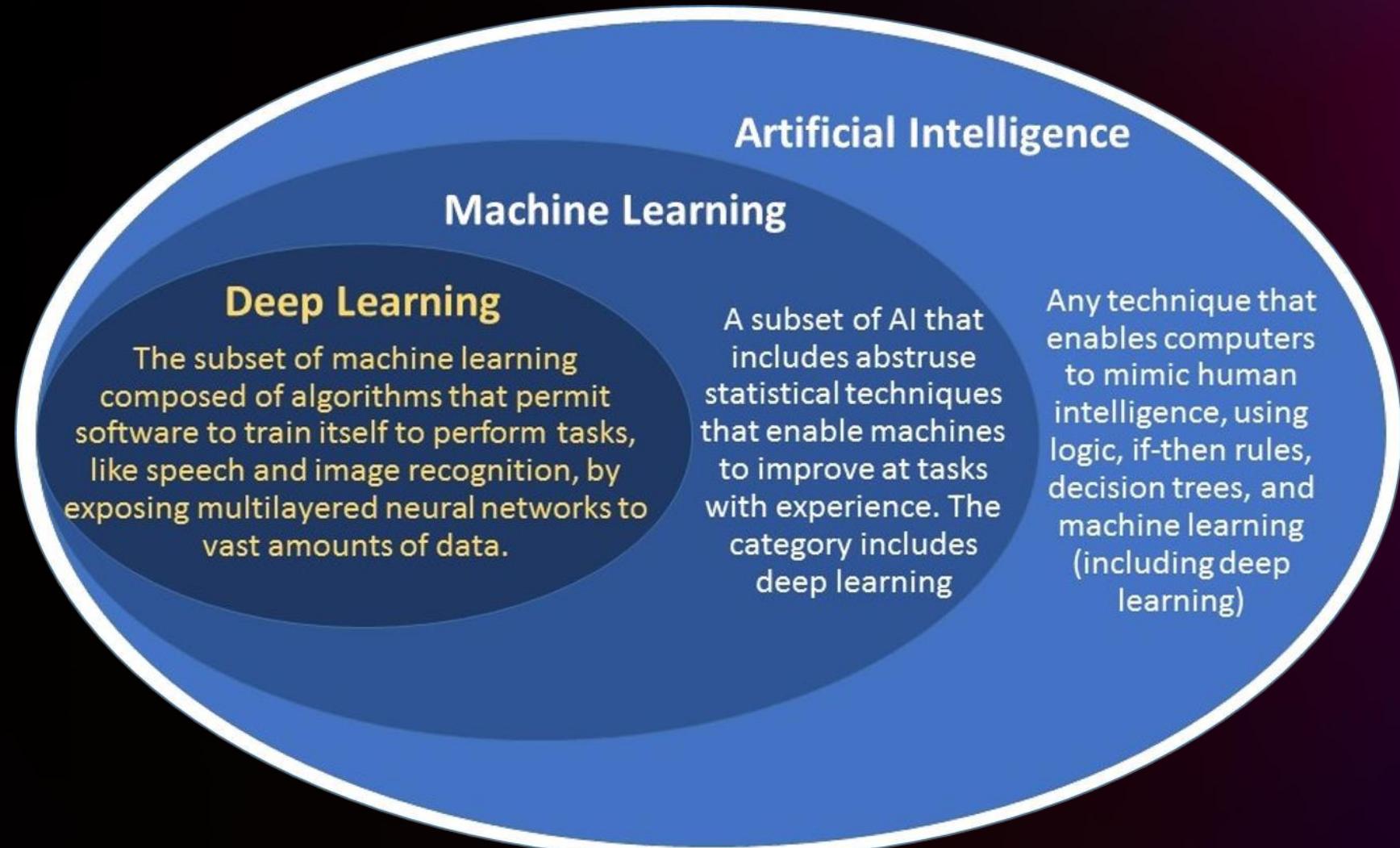
> amplify add predictions



Powered by:  
Amazon Comprehend  
Amazon Rekognition  
Amazon Translate  
Amazon Transcribe  
Amazon Polly  
Amazon Textract



# What is AI?



# AWS AI Services



## Vision

Extract data from images, video and documents.



Amazon Rekognition



## Speech

Interpret audio and create voice



Amazon Polly



## Language

Understand and interpret language



Amazon Translate

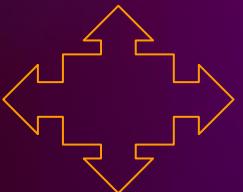


## Intelligence

Make intelligent predictions



Amazon Personalize



## Custom

Run your own models



Amazon SageMaker



Amazon Textract



Amazon Transcribe



Amazon Comprehend



Amazon Forecast



Amazon Lex

# Amazon Comprehend

## Overview



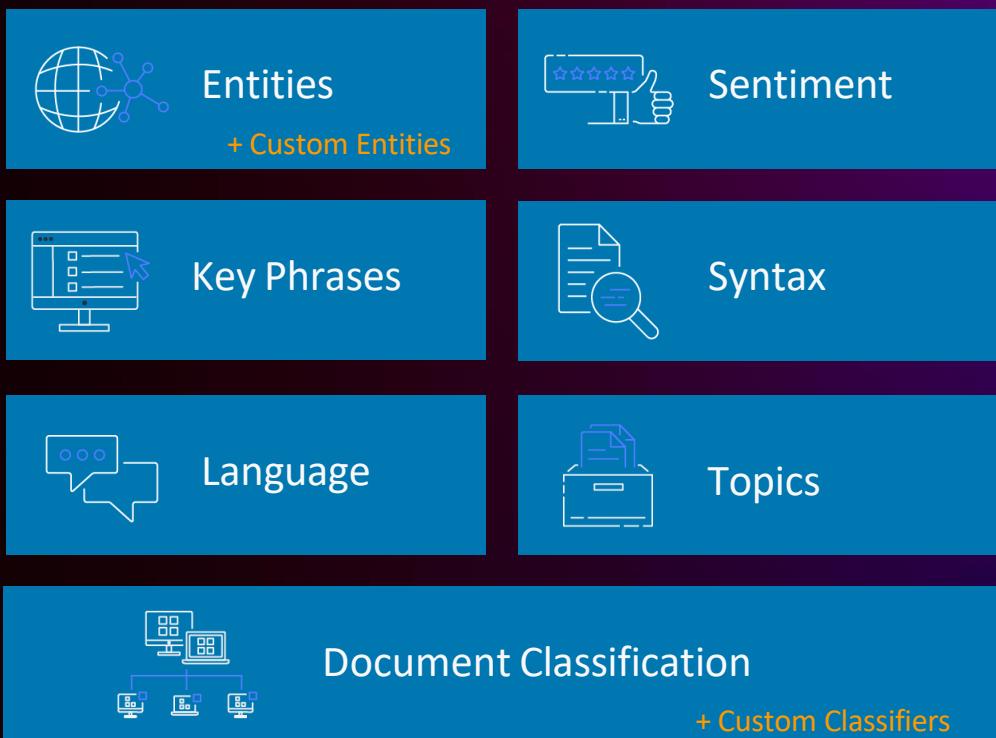
### Documents

Email, chat, social,  
phone calls and  
more



### Amazon Comprehend

Automatically  
extract insights  
from text



# Hosting

> amplify add hosting



Amazon Simple Storage  
Service (Amazon S3)

Hosting Powered by:  
Amazon CloudFront  
Amazon S3



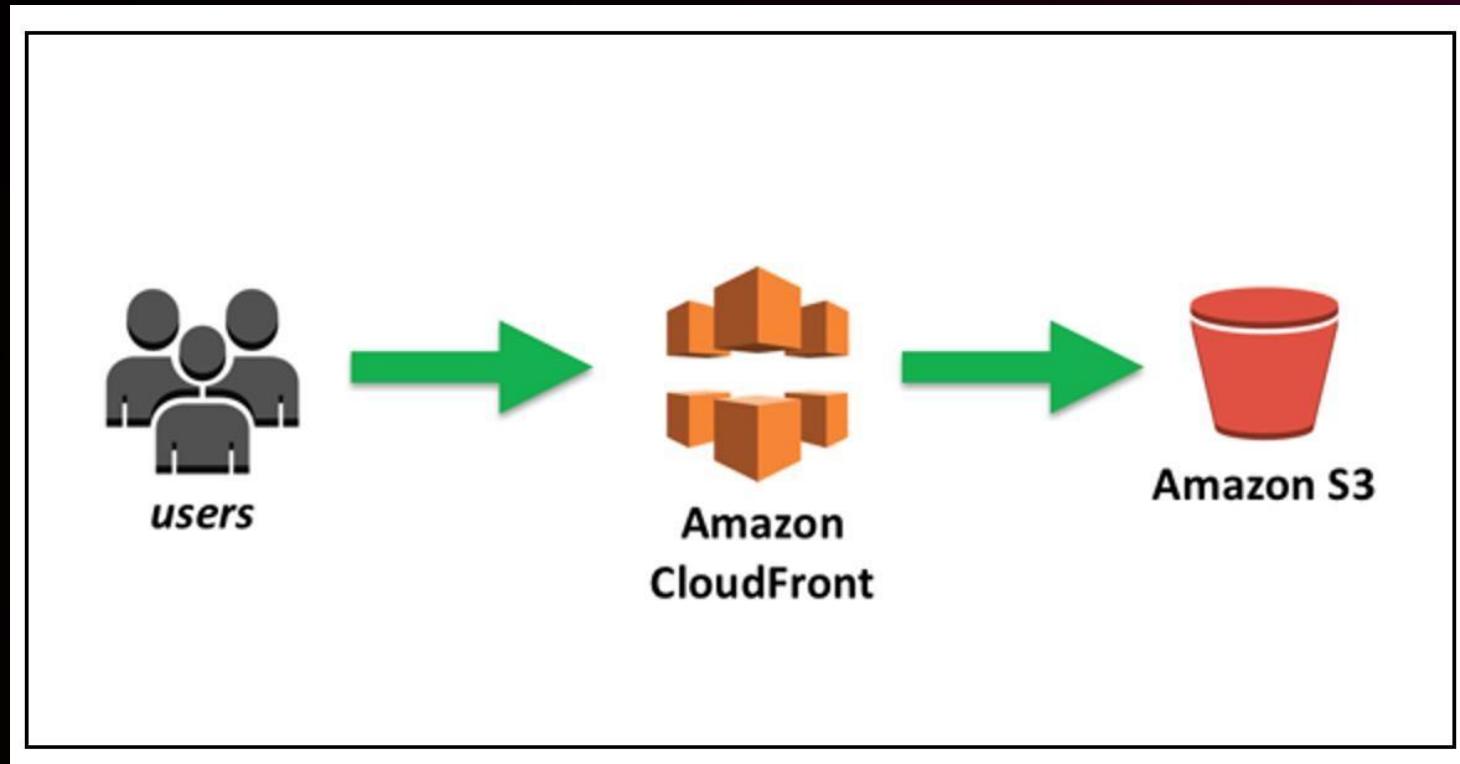
Amazon CloudFront

# Hosting Options

**Amplify Managed Hosting - AWS Amplify Manages the provisioning of the application**

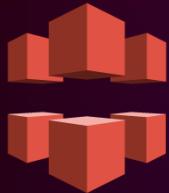
**Self Hosting - You have full control of your hosted application**

# Hosting Architecture



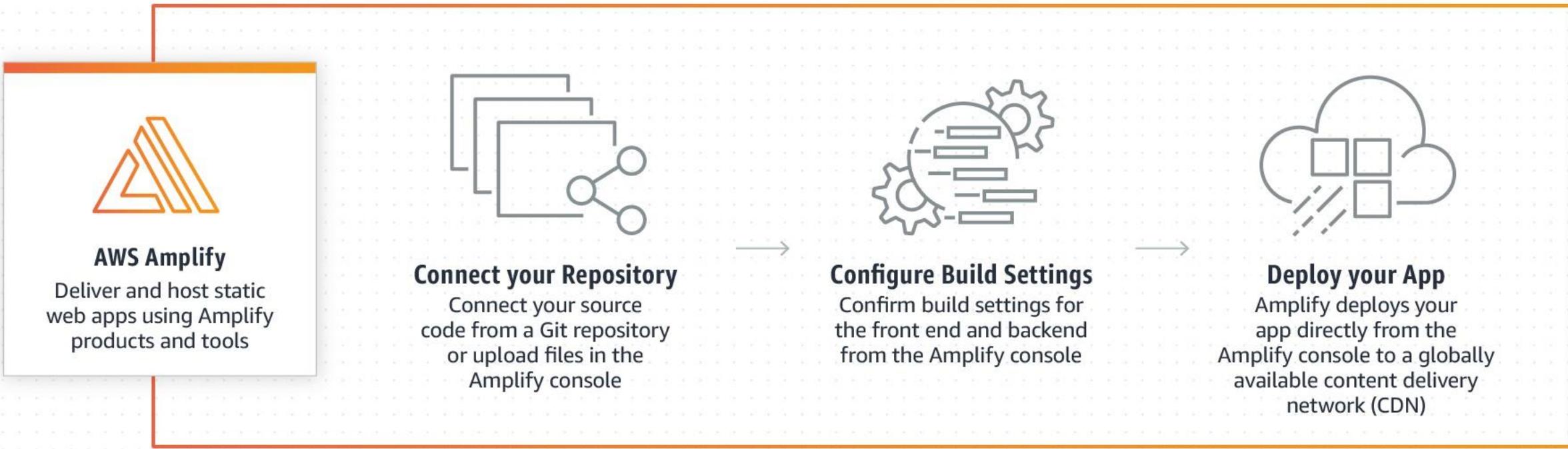
# What is Amazon CloudFront

- Global Content Delivery Network with Massive Capacity and Scale
- Optimized for Performance and Scale
- Built in Security Features
- Self-Service Full Control Configurations
- Robust Real Time Reporting
- Static and Dynamic Object and Video Delivery



Amazon  
CloudFront

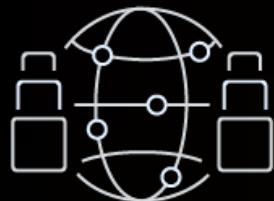
# Amplify Hosting



# What Else Can I do?

# Amplify DataStore

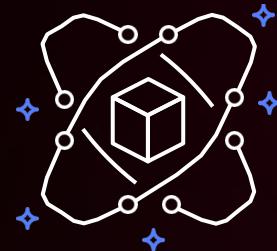
Multi-platform (iOS/Android/React Native/Web) on-device persistent storage engine that automatically synchronizes data between mobile/web apps and the cloud using GraphQL



Automatic versioning,  
conflict detection, and  
resolution in  
the cloud



Familiar and  
local first  
programming  
model

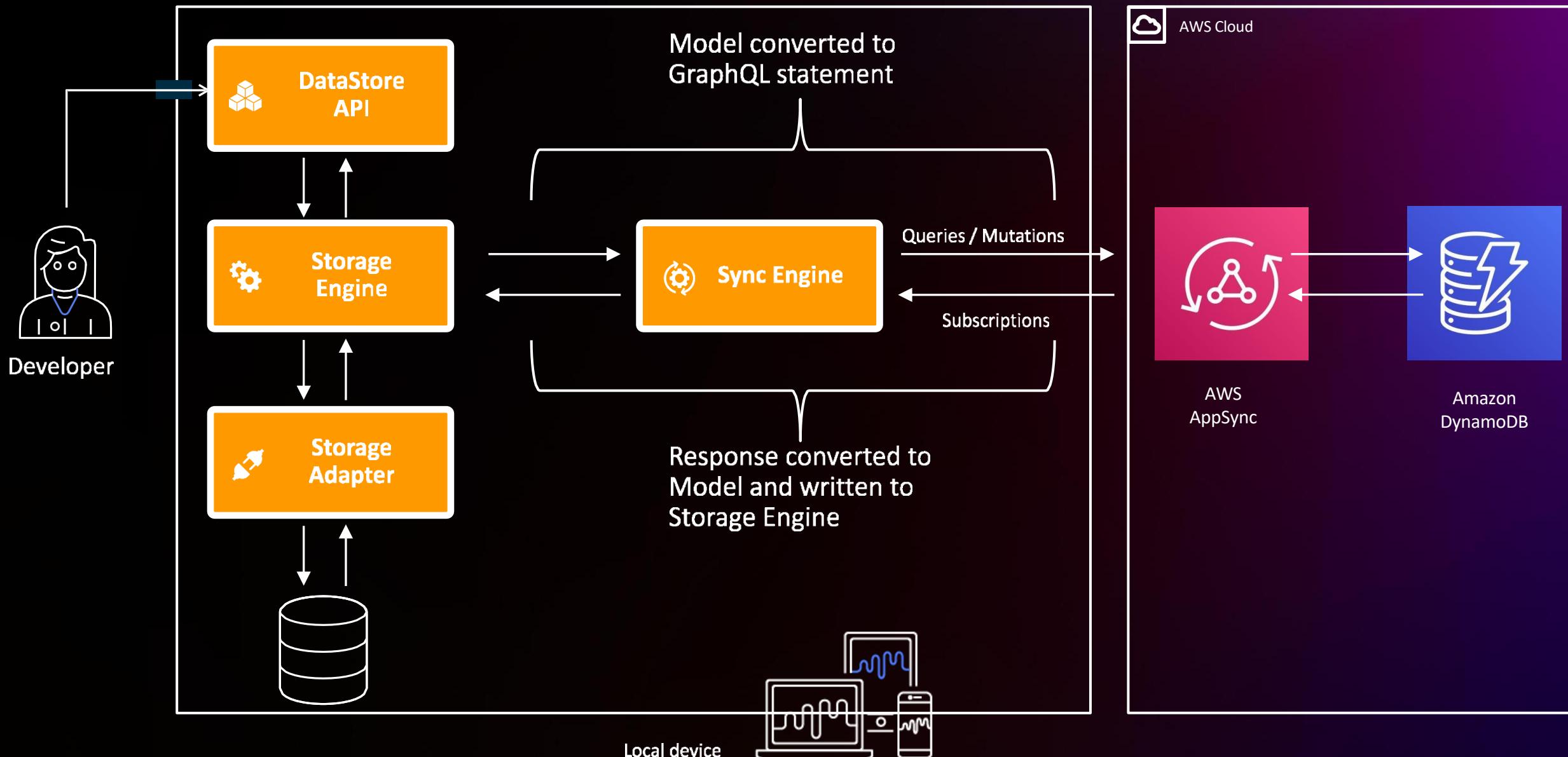


Delta sync  
and auto-merge



Powered by  
AWS AppSync and  
GraphQL

# Amplify DataStore



# Example: Synchronize app data with DataStore

```
await DataStore.save(new Appointment(  
  {  
    description: formState.description,  
    serviceRegion: formState.serviceRegion,  
    scheduledTime: formState.startDate  
  })  
);
```

```
await DataStore.query(  
  WorkOrder,  
  item => item.appointmentID("eq", appointment.id));
```

## Save and retrieve

```
const subscription = DataStore.observe(Appointment).subscribe(msg => {  
  console.log(msg.model, msg.opType, msg.element);  
  if (msg.opType === "INSERT") {  
    ...  
  } else if (msg.opType === "DELETE") {  
    ...  
  }  
});
```

## Subscribe to changes

New! Use **Selective Sync** to apply predicates to the base and delta sync queries, as well as to incoming subscriptions

```
DataStore.configure({  
  syncExpressions: [  
    syncExpression(Appointment, () => {  
      return (c) => c.serviceRegion('contains', 'WA');  
    }),  
    syncExpression(WorkOrder, () => {  
      return (c) => c.serviceRegion('contains', 'WA');  
    }),  
  ]  
});
```

New! Only sync a subset of data

# Analytics

> amplify add analytics



Amazon Pinpoint

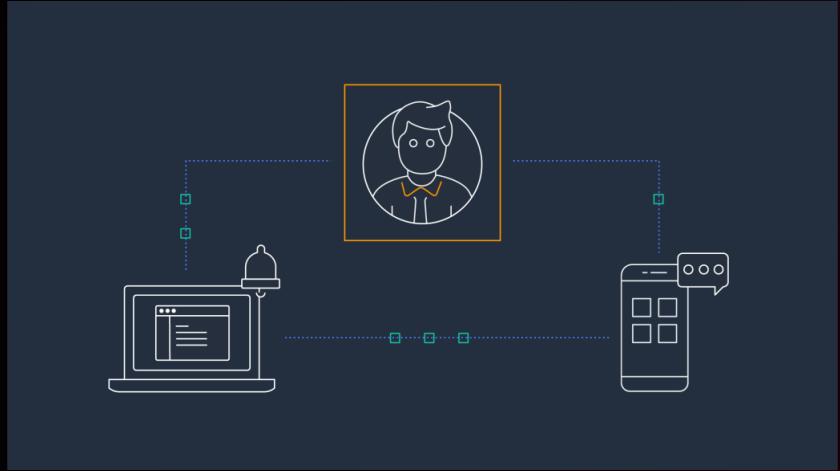
Powered by:  
Amazon Pinpoint  
Amazon Kinesis



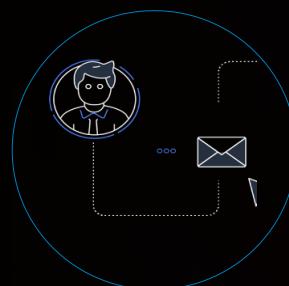
Amazon Kinesis

# Amazon Pinpoint

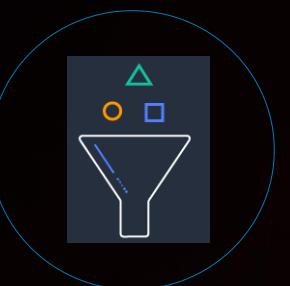
Multichannel marketing communication service



Flexible use cases



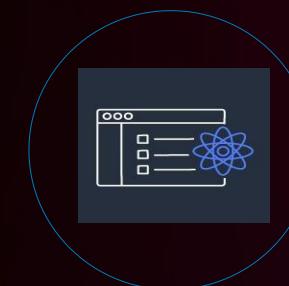
Campaigns and journeys



Segmentation



Channel choice



Personalization



Rich analytics



Global scale

# Real-time: Amazon Kinesis

Easily collect, process, and analyze data and video streams in real time



## Kinesis Data Streams

Collect streaming data, at scale, for real-time analytics



## Kinesis Data Firehose

Prepare and load data streams into data stores and analytics services



## Kinesis Data Analytics

Get actionable insights from streaming data in real time



## Kinesis Video Streams

Capture, process, and store media streams for playback, analytics and machine learning

# Geo

> amplify add geo



Amazon Location Service

Powered by:  
Amazon Location Service



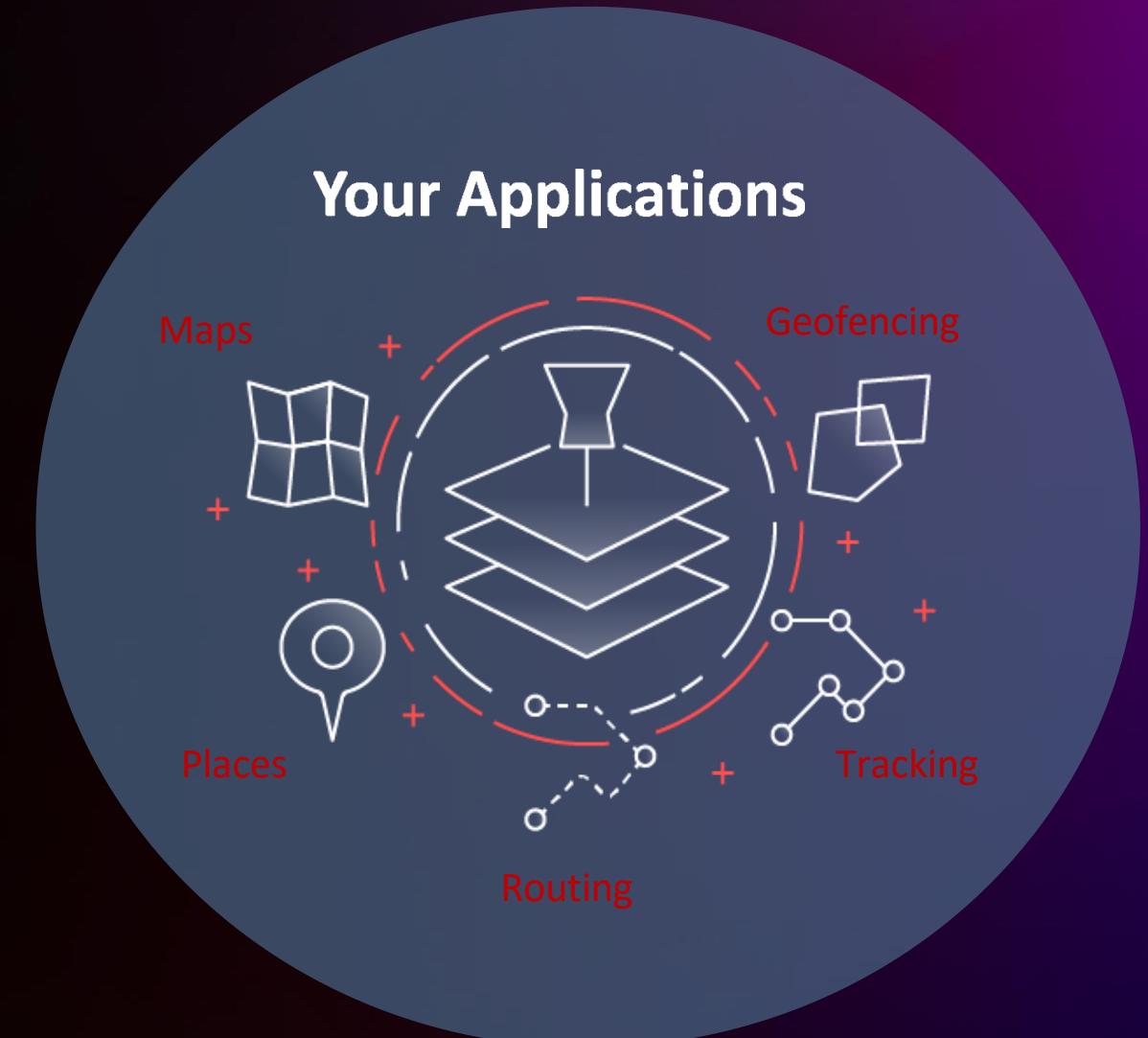
Map



Location Search

# Amazon Location Service

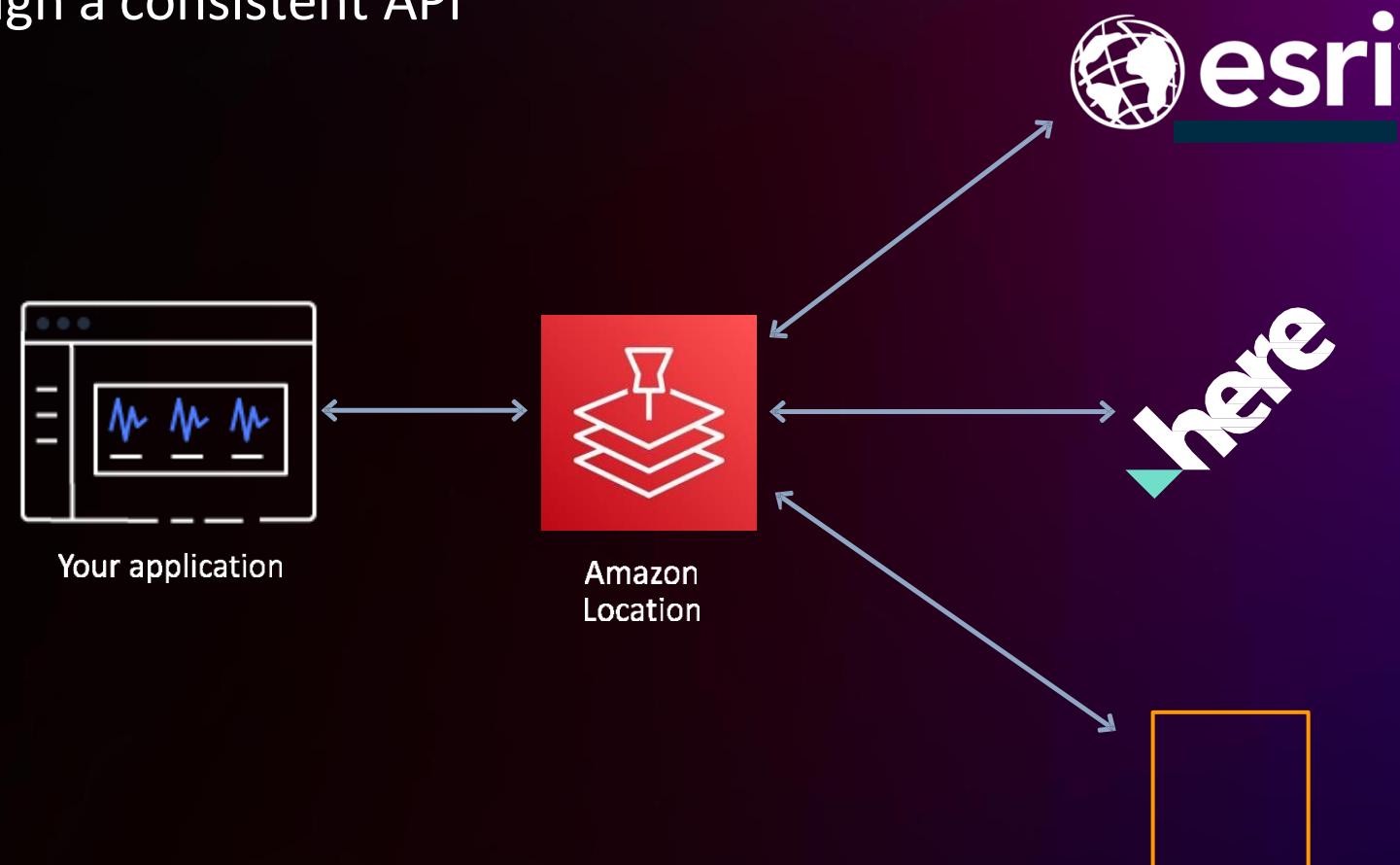
- Shorter time to production
- Easy access to high-quality data
- Privacy and security
- Cost-effective



# Easy Access to High-quality Data

Access data from Esri and HERE through a consistent API

- No need for new credentials, and no vendor onboarding
- Simplified global coverage
- A single consistent API
- One price regardless of data provider



# Explore All Features

<b>Authentication</b>  Enable sign-in, sign-up and sign-out within minutes with pre-built UI components and powerful authentication APIs	<b>Storage</b>  A simple mechanism for managing user content in public, protected or private storage	<b>GraphQL API</b>  Easy and secure solution to access your backend data with support for real-time updates using GraphQL
<b>DataStore</b>  Seamlessly synchronize and persist online & offline data to the cloud as well as across devices	<b>Geo</b>  Add modern, interactive maps with location markers and location search to your JavaScript-based web projects.	<b>REST API</b>  A straightforward and secure solution for making HTTP requests using REST APIs
<b>Analytics</b>  Make informed decisions with drop-in analytics to track user sessions, custom user attributes and in-app metrics	<b>Push Notifications</b>  Drive customer engagement using push notifications with campaign analytics and targeting	<b>XR</b>  Engage your customers in a different dimension with augmented reality (AR) and virtual reality (VR) content within your app
<b>PubSub</b>  Provide best-in-class real-time experiences by connecting your application with a message-oriented middleware in the cloud	<b>Interactions</b>  Automate customer workflows by enlisting the help of conversational chatbots powered by deep learning technologies	<b>AI / ML Predictions</b>  Design delightful experiences with the power of AI and ML functionality such as computer vision, translation, transcription and more

# RESOURCES

Amplify Documentation:  
<https://docs.amplify.aws/>

Amplify Blog:  
<https://aws.amazon.com/amplify/blog/>

Amplify on Github:  
<https://github.com/aws-amplify>

# THANK YOU!