



Builders Online Series

From Idea to MVP: Accelerate application development with AWS Amplify

Donnie Prakoso

Senior Developer Advocate, ASEAN
Amazon Web Services



@donnieprakoso



donnieprakoso

Agenda for today

- The mobile/web application landscape
- AWS Amplify to accelerate application development
- Demo - Building apps with AWS Amplify
- What's next?

Stay ahead with mobile first



**5B Mobile
internet
users by
2025**



**52% of overall
web traffic
comes through
mobile devices**



**3.7 hrs daily
avg time
spent on
mobile device**

Sources:

<https://www.bondcap.com/report/itr19/#view/2>

<https://www.appannie.com/en/about/press/releases/app-annie-unveils-the-state-of-mobile-for-2020-in-a-new-report/>



First impressions count

25% apps are abandoned after first use

61% expect apps to start in 4 seconds or less

1 in 3 users say mobile app crashes/errors make them think less of the brand

Sources:

<https://www.bondcap.com/report/itr19/#view/2>

<https://www.appannie.com/en/about/press/releases/app-annie-unveils-the-state-of-mobile-for-2020-in-a-new-report/>

How to simplify increased complexity?



Ride hailing

Media streaming

Social media

Dating

Security

Online/offline access

Cost

Development time

Frameworks

Quality

Device fragmentation

Scale

Locality

Performance

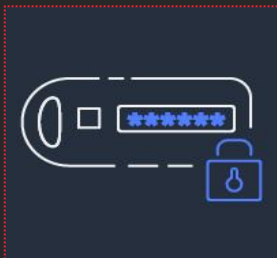
And accomplish application objectives?



Speed to market



Innovation and differentiation



Highly performant/secure/global

AWS Amplify

Designed for the development lifecycle

Engage/Measure

- Multi-channel (push/sms/email/voice)
- Behavior-based and personalized audience segments
- Engagement performance measurements
- Real-time customer data for immediate optimization

Deploy/Host

- AWS infrastructure
- Ease of deployment with CLI or hosting
- CI/CD capability
- Fully managed global hosting



Develop

- Open source libraries
- iOS/Android Native
- Javascript/React/Vue/Angular
- UI components
- Escape hatches

Test

- AWS Device Farm
- Test on real devices
- Test on real browsers
- Integrate testing with CI/CD

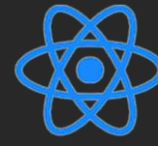
AWS Amplify: supports mobile and web frameworks



Android



iOS



React native



Ionic



Javascript



React

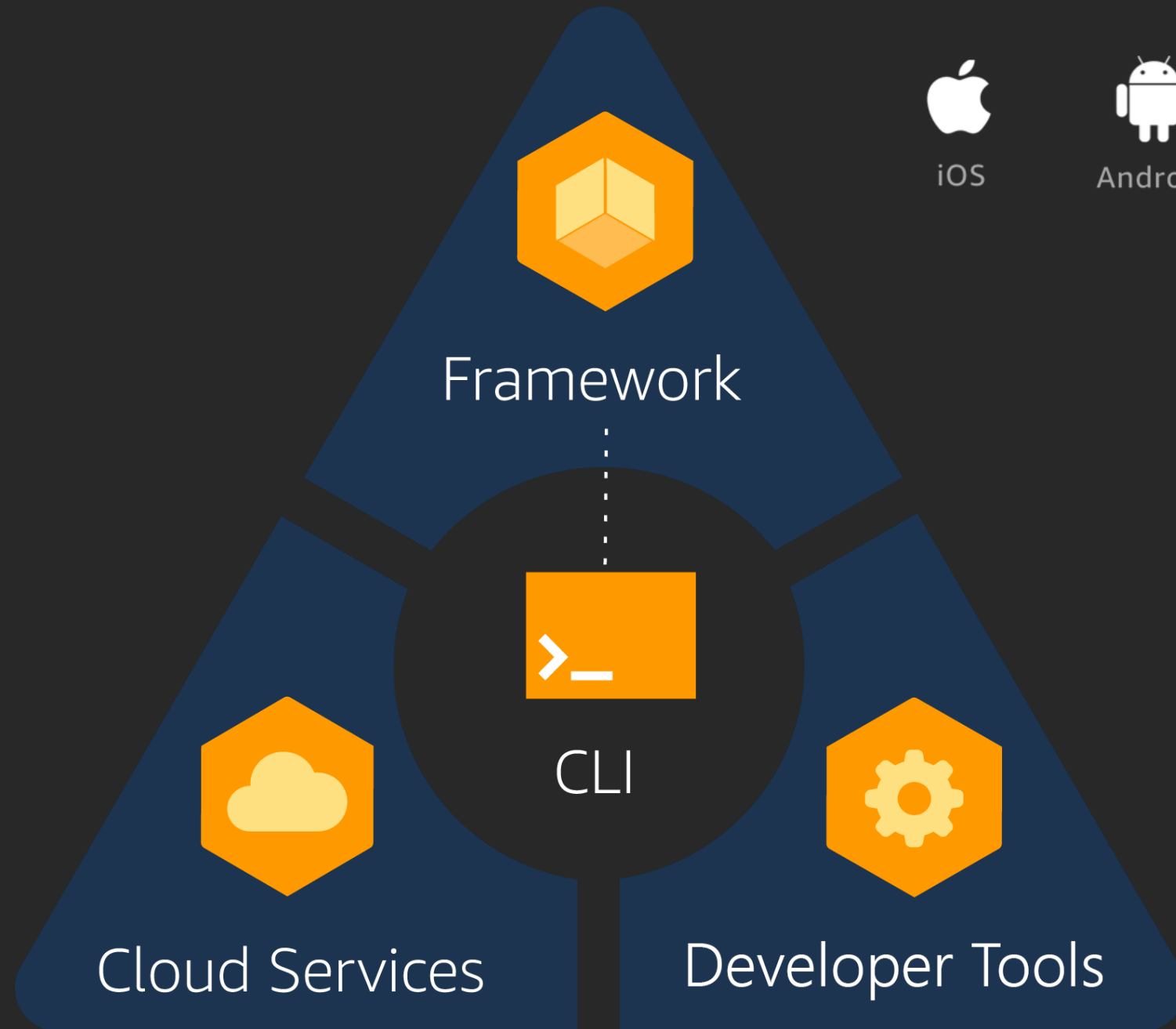


Angular



Vue

An integrated developer experience



Amplify Libraries: Use case features

Authentication

Authentication APIs with prebuilt UI components for your app

Data Store

On-device persistent storage that automatically synchronizes data between you apps and the cloud

API

HTTP requests using REST and GraphQL with support for real-time data

Analytics

Track user sessions, custom user attributes and in-app metrics

PubSub

Connect your app to message-oriented middleware on the cloud

Predictions

Add ML capabilities to your app powered by cloud services

Interactions

Conversational bots powered by deep learning technologies

Notifications

Push notifications with campaign analytics and targeting

Storage

Manage user content securely in public, protected, and private storage.

XR

Work with augmented reality and virtual reality content in your apps

Let's build an app

Demo overview

\$ **amplify init**

Initialize a project and environment

\$ **amplify add api**

Provision an API and data infrastructure

\$ **amplify mockup**

Testing and debugging local updates

\$ **amplify add auth**

Add an Amazon Cognito user pool

\$ **amplify push**

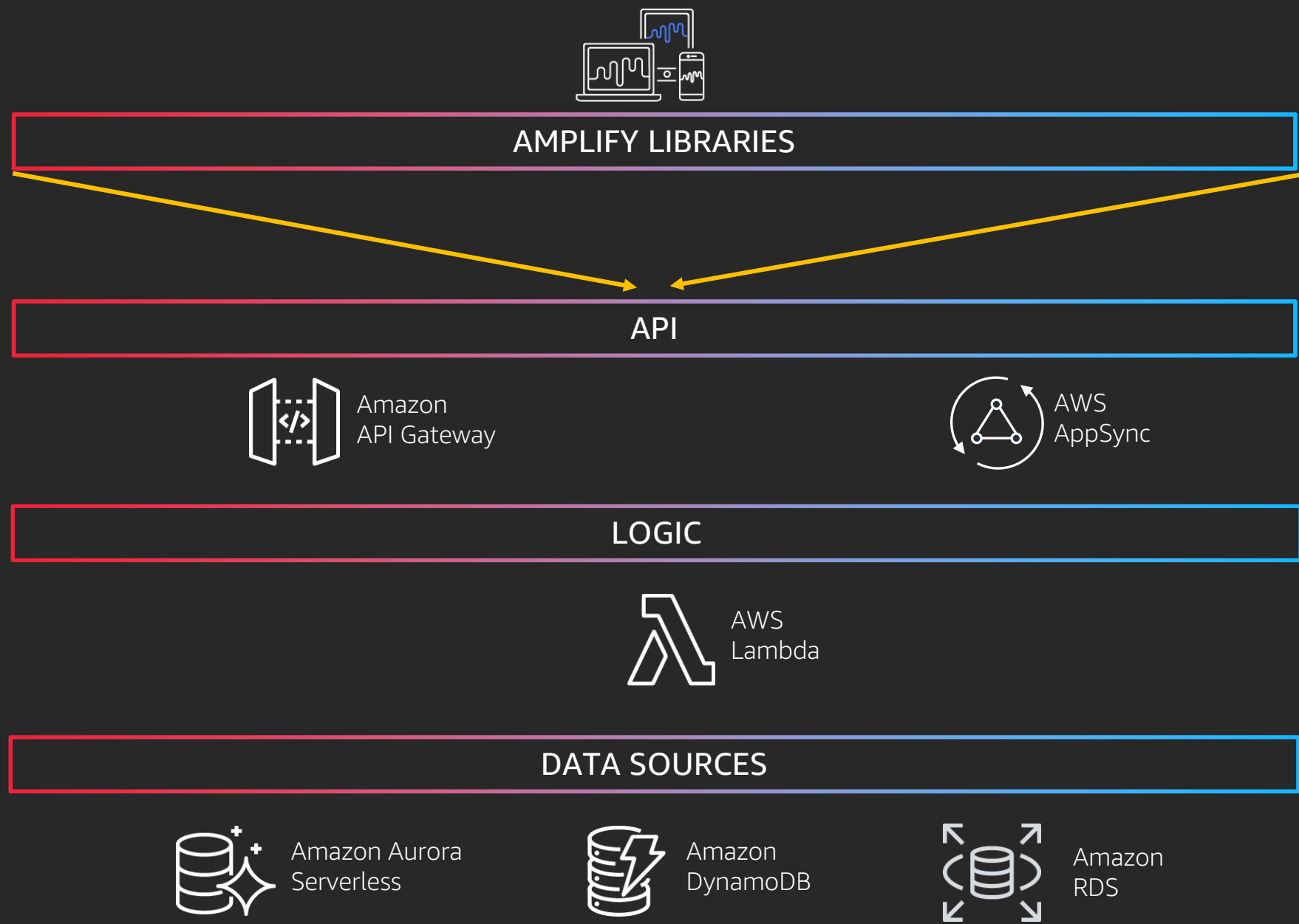
Deploy via AWS CloudFormation

\$ amplify init

Demo - 1

\$ amplify add api

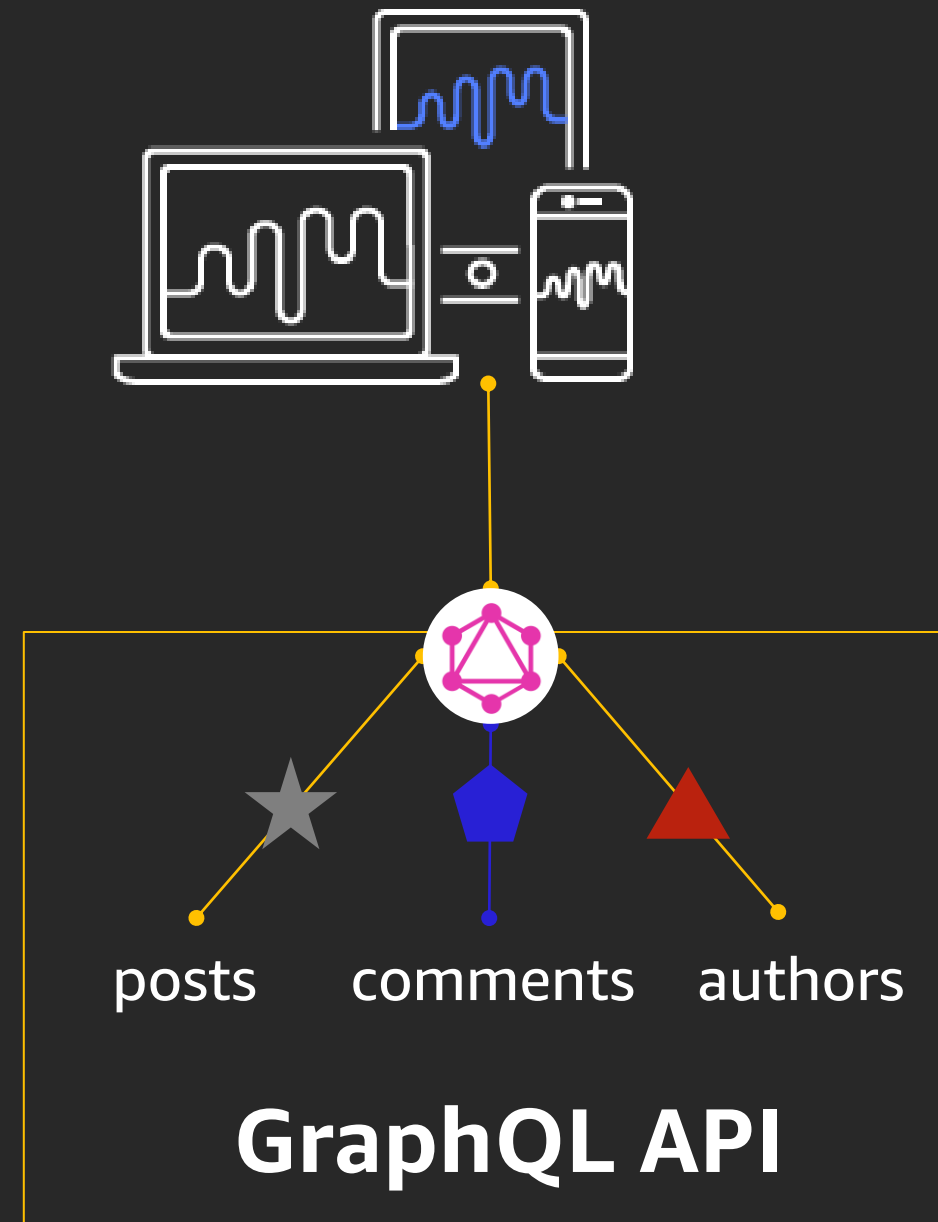
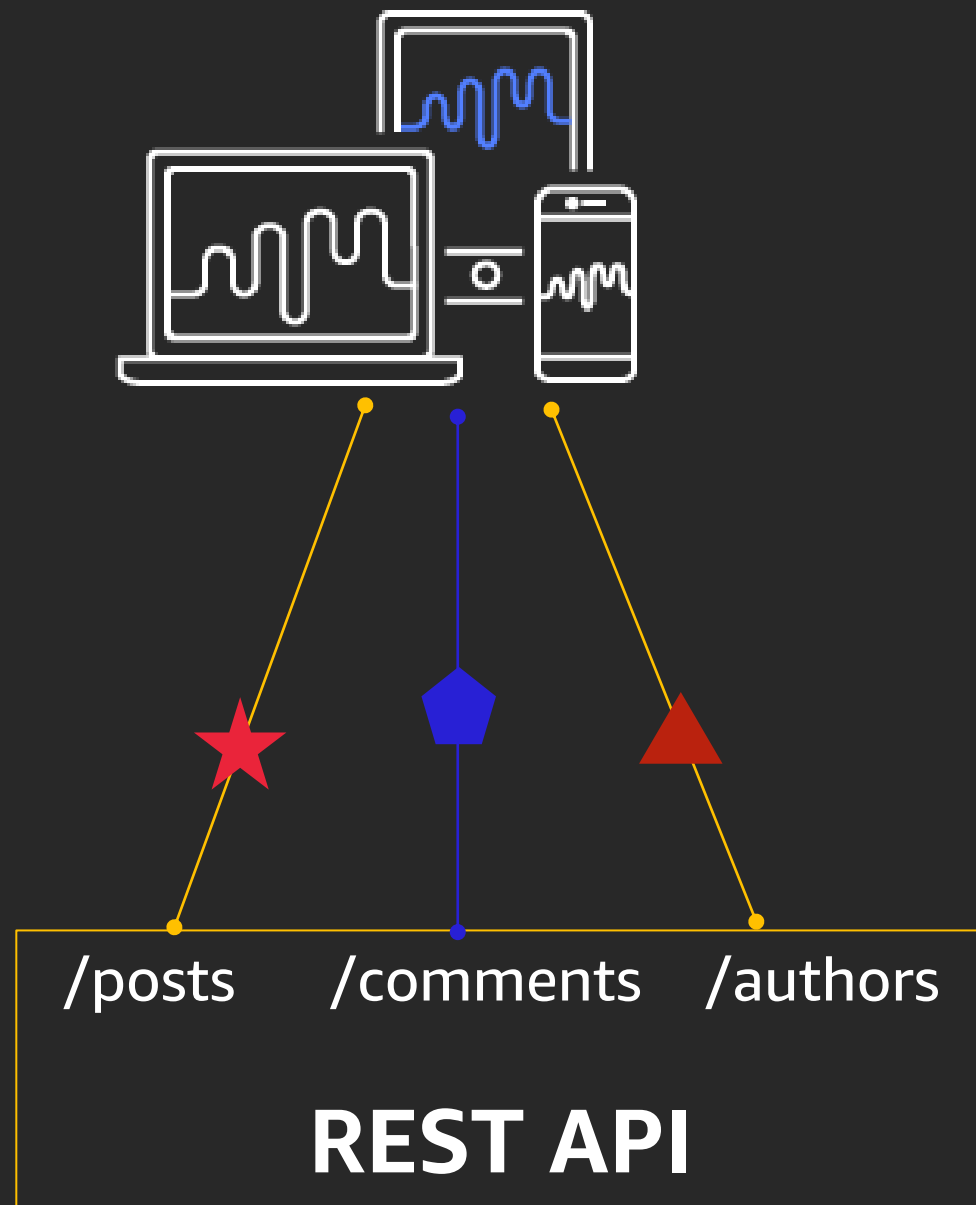
API Architectures: Integrate with existing services



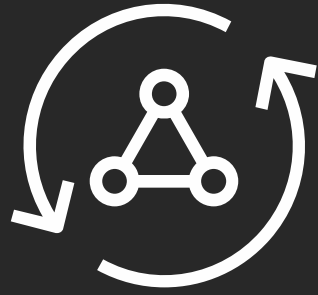
On prem, SaaS,
existing APIs,
VPCs integrations



API Architectures: choose your API



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

Demo - 2

\$ amplify mock

Demo - 3

\$ amplify add auth

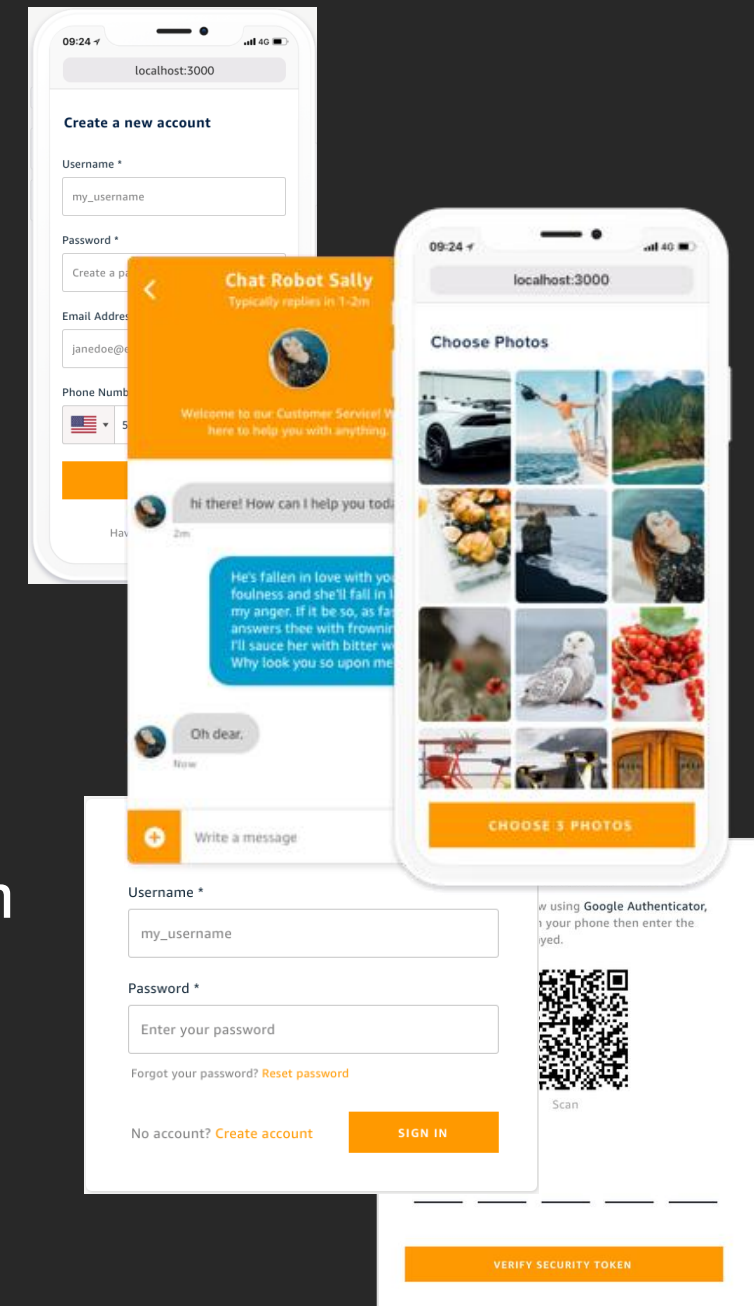
Amplify Auth: Simple, secure, scalable

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 Facebook, Google or Amazon
- Automatic integration with existing Amazon Cognito resources
- Custom auth flow i.e. captcha



Demo - 4

\$ amplify add analytics

Amplify Analytics: Understand engagement

Page view tracking

Page event tracking

Streaming analytics

Storing analytics

Benefits

- Amazon Pinpoint delivers user engagement
- Measure user responses
- Optimize based on user responses
- Analyze message delivery and engagement data

What's next?

With innovation driven use cases

Use cases

Big data and personalization:

- onboarding flows
- securely manage content
- engage with users/campaigns

Multi-Device and Multi-Medium:

- real-time updates/data
- low latency/high availability

AI/ML:

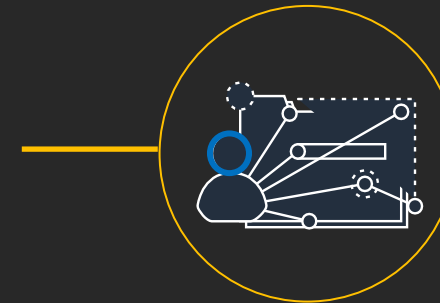
- online/offline feeds
- Translations

AWS Amplify features

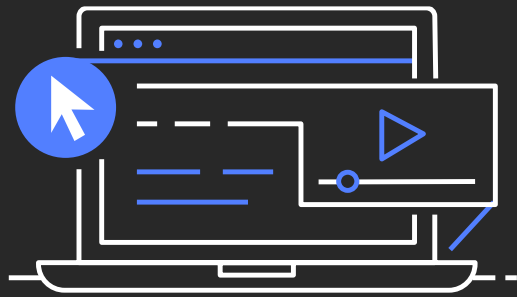
Auth, UI components, analytics, interactions, notifications, API, datastore

API, datastore, global web hosting

Predictions, API, datastore



AWS Digital Training



Flexibility to Learn Your Way

Build cloud skills with 550+ free digital training courses, or dive deep with classroom training

Featured Courses

- [AWS Cloud Practitioner Essentials \(Second Edition\)](#)
Learn the fundamentals of the AWS Cloud and prepare for the AWS Certified Cloud Practitioner exam.
- [Amazon DynamoDB for Serverless Architectures](#)
An introduction to Amazon DynamoDB and how it's leveraged in building a serverless architecture.
- [AWS Security Fundamentals](#)
Learn fundamental cloud computing and AWS security concepts, including AWS access control and management, governance, logging, and encryption methods.
- [Getting Started with Amazon Simple Storage Service \(Amazon S3\)](#)
The course provides you with the knowledge to determine when to use Amazon S3 by reviewing typical use cases and understanding how the service provides object storage for your applications.

Thank you for attending AWS Builders Online Series

We hope you found it interesting! A kind reminder to **complete the survey**.
Let us know what you thought of today's event and how we can improve the event experience for you in the future.



aws-apac-marketing@amazon.com



twitter.com/AWSCloud



facebook.com/AmazonWebServices



youtube.com/user/AmazonWebServices



slideshare.net/AmazonWebServices



twitch.tv/aws



Builders Online Series

Thank you

Donnie Prakoso

Senior Developer Advocate, ASEAN
Amazon Web Services



@donnieprakoso



donnieprakoso