

AWS BYTE SIZE LEARNING

Building Modern Web Application with AWS Amplify

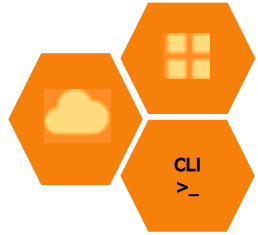
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AWS Amplify

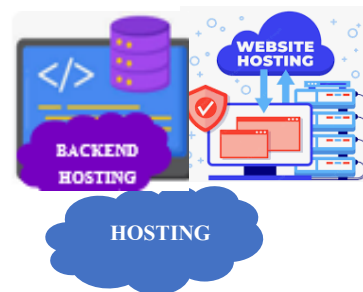


Build full-stack web and mobile apps in hours. Easy to start, easy to scale



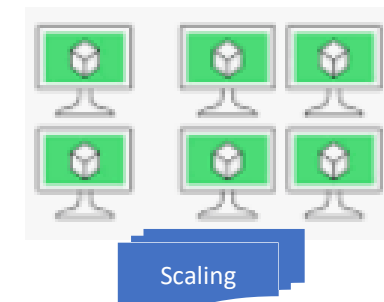
Amplify's open-source framework includes set of libraries, UI components, and a command line interface (CLI) to build an app backend and integrate it with iOS, Android, Web, and React Native apps.

AWS Amplify consists of a set of tools and services (web app and static website hosting) to accelerate the development of mobile and web applications on AWS.



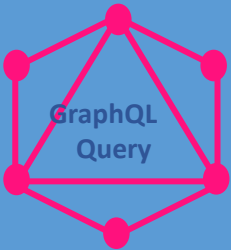
The framework leverages a core set of AWS Cloud Services to offer capabilities including offline data, authentication, analytics, push notifications, and bots at high scale.

All the infrastructure Amplify provisions for you uses "Serverless" technologies (S3, Lambda, AppSync, DynamoDB, etc.) - these services are built to scale automatically



GraphQL

A query language for your API



Describe your data

```
type Project {
  name: String
  tagline: String
  contributors: [User]
}
```

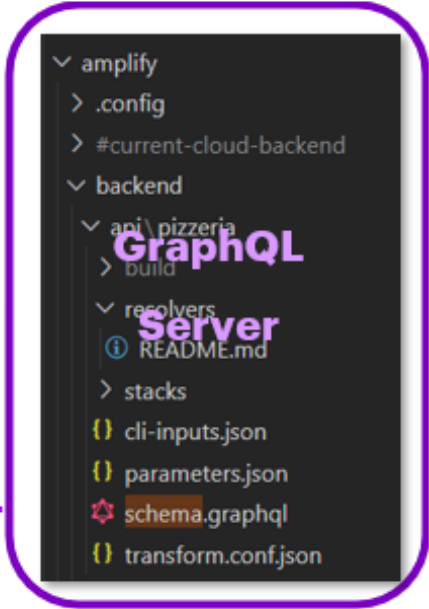
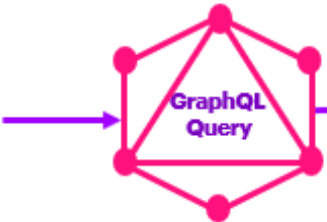
Ask for what you want

```
{
  project(name: "GraphQL") {
    tagline
  }
}
```

Get predictable results

```
{
  "project": {
    "tagline": "A query language for APIs"
  }
}
```

GraphQL API Architecture




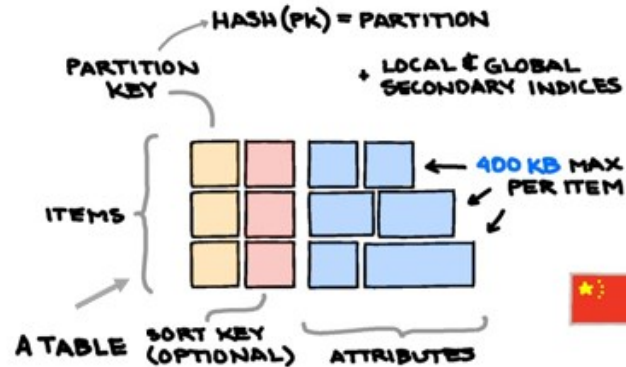
AWS DynamoDB

ESSENTIALS

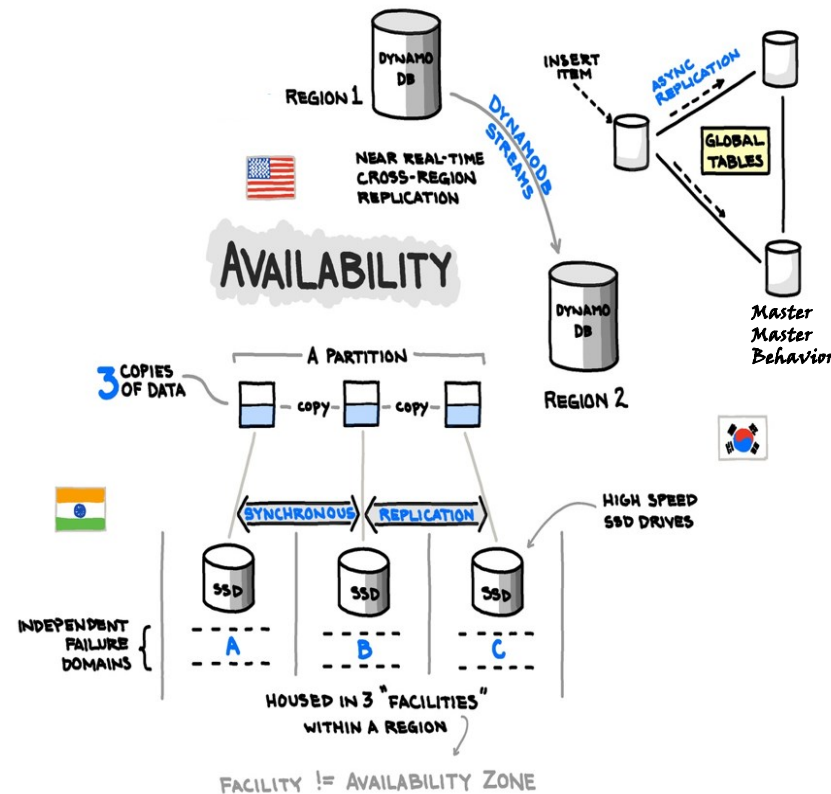
KEY-VALUE OR DOCUMENT STORE

PARTITIONS HOLD UP TO 10 GB

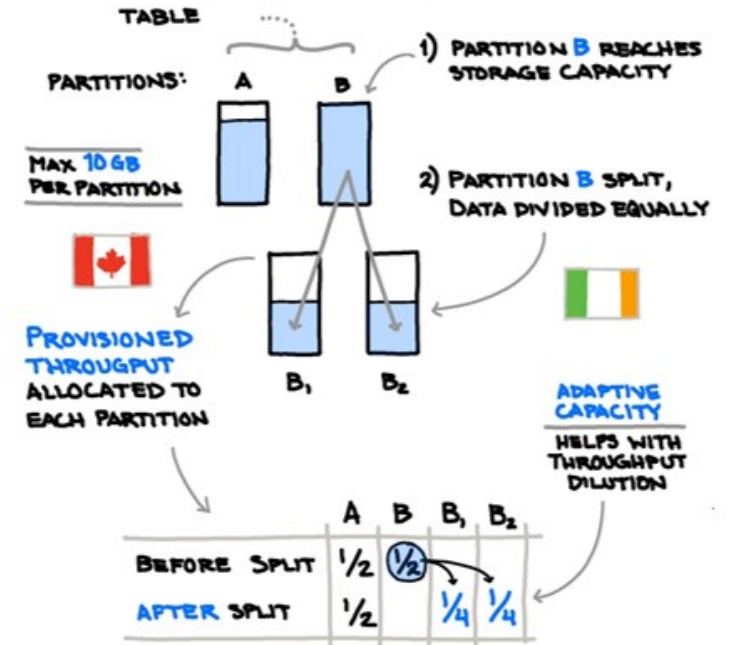
UP TO  1000 WCU - OR - 3000 RCU THROUGHPUT



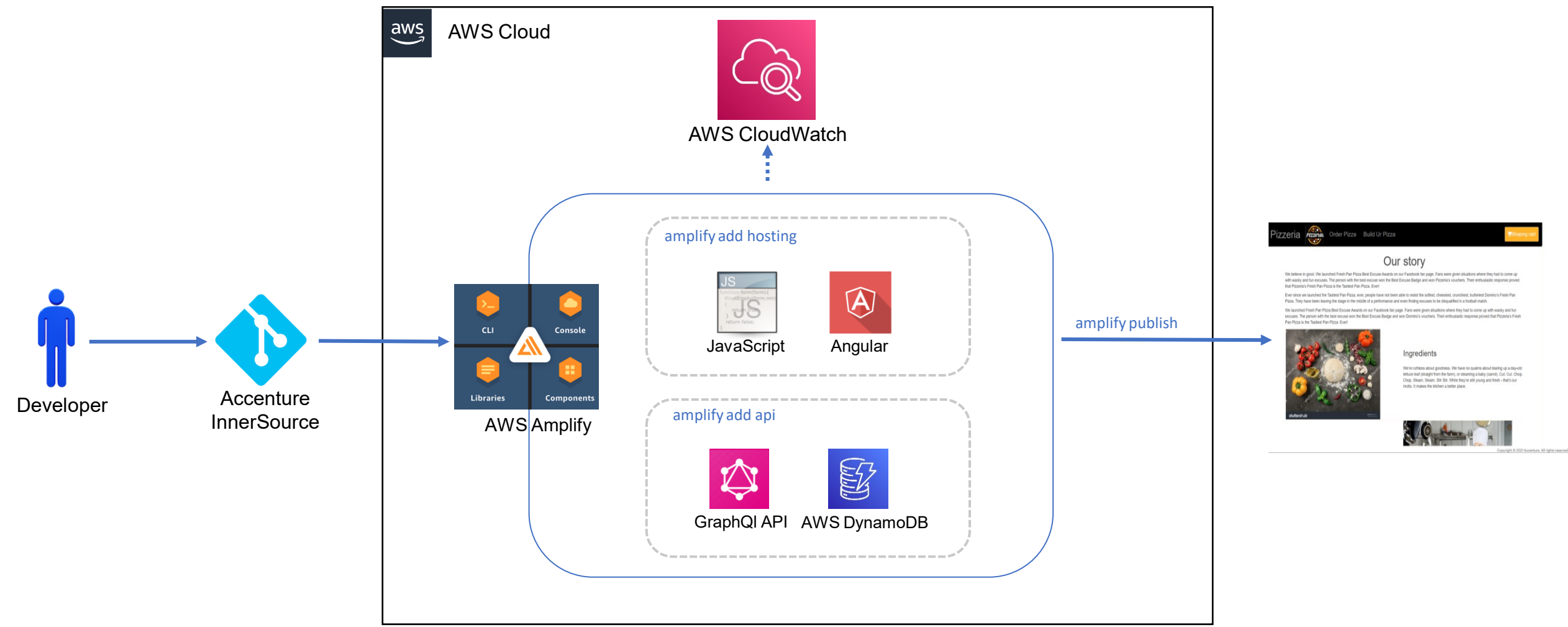
AWS DYNAMODB



SCALABILITY



Building Modern Web Application



Amplify Commands

```
npm install -g @aws-amplify/cli
npm install --save aws-amplify @aws-amplify/ui-angular
```

amplify configure

```
C:\Users\vidya.bharti\Downloads\pizzeriaampliy\pizzeria>amplify configure
Follow these steps to set up access to your AWS account:

Sign in to your AWS administrator account:
https://console.aws.amazon.com/
Press Enter to continue

Specify the AWS Region
? region: us-east-1

Specify the username of the new IAM user:
? user name:

Complete the user creation using the AWS console
https://console.aws.amazon.com/iam/home?region=us-east-1#/users$new?step=fi
policy%2FAdministratorAccess-Amplify
Press Enter to continue

Enter the access key of the newly created user:
? accessKeyId: *****
? secretAccessKey: *****
This would update/create the AWS Profile in your local machine
? Profile Name: vidyakey

Successfully set up the new user.
```

amplify init

```
C:\Users\vidya.bharti\Downloads\pizzeriaampliy\pizzeria>amplify init
Note: It is recommended to run this command from the root of your app
? Enter a name for the project pizzeriaamplify
The following configuration will be applied:

Project information
| Name: pizzeriaamplify
| Environment: dev
| Default editor: Visual Studio Code
| App type: javascript
| Javascript framework: angular
| Source Directory Path: src
| Distribution Directory Path: dist
| Build Command: npm.cmd run-script build
| Start Command: ng serve

Deployment completed.
Deployed root stack pizzeriaamplify [ ***** ] 4/4
  amplify-pizzeriaamplify-dev-1  AWS::CloudFormation::Stack  CREATE_COMPLETE
  AuthRole                      AWS::IAM::Role       CREATE_COMPLETE
  UnauthRole                    AWS::IAM::Role       CREATE_COMPLETE
  DeploymentBucket              AWS::S3::Bucket      CREATE_COMPLETE

√ Help improve Amplify CLI by sharing non sensitive configurations on failures (y/n)
Deployment state saved successfully.
√ Initialized provider successfully.
✔ Initialized your environment successfully.

Your project has been successfully initialized and connected to the cloud!

Some next steps:
"amplify status" will show you what you've added already and if it's locally configured
"amplify add <category>" 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 console" to open the Amplify Console and view your project status
"amplify publish" will build all your local backend and frontend resources (if you have

Pro tip:
Try "amplify add api" to create a backend API and then "amplify push" to deploy everyth
```

Amplify Commands

AWS Amplify CLI

amplify add api

```
C:\Users\vidya.bharti\Downloads\pizzeriaampliy\pizzeria>amplify add api
? Select from one of the below mentioned services: GraphQL
? Here is the GraphQL API that we will create. Select a setting to edit or continue Continue
? Choose a schema template: Single object with fields (e.g., "Todo" with ID, name, description)

⚠ WARNING: your GraphQL API currently allows public create, read, update, and delete access to all models via an API Key. To configure F
DY authorization rules, review: https://docs.amplify.aws/cli/graphql/authorization-rules
Edit your schema at C:\Users\vidya.bharti\Downloads\pizzeriaampliy\pizzeria\amplify\backend\api\pizzeriaamplify\schema.graphql or place
in a directory at C:\Users\vidya.bharti\Downloads\pizzeriaampliy\pizzeria\amplify\backend\api\pizzeriaamplify\schema
√ Do you want to edit the schema now? (Y/n) · yes
Edit the file in your editor: C:\Users\vidya.bharti\Downloads\pizzeriaampliy\pizzeria\amplify\backend\api\pizzeriaamplify\schema.graphql
✓ Successfully added resource pizzeriaamplify locally
```

amplify hosting add

```
C:\Users\vidya.bharti\Downloads\pizzeriaampliy\pizzeria>amplify hosting add
√ Select the plugin module to execute · Hosting with Amplify Console (Managed hosting with custom domains, Continuous deployment)
? Choose a type Manual deployment

You can now publish your app using the following command:

Command: amplify publish
```


Amplify Commands

amplify push

```
C:\Users\vidya.bharti\Downloads\pizzeriaampliy\pizzeria>amplify push
| Fetching updates to backend environment: dev from the cloud.
⚠ WARNING: your GraphQL API currently allows public create, read, update, and delete access to all models
DY authorization rules, review: https://docs.amplify.aws/cli/graphql/authorization-rules

/ Building resource api/pizzeriaamplify ✓ GraphQL schema compiled successfully.

Edit your schema at C:\Users\vidya.bharti\Downloads\pizzeriaampliy\pizzeria\amplify\backend\api\pizzeriaamp
in a directory at C:\Users\vidya.bharti\Downloads\pizzeriaampliy\pizzeria\amplify\backend\api\pizzeriaamp
✓ Successfully pulled backend environment dev from the cloud.
| Building resource api/pizzeriaamplify
⚠ WARNING: your GraphQL API currently allows public create, read, update, and delete access to all models
DY authorization rules, review: https://docs.amplify.aws/cli/graphql/authorization-rules

✓ GraphQL schema compiled successfully.

Edit your schema at C:\Users\vidya.bharti\Downloads\pizzeriaampliy\pizzeria\amplify\backend\api\pizzeriaamp
in a directory at C:\Users\vidya.bharti\Downloads\pizzeriaampliy\pizzeria\amplify\backend\api\pizzeriaamp

Current Environment: dev
```

Category	Resource name	Operation	Provider plugin
Api	pizzeriaamplify	Create	awscloudformation

```
? Are you sure you want to continue? Yes
```

amplify publish

```
C:\Users\vidya.bharti\Downloads\pizzeriaampliy\pizzeria>amplify publish
Fetching updates to backend environment: dev from the cloud.
⚠ WARNING: your GraphQL API currently allows public create, read, update, and delete
/ authorization rules, review: https://docs.amplify.aws/cli/graphql/authorization-rul

Fetching updates to backend environment: dev from the cloud. ✓ GraphQL schema compil

Edit your schema at C:\Users\vidya.bharti\Downloads\pizzeriaampliy\pizzeria\amplify\ba
in a directory at C:\Users\vidya.bharti\Downloads\pizzeriaampliy\pizzeria\amplify\ba
Successfully pulled backend environment dev from the cloud.

Current Environment: dev
```

Category	Resource name	Operation	Provider plugin
Hosting	amplifyhosting	Create	awscloudformation
Api	pizzeriaamplify	No Change	awscloudformation

```
Are you sure you want to continue? Yes

✓ Zipping artifacts completed.
✓ Deployment complete!
https://dev.d9i8txsr68sqt.amplifyapp.com
```


DEMO



**THANK YOU
HAPPY LEARNING 😊**