



CLICK, CAPTURE, CREATE: VIRTUAL PHOTOBOOTH WITH AWS AMPLIFY

introducing **ABOUT ME**

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WHAT'S ON TABLE

Story behind building Virtual Photobooth

- 01 WHY ?**
- 02 WHAT ?**
- 03 AGAIN WHY ?**
- 04 ARCHITECTURE**
- 05 HOW TO USE ?**
- 06 SUCCESS STORY**

**"Problems are nothing but
wake-up calls for creativity"**
- Gerhard Gschwandtner



INSPIRATION

During the Mauticon conference in 2020, I encountered an innovative virtual photo booth

But it was paid tool



BIRTH OF THE IDEA

Wanted to bring this to AWS Community Day South Asia 2021 but couldn't find a free tool in time.

Fast forward to 2022, as we prepped for ACD India, I decided to build our own virtual photo booth for the community

VISION

The image shows a virtual photo booth interface. At the top, there's a blue circular icon with a camera and the text "VIRTUAL PHOTOBOTH". Below it is a green button labeled "Click me & Frame me!". To the left, a green box lists four steps: "Step 1: Select your frame first", "Step 2: Adjust your camera in right position", "Step3: Capture photo", and "Step 4: Download photo". To the right, there are two colored boxes: "Frame 1" (green) and "Frame 2" (red). Below these are two circular preview images of a person wearing a cap, one in a green frame and one in a red frame. At the bottom, there are "Capture" and "Download" buttons.

Step 1: Select your frame first
Step 2: Adjust your camera in right position
Step3: Capture photo
Step 4: Download photo

Frame 1

Frame 2

Capture

Download

EXTENDED

During ACD India event preparation time CFP got opened for AWS Community Day, Pune 2022

I discussed this idea with Jones Zachariah Noel N

EXTENDED

Decided to build this virtual photo booth with AWS Amplify studio with the same admin functionality.

- ▶ Admin login
- ▶ Admin or user can upload their photo frame to a customised virtual photo booth
- ▶ Admin or user can upload multiple photo frames

WHAT

what we require to build whole full stack application?

Hosting

Amplify hosting

Authentication

Amplify Authentication

API

Amplify API - GraphQL

Storage

Amplify Storage -Assets

WHY AMPLIFY?

Swiss army knife

Develop
Configure backend: [CLI](#), [Admin UI](#)
Connect backend: [Libraries](#), [UI Components](#)

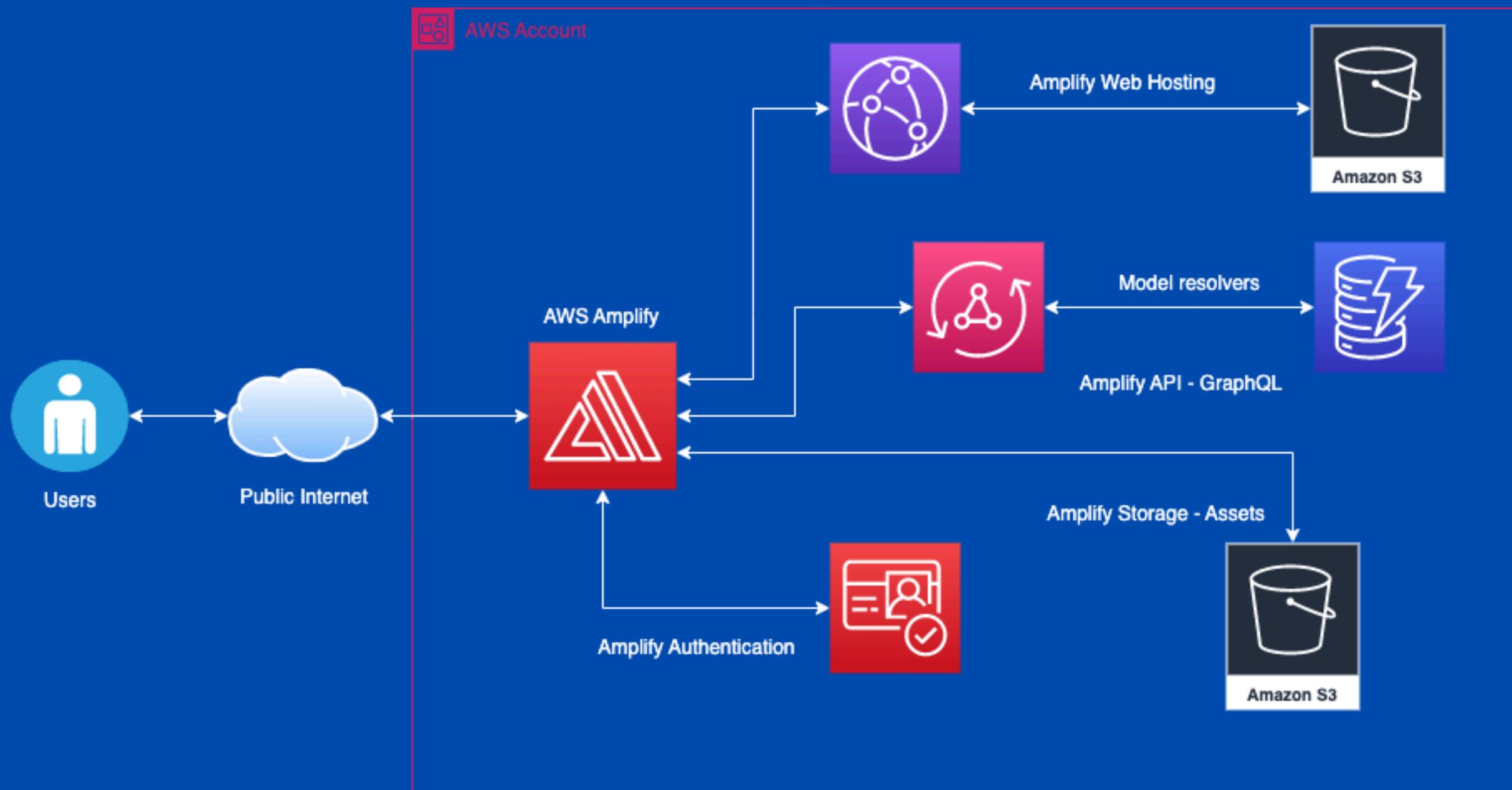
Deliver
[CLI, Console](#)

Manage
[Admin UI](#)

Authentication	DataStore	Managed Hosting	Manage Users
API (GraphQL, REST)	Functions	CI/CD	Manage Content
Storage	Analytics	Branch Deploys	
Interactions	AI/ML Predictions	Atomic Deployments	
PubSub	Push Notifications	Custom Domains	



ARCHITECTURE



HOW TO USE

Scan this QR to know more details steps and screenshot



- > amplify init
- > amplify add auth
- > amplify add api
- > amplify add storage
- > amplify add hosting
- > amplify status
- > amplify publish

AMPLIFY INIT

```
\u$ amplify init
⚠️ For new projects, we recommend starting with AWS Amplify Gen 2, our new code-first developer
experience. Get started at https://docs.amplify.aws/react/start/quickstart/
✓ Do you want to continue with Amplify Gen 1? (y/N) · yes
✓ Why would you like to use Amplify Gen 1? · I am a current Gen 1 user
Note: It is recommended to run this command from the root of your app directory
? Enter a name for the project 30daysofamplify
The following configuration will be applied:

Project information
| Name: 30daysofamplify
| Environment: dev
| Default editor: Visual Studio Code
| App type: javascript
| Javascript framework: react
| Source Directory Path: src
| Distribution Directory Path: build
| Build Command: npm run-script build
| Start Command: npm run-script start

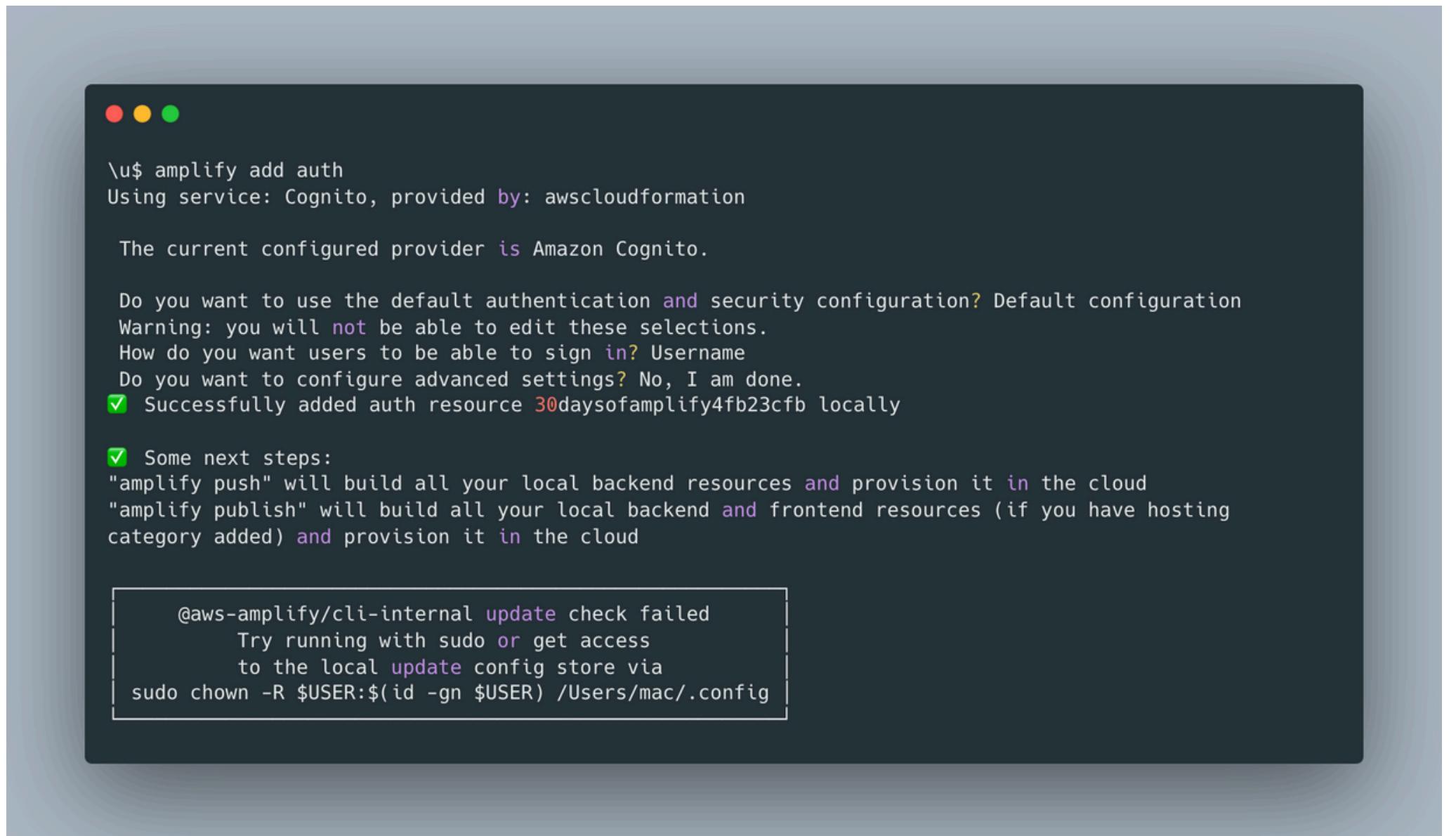
? Initialize the project with the above configuration? Yes
Using default provider awscloudformation
? Select the authentication method you want to use: AWS profile

For more information on AWS Profiles, see:
https://docs.aws.amazon.com/cli/latest/userguide/cli-configure-profiles.html

? Please choose the profile you want to use amplify-us-east-1
Adding backend environment dev to AWS Amplify app: d30nacai3cvdjj

Deployment completed.
Deploying root stack 30daysofamplify [ ===== ] 3/4
  amplify-30daysofamplify-dev-8... AWS::CloudFormation::Stack      CREATE_IN_PROGRESS   Fri
Nov 22 2024 19:40:48...
    DeploymentBucket          AWS::S3::Bucket            CREATE_COMPLETE     Fri
Nov 22 2024 19:41:04...
    AuthRole                 AWS::IAM::Role           CREATE_COMPLETE     Fri
Nov 22 2024 19:41:08...
    UnauthRole               AWS::IAM::Role           CREATE_COMPLETE     Fri
Nov 22 2024 19:41:08...
```

AMPLIFY ADD AUTH



```
\u$ amplify add auth
Using service: Cognito, provided by: awscloudformation

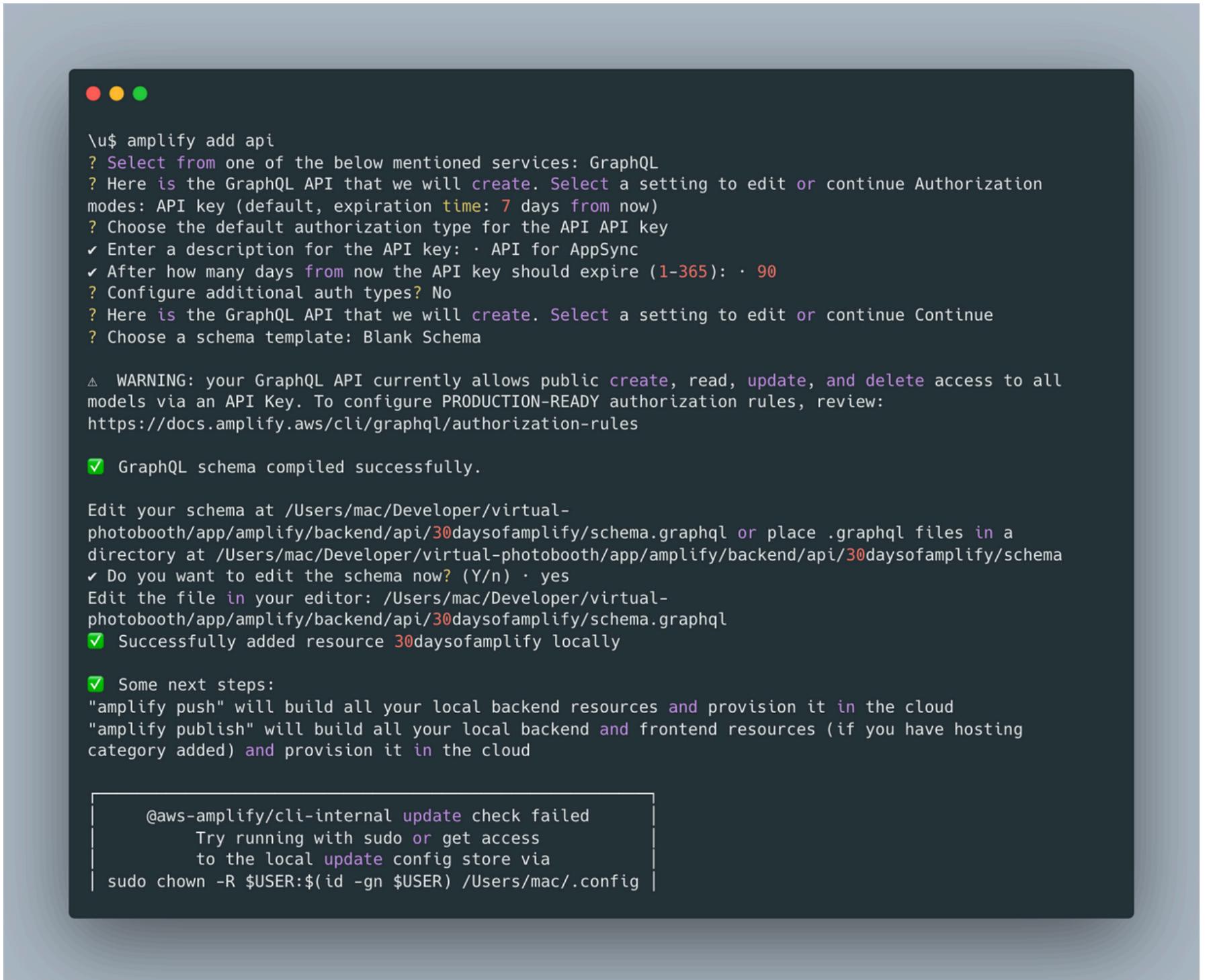
The current configured provider is Amazon Cognito.

Do you want to use the default authentication and security configuration? Default configuration
Warning: you will not be able to edit these selections.
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 30daysofamplify4fb23cfb locally

✓ Some next steps:
"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

@aws-amplify/cli-internal update check failed
Try running with sudo or get access
to the local update config store via
sudo chown -R $USER:$USER /Users/mac/.config
```

AMPLIFY ADD API



```
\u$ 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 Authorization
modes: API key (default, expiration time: 7 days from now)
? Choose the default authorization type for the API API key
✓ Enter a description for the API key: · API for AppSync
✓ After how many days from now the API key should expire (1-365): · 90
? Configure additional auth types? No
? Here is the GraphQL API that we will create. Select a setting to edit or continue Continue
? Choose a schema template: Blank Schema

⚠ WARNING: your GraphQL API currently allows public create, read, update, and delete access to all
models via an API Key. To configure PRODUCTION-READY authorization rules, review:
https://docs.amplify.aws/cli/graphql/authorization-rules

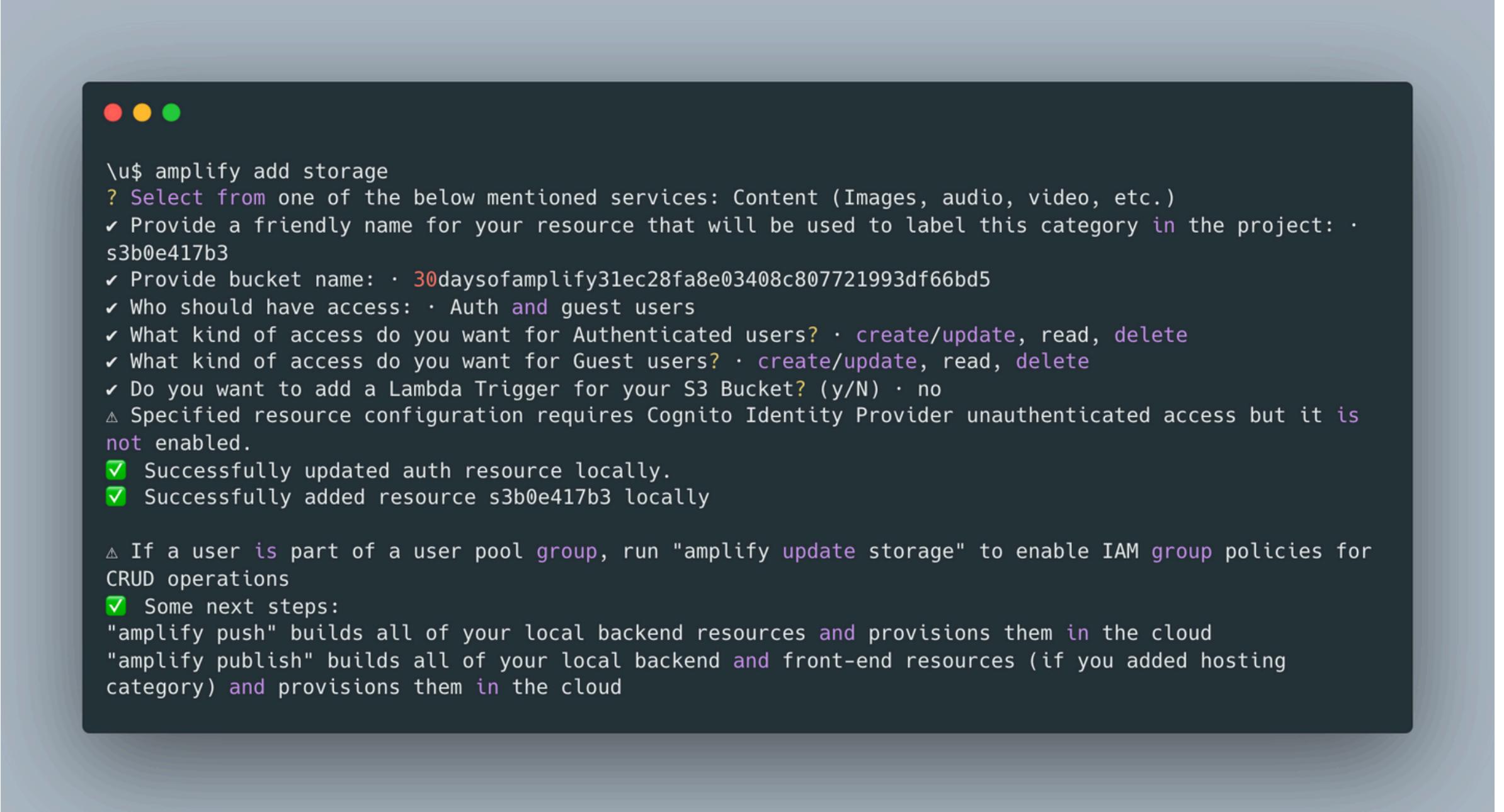
✓ GraphQL schema compiled successfully.

Edit your schema at /Users/mac/Developer/virtual-
photobooth/app/amplify/backend/api/30daysofamplify/schema.graphql or place .graphql files in a
directory at /Users/mac/Developer/virtual-photobooth/app/amplify/backend/api/30daysofamplify/schema
✓ Do you want to edit the schema now? (Y/n) · yes
Edit the file in your editor: /Users/mac/Developer/virtual-
photobooth/app/amplify/backend/api/30daysofamplify/schema.graphql
✓ Successfully added resource 30daysofamplify locally

✓ Some next steps:
"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

[ @aws-amplify/cli-internal update check failed
  Try running with sudo or get access
  to the local update config store via
  sudo chown -R $USER:$(id -gn $USER) /Users/mac/.config ]
```

AMPLIFY ADD STORAGE



```
\u$ amplify add storage
? Select from one of the below mentioned services: Content (Images, audio, video, etc.)
✓ Provide a friendly name for your resource that will be used to label this category in the project: .
s3b0e417b3
✓ Provide bucket name: . 30daysofamplify31ec28fa8e03408c807721993df66bd5
✓ Who should have access: . Auth and guest users
✓ What kind of access do you want for Authenticated users? . create/update, read, delete
✓ What kind of access do you want for Guest users? . create/update, read, delete
✓ Do you want to add a Lambda Trigger for your S3 Bucket? (y/N) . no
⚠ Specified resource configuration requires Cognito Identity Provider unauthenticated access but it is
not enabled.
✓ Successfully updated auth resource locally.
✓ Successfully added resource s3b0e417b3 locally

⚠ If a user is part of a user pool group, run "amplify update storage" to enable IAM group policies for
CRUD operations
✓ Some next steps:
"amplify push" builds all of your local backend resources and provisions them in the cloud
"amplify publish" builds all of your local backend and front-end resources (if you added hosting
category) and provisions them in the cloud
```

AMPLIFY ADD STORAGE



The screenshot shows a mobile application interface with three circular status indicators at the top: red, yellow, and green. Below them is a code editor window displaying the following JavaScript code:

```
// Using Storage to perform S3 PutObject
await Storage.put(formState.image.name, formState.image.fileInfo);

// Using Storage to get S3 object
await Storage.get(currentPost.image, { download: true });
await Storage.get(currentPost.image);
```

SCHEMA

```
● ● ●  
type Template @model {  
    id: ID!  
    name: String!  
    description: String  
    image: String!  
}
```

```
● ● ●  
{  
    type Mutation {  
        createTemplate(input: CreateTemplateInput!, condition: ModelTemplateConditionInput): Template  
        updateTemplate(input: UpdateTemplateInput!, condition: ModelTemplateConditionInput): Template  
        deleteTemplate(input: DeleteTemplateInput!, condition: ModelTemplateConditionInput): Template  
    }  
  
    type Query {  
        getTemplate(id: ID!): Template  
        listTemplates(filter: ModelTemplateFilterInput, limit: Int, nextToken: String): ModelTemplateConnection  
    }  
  
    type Subscription {  
        onCreateTemplate(filter: ModelSubscriptionTemplateFilterInput): Template  
            @aws_subscribe(mutations: ["createTemplate"])  
        onUpdateTemplate(filter: ModelSubscriptionTemplateFilterInput): Template  
            @aws_subscribe(mutations: ["updateTemplate"])  
        onDeleteTemplate(filter: ModelSubscriptionTemplateFilterInput): Template  
            @aws_subscribe(mutations: ["deleteTemplate"])  
    }  
  
    type Template {  
        id: ID!  
        name: String!  
        description: String  
        image: String!  
        createdAt: AWSDateTime!  
        updatedAt: AWSDateTime!  
    }  
}
```

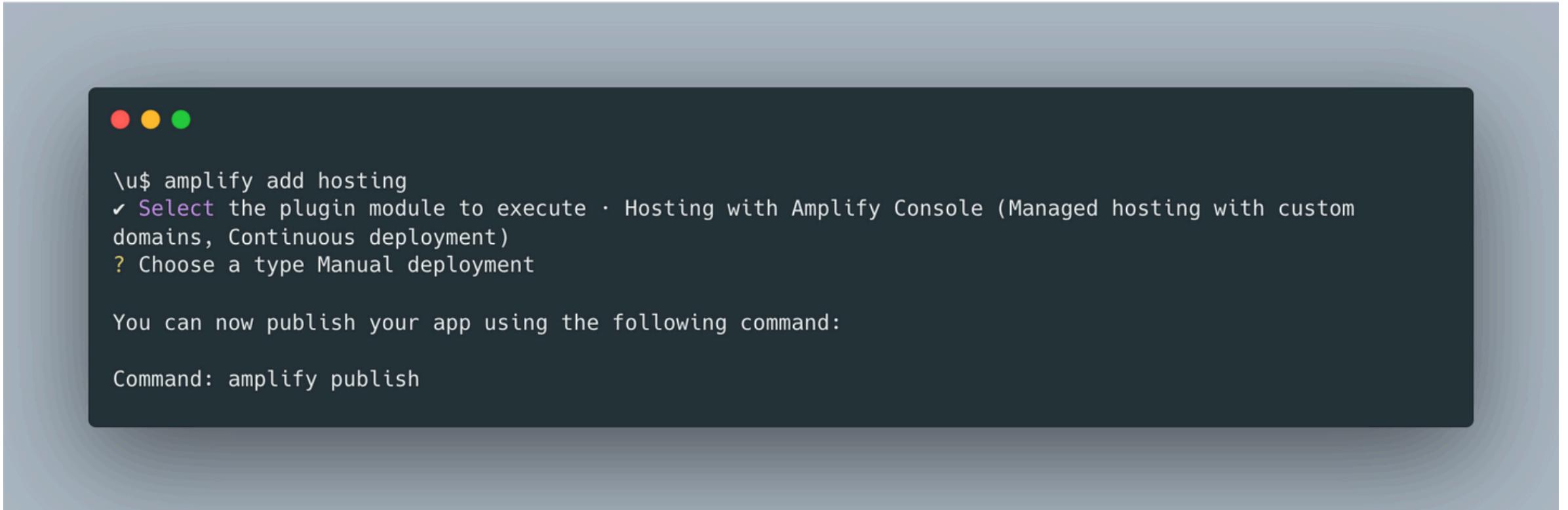
```
// Invoking mutations from Front-end
async function createTemplate(){
    await API.graphql({
        query: createTemplate,
        variables: { input: postInfo }
    });
}

// Invoking queries from Front-end
async function listTemplate(){
    await API.graphql({
        query: listTemplates,
        variables: { limit: 100 }
    })
}
```

```
export const createTemplate = /* GraphQL */ `mutation CreateTemplate(
    $input: CreateTemplateInput!
    $condition: ModelTemplateConditionInput
) {
    createTemplate(input: $input, condition: $condition) {
        id
        name
        description
        image
        createdAt
        updatedAt
    }
};

export const listTemplates = /* GraphQL */ `query ListTemplates(
    $filter: ModelTemplateFilterInput
    $limit: Int
    $nextToken: String
) {
    listTemplates(filter: $filter, limit: $limit, nextToken: $nextToken) {
        items {
            id
            name
            description
            image
            createdAt
            updatedAt
        }
        nextToken
    }
};
```

AMPLIFY ADD HOSTING



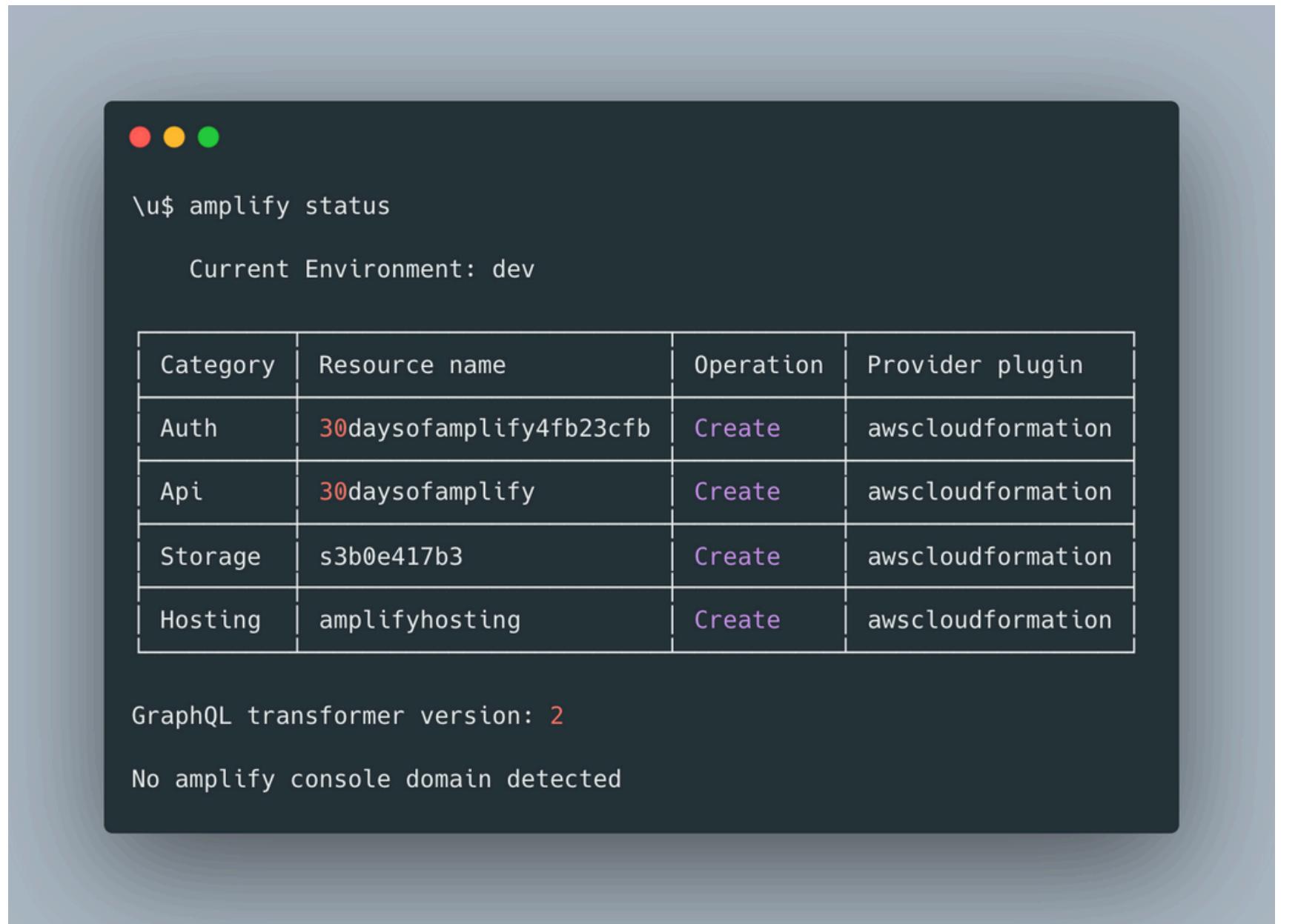
A screenshot of a terminal window on a Mac OS X system. The window has the standard title bar with red, yellow, and green buttons. The main area of the terminal shows the following text:

```
\u$ amplify add hosting
✓ 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 STATUS



A terminal window showing the output of the command `\u$ amplify status`. The output indicates the current environment is `dev`. It lists resources by category: Auth, Api, Storage, and Hosting, all of which are in the `Create` operation state using the `awscloudformation` provider plugin. The GraphQL transformer version is 2, and no Amplify console domain is detected.

```
\u$ amplify status

  Current Environment: dev

  Category      Resource name        Operation    Provider plugin
  Auth          30daysofamplify4fb23cfb  Create       awscloudformation
  Api           30daysofamplify      Create       awscloudformation
  Storage        s3b0e417b3          Create       awscloudformation
  Hosting        amplifyhosting     Create       awscloudformation

  GraphQL transformer version: 2
  No amplify console domain detected
```

work
DEMO



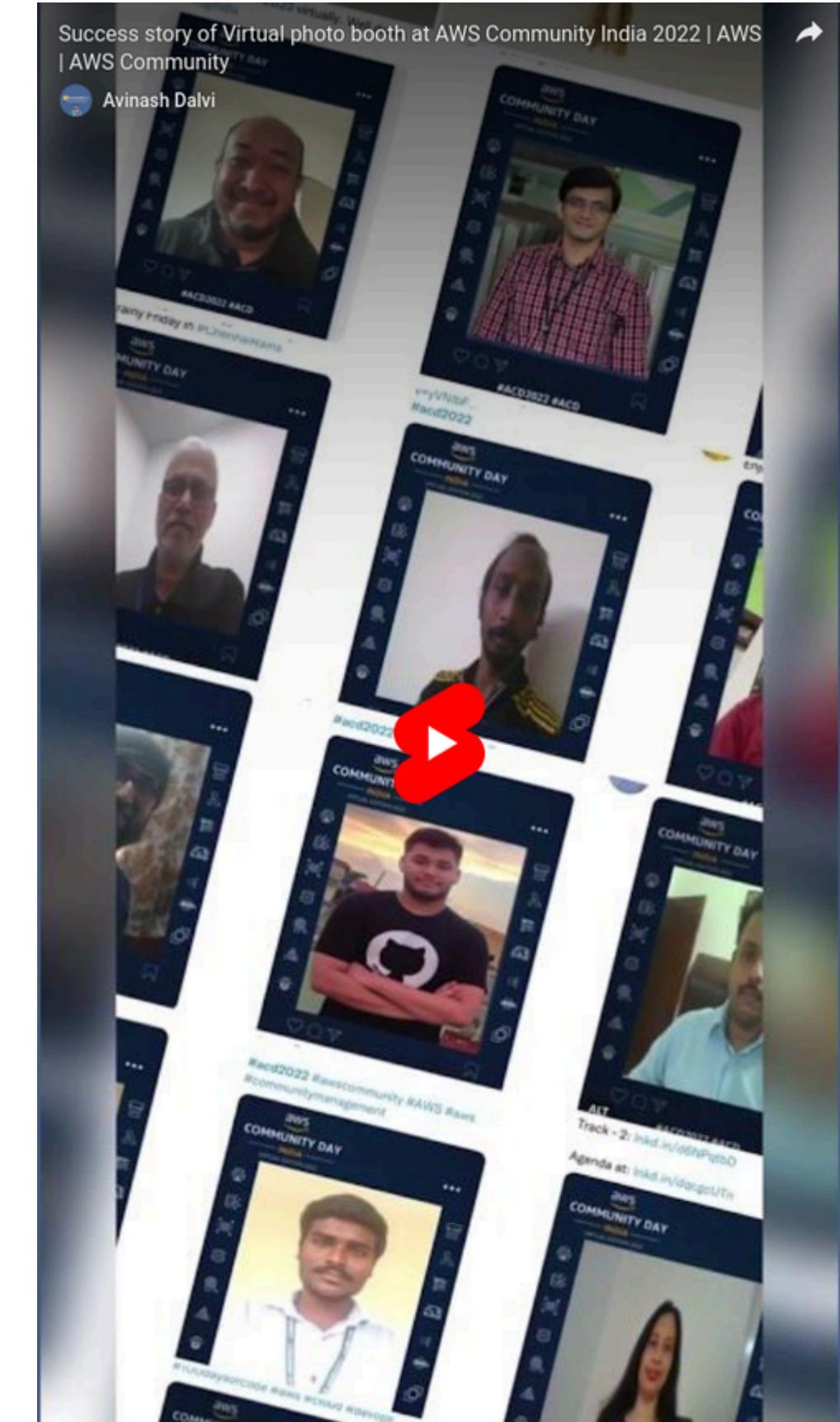
SCAN ME

<https://dev.d30nacai3cvdjj.amplifyapp.com/>

Stories SUCCESS

Don't Wait for Opportunity, Create it

@AvinashDalvi_



 @LearnwithAvinashDalvi

THANKS FOR LISTENING



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