Before we go in what AppSync is about and what it does, we should understand few terms

GraphQL: A query language for APIs that allows clients to request exactly the data they need.

Resolvers: Functions that fetch data for GraphQL queries. They can interact with databases, APIs, or other data sources.

Schema: Defines the structure of the GraphQL API, including types, queries, mutations, and subscriptions.

REST API: Uses multiple endpoints with fixed data structures and standard HTTP methods, which can lead to over-fetching or under-fetching of data.

GraphQL API: Uses a single endpoint with flexible, client-defined queries and mutations, allowing for more precise data retrieval and real-time capabilities.


AWS AppSync

AWS AppSync is a managed service that simplifies the development of scalable GraphQL APIs by handling many of the complexities involved in deploying and managing a GraphQL API at scale.

- AWS managed service that uses **GraphQL**

- Need to upload a GraphQL schema to AppSync

- Integrated with CloudWatch for logging

- Integrated with X-Ray for Tracing

Use case
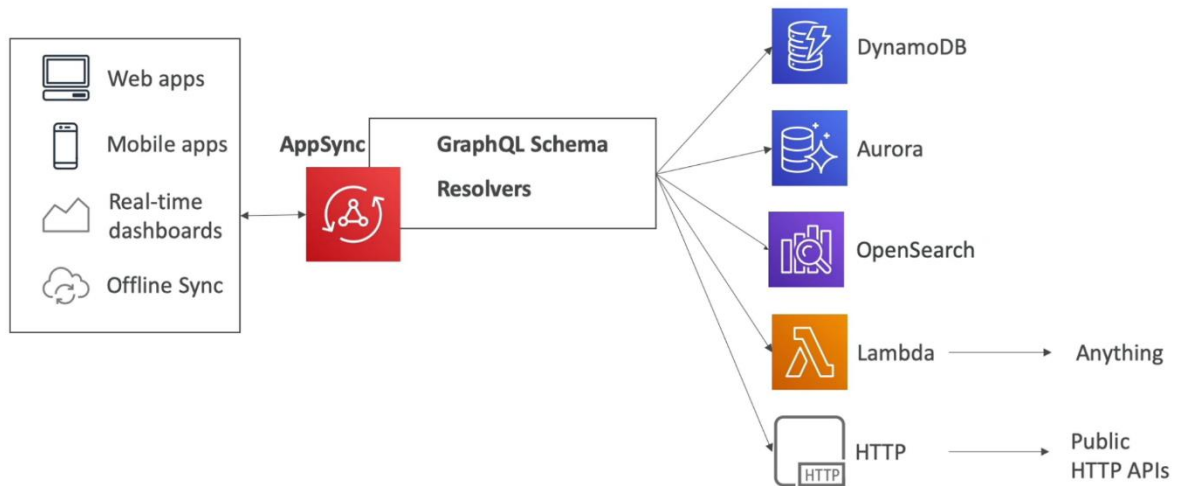
- GraphQL responses may include data from one or more sources (NoSQL DB, SQL DB, other APIs)

- Optional caching functionality to reduce load on the data source

- **Resolvers have direct integration with DynamoDB, Aurora and OpenSearch.**

- Lambda function can be used to get data from any source.

- Resolvers can fetch data from other HTTP APIs as well.

- **Retrieve data in real-time** with **WebSocket** or **MQTT** on WebSocket

- **Offline data synchronization** in mobile devices

Security

- **To get HTTPS on AppSync with a custom domain, use CloudFront in front of AppSync**

- 4 ways to authorize applications to interact with AppSync GraphQL API:

  - API_KEY - generate an API key and give it to the customer

  - AWS_IAM - authorize IAM users or roles / **cross-account access**

  - AMAZON_COGNITO_USER_POOLS - AWS managed IDP for external users

  - OPENID_CONNECT - 3rd party OIDC compatible IDP for external users

Questions:

https://lisireddy.medium.com/aws-appsync-scenario-based-questions-1d3b43fc72b8

Wish you the best …! Happy Learning ..!

Yours' Love (@lisireddy across all the platforms)