
AWS
re:Invent
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API-first functionless application architectures with AWS AppSync

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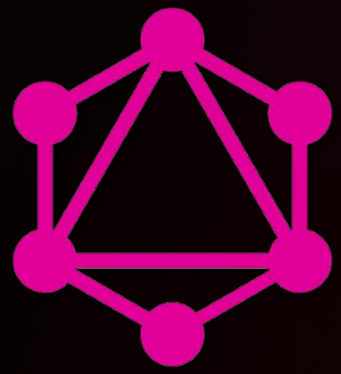
What is GraphQL?

AWS AppSync overview

Functionless API

Interactive Session

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GraphQL

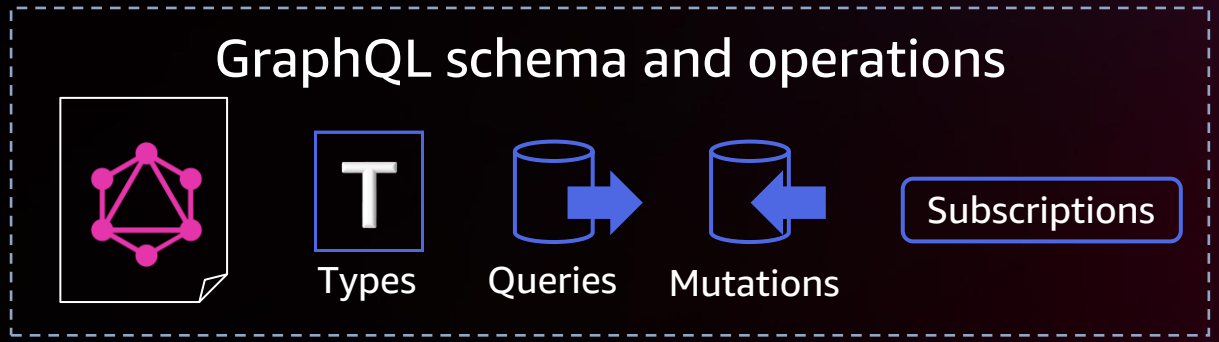
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GraphQL is a query language for APIs and
a runtime for fulfilling those queries
with your existing data



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A query language for APIs … and a runtime




```
type User {
  id: ID!
  username: String!
  firstName: String
  lastName: String
  daysActive: Int
}
```

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A query language for APIs … and a runtime

Queries

```
query GetPost {
  getPost(id: ”1”) {
    id
    title
    author
    date
  }
}
```

Mutations

```
mutation CreatePost {
  createPost(input: {…}) {
    id
    title
    author
    date
  }
}
```

Subscriptions

```
subscription OnCreatePost {
  onCreatePost {
    id
    title
    author
    date
  }
}
```

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A query language for APIs … and a runtime

Queries

```
query GetPost {
  getPost(id: ”1”) {
    id
    title
  }
}
```

Mutations

```
mutation CreatePost {
  createPost(input: {…}) {
    id
    date
  }
}
```

Subscriptions

```
subscription OnCreatePost {
  onCreatePost {
    id
    title
    author
  }
}
```

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AWS AppSync overview

ACCELERATE APPLICATION DEVELOPMENT AND IMPROVE PERFORMANCE WITH GRAPHQL



Build apps faster

Frontend developers can build features without waiting for backend teams to create new APIs



Simplified data access

Interact with data from multiple microservices, data sources, and REST APIs using a single API



Improve app performance

Fetch only required data and reduce the number of network requests to fetch data for a particular view



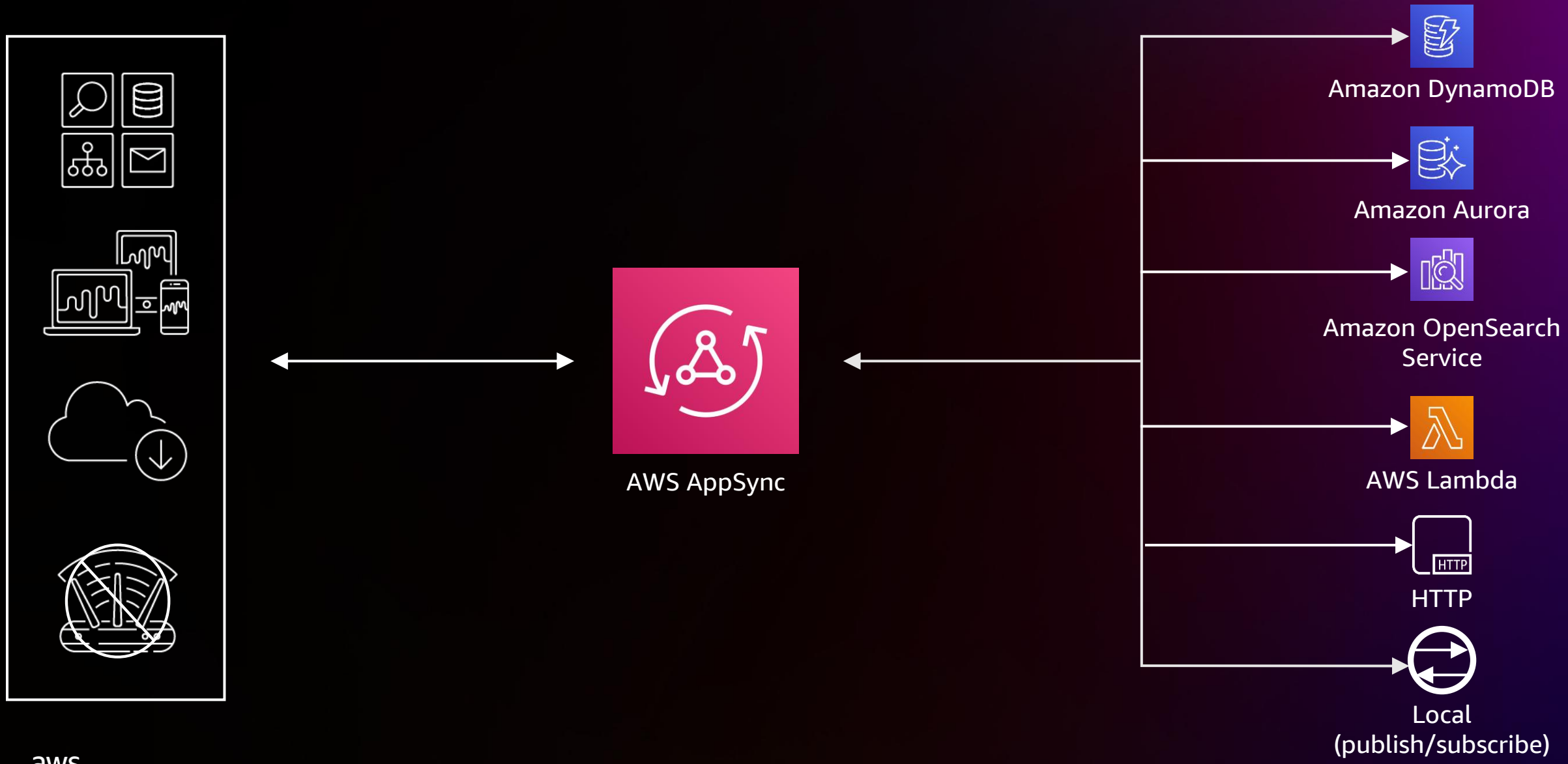
Real-time experiences

Create engaging apps with real-time subscriptions

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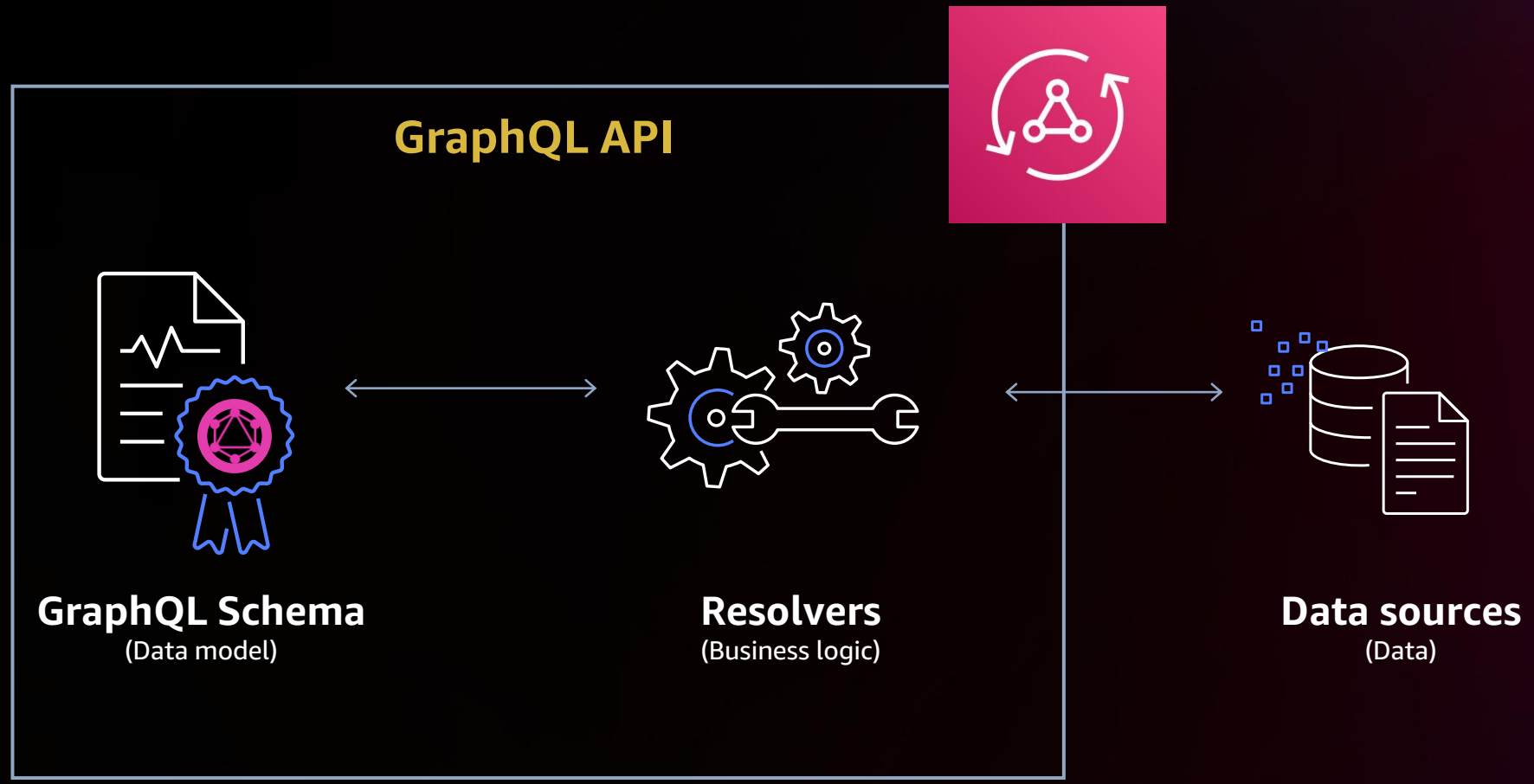
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How AWS AppSync works



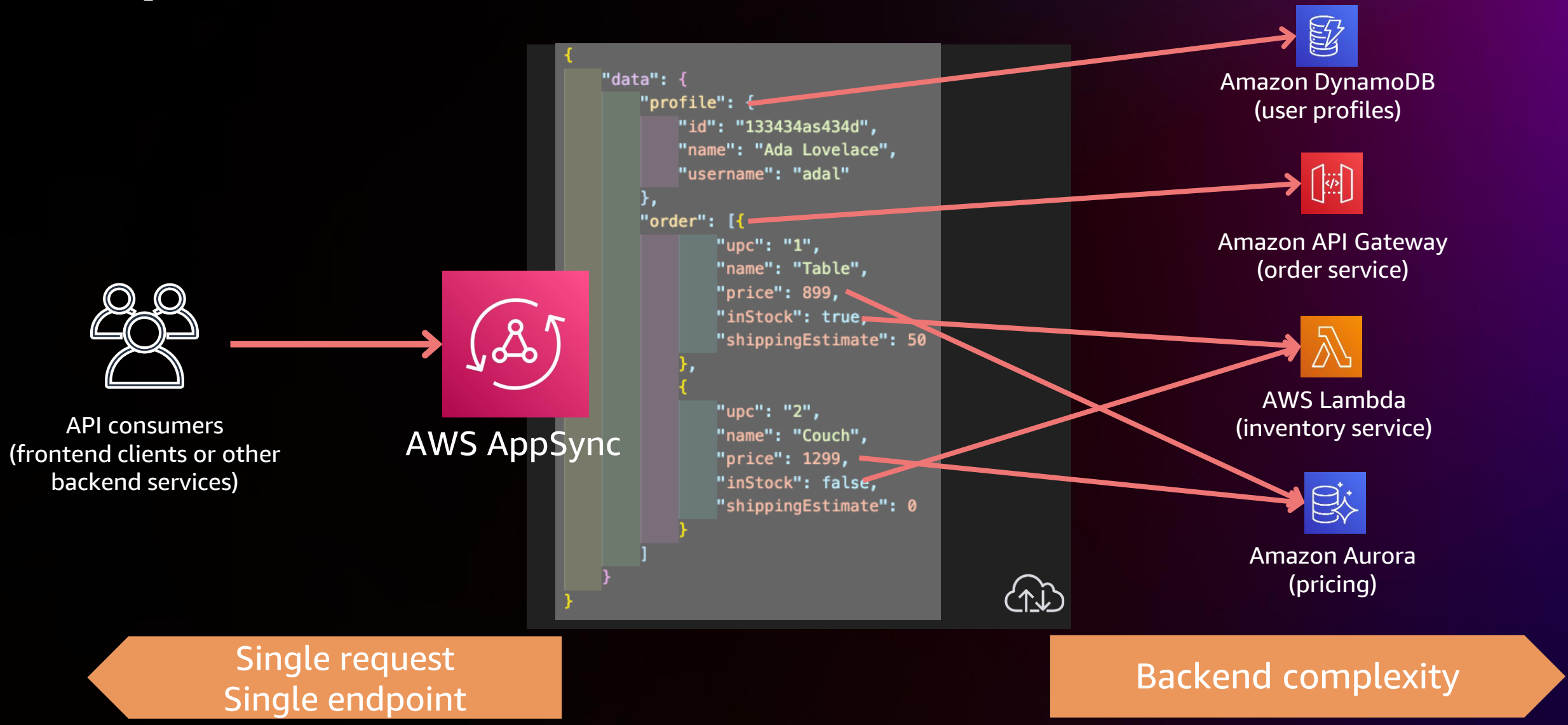
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How AWS AppSync works



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Simplified data access

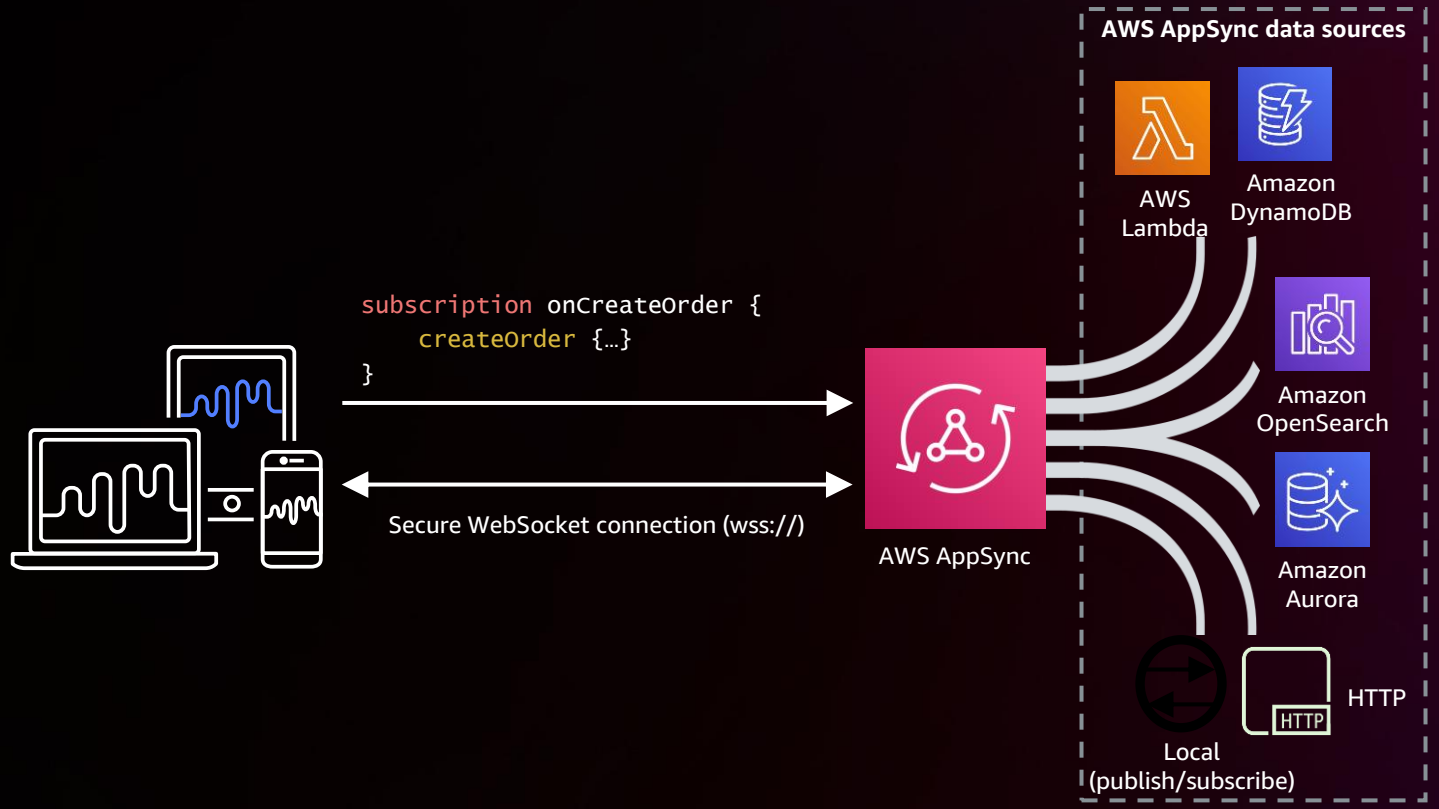


Single request
Single endpoint

Backend complexity

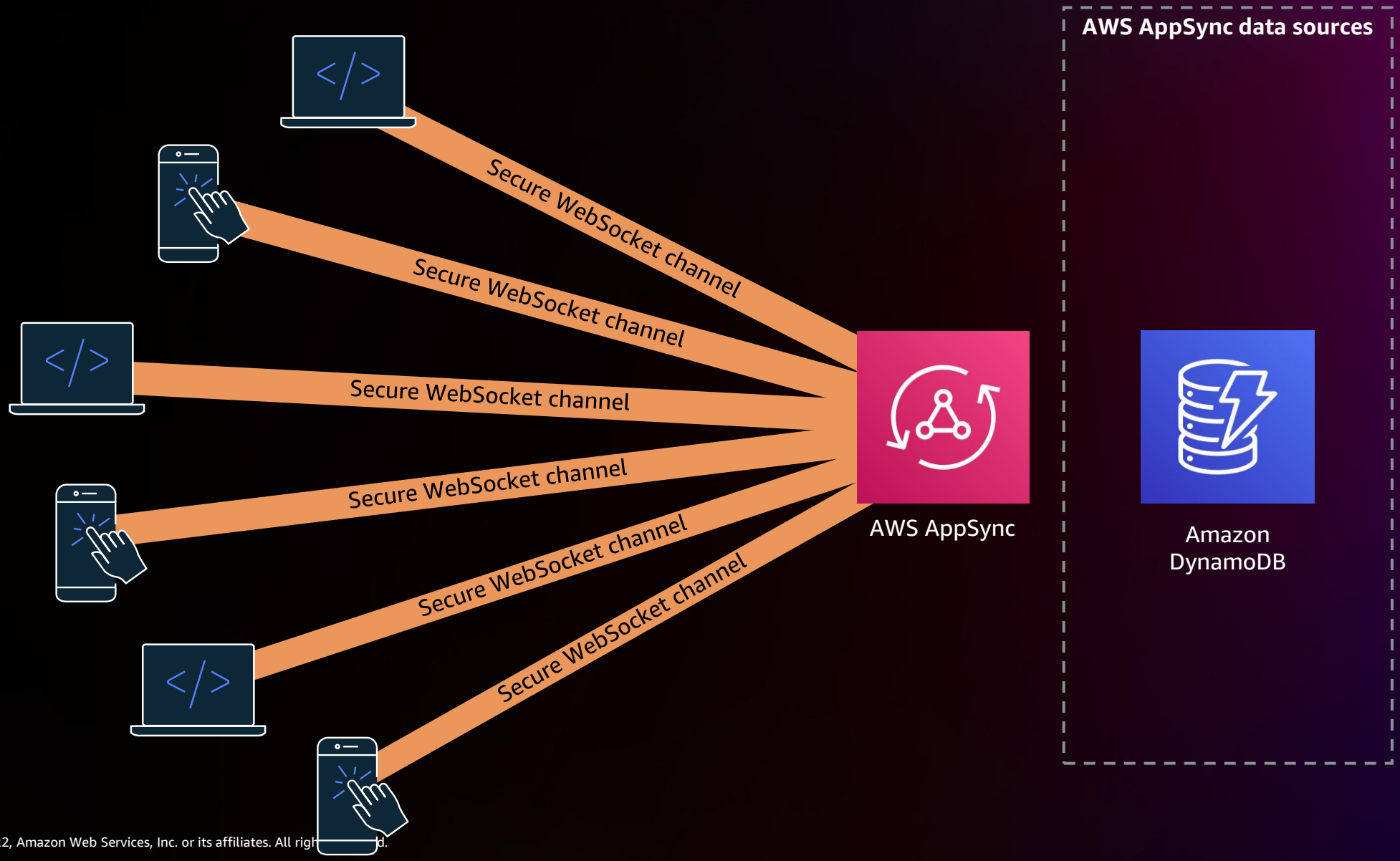
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Real-time use cases with GraphQL subscriptions



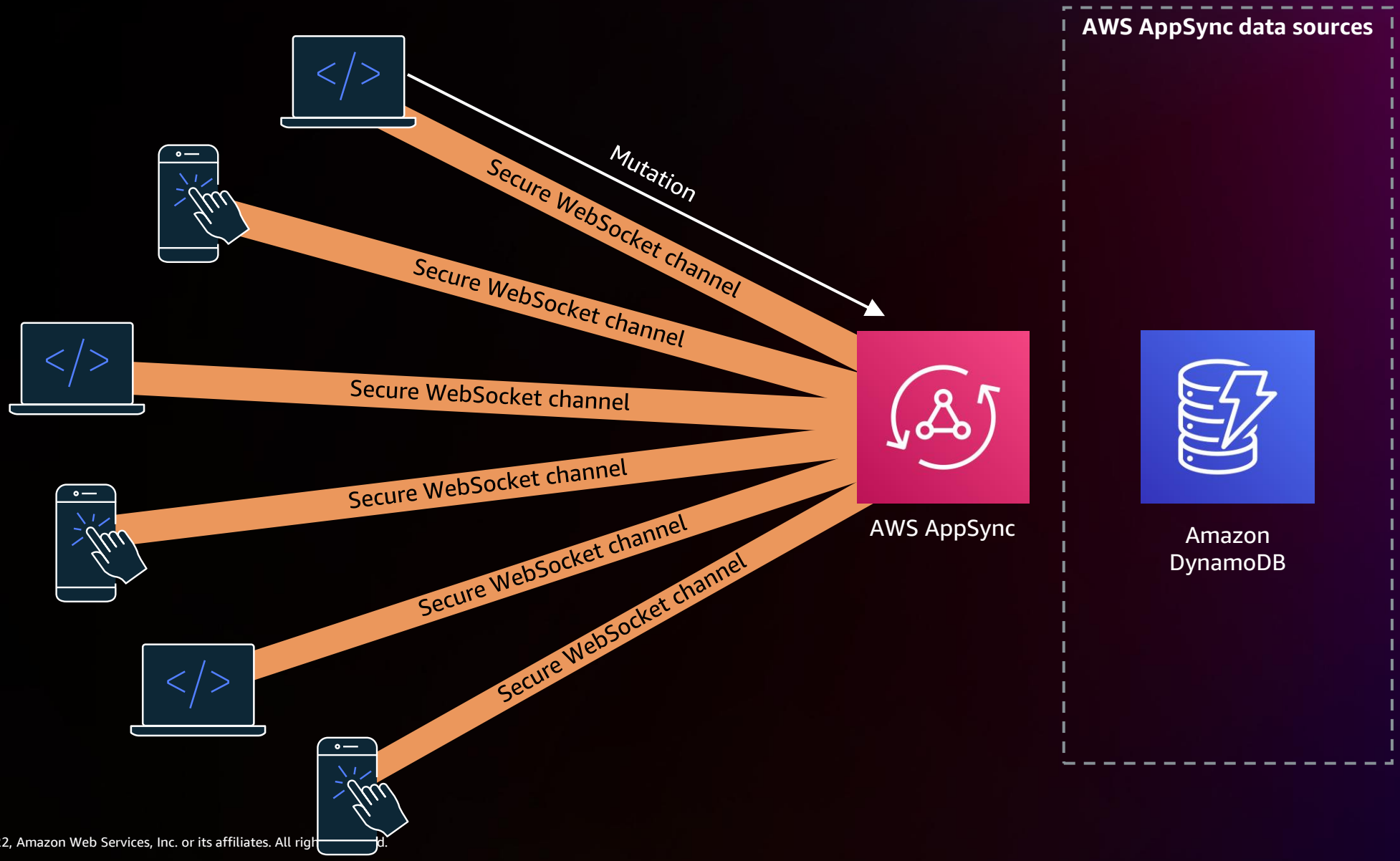
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Real-time GraphQL subscriptions



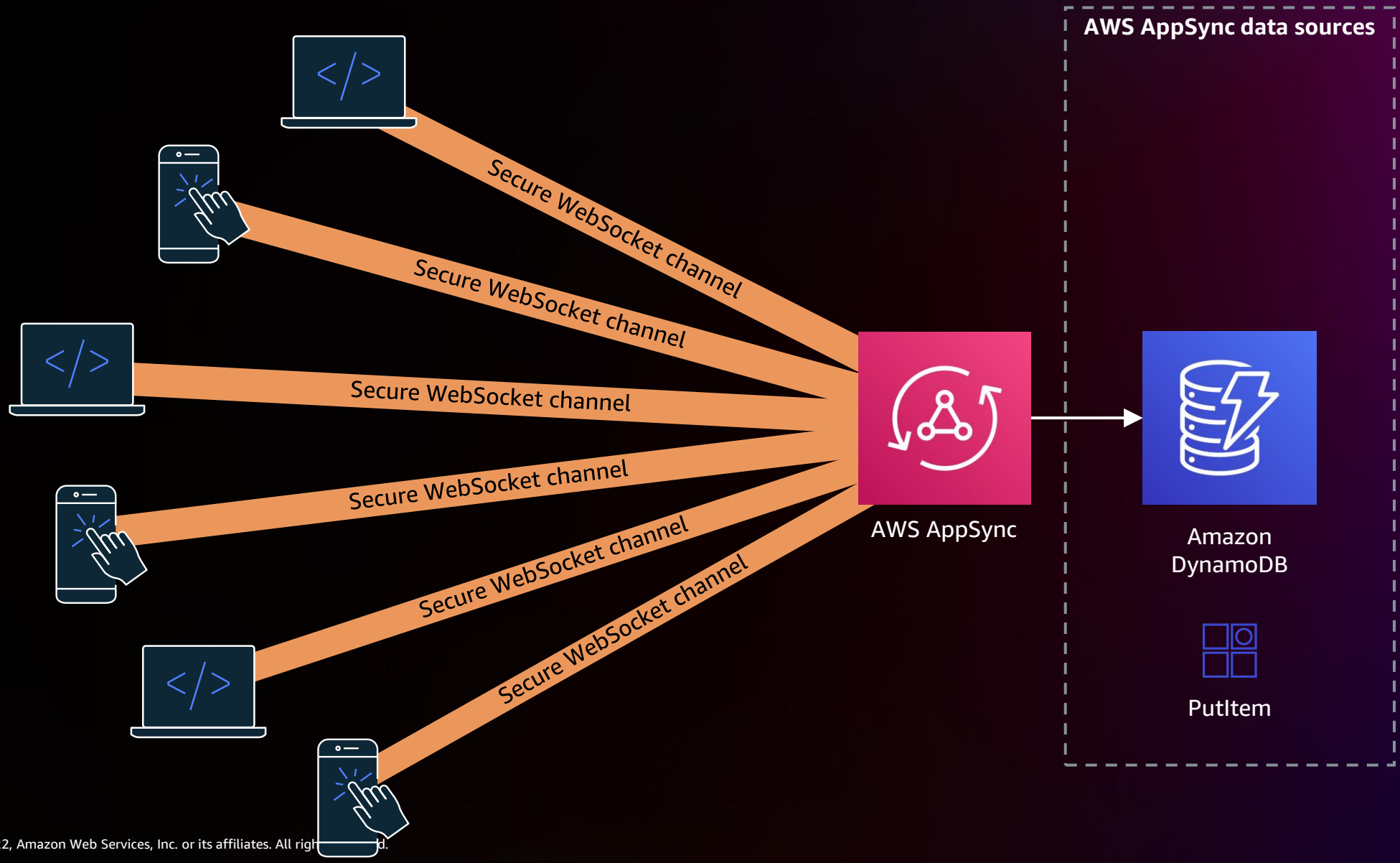
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Real-time GraphQL subscriptions



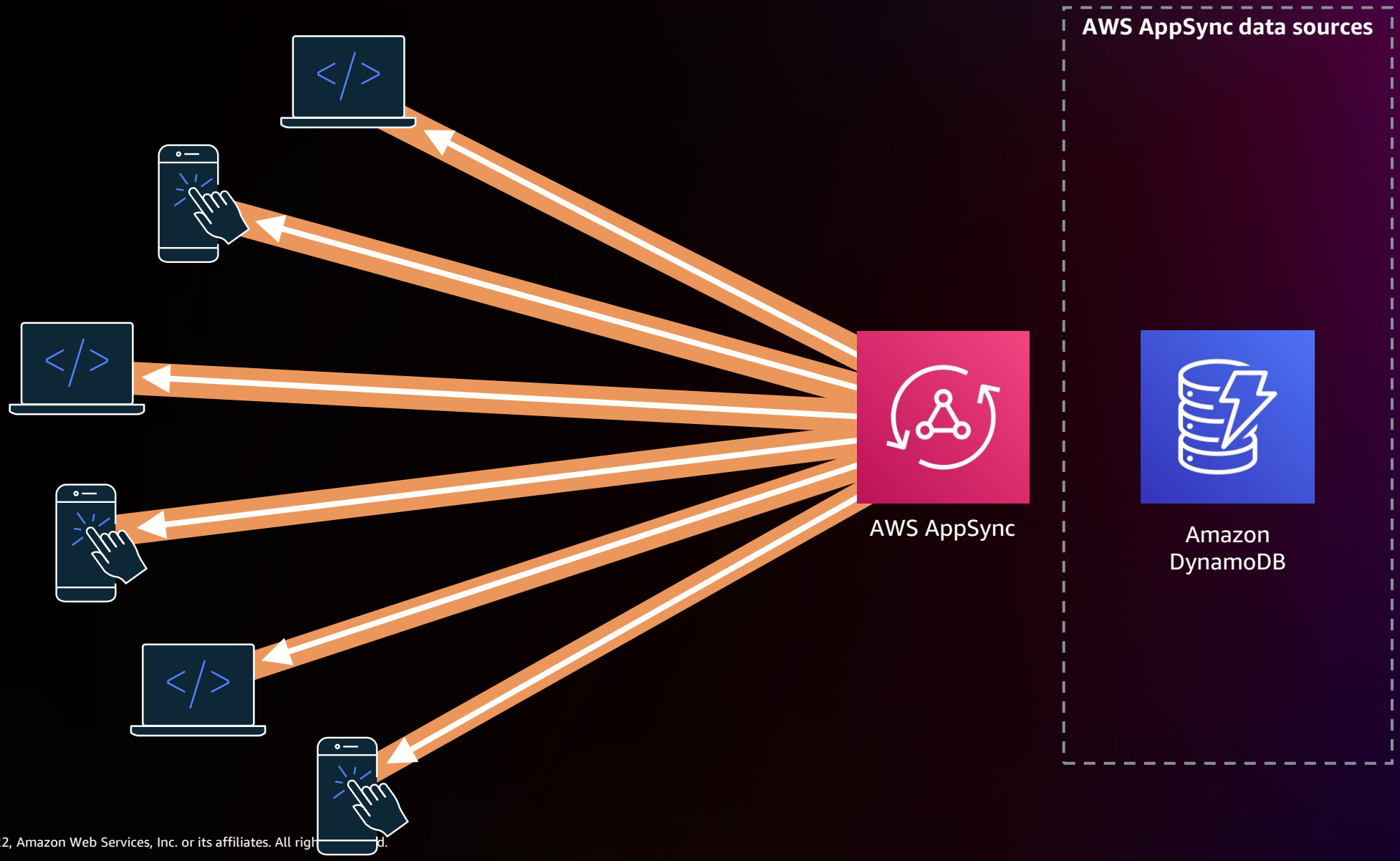
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Real-time GraphQL subscriptions



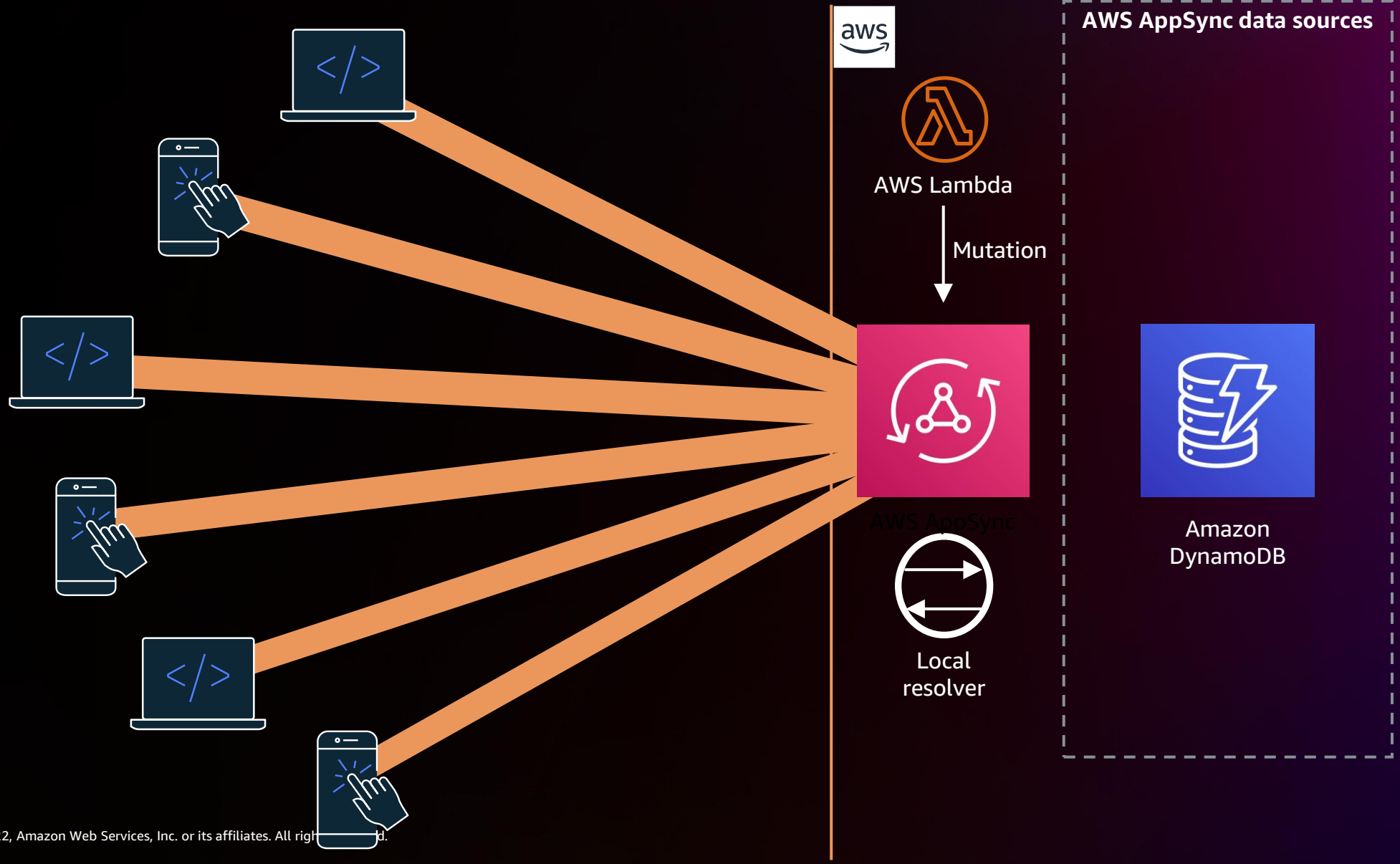
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Real-time GraphQL subscriptions



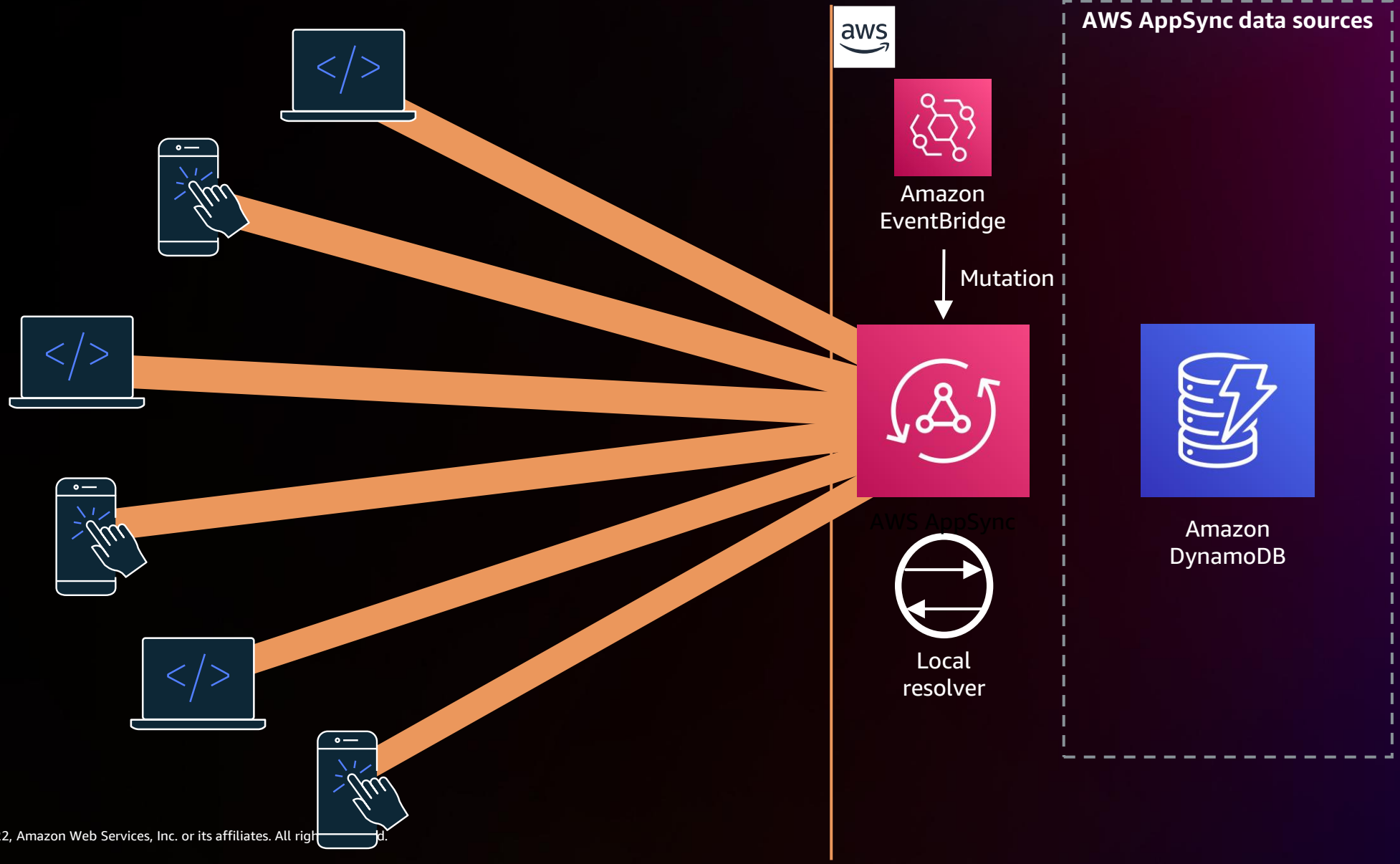
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Real-time GraphQL subscriptions



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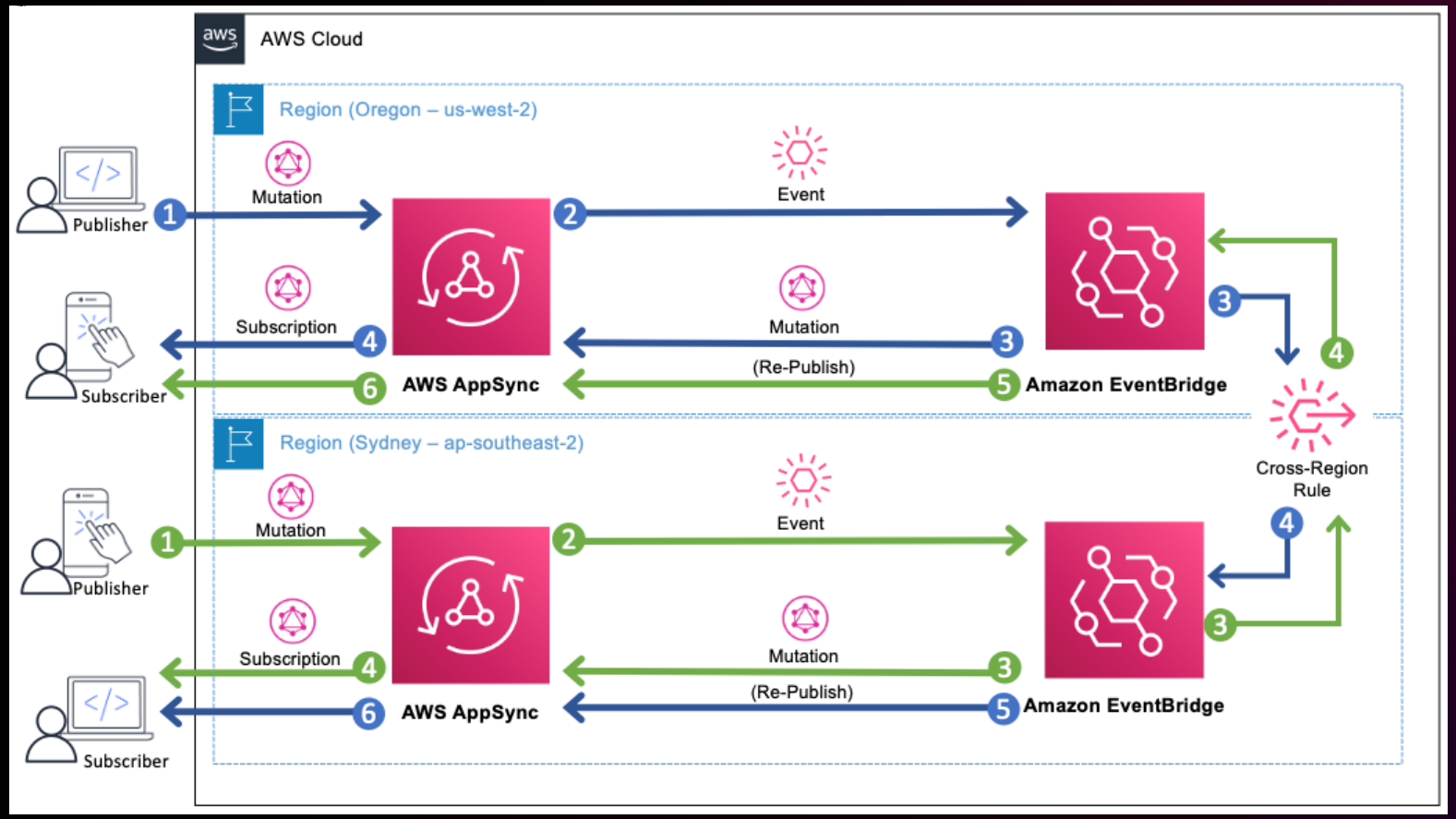
Real-time GraphQL subscriptions



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Advanced functionless use cases

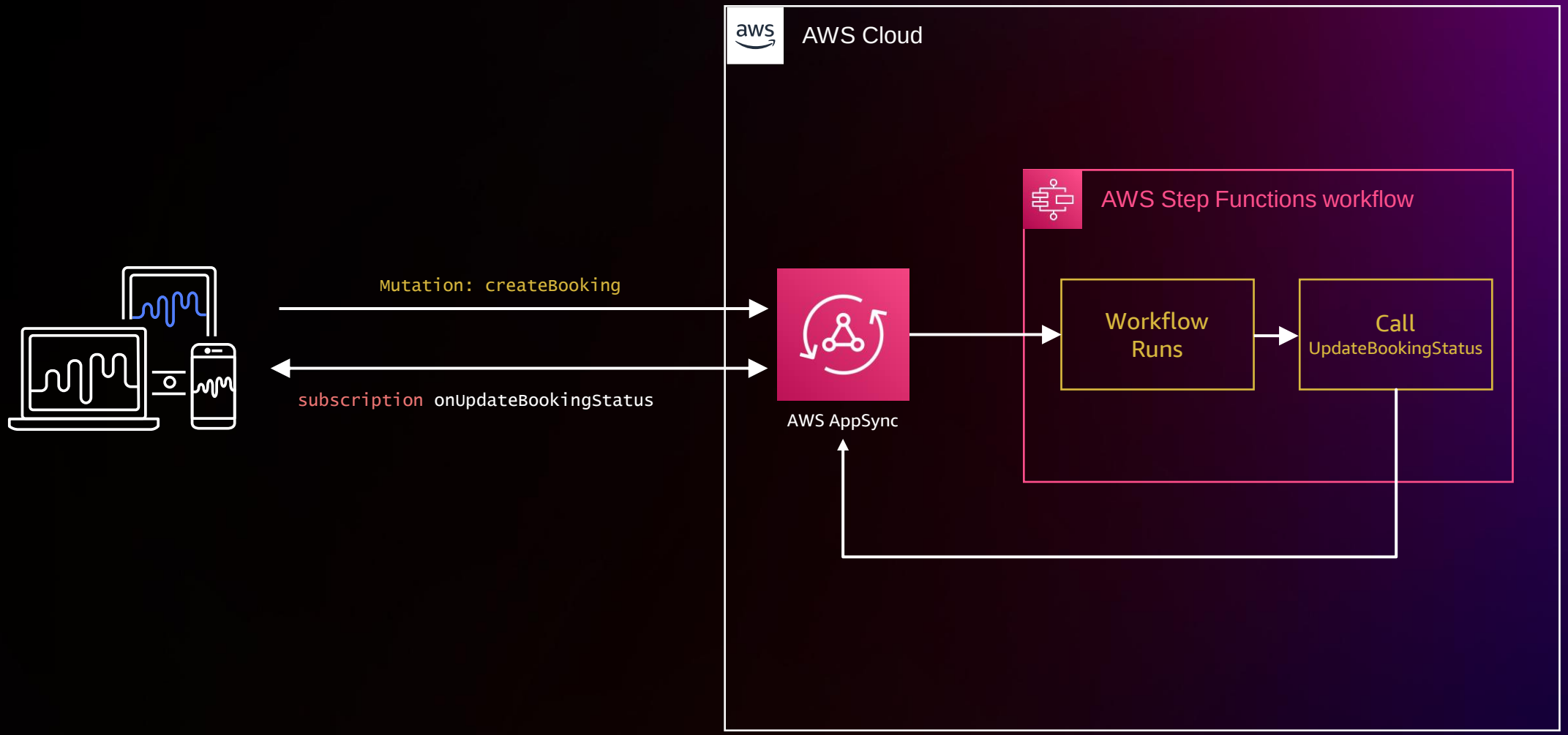
MULTI-REGION SERVERLESS WEBSOCKET PUB/SUB API WITH AWS APPSYNC AND AMAZON EVENT BRIDGE



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Advanced functionless use cases

LONG-RUNNING WORKFLOW INVOCATION FROM AWS APPSYNC



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Interactive session

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Thank you!

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