

Building a "backend-less" URL shortener

Eric Johnson

Sr Developer Advocate – Serverless Applications, AWS

Who am I?

- Eric Johnson - @edjgeek
- Sr. Developer Advocate – Serverless, AWS
- Serverless / tooling / automation Geek
- Software Architect / Solutions Architect
- Music lover
- Pizza / diet Dr. Pepper fanatic



Serverless web application



Client

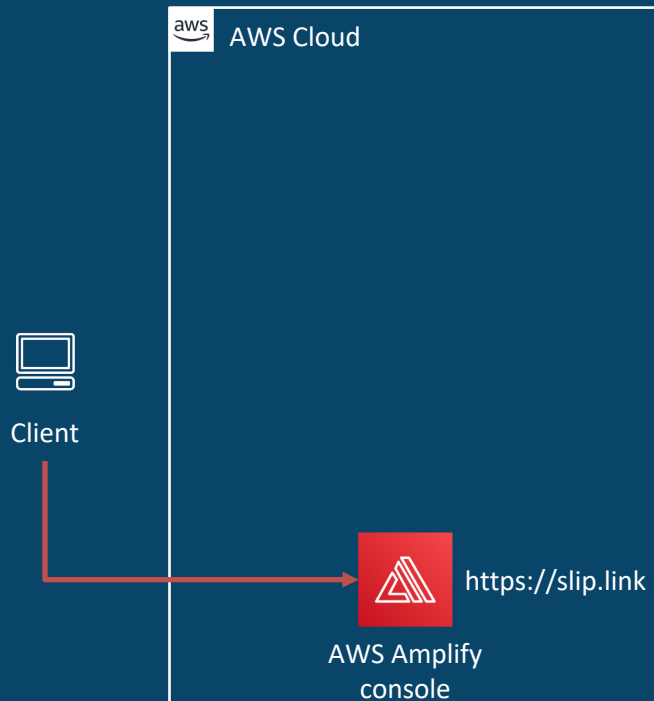


AWS Cloud

Client hosting



Client hosting



AWS Amplify

- CI/CD for client applications
- Provides test and build automation
- Connects to GitHub or CodeCommit
- Supports stage level environment variables
- Multi branch deployments
- Powered by...

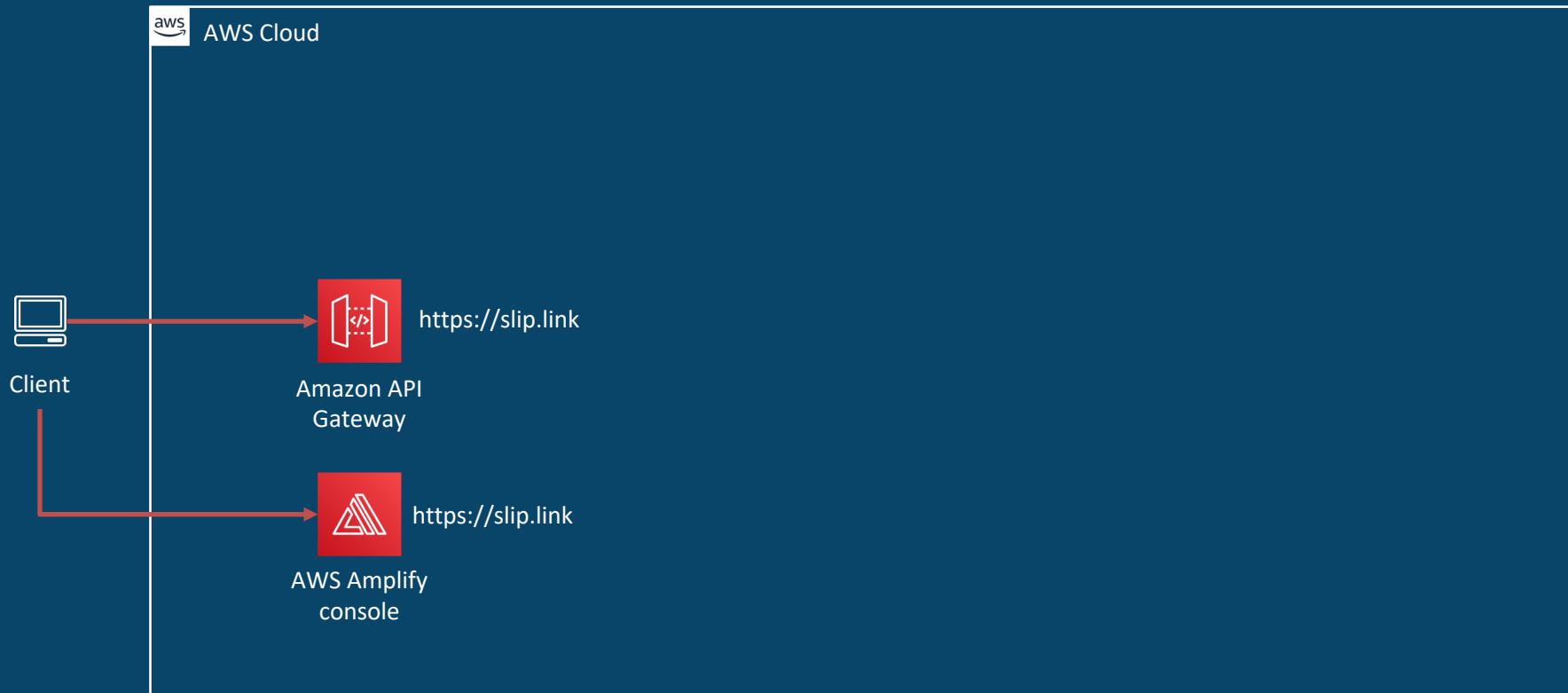


Amazon CloudFront

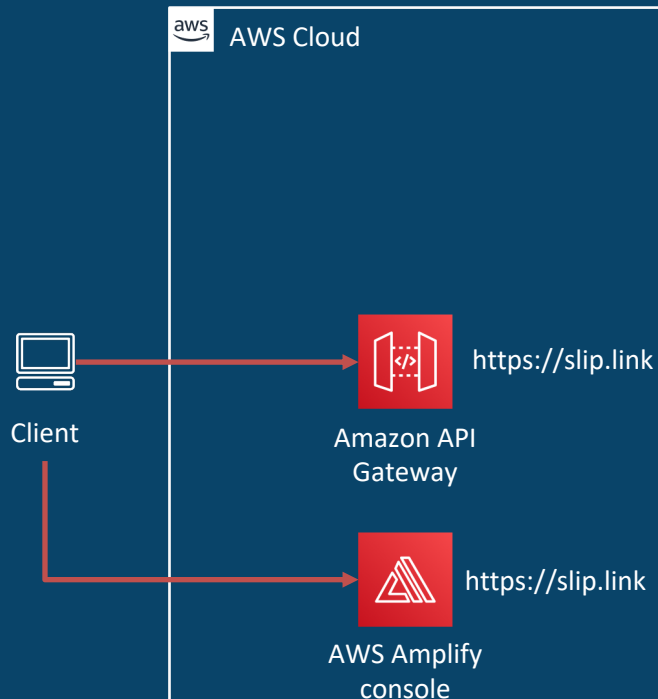


Amazon S3

API management



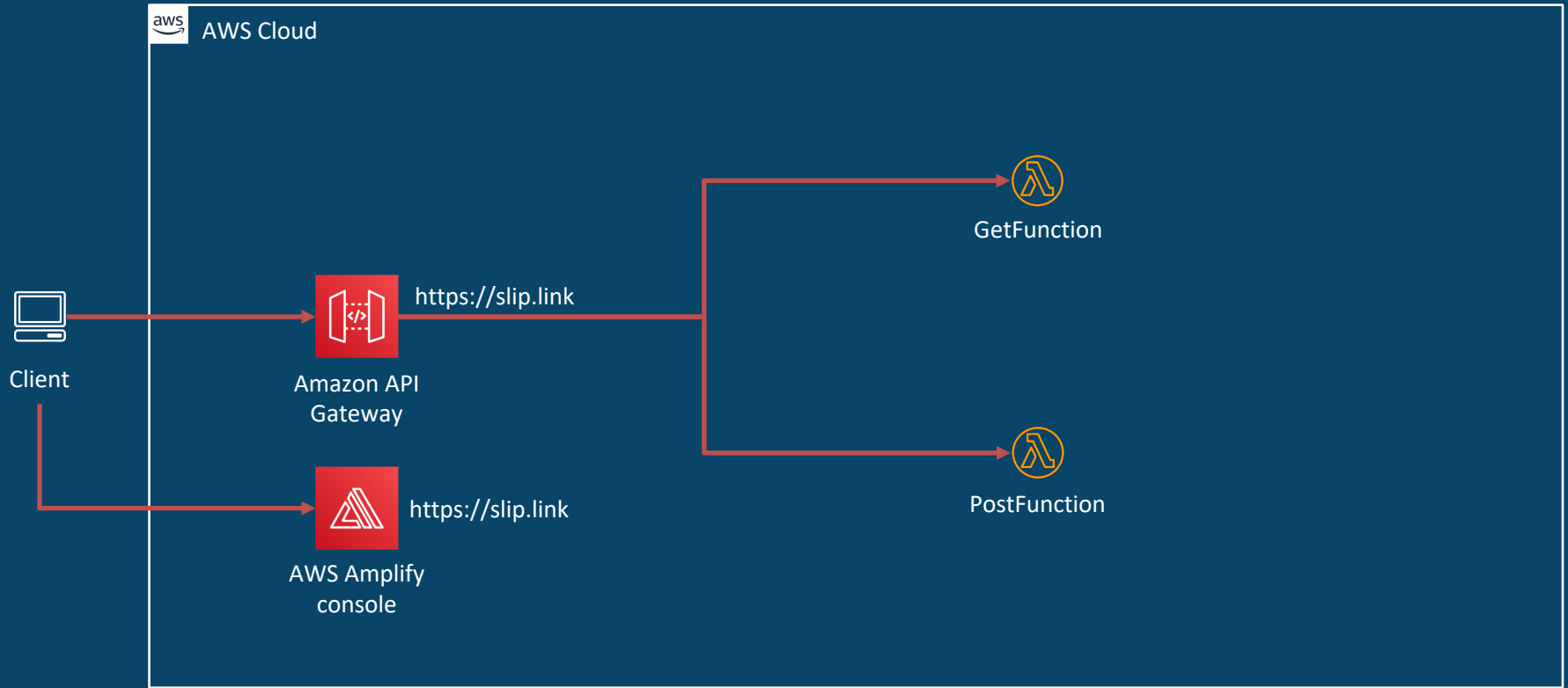
API management



Amazon API Gateway

- Authentication/Authorization support through authorizers
- Throttling
- Caching
- SSL offloading
- Custom domains
- Resource policies
- Request/Response modeling and validation

Backend



Backend

AWS Lambda

- Supports multiple languages natively
- Offers custom runtime for other languages
- Auto scales
- Pay for only what you use



Client

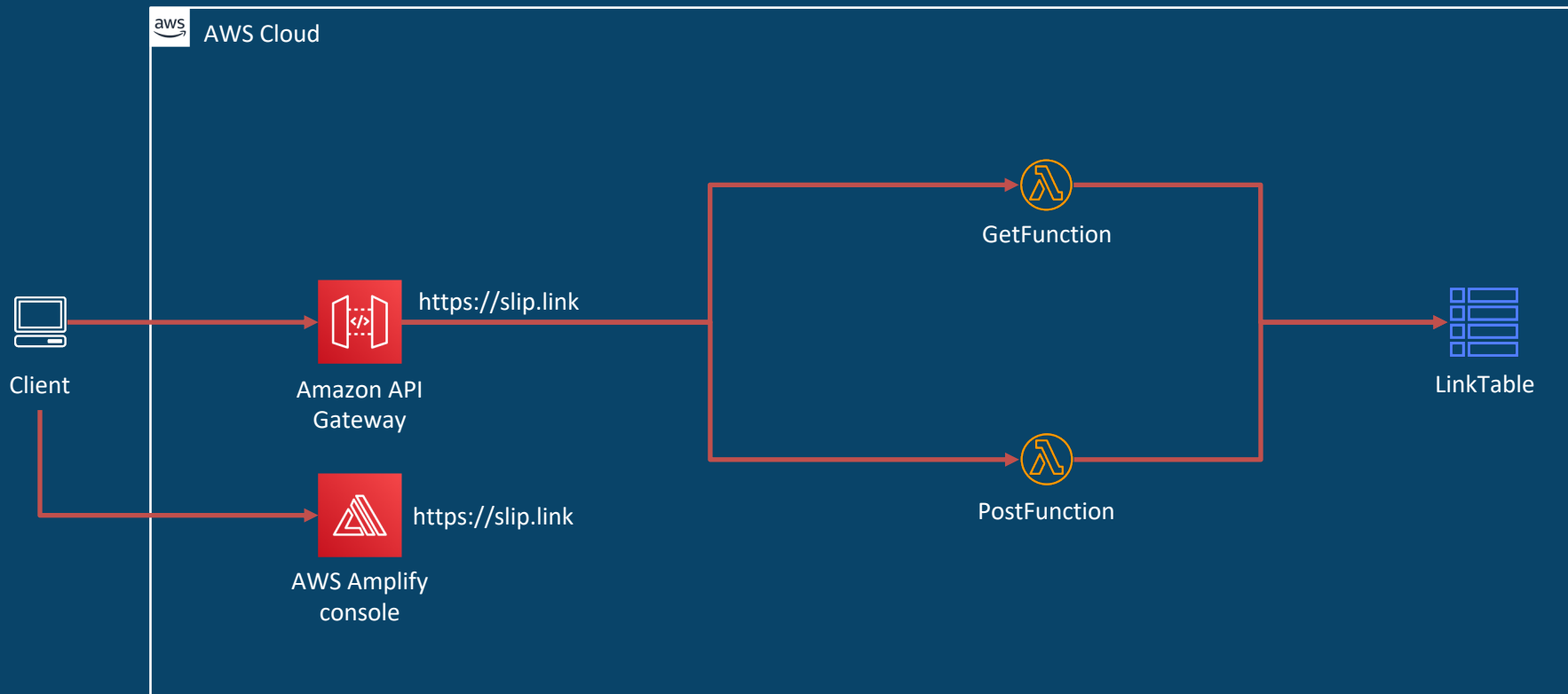


GetFunction



PostFunction

Data storage



Data storage

Amazon DynamoDB

- DynamoDB
- Key/Value store
- Highly scalable
- Highly durable
- Global, multi-master tables
- API access



Client



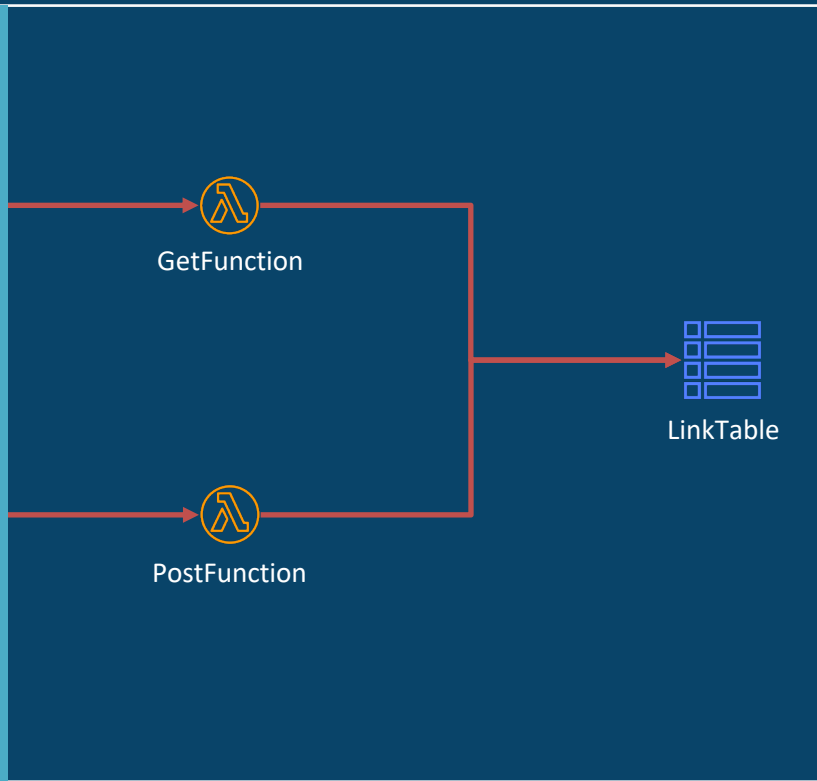
GetFunction



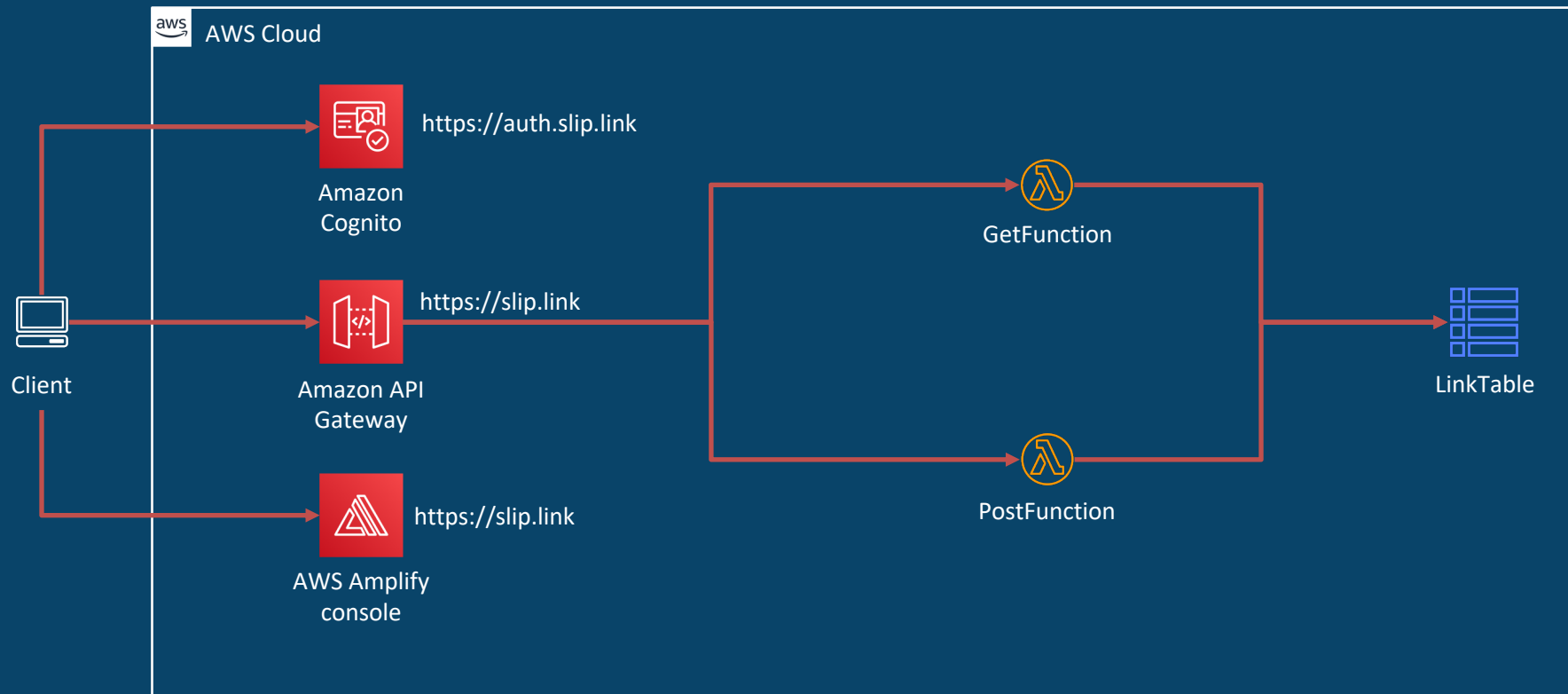
PostFunction



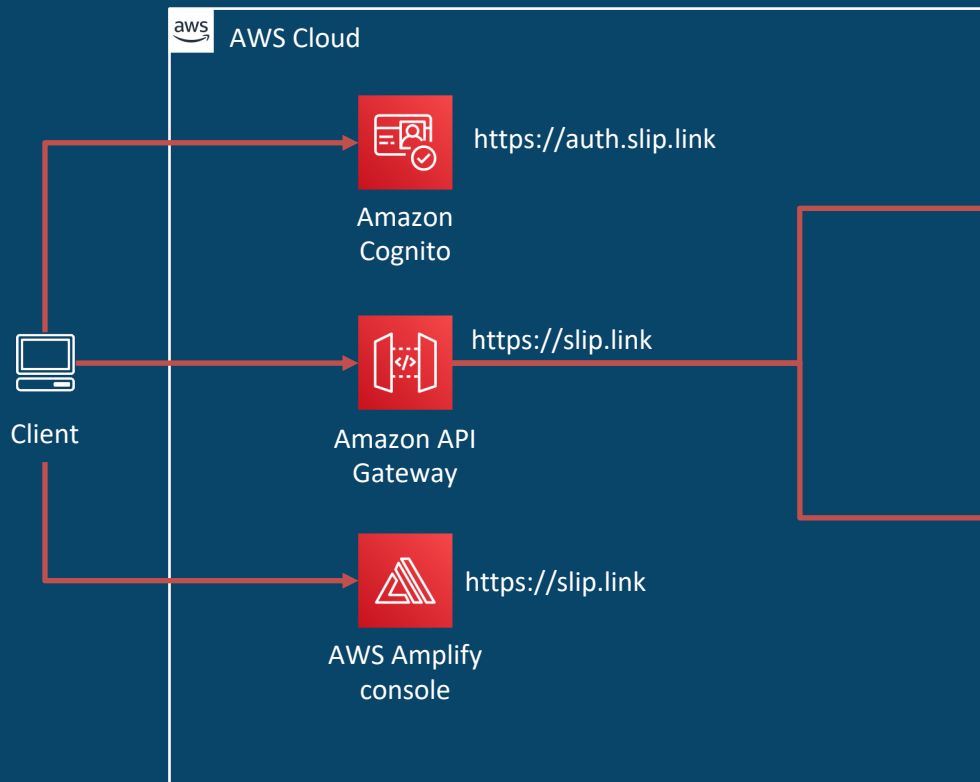
LinkTable



Security



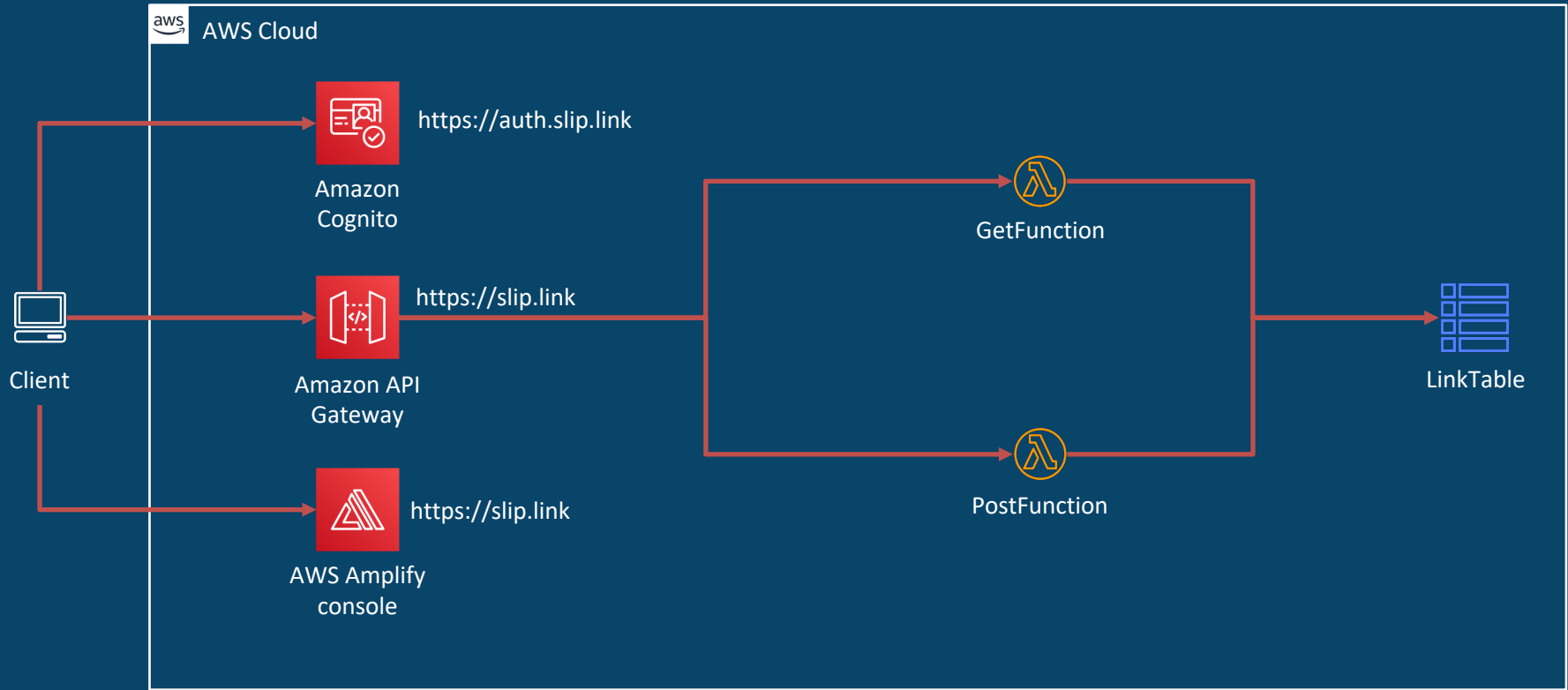
Security



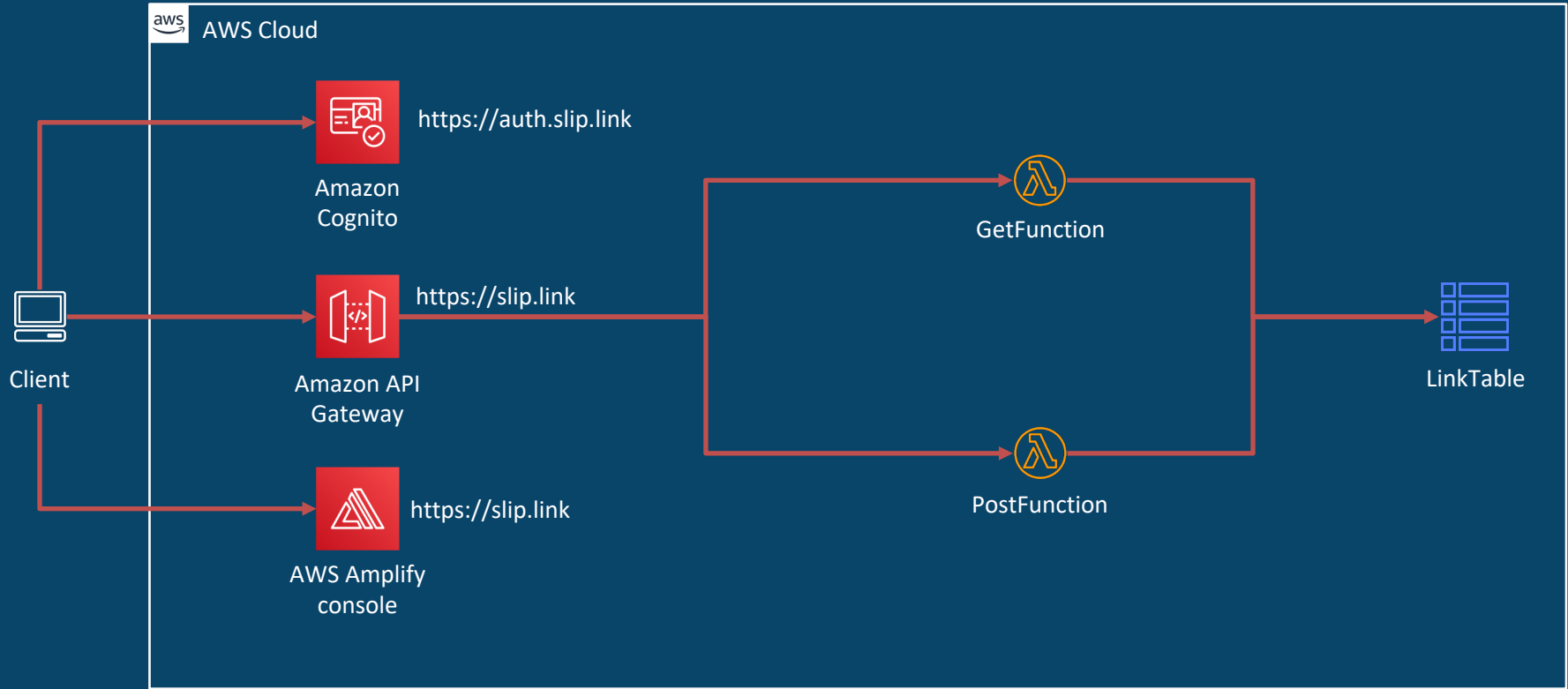
Amazon Cognito

- User pools
- Federated identity
- Hosted login pages
- Custom domains
- Scopes

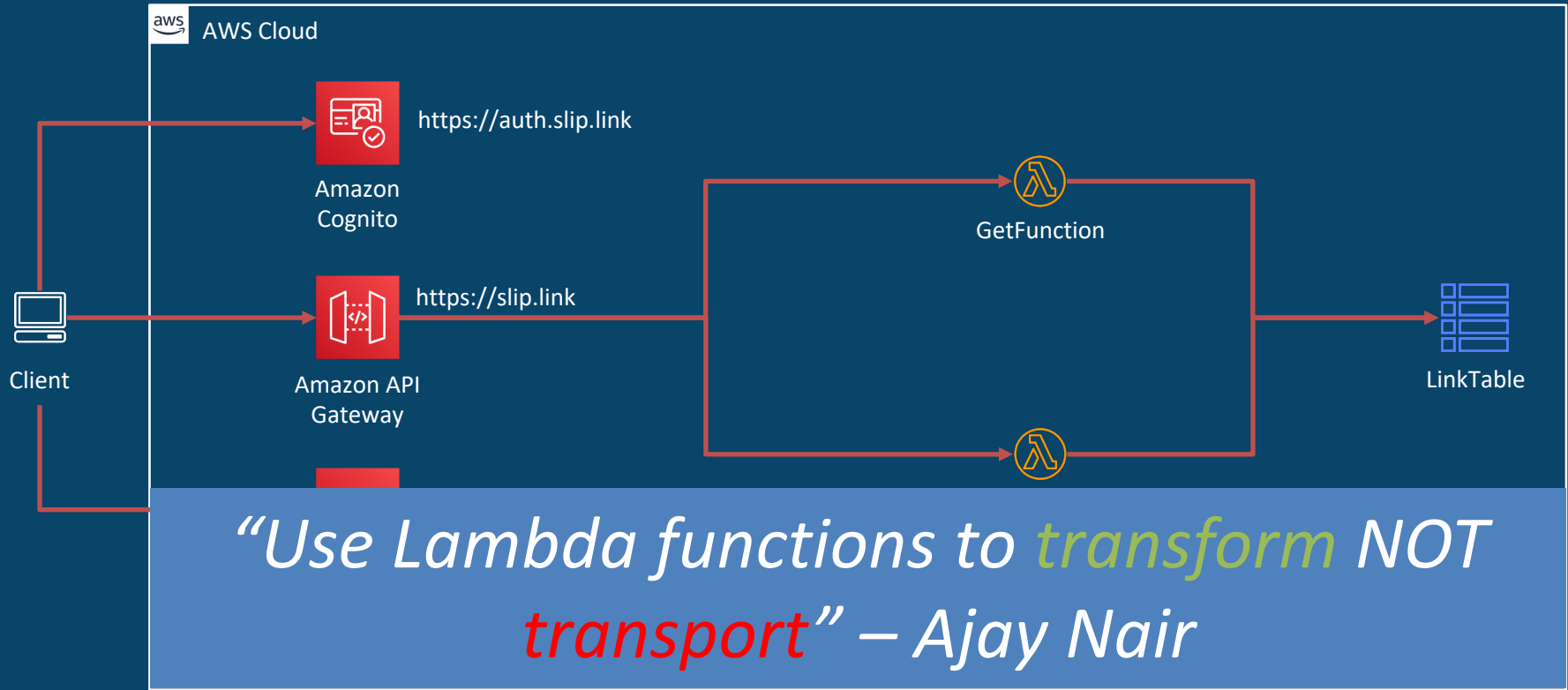
The whole picture



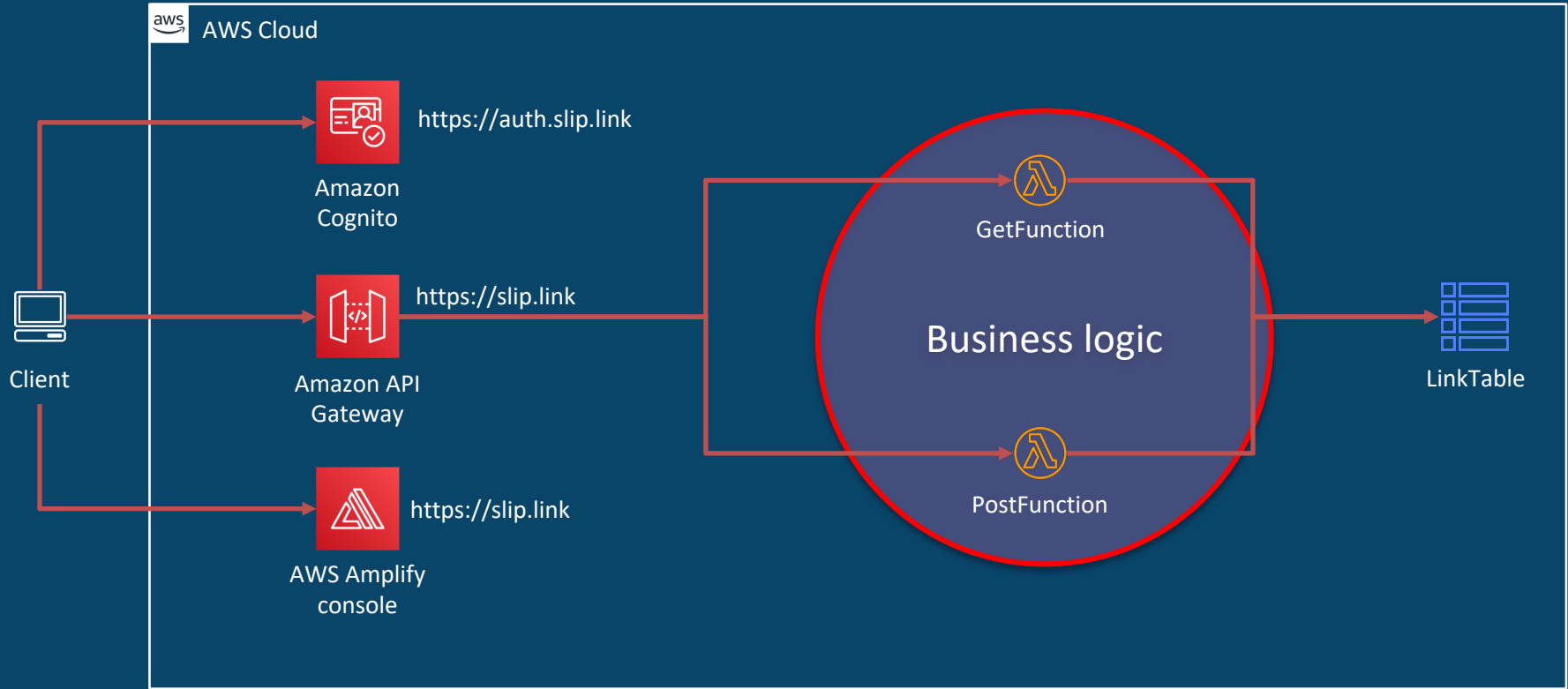
Transport or transform



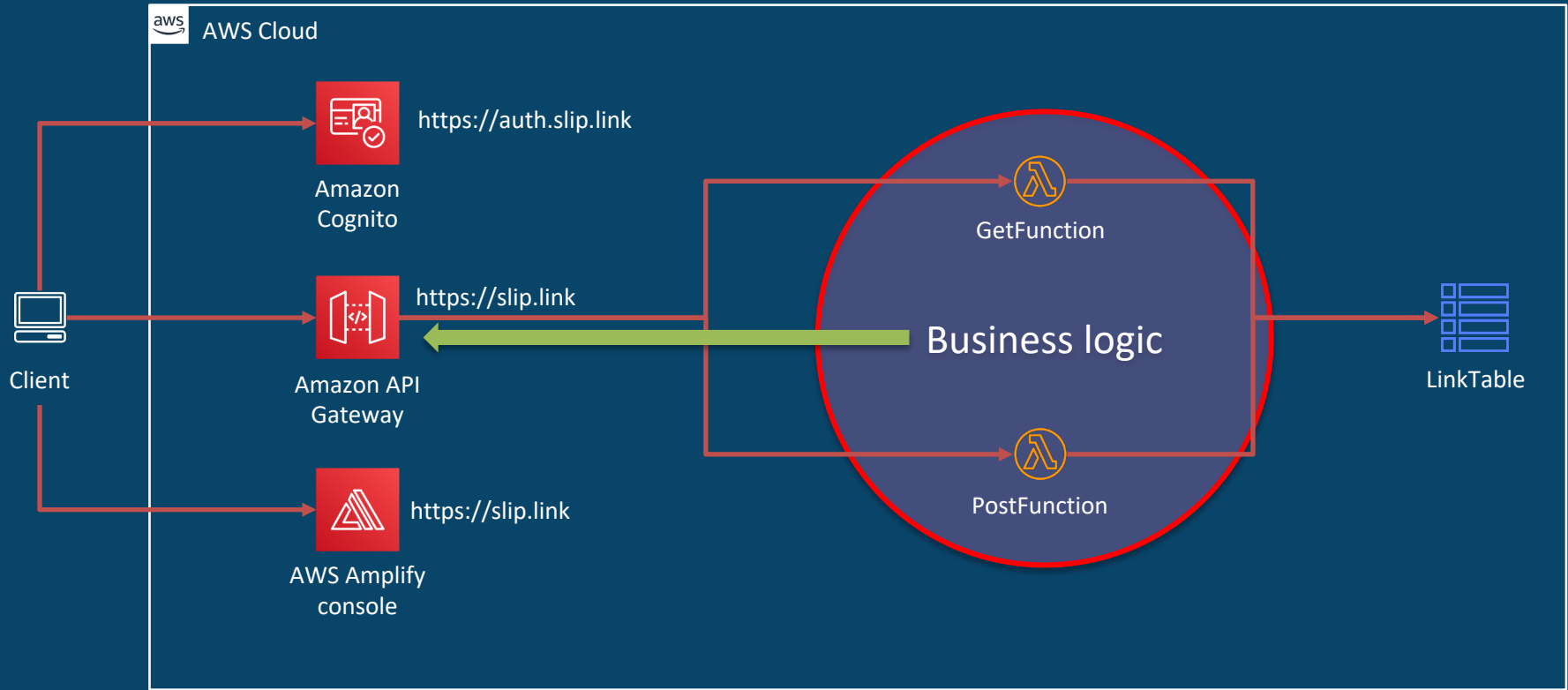
Transport or transform



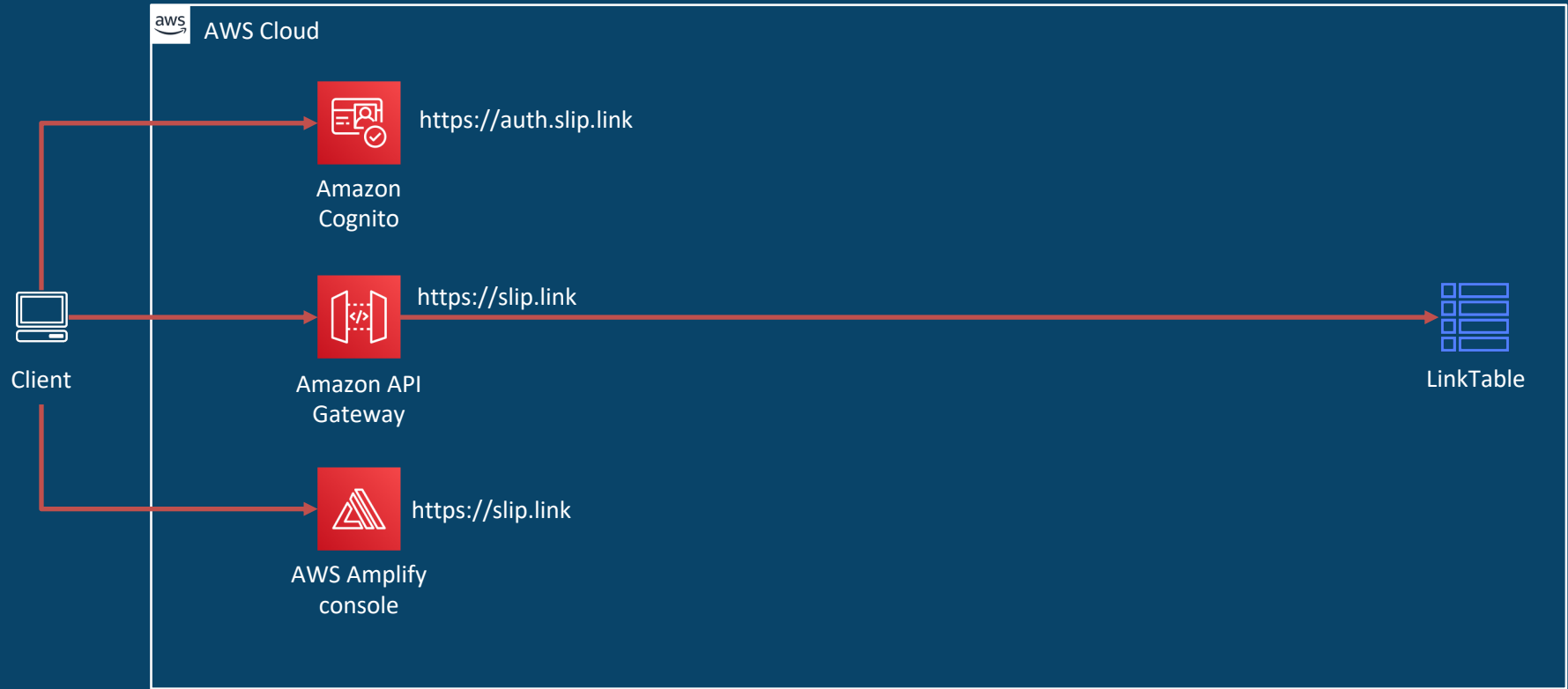
Do we even need these?



Relocating business logic



What we are going to build



Expectations

- POC
- Happy path only
- Not a move to replace Lambda
- Understanding of the power of API Gateways
- Gain an understanding of the right tool for the job

Let's Code

@edjgeek





Please

**Remember to
rate this session**

Thank you!

