Principles: Web APIs

Technology: API Gateway

Assumptions

Students have completed the “Lambda / IAM” exercise.

Out of class learning activities

AWS API Gateway lets you implement web APIs for your server-side code. In this class we will use API Gateway to allow our Lambda functions to be called over the web via HTTP. You may recall that in CS 240 we wrote a Java server that implemented web APIs for the Family Map application. In this class, rather than writing our own Java server, we will instead use Lambda to implement our backend functionality, and use API Gateway to make our Lambda services callable through a web API.

Use the following resources to learn the following:

1. What is AWS API Gateway?
2. How to create a web API that invokes Lambda functions
    a. Create a new web API
    b. Create resources (or URLs) in a web API
    c. Configure HTTP methods on resources that call Lambda functions
    d. Pass HTTP request body to a Lambda function
    e. Pass request URL parameters to a Lambda function
    f. Map Lambda function output to HTTP responses
    g. Configure CORS on HTTP methods
3. Deploy a web API
4. Test a web API using Postman or Curl
5. Export a client SDK for a web API
6. Use a client SDK to call a web API

The Pluralsight course named “Building Scalable APIs with the AWS API Gateway” video provides an introduction to API Gateway with examples in Javascript (you don’t need to know Javascript to understand it). To save time you can skip the following modules in the course:

“Granting User Access Permissions”, “Creating an API Key”, “Logging and Alerting”, and “Where Do I Go From Here?”
https://app.pluralsight.com/library/courses/scalable-aws-api-gateway/table-of-contents

For additional information, you can peruse the The API Gateway Developer Guide
https://docs.aws.amazon.com/apigateway/latest/developerguide/welcome.html