

AWS
re:Invent

S V S 2 2 0

Build microservice APIs with Amazon API Gateway

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Who am I?

- Dhawal Patel- dhawalkp@amazon.com
- Sr. Solutions Architect – AWS
- Serverless / microservices / Machine Learning Geek
- Software Architect / Solutions Architect
- Music lover

Agenda

- What are microservices?
- How do I get started?
- Build a microservices based application
- Q&A

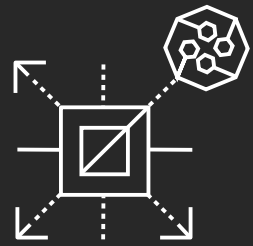
What are microservices?

Microservices

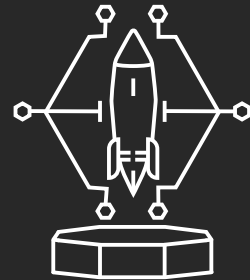
Architectural approach to software development in which applications are composed from services that are

- Single capability
- Encapsulated
- Independent
- Decentralized data

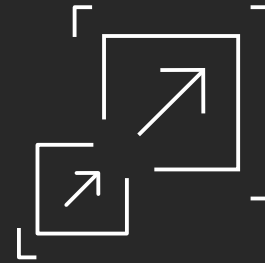
Benefits of microservices



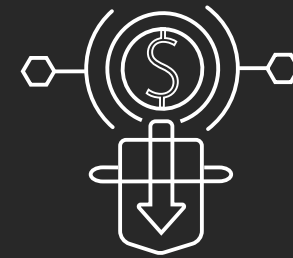
Agility



**Simple
deployment**



Flexible scaling



Lower costs

Serverless – different categories

COMPUTE



AWS
Lambda



AWS
Fargate

DATA STORES



Amazon
S3



Amazon Aurora
Serverless



Amazon
DynamoDB

INTEGRATION



Amazon
API Gateway



Amazon
SQS



Amazon
SNS



AWS
Step Functions



AWS
AppSync

Let's build a real-world microservice

- Based on production-grade AWS Service – Serverless Application Repository
- Open API 3.0 Swagger
- RESTful API
- Java and JAX-RS based
- AWS Serverless Java Container framework
- Open sourced on Github

Build – 5 microservice REST APIs

POST /applications

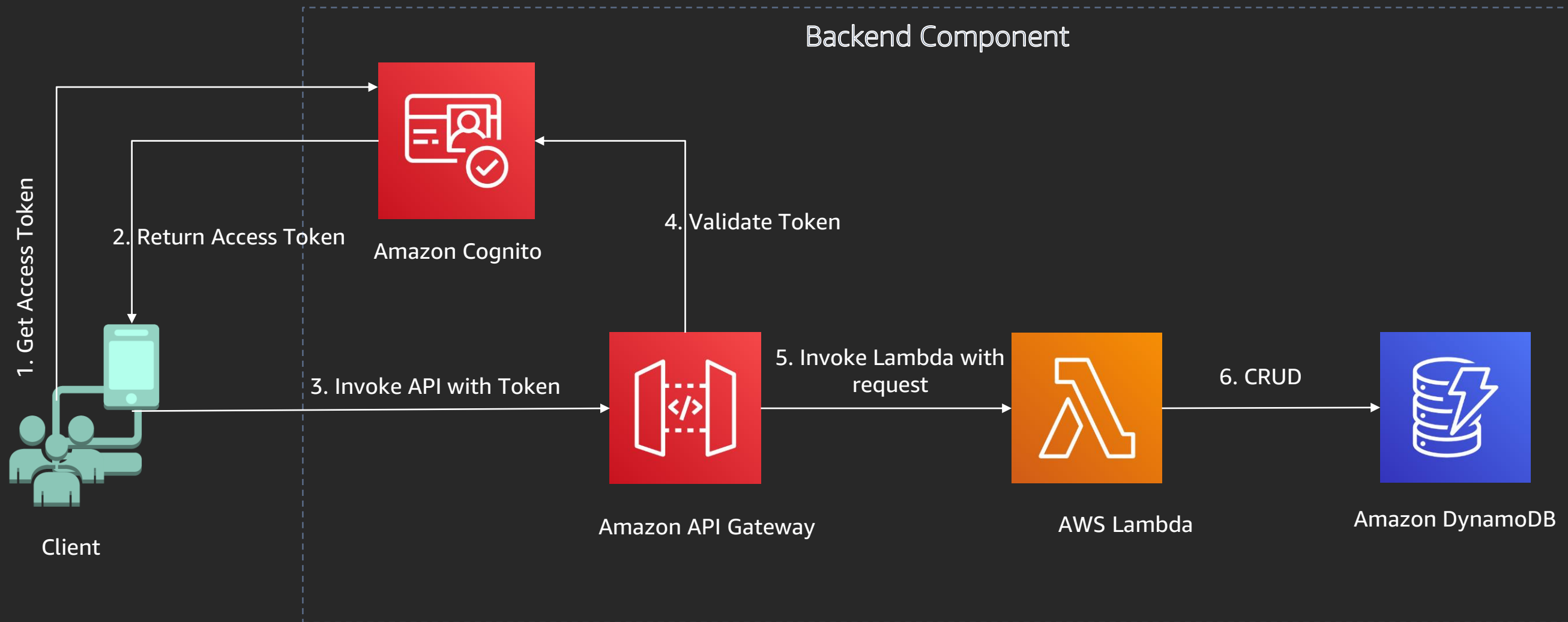
GET /applications

GET /applications/{applicationId}

PATCH /applications/{applicationId}

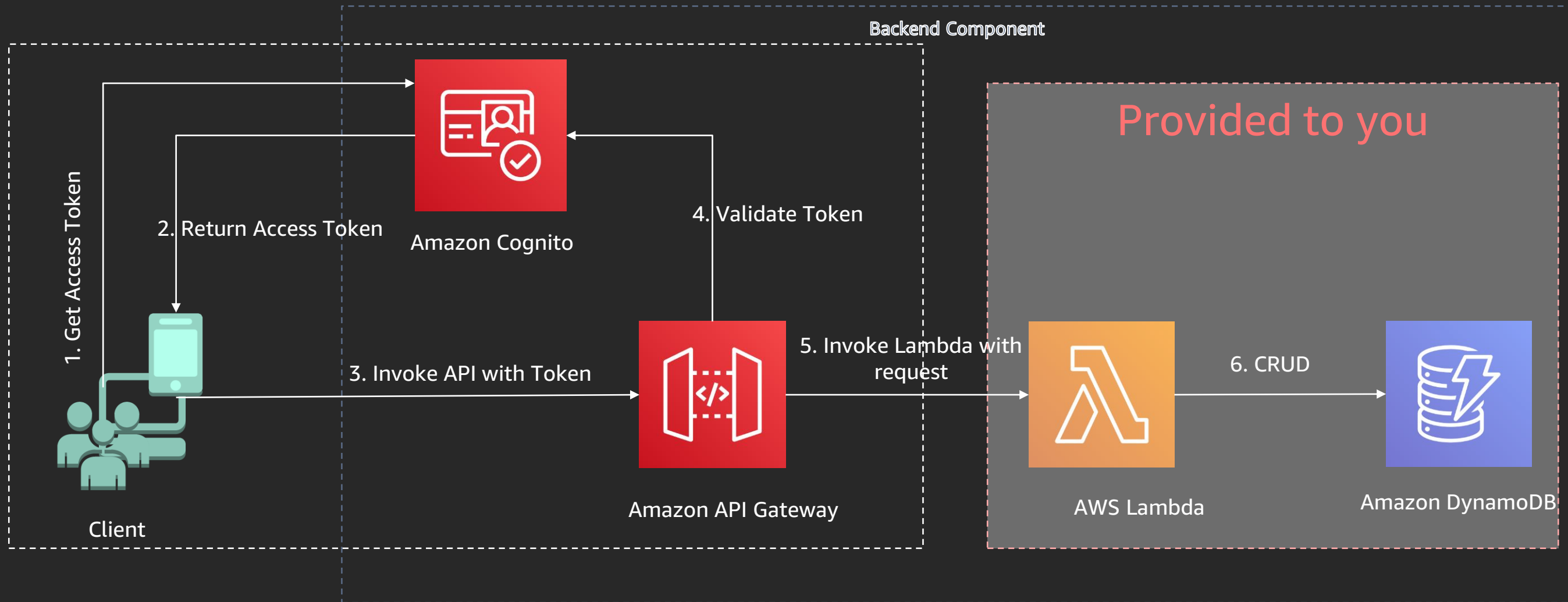
DELETE /applications/{applicationId}

A Serverless microservice based Application



API Gateway + Lambda + DynamoDB: core building blocks

Building - A Serverless microservice based Application



API Gateway + Lambda + DynamoDB: core building blocks

Let's build microservices!

Workshop Resources

Workshop URL <https://microservices-workshop.com>

Git Repo <https://github.com/aws-labs/realworld-serverless-application>

Questions?

Thank you!

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