
aws
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AUSTRALIA AND NEW ZEALAND | 5 & 6 MAY

DEV01

Design patterns for success in serverless microservices

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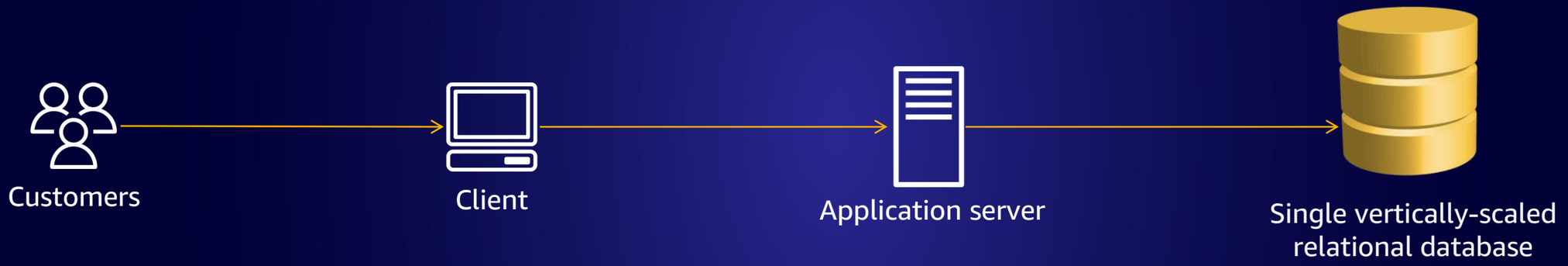
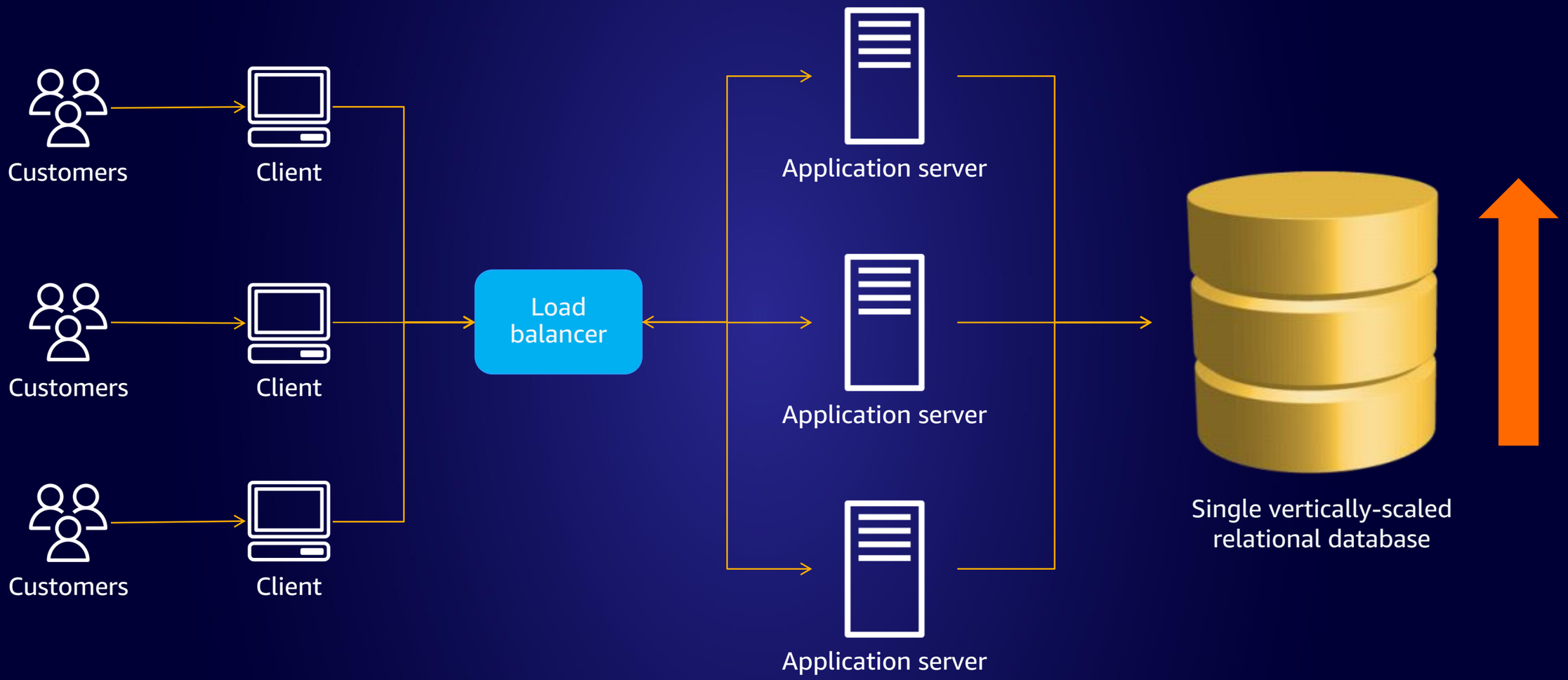
Amazon Web Services

Overview

Business critical application

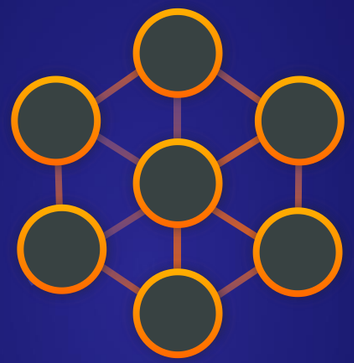


Increased load



Architecture review

Monolith
Does everything



Microservices
Do one thing

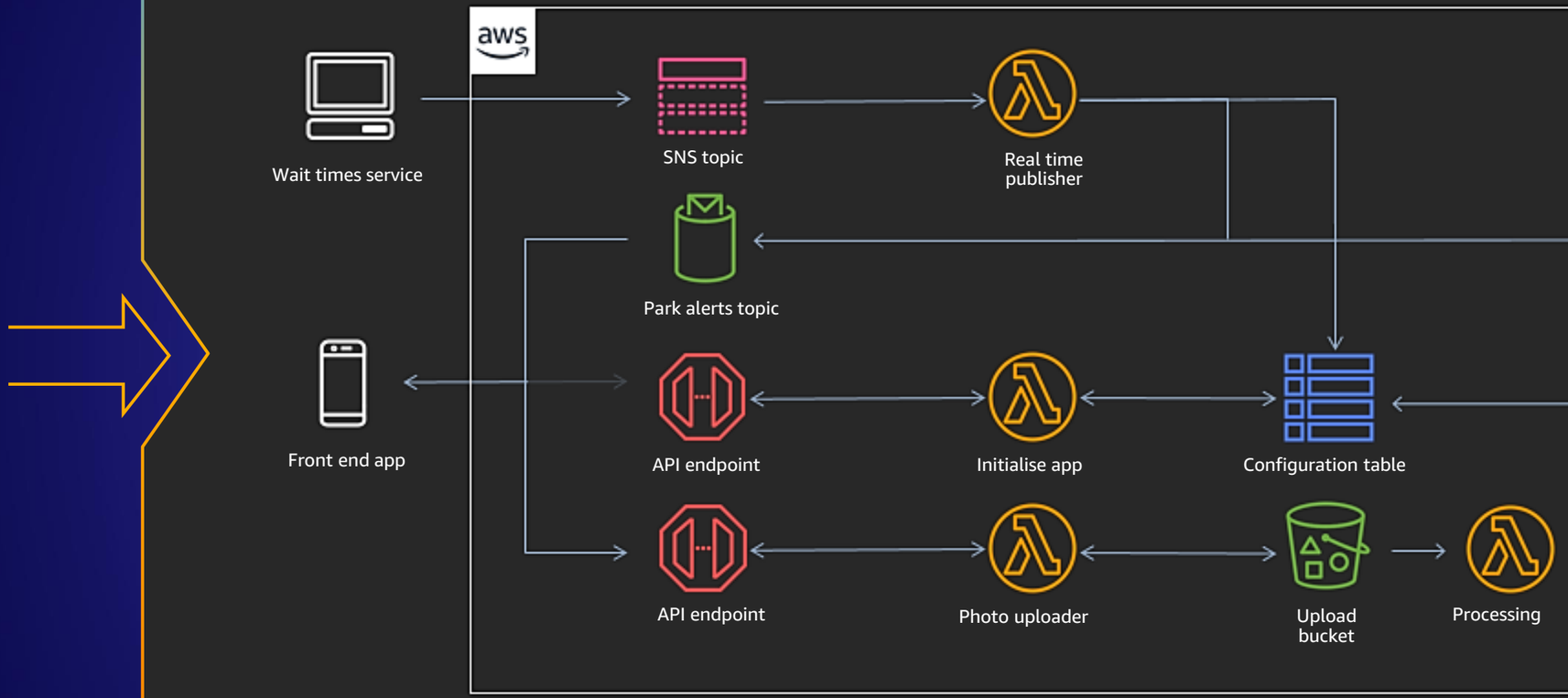
Scales to
millions of users

Has global
availability

Responds in
milliseconds

Handles petabytes
of data

Small pieces, loosely joined



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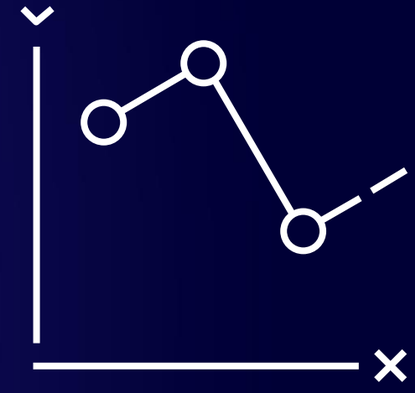
Application concerns

UX degradation

Lack of insights



Database contention

Serverless is more than just compute

COMPUTE


AWS Lambda


AWS Fargate

DATA STORES


Amazon S3


Amazon Aurora Serverless


Amazon DynamoDB

INTEGRATION


Amazon EventBridge


Amazon API Gateway


Amazon SQS


Amazon SNS

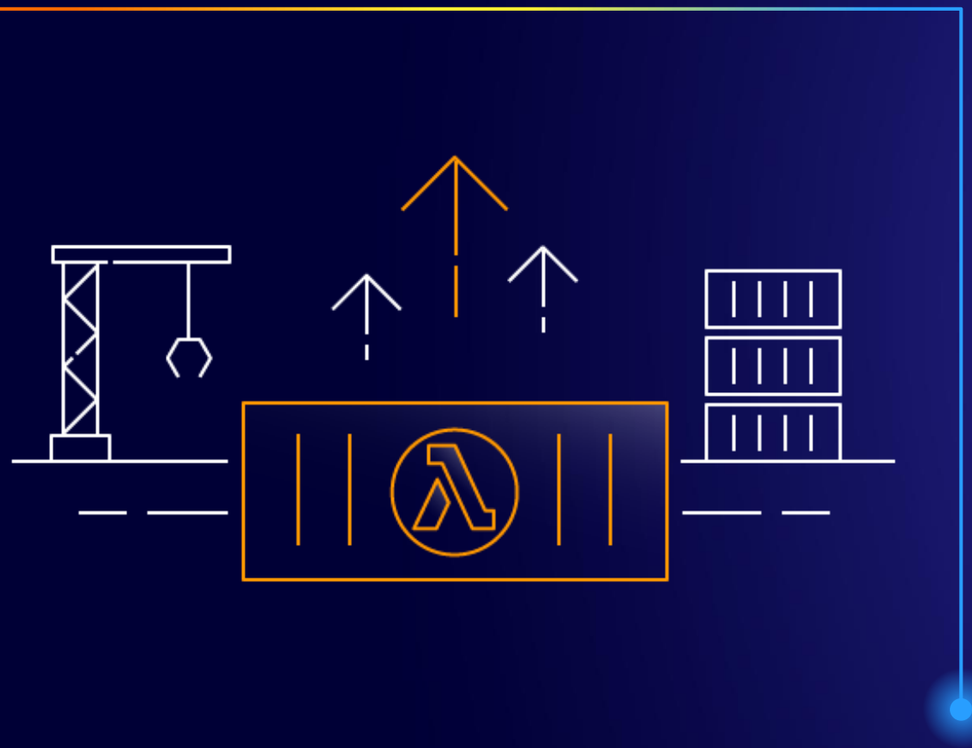

AWS Step Functions


AWS AppSync

Lambda container image support

NEW!

LAMBDA SUPPORTS PACKAGING AND DEPLOYING FUNCTIONS AS CONTAINER IMAGES



- Use a consistent set of tools for containers and Lambda-based applications
- Deploy large applications with AWS-provided or third-party images of up to 10 GB
- Benefit from subsecond automatic scaling, high availability, 140 native service integrations, and a pay-for-use billing model

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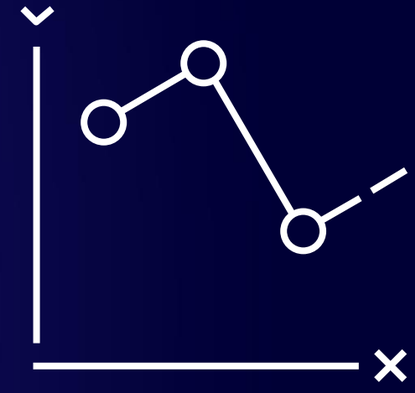


Database contention

Command Query Responsibility Segregation

Concepts in distributed systems

Command vs Event

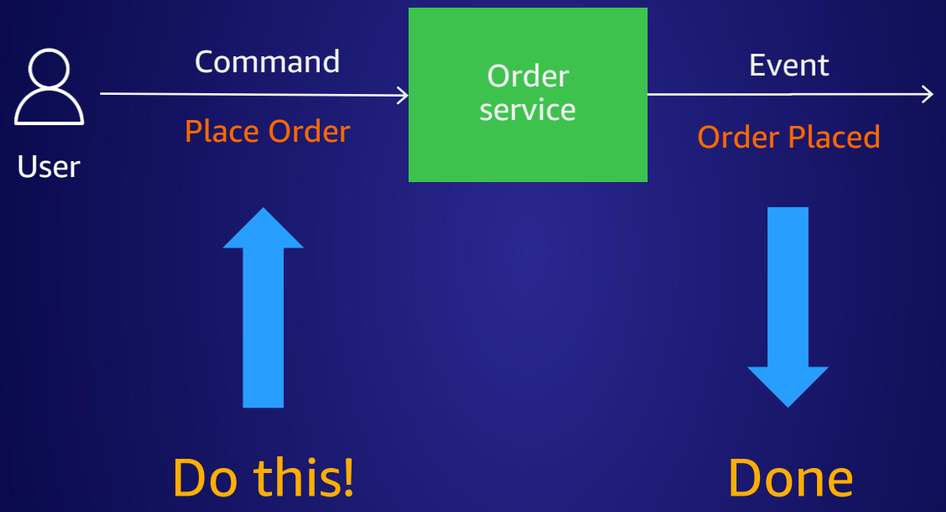
Event Notification

Event-Carried State Transfer

Event Sourcing

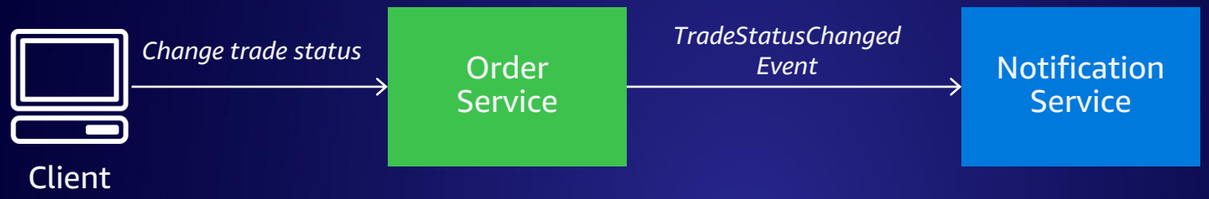
Command Query Responsibility Segregation (CQRS)

Command vs Event



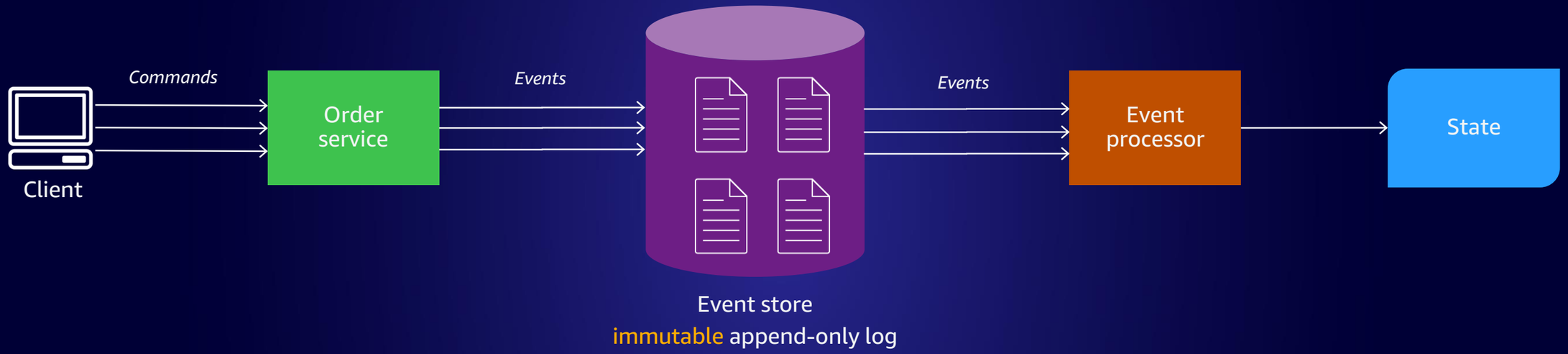
Event driven architecture

Event Notification



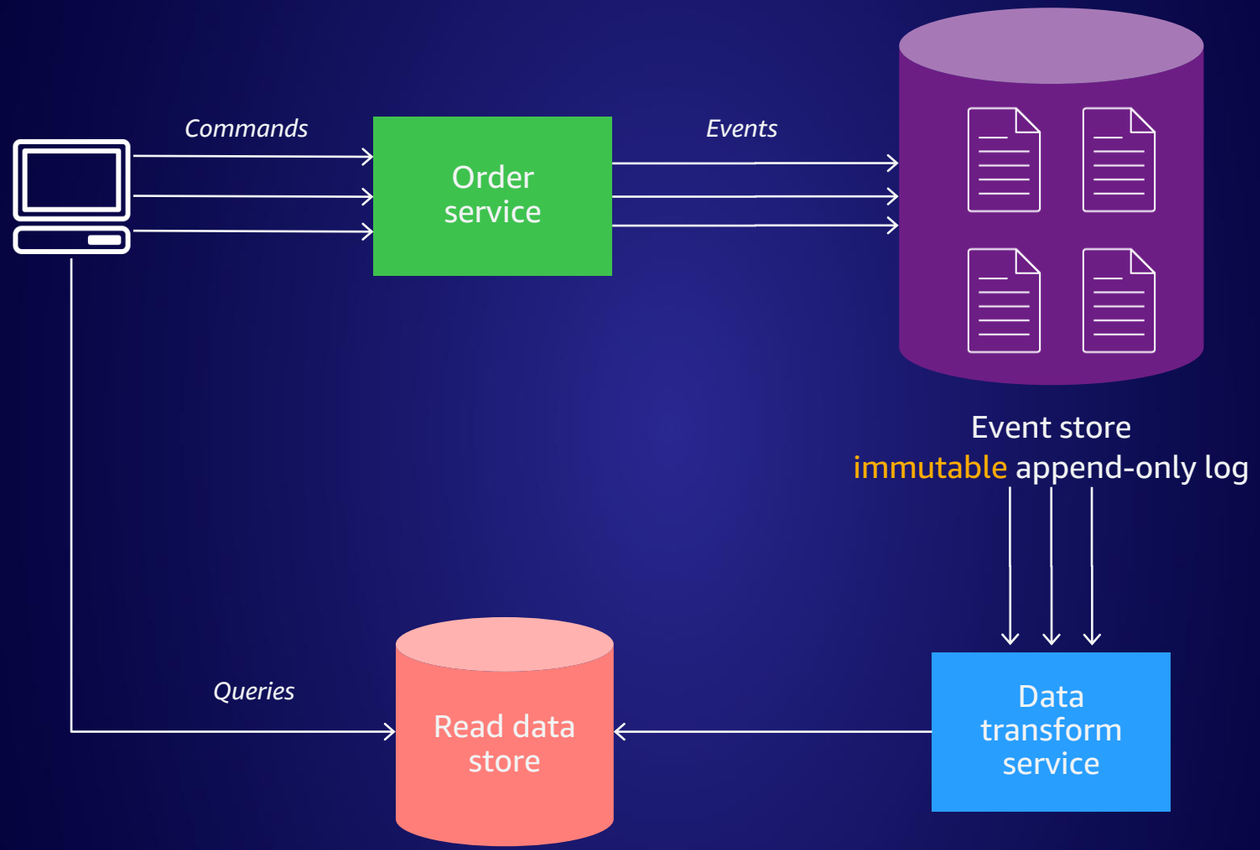
Event-Carried State Transfer

Event sourcing



CQRS with event sourcing

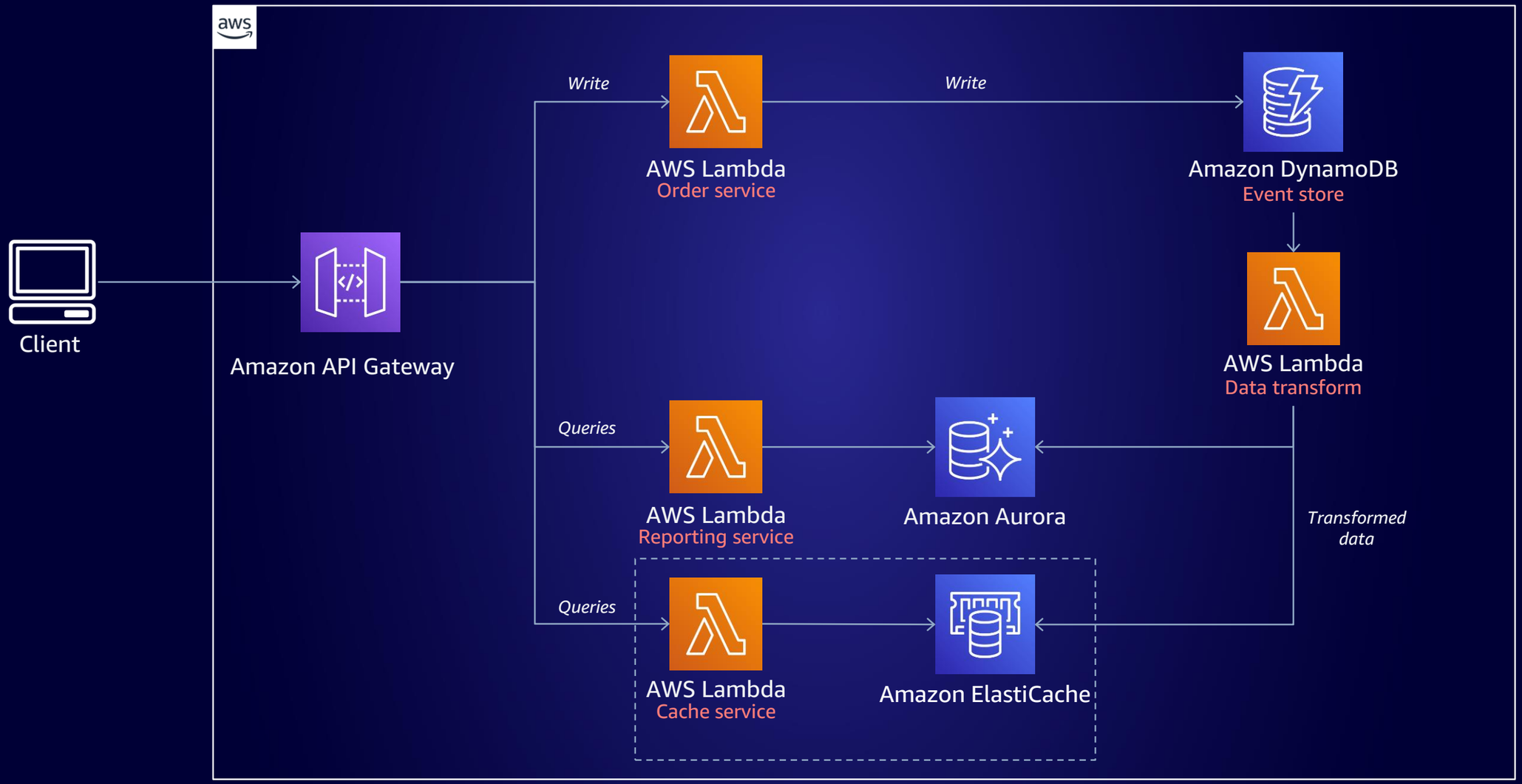
COMMAND QUERY RESPONSIBILITY SEGREGATION



Use case: Search service

CQRS with event sourcing

COMMAND QUERY RESPONSIBILITY SEGREGATION



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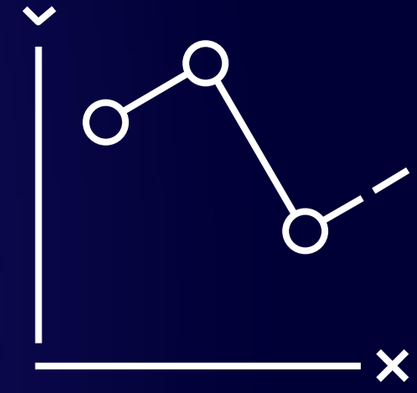
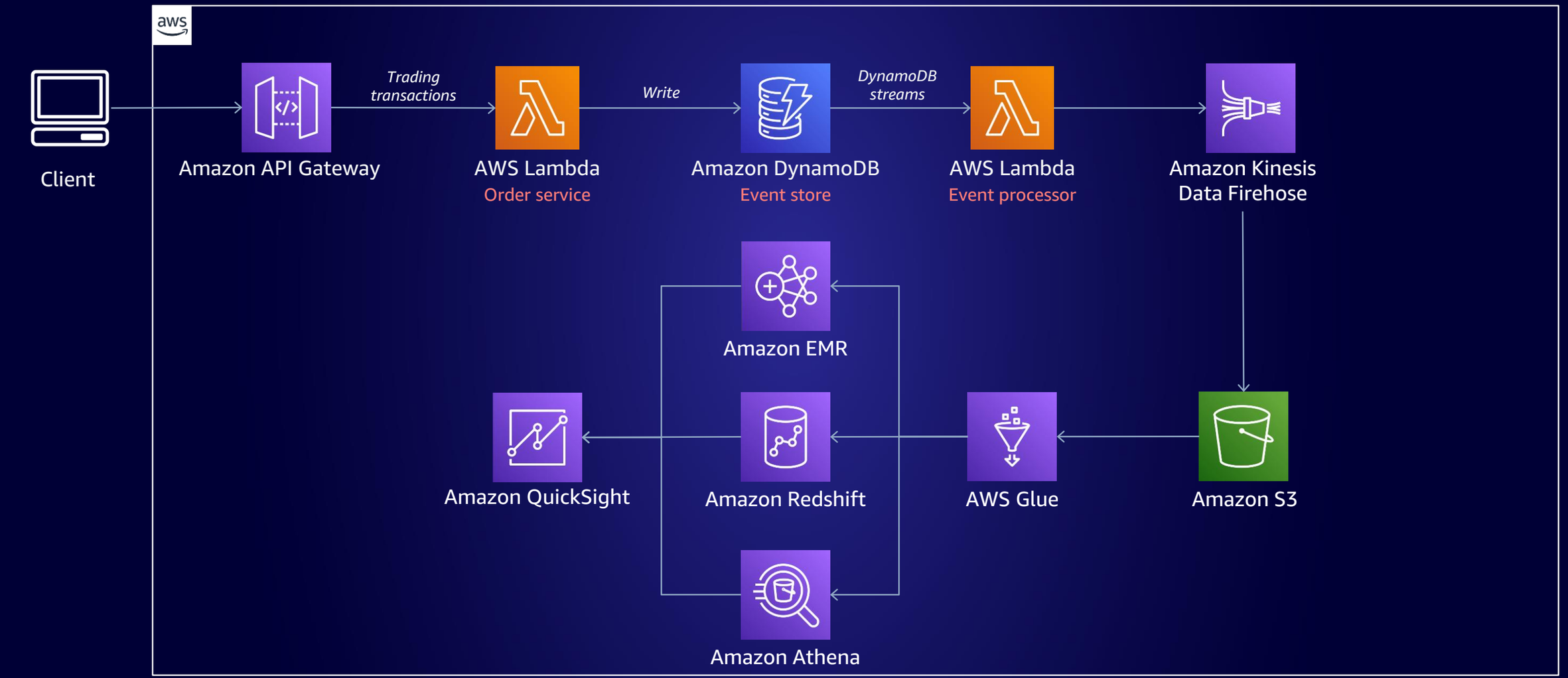


Database contention

Data analytics with event sourcing



Application concerns

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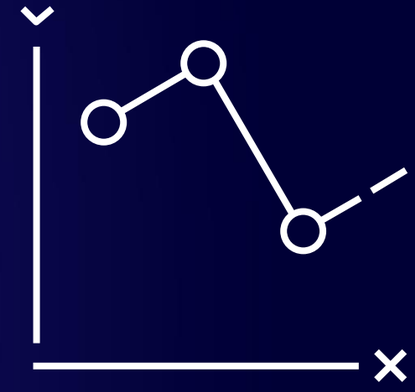
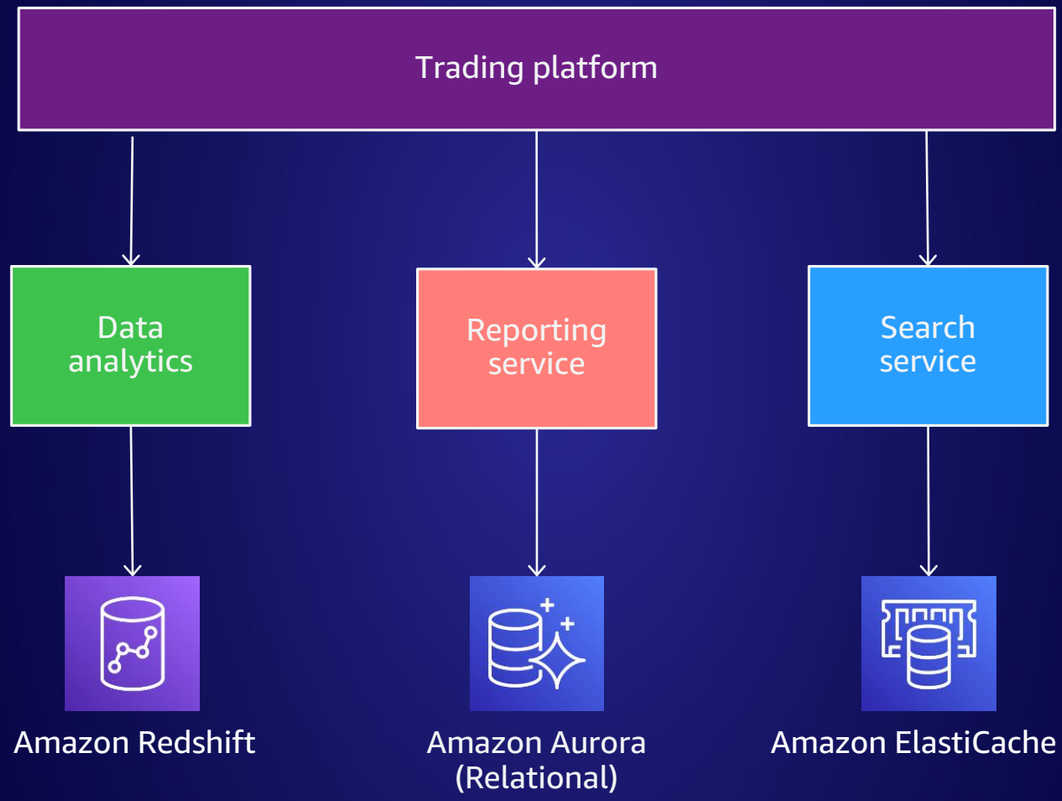


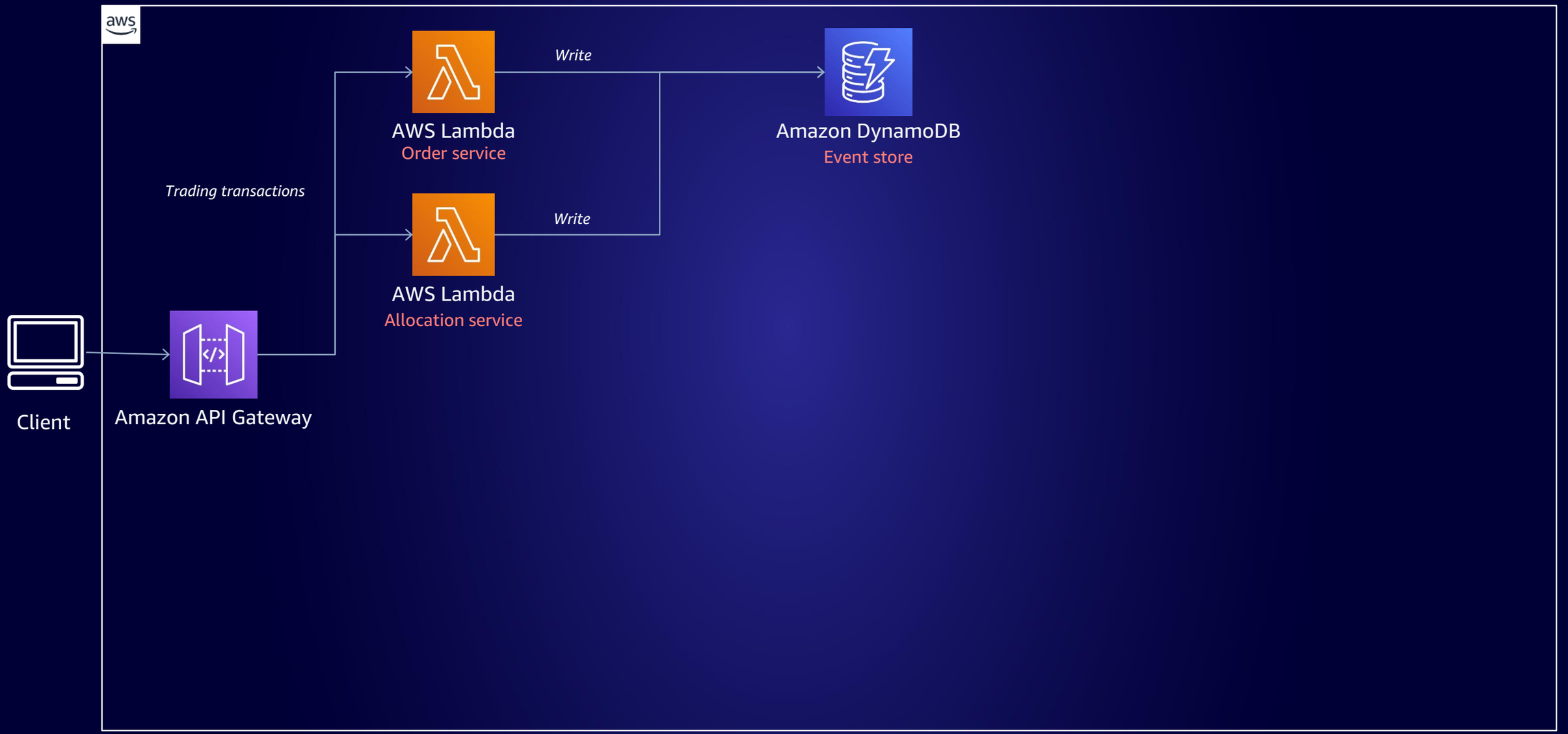
Database contention

Polyglot persistence

Polyglot persistence



Putting it all together



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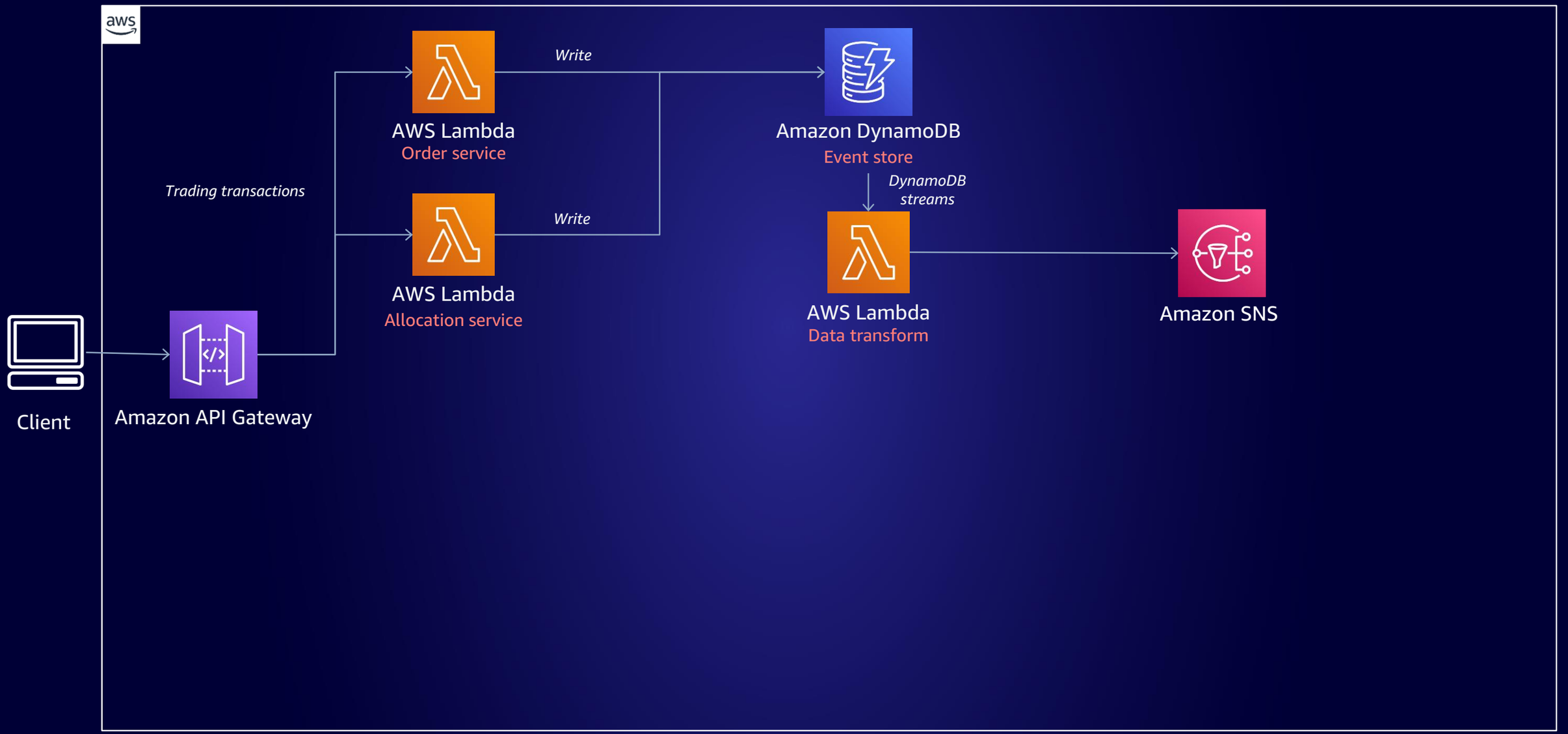

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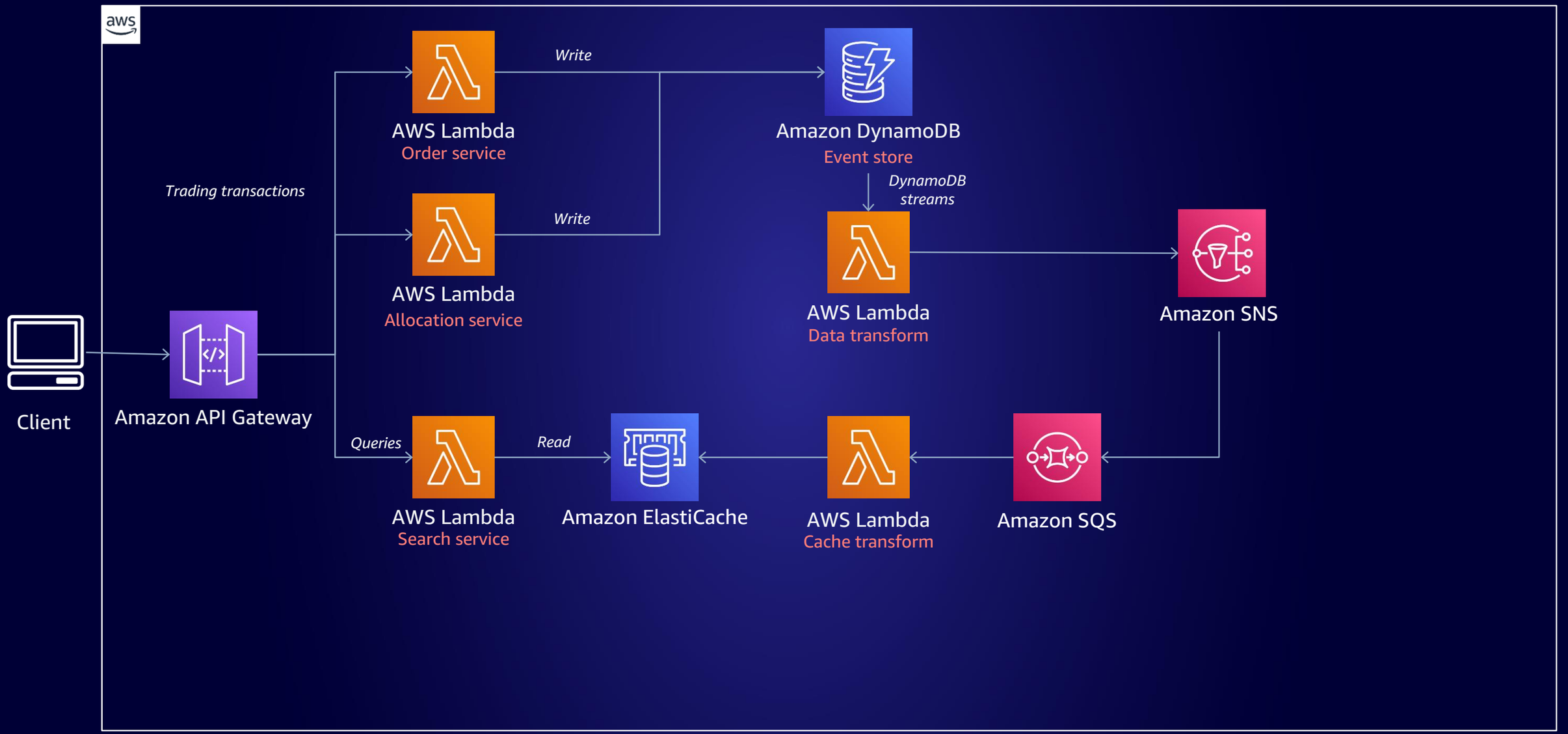

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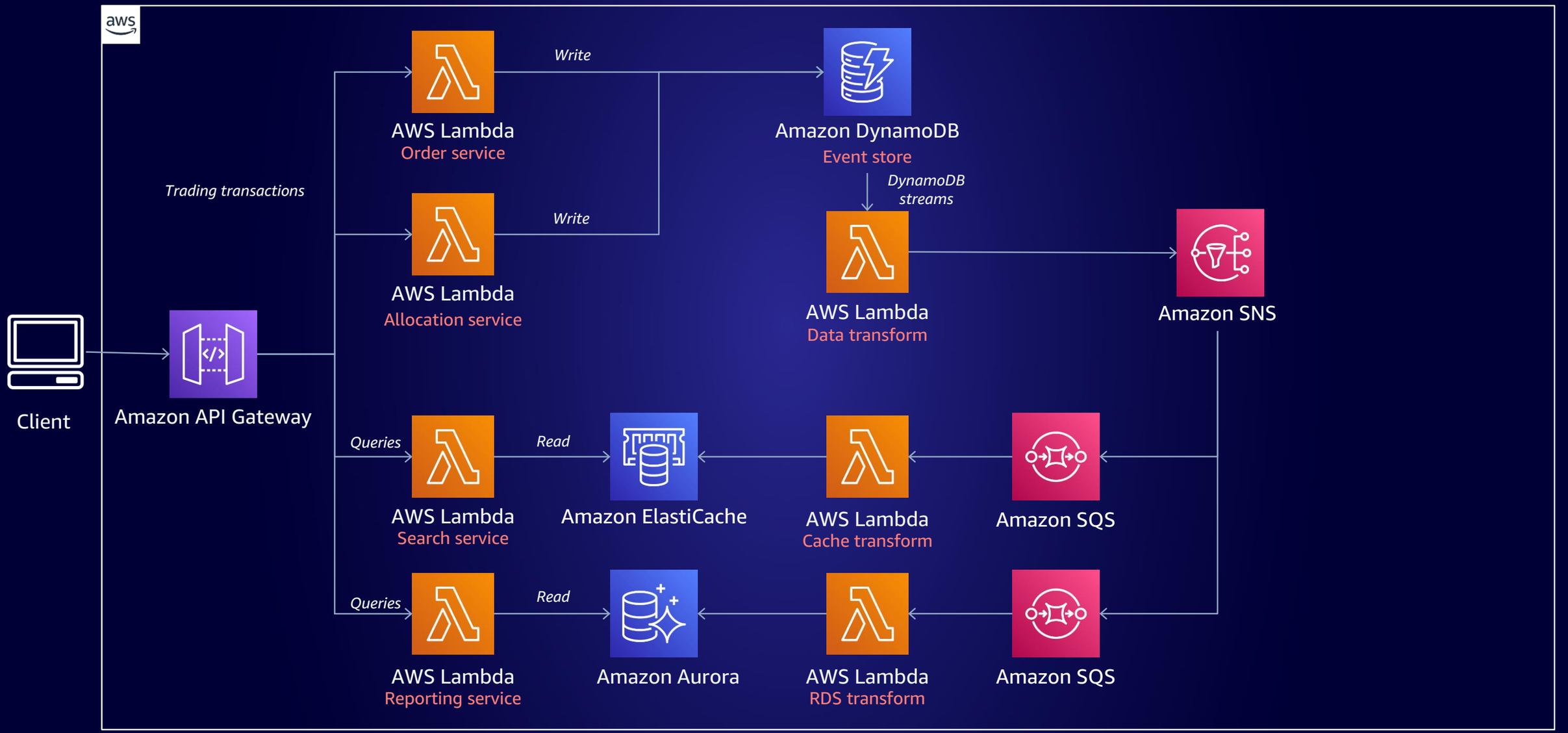

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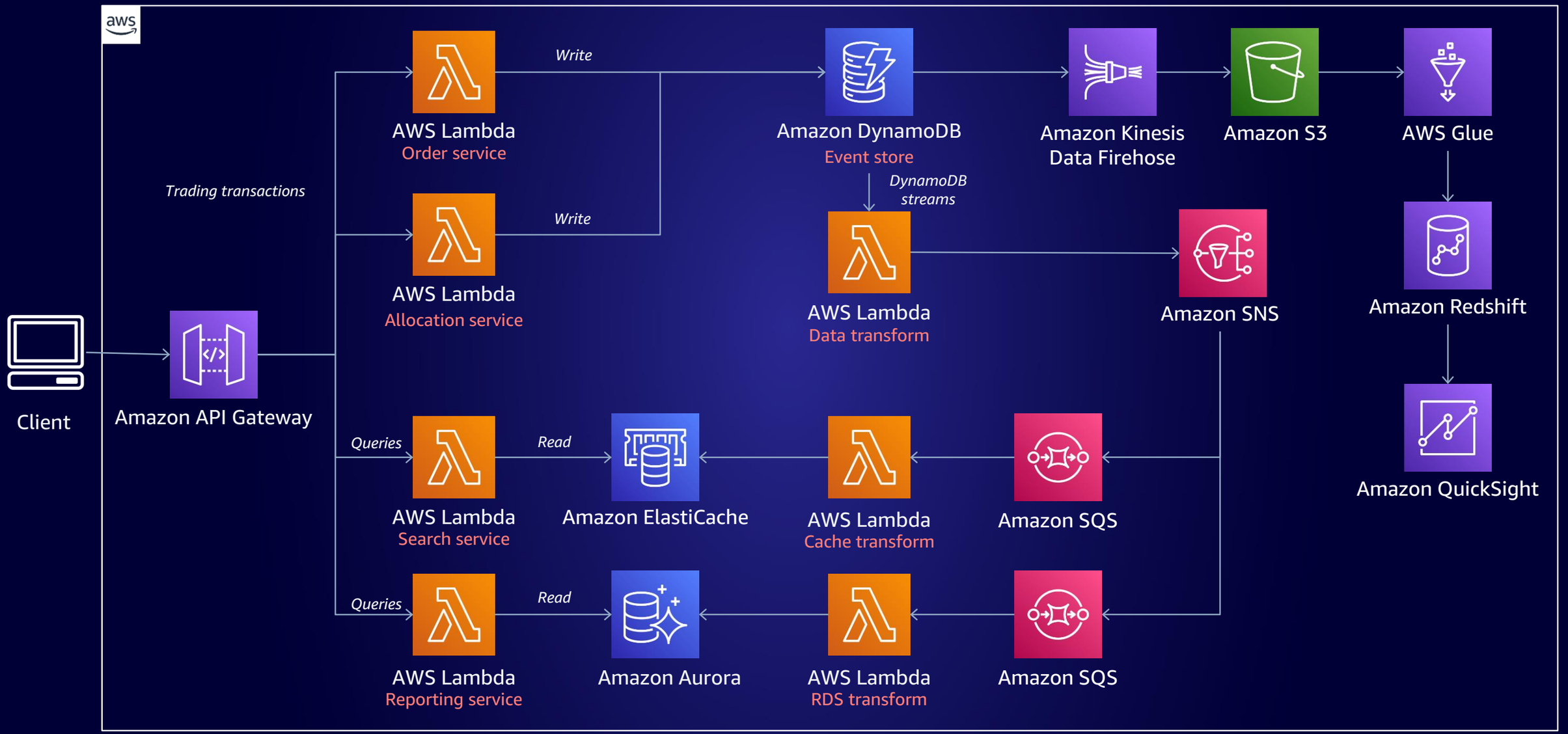

Demo

What did we learn today?

Concepts in distributed systems

Event driven patterns

Event sourcing

Command Query Responsibility Segregation

Polyglot persistence

Next steps

Learn Containers and Serverless

TRAINING CREATED BY THE EXPERTS AT AWS TO HELP YOU BUILD SKILLS FOR RUNNING CONTAINERS

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Architecting Serverless Solutions (3 hours)

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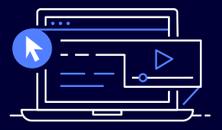
AWS Training and Certification



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Thank you!

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Amazon Web Services

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