# AWS State, Local, and Education Learning Days

New York City



aws Learning Days
State, Local, and Education

# Cloud Foundations

**10:15am – 11:15am**

**100** level

## Migration and modernization with AWS: lessons learned and best practices

Learn insights on AWS tools and services, and modernizing applications during migration

**11:30am – 12:30pm**

**200** level

## Foundational best practices to strengthen your cloud journey

Foundational cloud principles to ensure secure, reliable, compliant, and operationally excellent AWS environment

**1:30pm – 3:00pm**

**200** level

## AWS Foundations hands-on workshop

Customize your AWS learning with interactive technical workshops and personalized lab experiences.

**3:15pm – 4:15pm**

**300** level

## Designing modern applications in AWS

Unlock serverless potential: reduce costs, boost scalability, and enhance security with cloud-native architectures

# Designing modern applications in AWS

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# Voice of the Customer

Scan this QR Code with your phone

Or join at: https://menti.com with code 8247 4115

TODO: Replace with Fresh one for the event.

# Architecting on AWS is different

- It’s not just about stringing together services, but about building scalable, elastic, resilient, secure, reliable and cost-efficient solutions using managed cloud-native services
- Leverage cloud-scale, robust infrastructure
- The cost model frees architects up to do more & more cost-efficiently; promotes innovation
- Emphasis on composable architectures of distributed, modular & reusable components; generally service-oriented
- Servers/hosts are no longer the atomic unit of architecture
- Infrastructure-as-code: infrastructure as cattle, not pets
- Hyper-automation as a strategy
- Expanded integration and orchestration pathways (asynchronous, event-driven, “everything-as-an-API” decoupling)

# Principles of Modern Cloud System Architecture

## Systems

Build flexibly for the future with loosely coupled services and component-based architecture

Require auto-scaling and load balancing

Use purpose-built services

Govern architecture across the enterprise

Ensure performance and skill alignment

Offer seamless storage functionality

Decouple infrastructure & experience

Work backwards from business needs

Leverage automation and containers

# Principles of Modern Cloud System Architecture

## Experience

Deliver holistically with user-centered design, accessibility, and reusable components

Require scalable public and worker interfaces

Segment and personalize

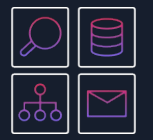
Develop a unified design approach

Ensure performance and skill alignment

Use seamless data to make decisions

Decouple data and channels

Work backwards from user needs

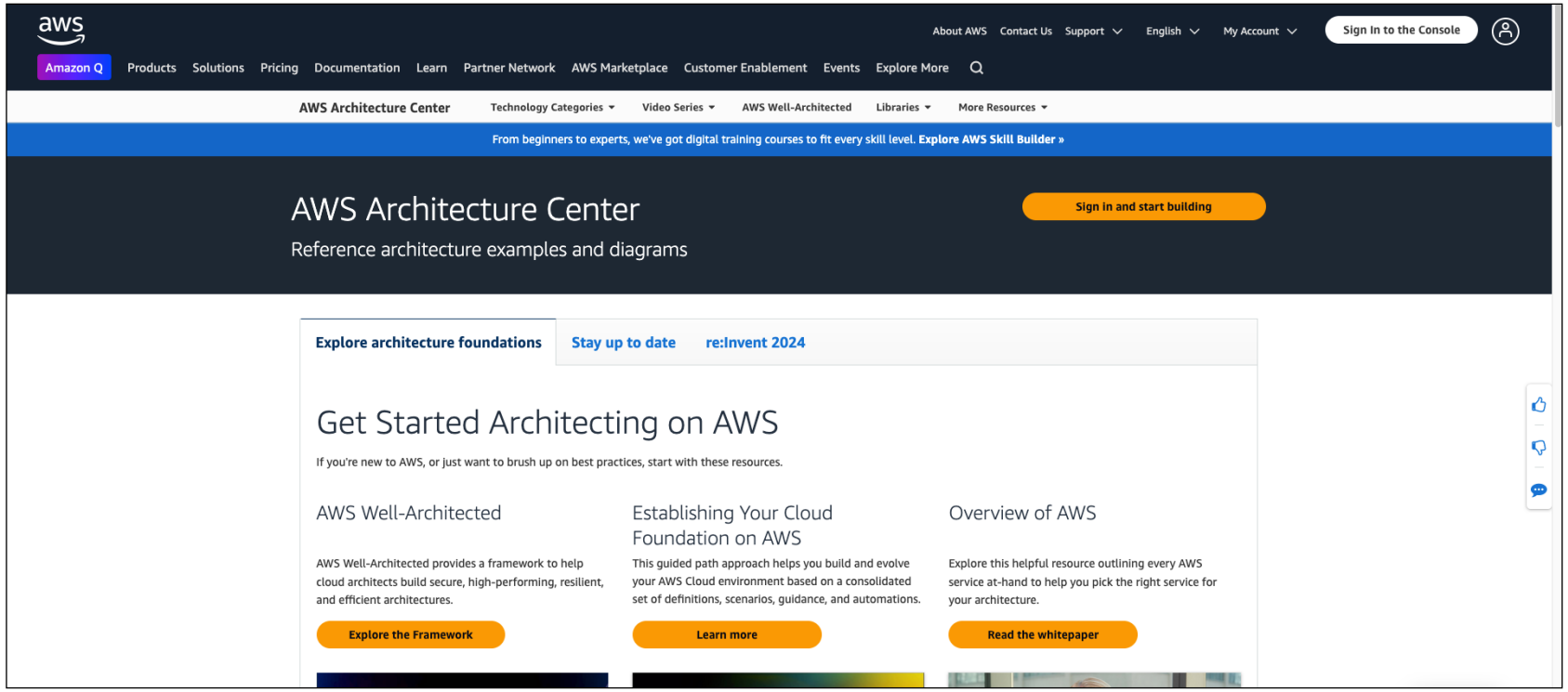


Leverage reusable components

# AWS Architecture Center

https://aws.amazon.com/architecture

- Library of content including
  - Patterns
  - Reference Architectures
  - Guidance
  - Solutions, and more
- Links and other resources for architecting on AWS
- Video Series like ‘This is My Architecture’ and ‘How to Build This’
- Architecture Best Practices



# What is the AWS Well-Architected Framework?

Pillars & Lenses

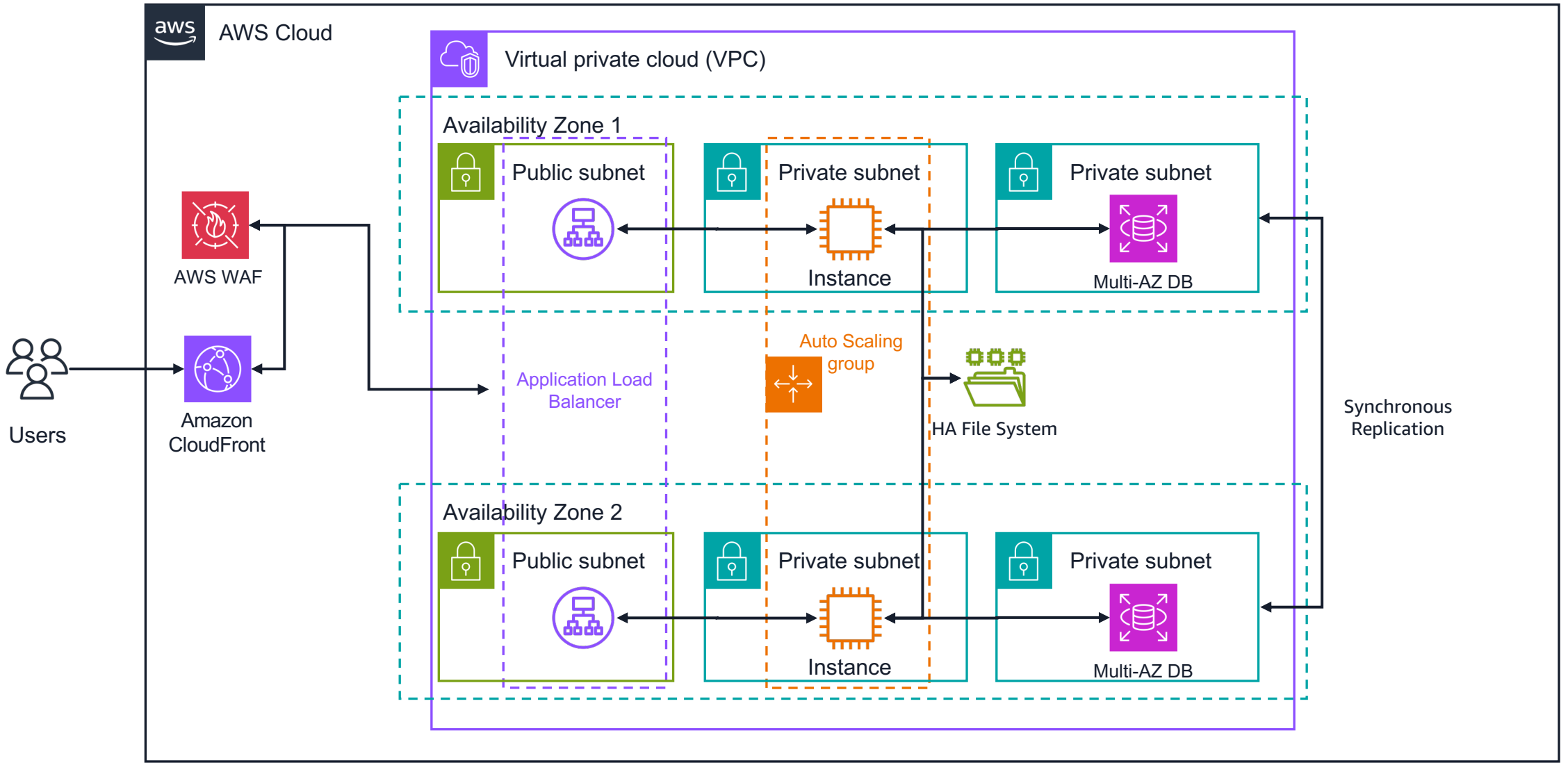
Design principles

Questions

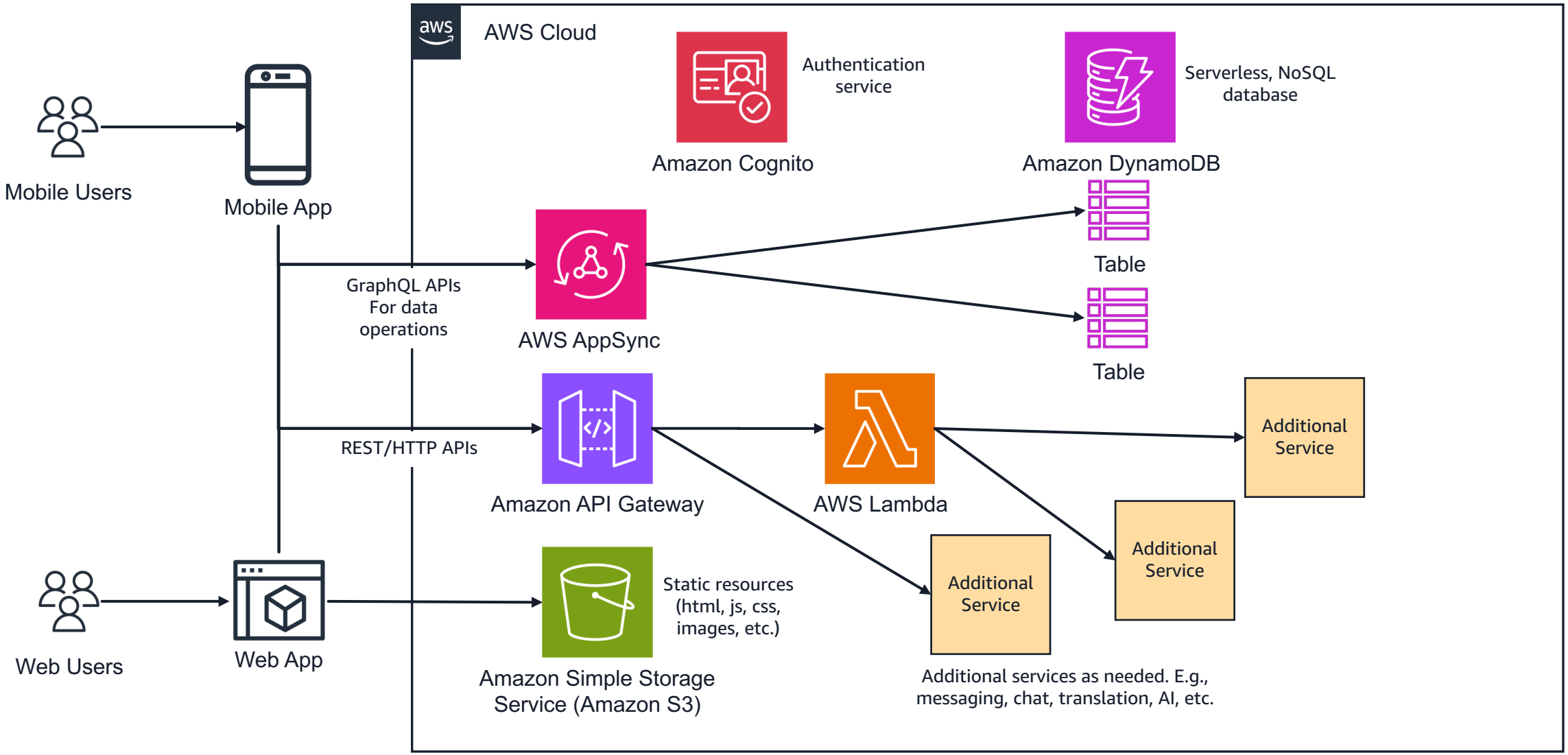
Best Practices

# Pillars of the AWS Well-Architected Framework

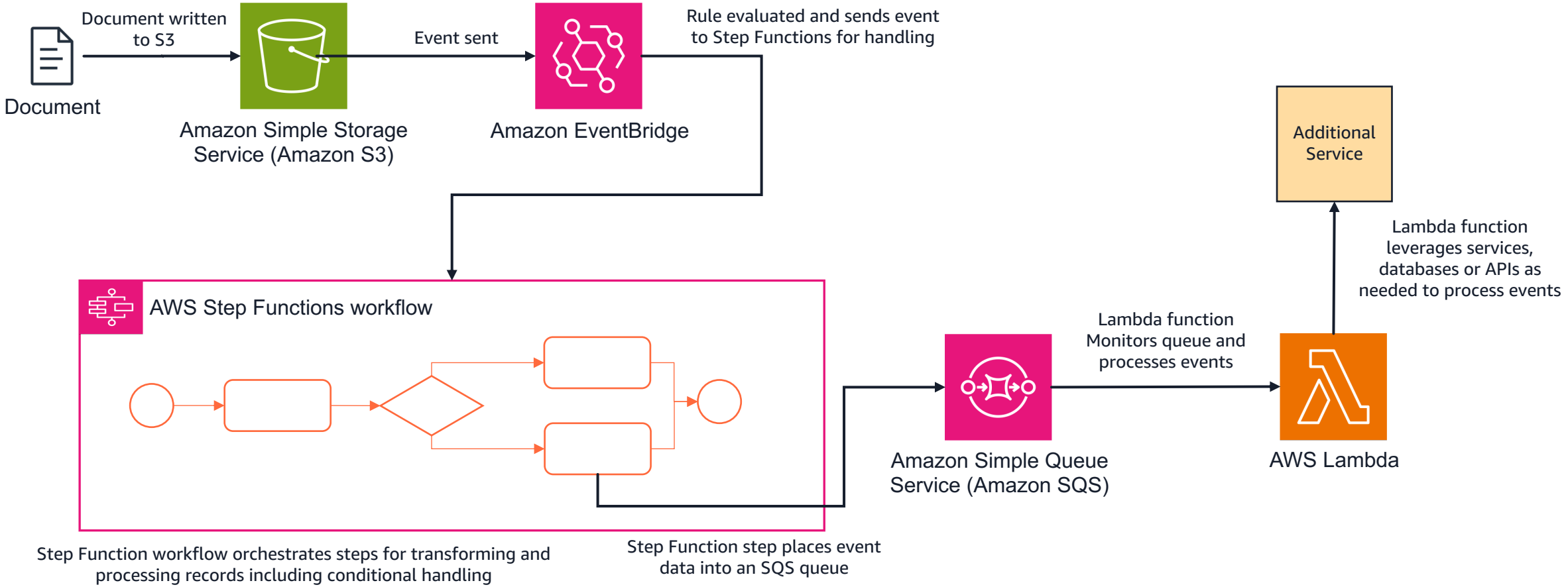
# Highly Available 3-Tier Application



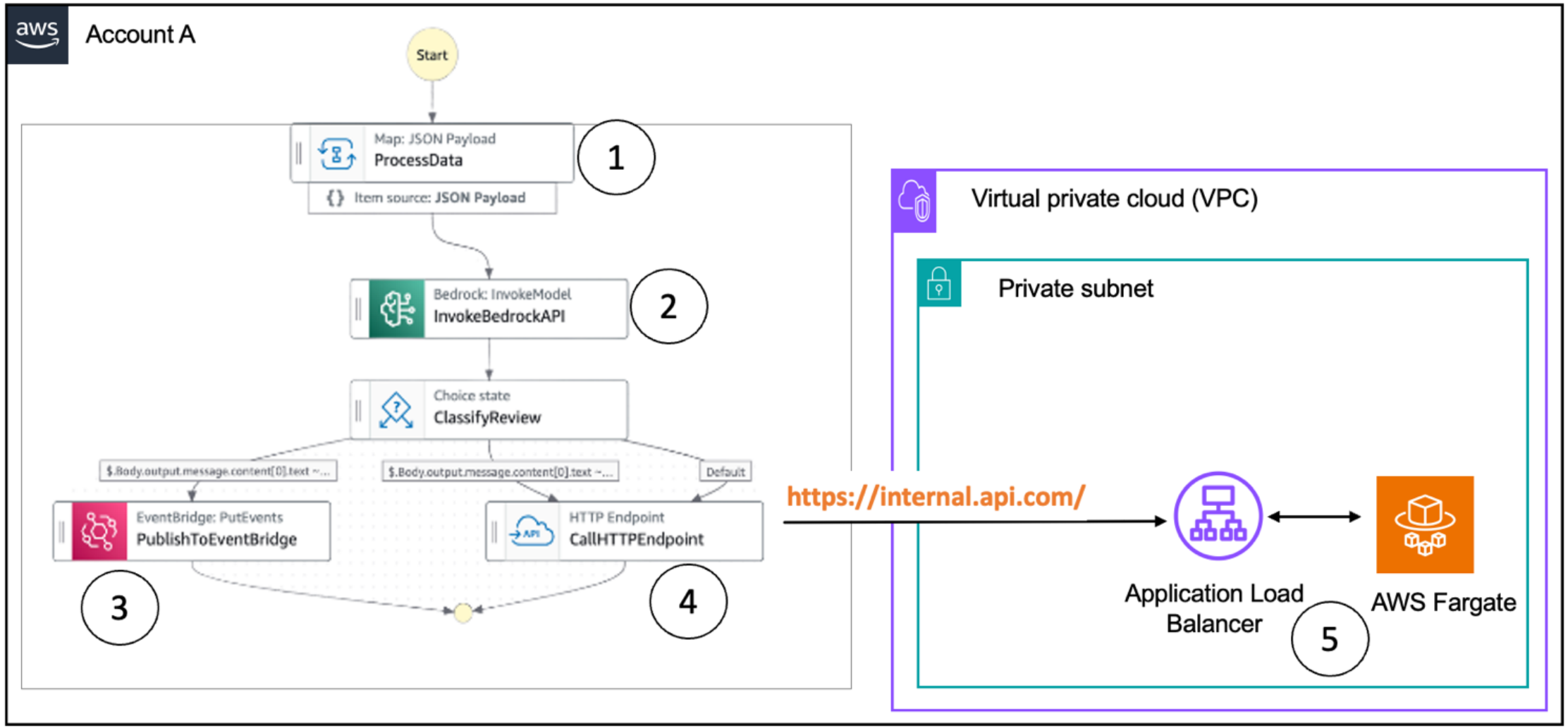
# Serverless Web/Mobile Application with APIs



# Event-driven processing

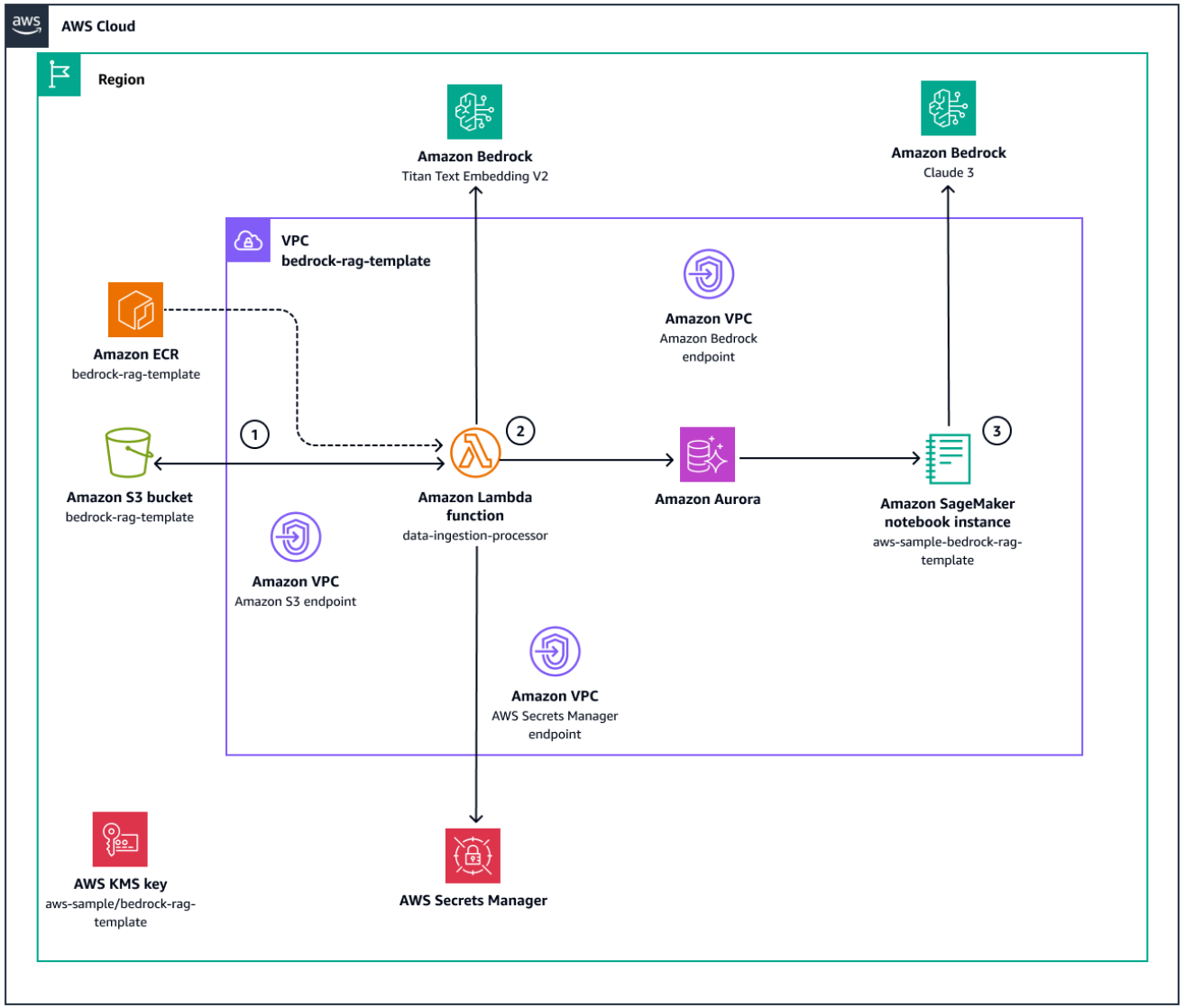


# Orchestrated Asynchronous Processing



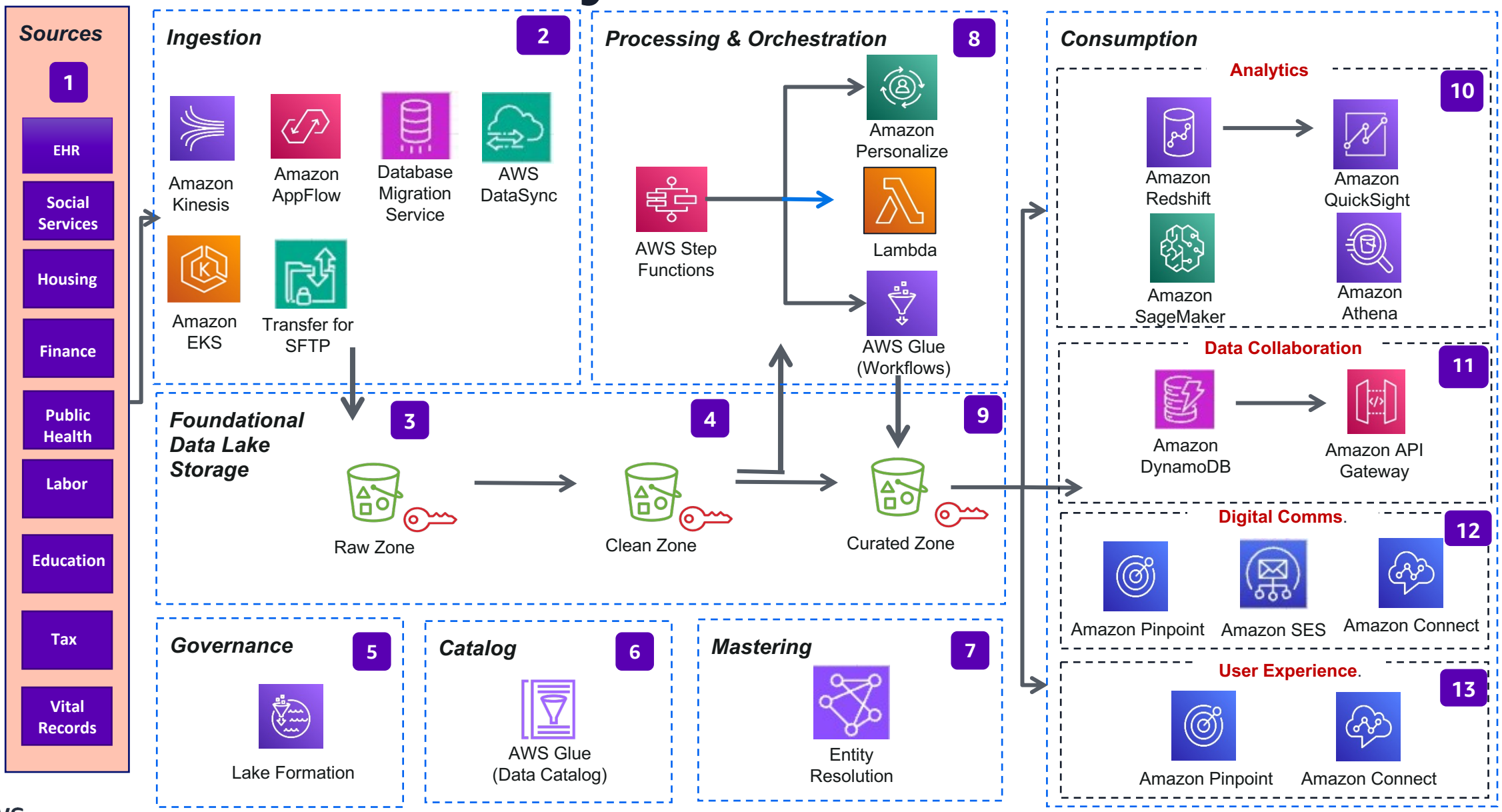

Source: https://aws.amazon.com/blogs/compute/simplifying-private-api-integrations-with-amazon-eventbridge-and-aws-step-functions-2/

# Generative AI RAG Architecture




Source: https://docs.aws.amazon.com/prescriptive-guidance/latest/patterns/deploy-rag-use-case-on-aws.html

# Modern Data Analytics Platform



# Let’s get out the chalk

# Thank you!

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**Please complete the survey for this session**

**Track: Cloud Fundamentals**

Session: Designing modern applications in AWS



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