Aetna Movie API – Cloud-Native Architecture Overview

Purpose
Executive summary of the end-state solution

Audience
CTO, Sponsors

Overview
A secure, scalable, AWS-native Movie API platform that exposes film data via RESTful services, built using Java Spring Boot, and deployed on ECS Fargate with RDS PostgreSQL, secured by Amazon Cognito, and operated through GitHub Actions CI/CD pipelines.

Core Architecture Components
- Frontend/API Clients → Public Internet
- API Gateway (HTTP APIs) → Authentication via Cognito
- Spring Boot API (ECS Fargate) → Containerized compute
- Amazon RDS (Postgres) → Relational data (movies/ratings)
- CloudWatch + SNS → Monitoring, logging, notifications
- GitHub Actions → CI/CD with ECR deployment
- Amazon Workspaces → Isolated developer environments

Security
- Cognito for AuthN/AuthZ
- Parameter Store & Secrets Manager for sensitive configs
- API Gateway throttling and CloudWatch alarms

Benefits
- 100% AWS-native (no on-prem or self-hosted)
- Extensible, modular microservice structure
- Secure, observable, and CI/CD-driven
- Developer-ready via pre-provisioned AWS Workspaces