

PROJECT ABSTRACT

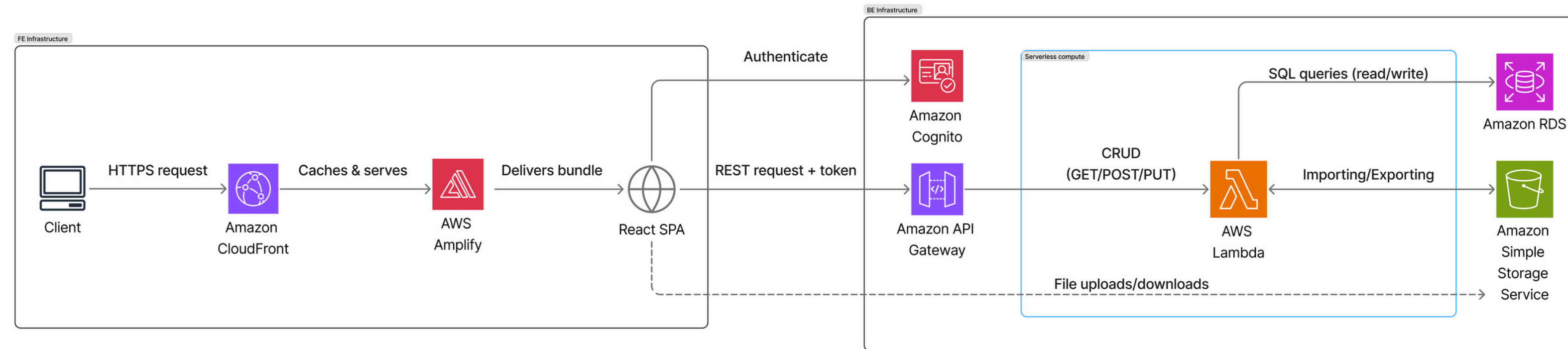
The security control testing team is responsible for ensuring regulatory compliance by testing hundreds of security controls. Currently, the team relies on manual spreadsheets to manage testing assignments, track review status, and monitor overall progress. This approach is inefficient, error-prone, and provides limited visibility into individual responsibilities and team-wide performance.

As a result, the understaffed team struggles to keep up with required testing, increasing the risk of missed controls, delayed compliance reporting, and difficulty for leadership to make informed decisions.

ARCHITECTURE

Our system features a fully serverless, event-driven architecture hosted on AWS for maximum scalability and low overhead. A React SPA serves as the interface, with Amazon Cognito ensuring secure, identity-based access.

Backend logic is orchestrated by AWS Lambda via API Gateway, managing structured data in Amazon RDS. For high-performance file handling, we've integrated Amazon S3 to manage imports and exports. By utilizing presigned URLs, the system enables direct, secure data transfers between the client and storage, optimizing performance while maintaining a robust, decoupled infrastructure.



SOLUTION

Our solution streamlines security control testing by replacing manual spreadsheets with an automated workflow management webapp.

It empowers testers to easily track assignments, enables leadership to monitor progress in real time, and provides clear visibility into compliance status.

This solution reduces workload, ensures consistency, improves audit readiness, and strengthens regulatory compliance.

TECH STACK

- AWS Services
 - CloudFront
 - AWS Amplify
 - Cognito
 - API Gateway
 - Lambda
 - RDS (PostgreSQL)
 - S3
- React
- Node.js
- Python



FUTURE

- Automate reminders for overdue requests, status changes, and assignment changes.
- Schedule recurring control tests automatically.
- Extend the platform to support other audit, and department.
- Use predictive analytics to identify testing bottleneck, overdue trends and high-risk controls.

FEATURES

Summary Dashboard

Track overall testing progress, and overdue requests.

Control Catalog

Refer to control descriptions, owners and SMEs.

Control Test Tracker

Monitor request status, assignees, and testing workflow.

User Login

Secure authentication and role-based access management.

Import & Export

Upload controls and export control reports efficiently.

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