QBurst

Workflow Management
Modernization

Achieving operational excellence with faster processing and enhanced reliability with a complete code overhaul and robust AWS infrastructure

Project Overview

The project involved revitalizing the client's administrative portal and adding enhanced features on the mobile application, addressing key performance, scalability, and functionality requirements. The implementation modernized the portal's codebase with the latest technologies, streamlined operations through AWS infrastructure, and introduced new features for enhanced efficiency. This comprehensive upgrade significantly enhanced the portal's performance and reliability, leading to faster processing time and smoother user interactions.

Client Profile

A UK-based facilities services firm that specializes in tasks requiring precise operational tracking.

Business Requirements

The primary goal was to revamp the administrative portal, optimize performance, and introduce new features on the mobile application to increase the system's scalability and reliability.

- Performance optimization to handle increased data load and user interactions seamlessly

- Update and modernize codebase with the latest framework and package versions

- Enhance the scalability for data-intensive tasks and real-time notifications

- Feature enhancements for automated SharePoint file syncing, custom form creation, report generation, and a real-time map view for tracking operator movement

QBurst Solution

To meet the client's requirement, we executed a comprehensive revamp of the administrative portal and optimized its performance.

- The codebase was updated by bringing the framework and packages to the latest stable versions

- A detailed performance analysis was conducted to identify and address significant bottlenecks

- A scalable infrastructure was established by hosting the application on AWS EC2 servers, with dedicated servers for API requests, data syncing with MS Dynamics 365, real-time notifications via an MQ server, and a user-facing web server

- To enhance the scalability of data-intensive operations, AWS SQS was integrated for efficient queue management

Project Highlights

- Automated SharePoint file syncing, custom form and report generation, and a real-time map view for tracking operator movement

- Automated file syncing between SharePoint and the mobile app

- Administrative portal users can create and customize forms that are displayed in the mobile app and generate reports without third-party tools

- Real-time map view to track operator movement and status, enhancing data authenticity and monitoring

- Push notifications for real-time data updates and messaging for operators via Firebase

- Geofencing and background location tracking monitor operator location during job activities

- Offline support enables app use with data syncing when reconnected

Technologies Used

- PHP
- MySQL
- DynamoDB
- AWS Lambda
- AWS S3
- AWS SES

- AWS SQS
- Flutter
- Dart
- Provider
- Firebase
- SQLite

Business Benefits

- The optimized administrative portal significantly improved user experience and data processing speed

- Streamlined operations with AWS SQS and dedicated servers minimized latency and ensured seamless data processing

- Updating the codebase and frameworks to the latest versions ensured a more stable and secure system, reducing downtime and maintenance costs

- Streamlined workflows through SharePoint syncing and custom forms/ reports save time and boost productivity

- Real-time map view and geofencing features provided accurate tracking of operator activities, enhancing data reliability

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