QCollect

Case Study

MECHANICAL ROCK

The Client

QCollect is committed to transforming delivery services in Australia. They supply locker banks and cloud based infrastructure to meet increased consumer demand for parcel pick up and delivery.

Digitally connected consumers are searching for lower prices, greater convenience and a seamless experience when buying, receiving and returning products.

QCollect's innovative locker banks enable couriers or consumers to store items temporarily and securely with 24/7 access via a mobile.

Items can be delivered to lockers at any time and picked up at the consumer's convenience.

The system features a simple and easy to use web application that allows couriers to drop items, notifies the recipient and allows them to retrieve the item securely at any time of day or night.
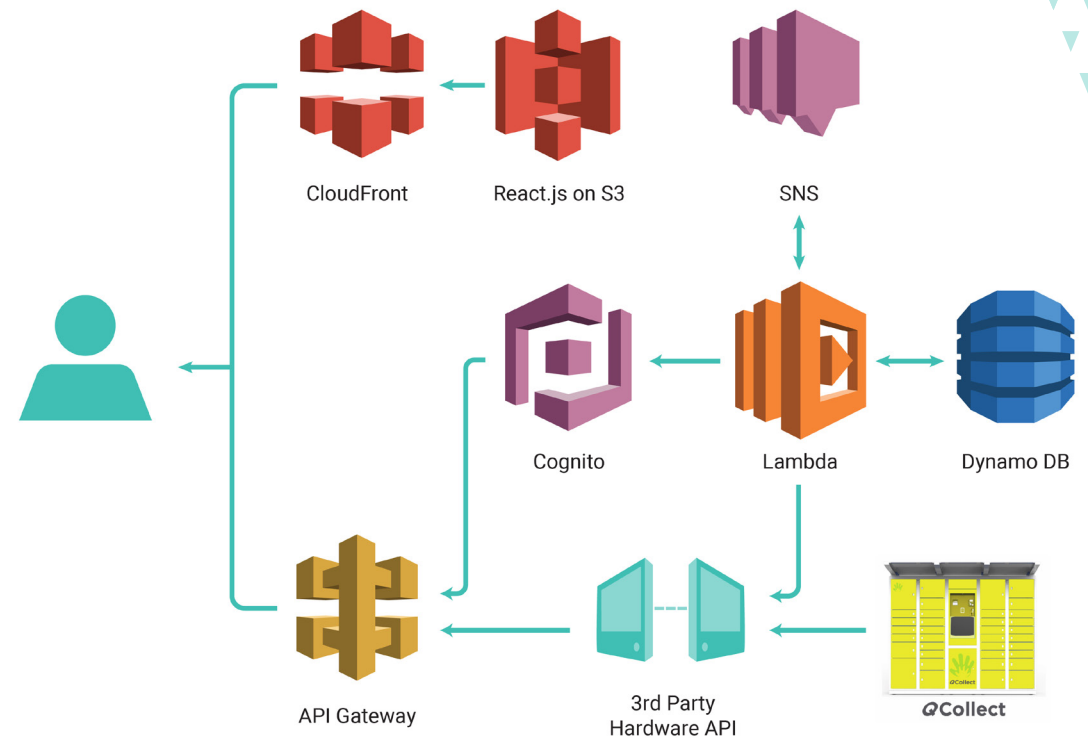
The Problem

QCollect engaged Mechanical Rock to build the mobile platform to allow end-users to access locker services.

By using AWS cloud services like API Gateway and Lambda (the serverless compute platform) we provided a cost-efficient and scalable architecture that will grow with them (see diagram)

A micro-services architecture means that QCollect only pay for the resources they use, but it also decouples QCollect's front-end from the hardware backend.

This will allow them to partner with different hardware vendors and upgrade the lockers as they require.

Further the scalable nature of serverless compute and the reach of the AWS public cloud means that the software solution will easily scale with QCollect's commercial and regional growth.

CloudFront

React.js on S3

SNS

Cognito

Lambda

Dynamo DB

API Gateway

3rd Party
Hardware API

QCollect

The Solution

QCollect's competitive advantage stems from their open locker platform which is available to all couriers, consumers and retailers.

To enable this open platform they needed a similarly flexible and open software platform, which Mechanical Rock were able to provide.

Mechanical Rock's software architecture and development expertise has enabled us to launch our platform in record time and give us a flexible platform that has literally cost nothing to run since inception but provides us limitless scale as we continue to grow
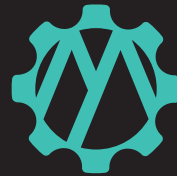*- QCollect Managing Director*

The Benefits

- A modern, light-weight and responsive React web front-end that works on any device

- AWS Lambda serverless functions to control hardware in a loosely coupled way

- Built in mobile authentication and security using services like AWS Cognito

- An open and scalable architecture which will allow modular components to be replaced at will

- Automated build and deployment pipelines with built-in tests to allow continuous delivery and live updates with zero downtime

- Minimal operating costs at startup due to the serverless nature of integration architecture

"Mechanical Rock built out a serverless eCommerce integration platform for us to be able to offer Warehousing as a Service to a new market. We weren't clear what we needed, but working with Mechanical Rock meant they drew out what was important and within weeks we had new platform and new customers."

Sophie Stott
Managing Director
Quickmail Pty Ltd

Think we can help with your project?

Get in touch so we can chat about your plans over a coffee

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www.mechanicalrock.io