Use Case

Homeowner and Guest can control lighting, temperature, and monitor home status via an app. For convenience, users can also ask Alexa to do the same tasks.

AWS Architecture

App runs on CloudFront/S3, and sends commands to API gateway, which proxies to the Raspberry pi. The pi auto-updates its public IP address via a custom lambda function.

Home Architecture

Light Switches are GE, and operate on the ZWAVE protocol. Raspberry pi has a zWave USB stick. Additionally, the pi connects to WiFi devices and GPIO devices via hardware.

Amazon CloudFront

Amazon API Gateway

AWS Lambda

Amazon Route 53

Raspberry PI

ZWAVE

WiFi

GPIO

GE Light Switches

Door Lock

Camera

Thermostat

Home Security System

Other Sensors (Water)