Description

The IoT workshop will cover an introduction to the AWS IoT ecosystem as well as a deep dive and walkthrough of AWS IoT integration with DynamoDB, Amazon Kinesis, and AWS Lambda. Attendees will also see demonstrations of AWS IoT Device Shadows, as well as participate in hands-on labs where they will set up their own IoT device to capture data into Amazon DynamoDB using AWS IoT and AWS Lambda.

Workshop Objectives

This workshop will:

- Provide an overview of AWS IoT services.
- Demonstrate integration between AWS IoT and related AWS services such as AWS Lambda and Amazon DynamoDB.
- Provide hands-on lab experience with AWS IoT and related AWS services.

Intended Audience

This technical, 400+ level, hands-on workshop is intended for:

- Associate level certified AWS solution architects and above.
- Senior engineering resources with deep AWS experience.

Prerequisites

Laptop: You will need a laptop to complete the hands-on lab work. Either Mac or PC will work.

AWS account: Attendees need an AWS account with sufficient permissions to create and modify roles, security groups and set up: AWS Lambda, Amazon SNS, Amazon SQS, AWS API Gateway, AWS IoT, Amazon Kinesis, Amazon Kinesis Firehose, Amazon Redshift, and Amazon DynamoDB.

Hardware: An Intel Edison with mini-breakout board is recommended: https://www.sparkfun.com/products/13025. Some Intel Edison boards may be available in the workshop, but we cannot guarantee enough for everyone. Attendees who bring a board should should bring enough equipment to run their hardware in a headless mode, which for an Intel Edison means two micro-usb cables : https://www.amazon.com/dp/B00NH13O7K/ref=cm_sw_r_cp_awd_qr0Ywb3A7CCFR. Attendees using a Raspberry Pi will need an Ethernet cable (regular cable will do). If using a MacBook, please bring Ethernet adapters as well.

Software: Development environment on your classroom laptop:

- Install NodeJS: https://nodejs.org/en/
- Any tools of your choosing that will support a NodeJS environment.
- Install Xcode via the Apple App Store.
- To check out code examples, please bring a GitHub account, and pre-install Git command line tools for your operating system.

Agenda[1]

Time	Topic
8:30 – 9:00	Introduction
9:00 – 9:45	Overview of Kinesis and DynamoDB in IoT use cases
9:45 – 10:00	Break
10:00 – 11:30	Deep dive and walk through of AWS IoT and integration with other AWS services
11:30 – 12:00	Let's get setup! Cover initial configuration requirements for the Intel Edison boards
12:00 – 1:00	Lunch
1:00 – 2:00	Hands-on labs
2:00 – 2:15	Break
3:00 – 5:00	Hands-on labs

[1] Subject to change