Welcome to this Amazon FreeRTOS workshop using the M5StickC

Lab 0 - Setup

If you follow the Setup guide, you will have nothing to do. The code first compiles to Lab 0

Your device will boot up, and directly go to sleep.

You can wake up the device by pressing the front button. This will trigger a full restart of the device, and device will go back to deep-sleep after a couple seconds.

Lab 1 - Create your own AWS IoT Button

A couple years ago, AWS announced the AWS IoT Button you could order from Amazon.com. Why not create our own ?

For this lab, our M5StickC will act as an AWS IoT Button, allowing you to trigger downstream AWS Services.

Lab 2 - Interract with the Thing

It’s the summer, and its hot outside. Lets play around with remove controlled Air Conditioning units.

For this lab, our M5StickC will act as our Air Conditioning unit.

You can turn the AirCon ON or OFF remotely as well as set a target temperature.

- If the AirCon is OFF, the temperature will rise to a stable 40 deg celcius.
- If the AirCon is ON, the temperature will decrease to reach your chosen temperature

Lab 3 - Just in Time Registeration with Greengrass

In this lab you will:

1. Use openssl on Cloud9 to create your certs and import your CA to AWS IoT
2. Create a lambda function and IoT Action to provision Greengrass in AWS IoT
3. Install and start greengrass with the certs you’ve created in **step 1**
4. Verifiy in AWS IoT Console that the group is successfully created/provisioned and then deploy the greengrass group

Disclaimer

The following workshop material including documentation and code, is provided as is. You may incur AWS service costs for using the different resources outlined in the labs. Material is provided AS IS and is to be used at your own discretion. The author will not be responsible for any issues you may run into by using this material.

If you have any feedback, suggestions, please use the issues section.