Setting up the RaspberryPi

NETWORK CONFIGURATION

1. Edit /etc/network/interfaces file

auto lo

iface lo inet loopback

auto eth0

iface eth0 inet static

#auto wlan0

#iface wlan0 inet dhcp

#wpa-conf /etc/wpa\_supplicant/wpa\_supplicant.conf

2. Edit /etc/dhcpcd.conf file. Add the following lines at the end after the line ‘nohook lookup-hostname’

static ip\_address=192.168.1.253/24

static routers=192.168.1.1

static domain\_name\_servers=192.168.1.1

CONFIGURING RASPBERRYPI TO RUN A MQTT MOSQUITTO BROKER

1. Connect Pi to internet

2. Run the following scripts in Pi terminal

sudo wget http://repo.mosquitto.org/debian/mosquitto-repo.gpg.key

sudo apt-key add mosquitto-repo.gpg.key

cd /etc/apt/sources.list.d/

sudo wget http://repo.mosquitto.org/debian/mosquitto-jessie.list

sudo apt-get update

sudo apt-get install mosquitto

3. Go to the file at /etc/mosquitto/mosquitto.conf and edit the line

allow\_anonymous true

Add line

listener 1883

4. Use following command to restart mosquitto service

sudo service mosquitto restart

5. Check the status of mosquitto service

service mosquitto status

PYTHON SCRIPT FOR THE SUBSCRIPTION

1. First install MQTT-Paho using following scripts in Pi terminal

pip install paho-mqtt

2. Run the python script using

python data\_getter.py

3. Files will store at /home/pi/Desktop/DataGather/Data/

4. Nature of the stored file is given as a test file(eg: KTPH\_P1\_123456789123.txt).

5. Can edit the 'topic' of the MQTT subscription at

Client.subscribe("sutd/2.601")

PARTICLE PHOTON

1. Use the mobile app or web applicaation to configure the Photon. Help is given from both methods.

2. Use the web ide at 'https://www.particle.io/'. Sign up and go to the web IDE.

3. Add the file using following link or copy the code given in 'collecter.ino'. Add libraries manually

https://l.facebook.com/l.php?u=https%3A%2F%2Fgo.particle.io%2Fshared\_apps%2F596491f18c7f4284e4000f88&h=ATO8wgLT5V4c2dch6zKCiujwB7RIKTocuOBXPGDTkvezAlOoDYJaq7ZERAqnDxX\_zvzBk9gXe5q5tJTp4dOcQTEN3R3RjCt8QVmwD6KgEzLbYiw5cd3DWAFMmbeqv3Dz3vDzag

(not editable)

4. Edit the 'id' as per users wish.

#define id "P1"

5. Change the topic of the MQTT publishing at

client.publish("sutd/2.601");