1.125 HW2

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1 Introduction

Thingsboard Community was used via docker to generate two temperature outputs for indoor and outdoor, and the data was sent to a firebase database for this homework assignment. The results of this assignment are shown below.

1.1 Thingsboard

Two thermometers representing inside and outside temperatures were created in thingsboard. These thermometers were associated with Building A and rule-chains were created for each thermometer to generate temperature values.

Thermometer A generator generates temperatures for outside with values of 30-40 degrees.

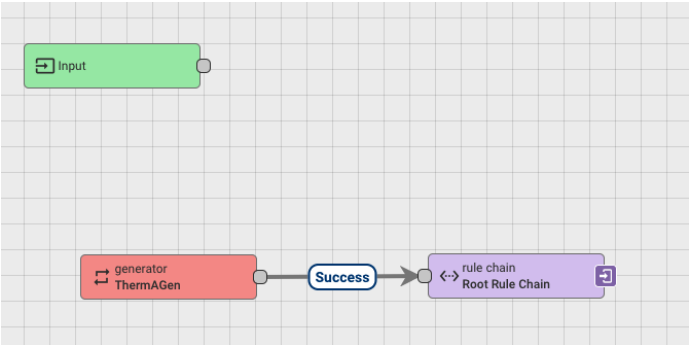

Figure 1: Thermometer A Rule Chain

Thermometer B generator generates temperatures for inside with values of 67-77 degrees.

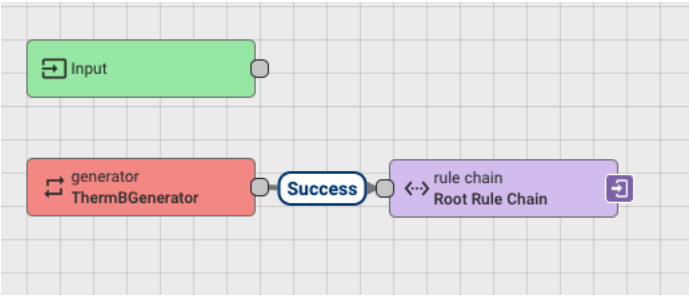

Figure 2: Thermometer B Rule Chain

The full rule chain is shown in figure 3. The rule chain is connected to send the time series data to a firebase database. Figure 4 shows the output of the time series block for the inside temperature thermometer.

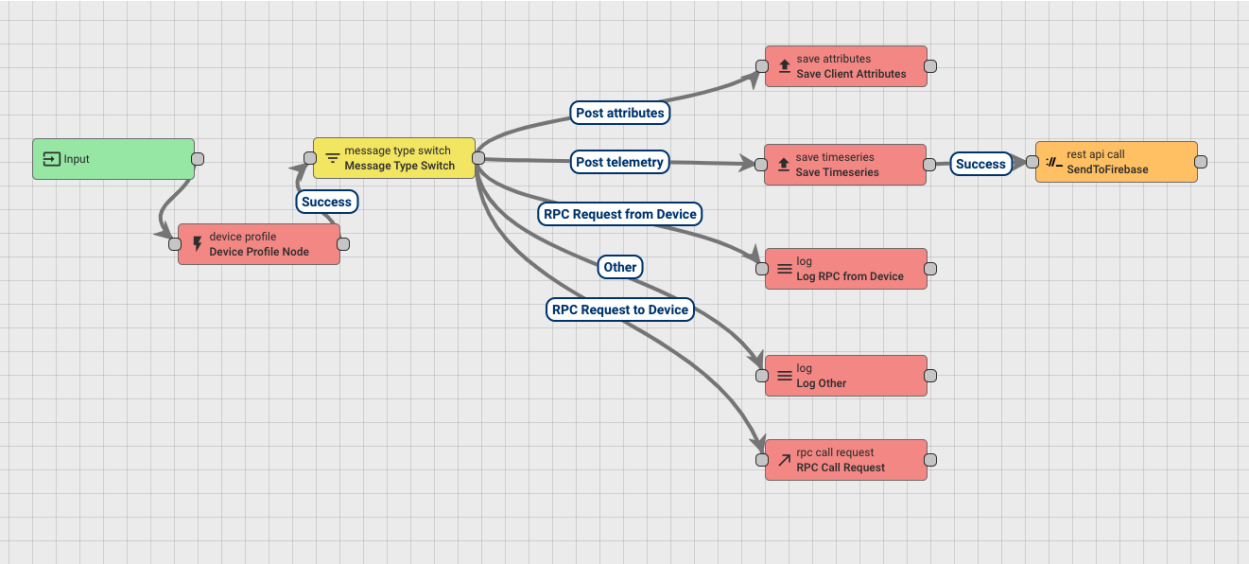

Figure 3: Full Rule Chain

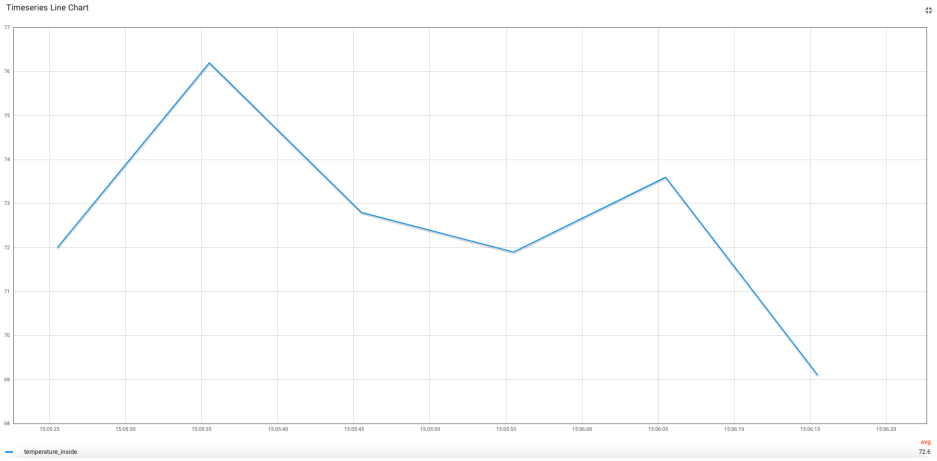

Figure 4: Time Series Data

1.2 Firebase

The data for temperature received in firebase is shown in figure 5. The variable labeled temperature out refers to the temperature outdoor, while temperature inside is the indoor temperature. The firebase dataset was located at https://tsting-39e10-default-rtdb.firebaseio.com/temperature.json.

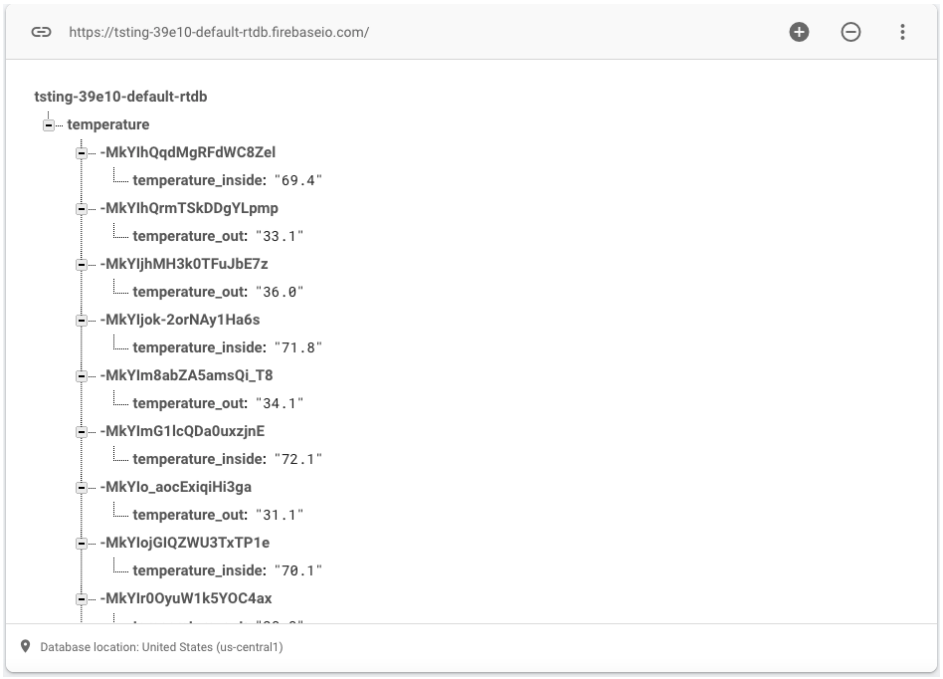

Figure 5: Firebase Data Received