VigilOffice

Second Assignment
Lab IoT

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Objectives

01 Real time office monitoring

02 Dynamic management of devices

03 Control from Master node

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VigilOffice Devices

Smart Lamp

Can be set as an Intrusion Detection device

Still in development

Smart HVAC

Ensures optimal cooling and comfort for your environment

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Lamp Node’s sensors and actuators

LED

Movement sensor (pir)

Flame sensor

Light sensor

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HVAC Node’s sensors and actuators

Temperature sensor (DHT11)

Humidity sensor (DHT11)

Flame sensor

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Dynamic MQTT topics exchange

1° step

Slave nodes subscribe to topic **vigiloffice/welcome**

2° step

Slave nodes publish on topic **vigiloffice/register**

3° step

Slave nodes subscribe to topic **vigiloffice/register/MAC**

4° step

Master node publishes the **status** and the **control** topic

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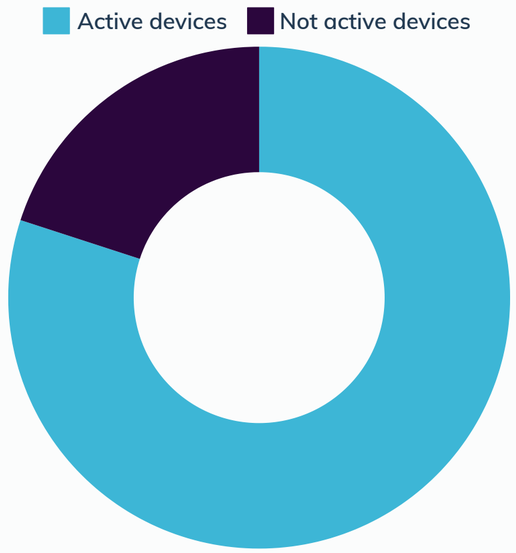
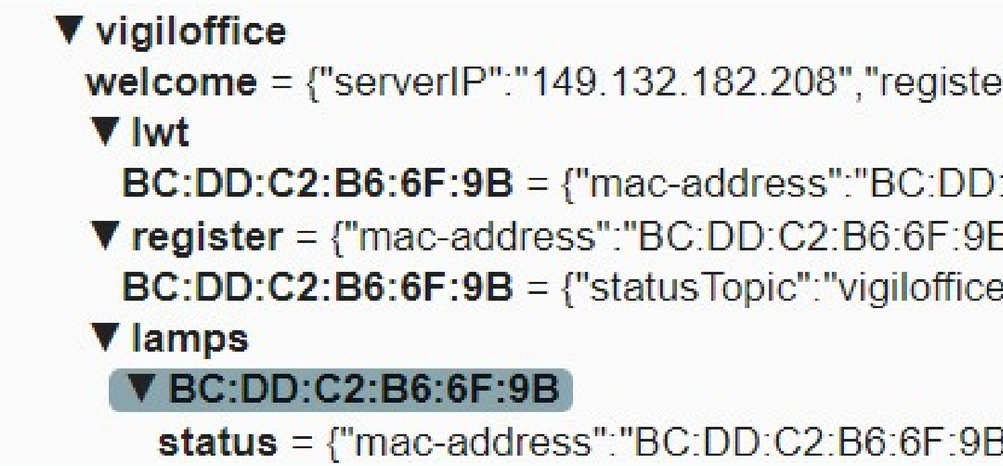
Always informed of device status with Last Will Testament

vigiloffice/lwt/slave-MAC





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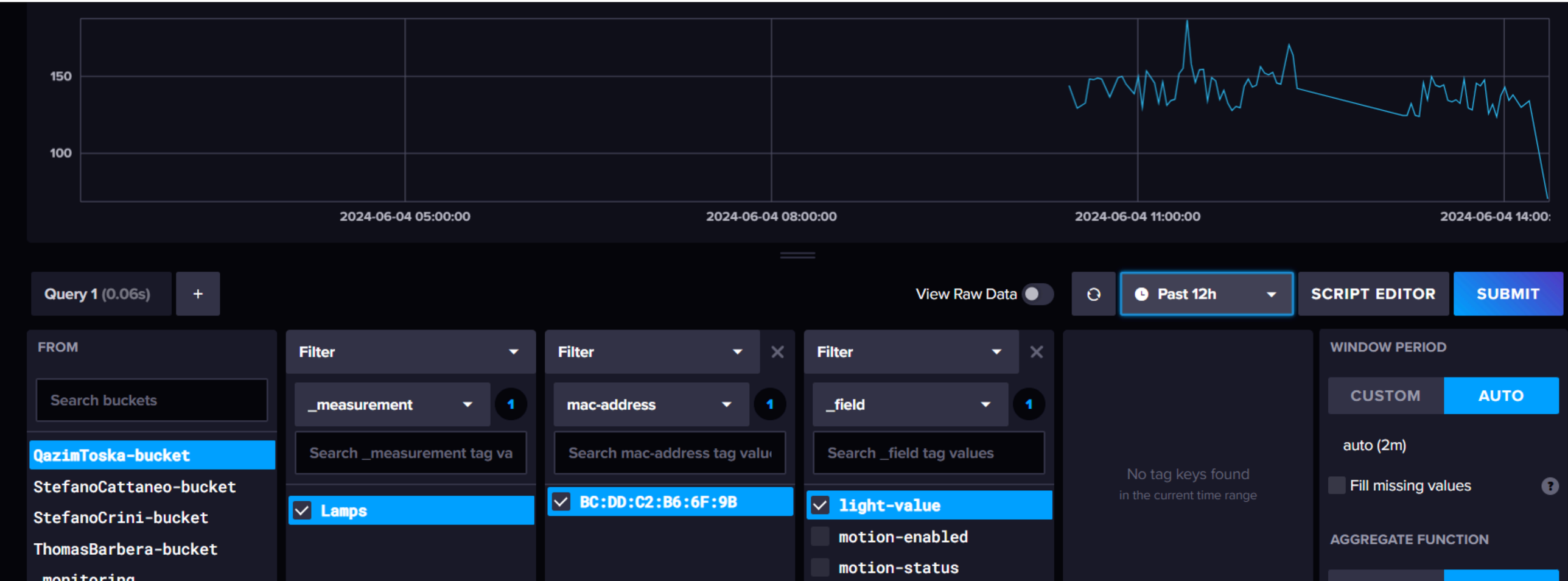
Data storing and analysis with InfluxDB



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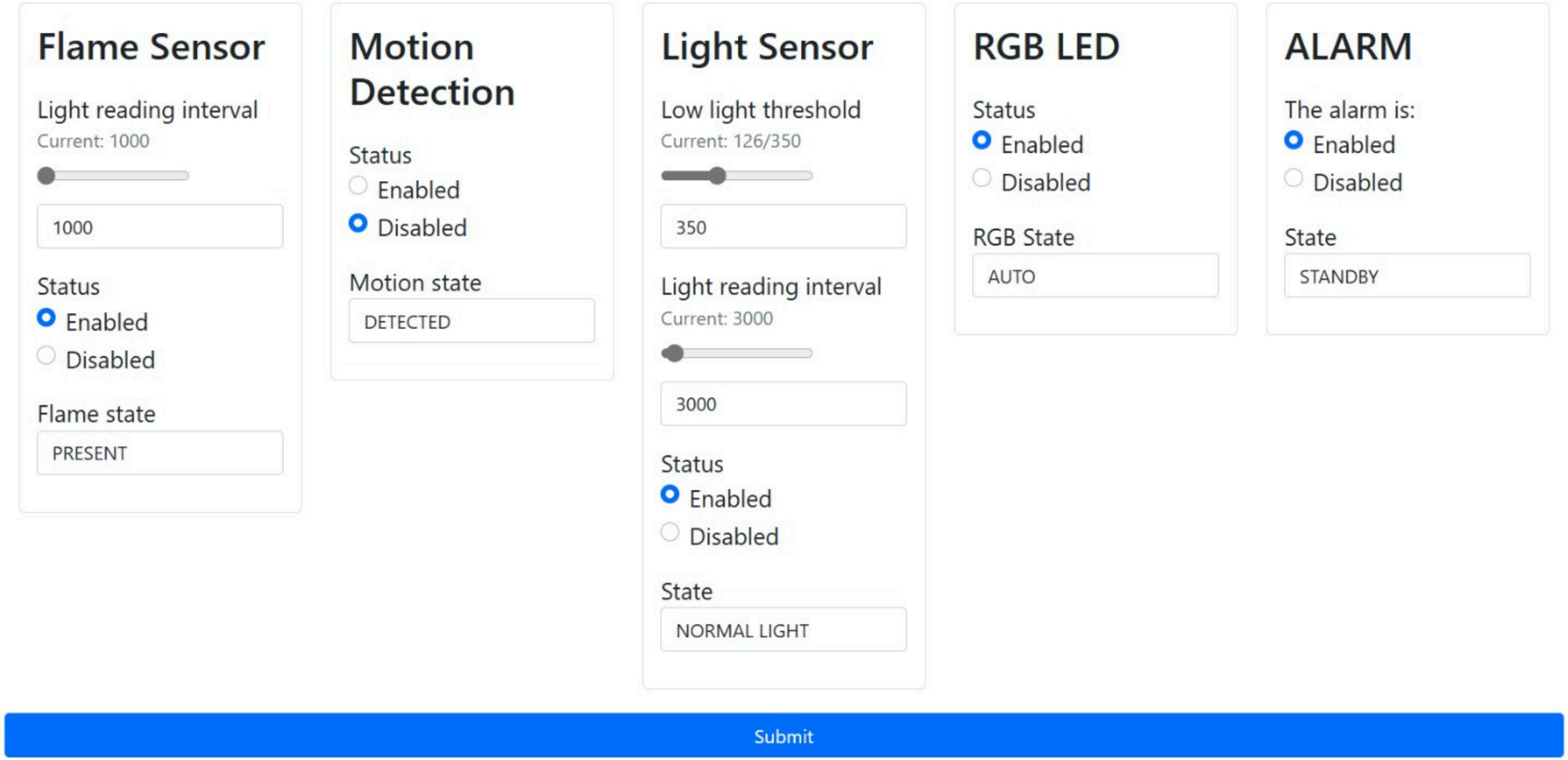
Control everything from the Web Server



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Future developments

01 Finish developing HVAC node

02 Transition Web Server to Node.js

03 Support Parking Manager node