ESP32 to The Moon

Digital Internet of Things Course

Chiang Mai Technical College

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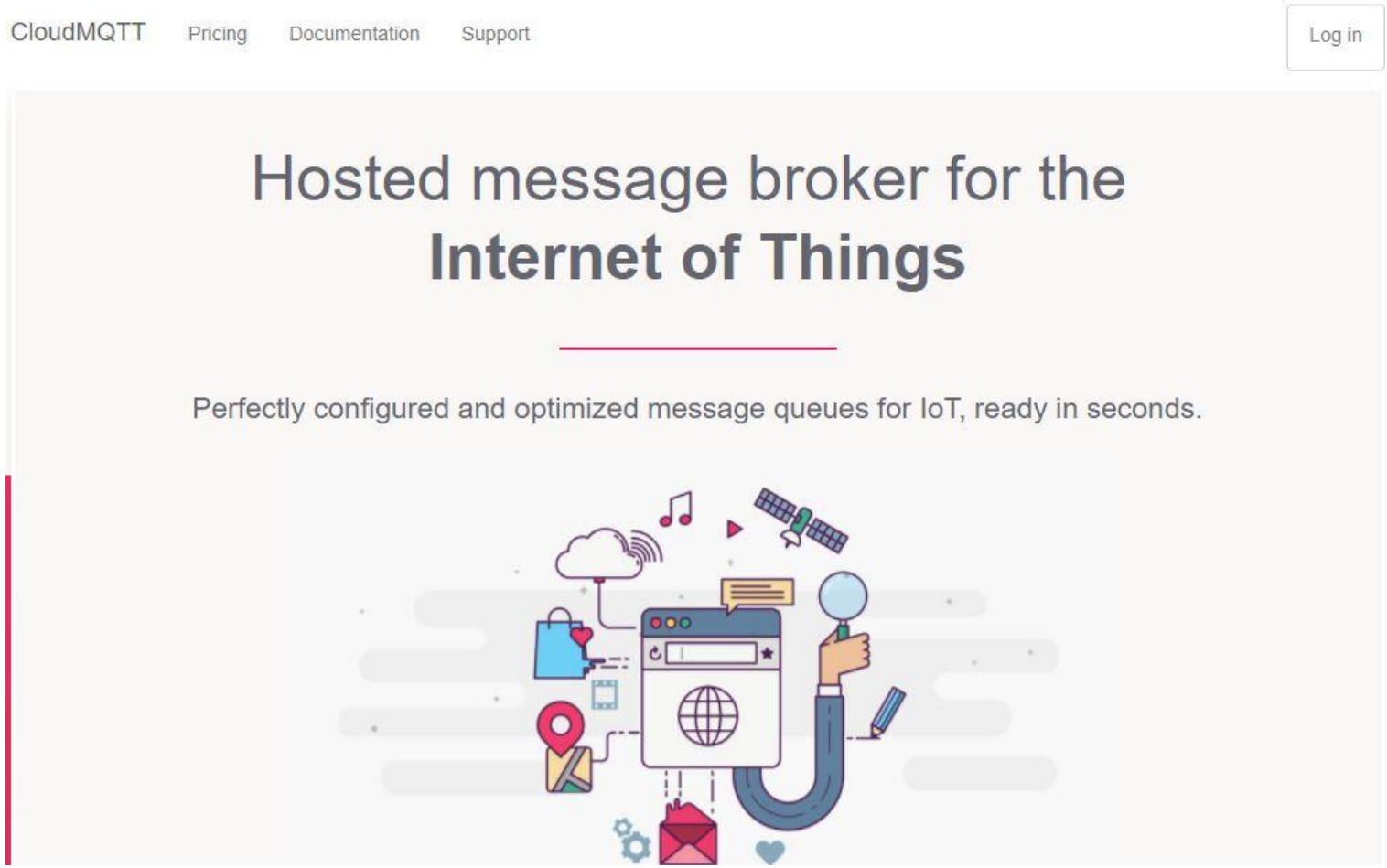
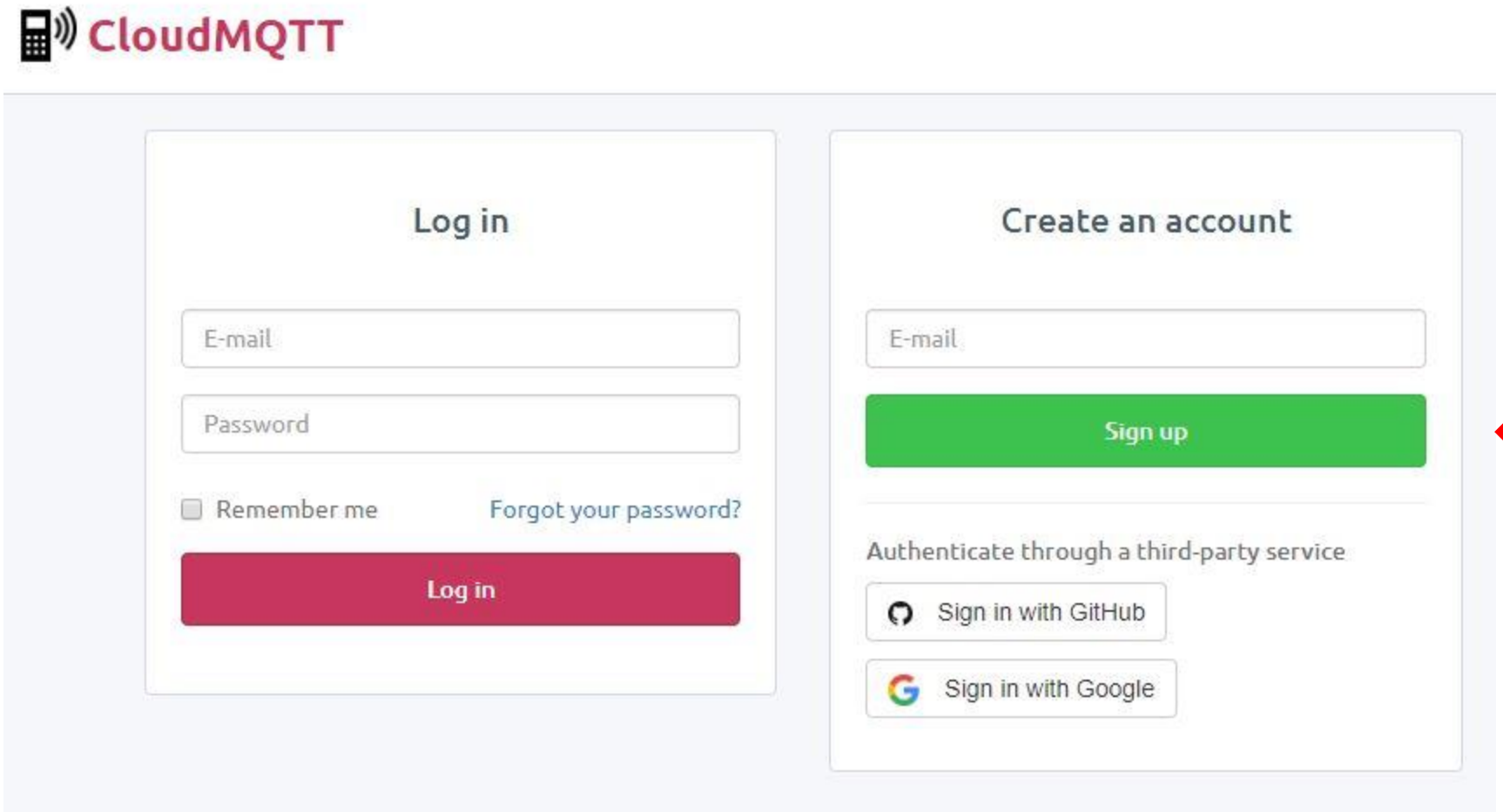
Introduce

- ESP32 to Thingspeak.com
- ESP32 to CloudMqtt.com
- ESP32 to Line Notification

ESP32 to CloudMqtt.com



ESP32 to CloudMqtt.com



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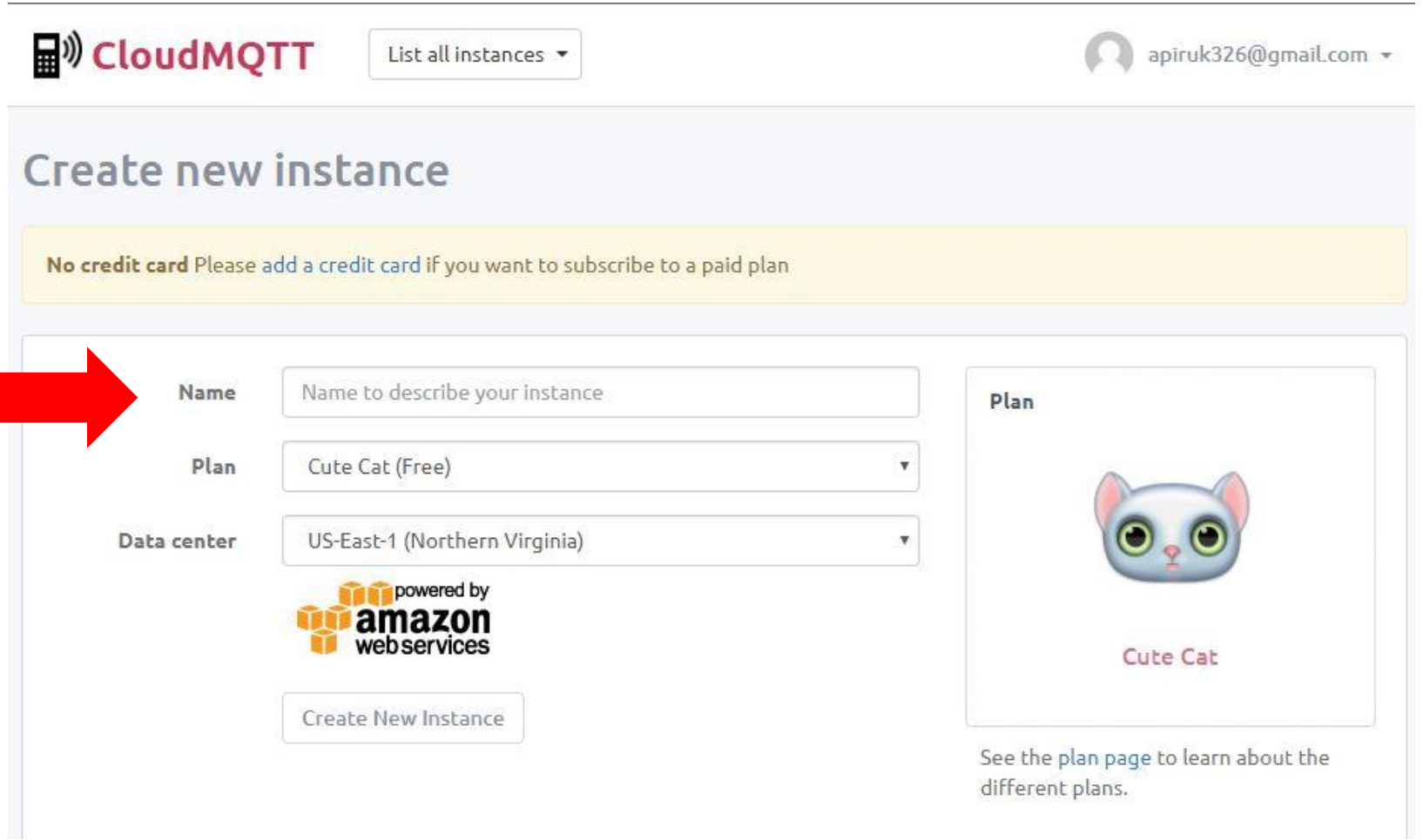

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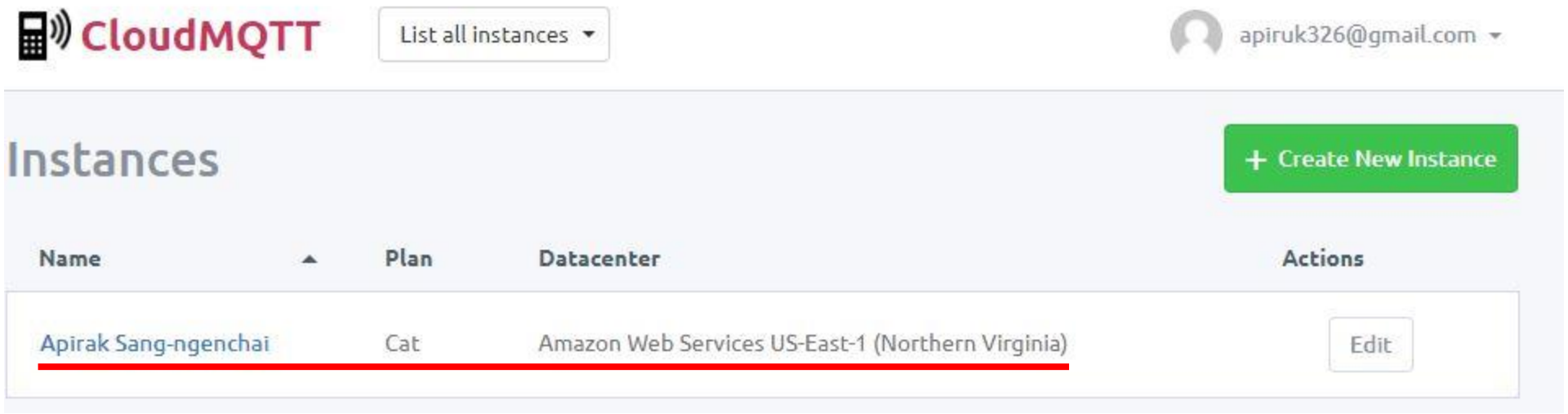

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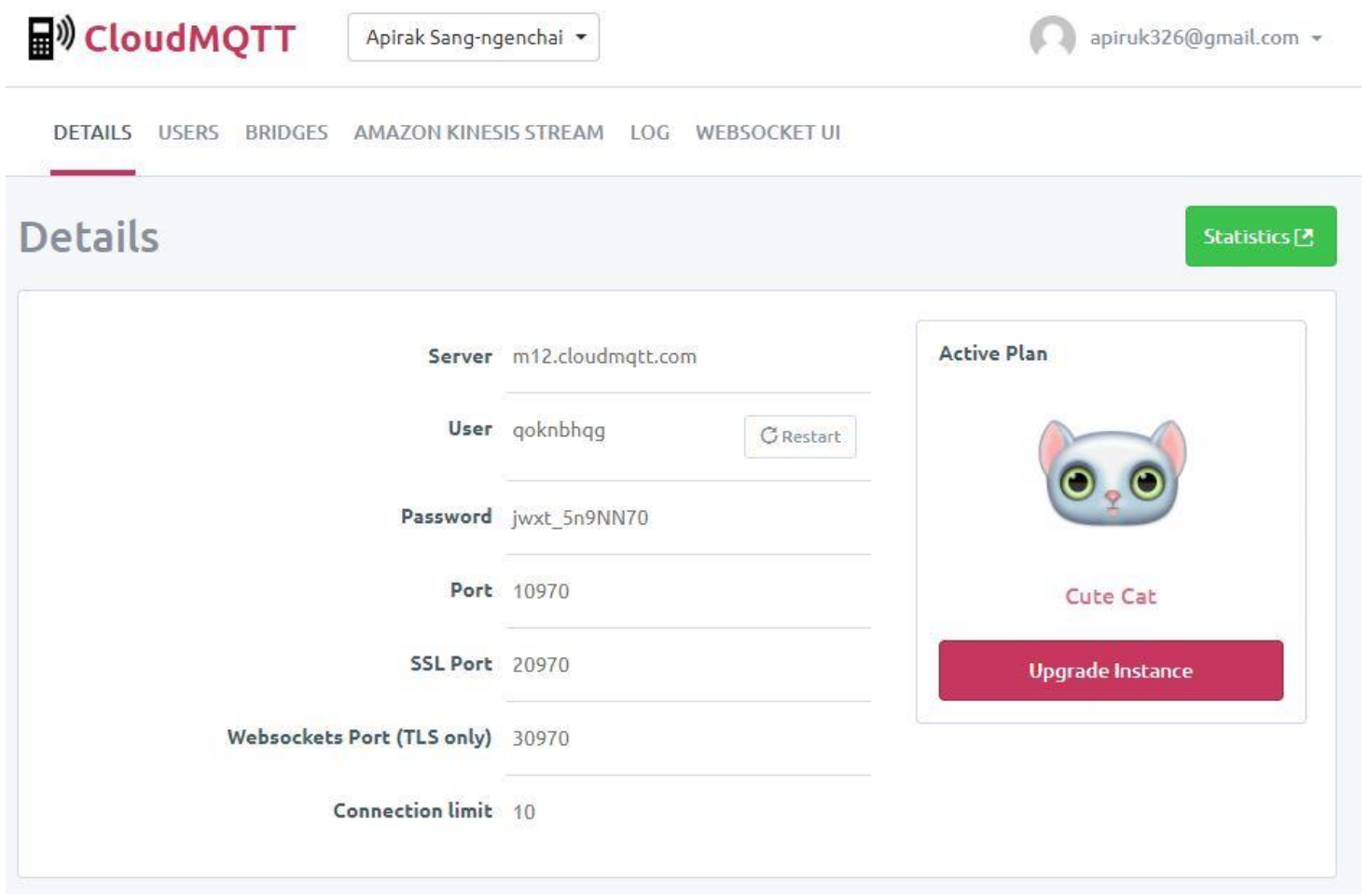
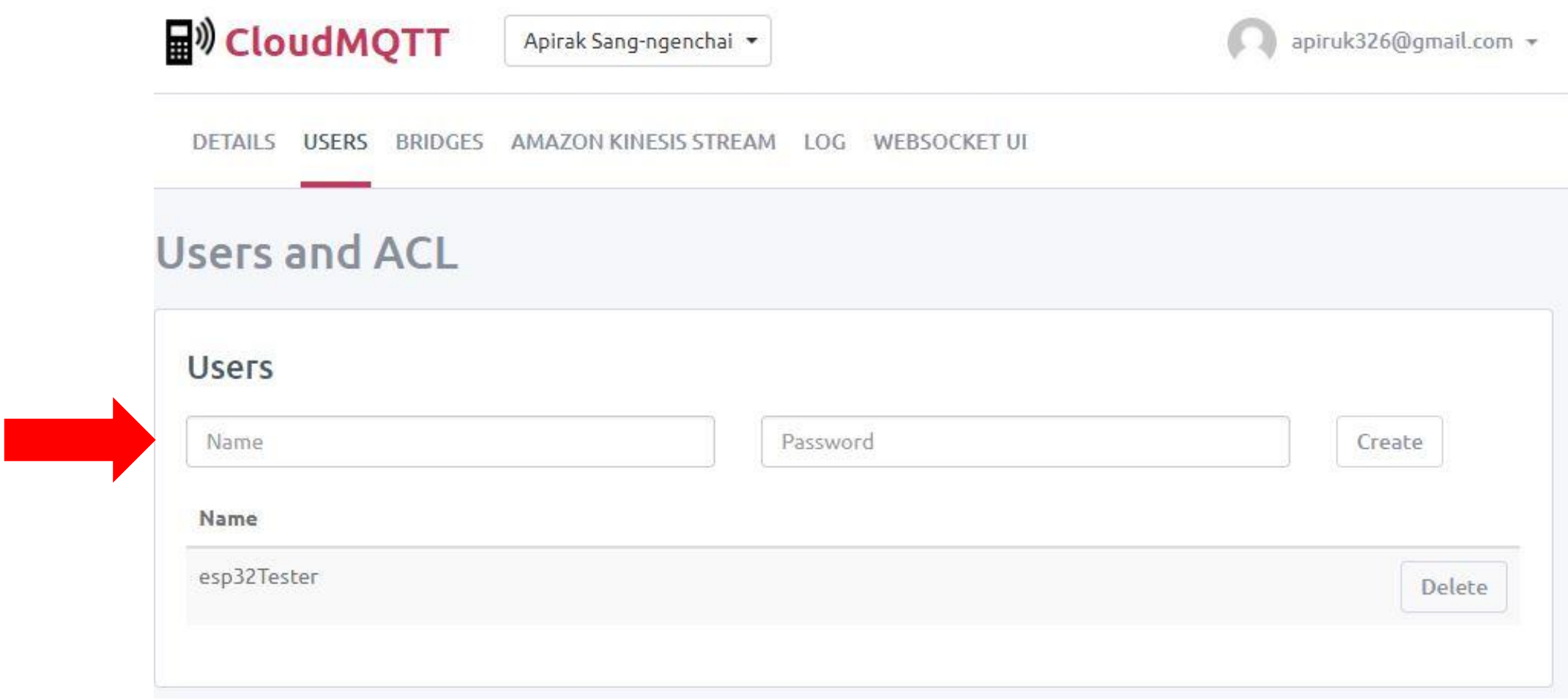


ESP32 to CloudMqtt.com

Server	m12.cloudmqtt.com
User	qoknbhqg
Password	jwxt_5n9NN70
Port	10970
SSL Port	20970
Websockets Port (TLS only)	30970
Connection limit	10

Restart

ESP32 to CloudMqtt.com



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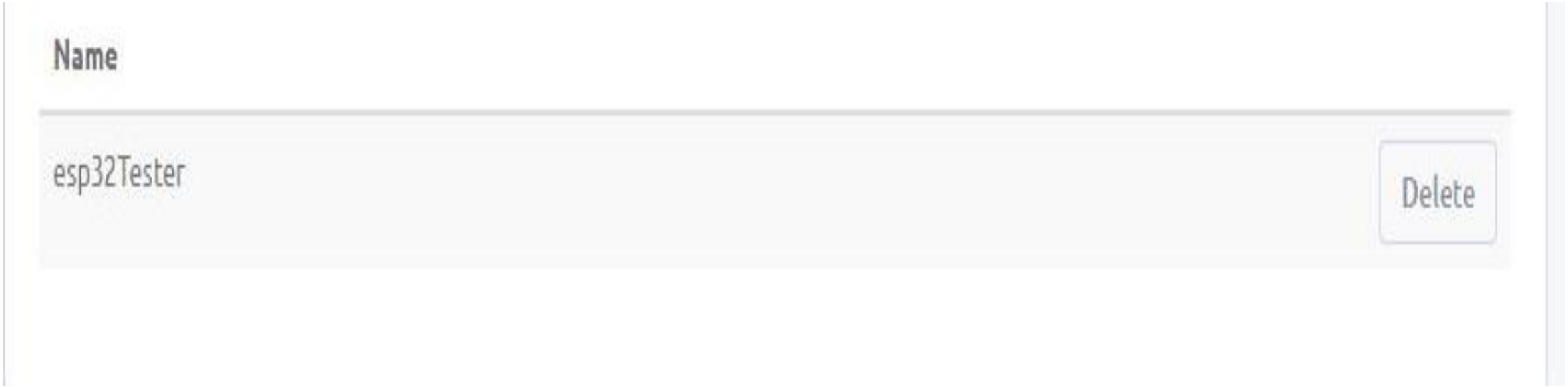


ESP32 to CloudMqtt.com

ACLs

Note:

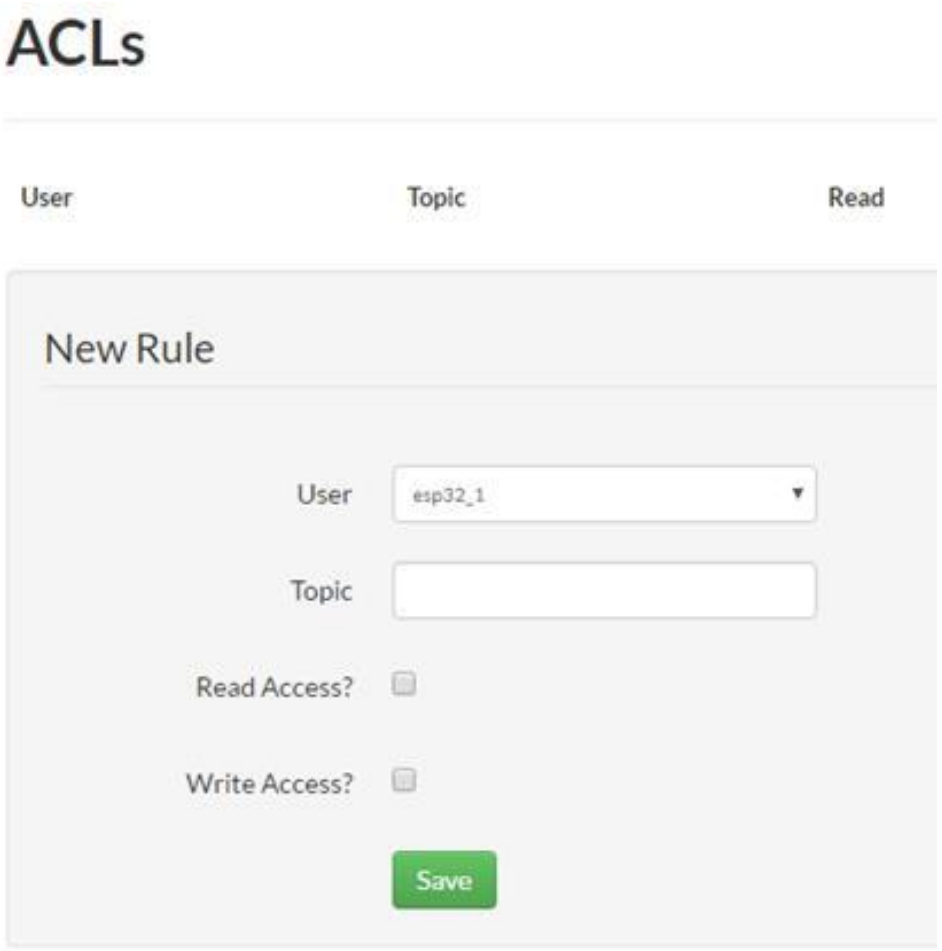
- You have to set a acl rule for a custom user before it can access anything
- Use # for multi level wildcard ACL
- Use + for single level wildcard ACL

For API docs look at HTTP API

User	Topic	Read	Write	
esp32Tester	/esp32/#	true	true	Delete

esp32Teste ▾ | Topic | Read Access? | Write Access? | + Add

ESP32 to CloudMqtt.com



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ESP32 to CloudMqtt.com

User	Topic	Read	Write	
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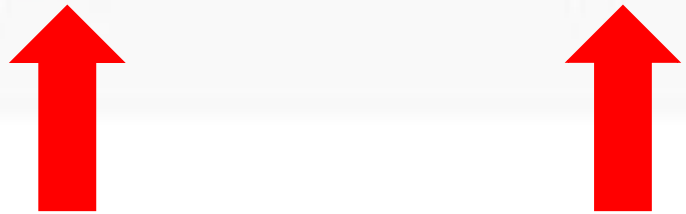

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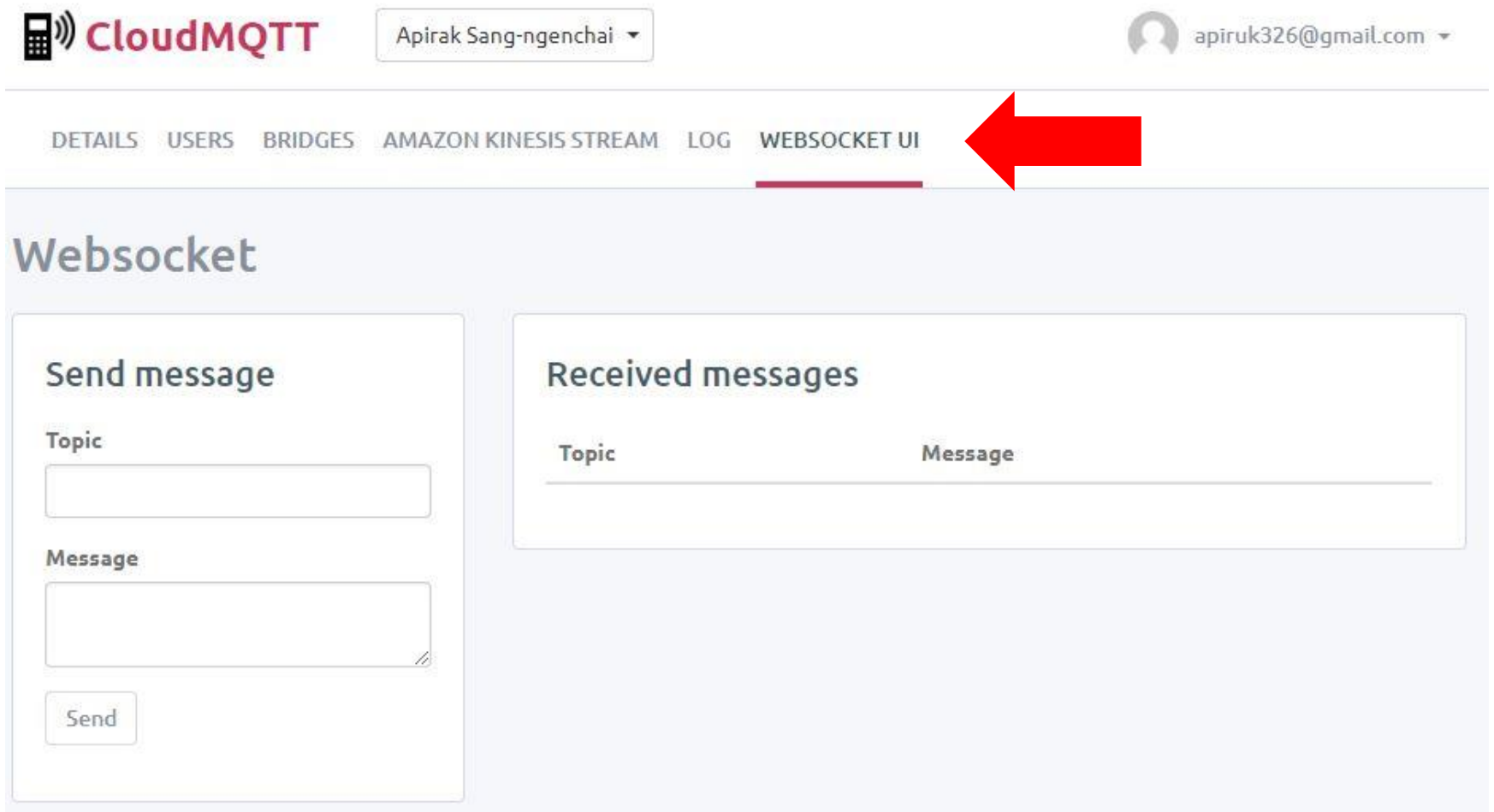

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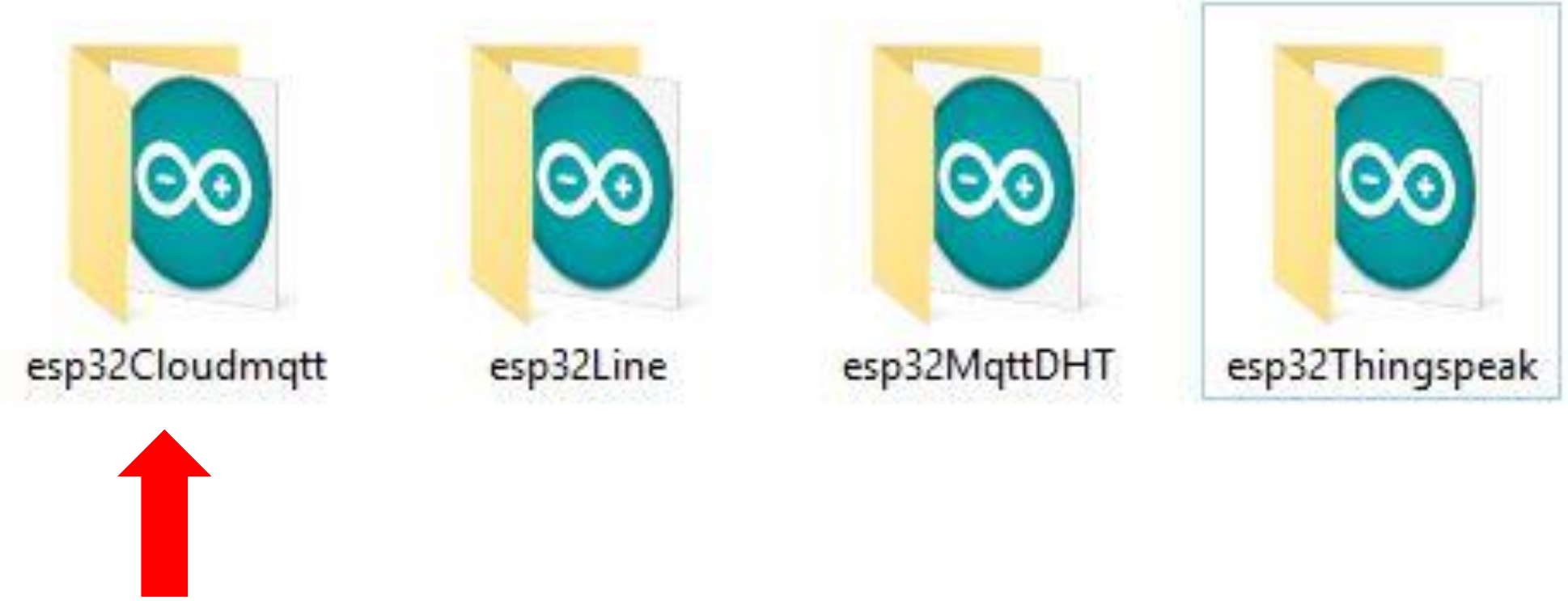


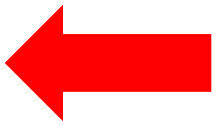
ESP32 to CloudMqtt.com

esp32Cloudmqtt | Arduino 1.8.5

File Edit Sketch Tools Help

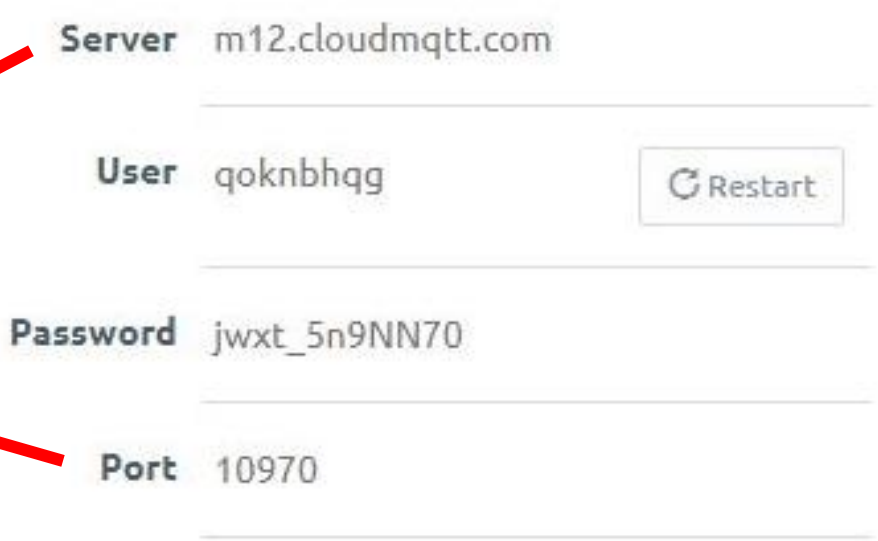
esp32Cloudmqtt §

```
1  #include <WiFi.h>
2  #include <PubSubClient.h>
3
4  #define WIFI_STA_NAME "xxxxxxxx"
5  #define WIFI_STA_PASS "xxxxxxxx"
6
7  #define MQTT_SERVER   "xxxxxxxx"
8  #define MQTT_PORT     xxxx
9  #define MQTT_USERNAME "xxxxxxxx"
10 #define MQTT_PASSWORD "xxxxxxxx"
11 #define MQTT_NAME     "ESP32_CMTC"
12
13 #define LED_PIN 12
```



ESP32 to CloudMqtt.com

```
7  #define MQTT_SERVER   "xxxxxxxx"
8  #define MQTT_PORT     xxxx
9  #define MQTT_USERNAME "xxxxxxxx"
10 #define MQTT_PASSWORD "xxxxxxxx"
11 #define MQTT_NAME     "ESP32_CMTC"
```



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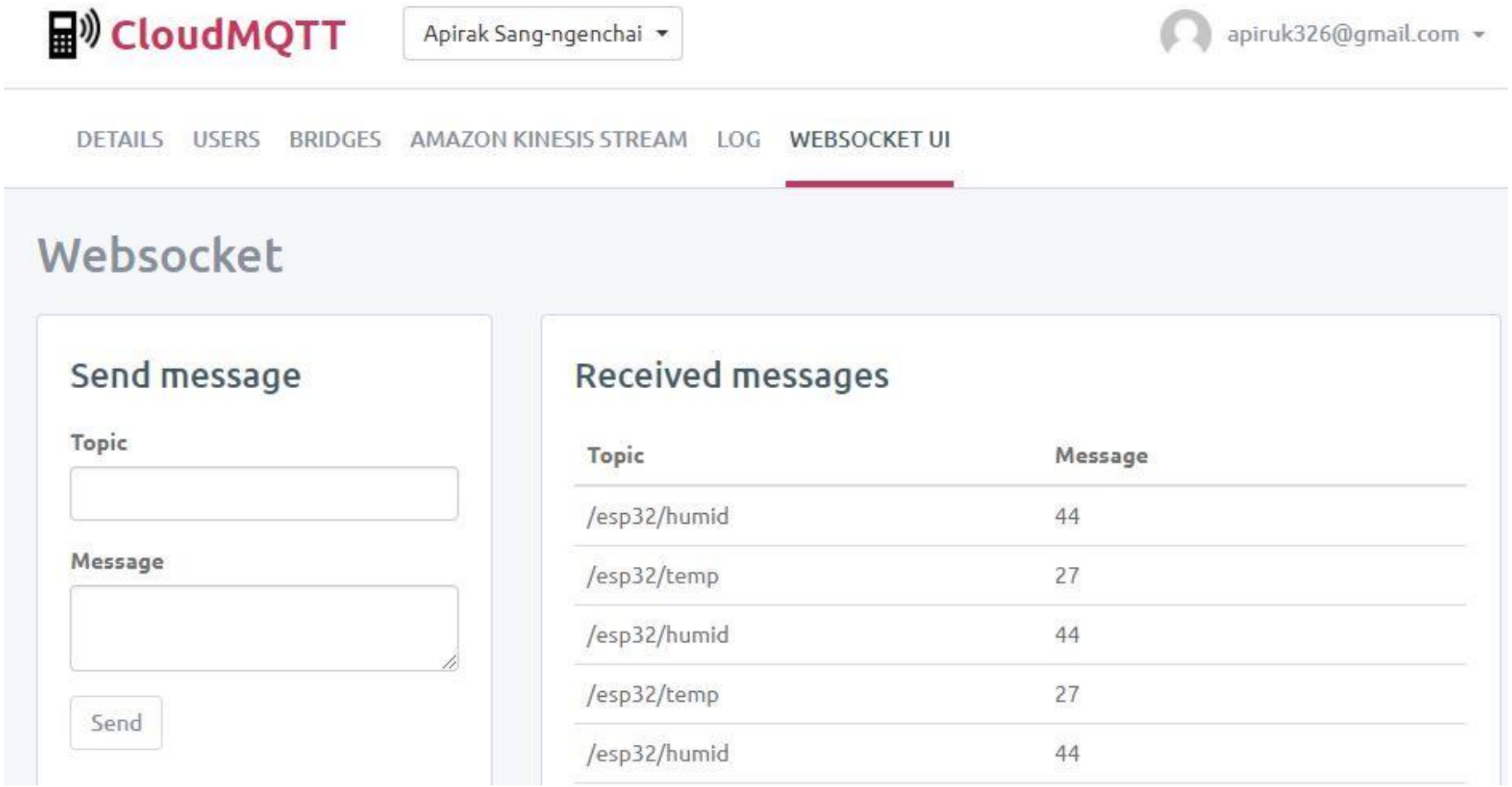

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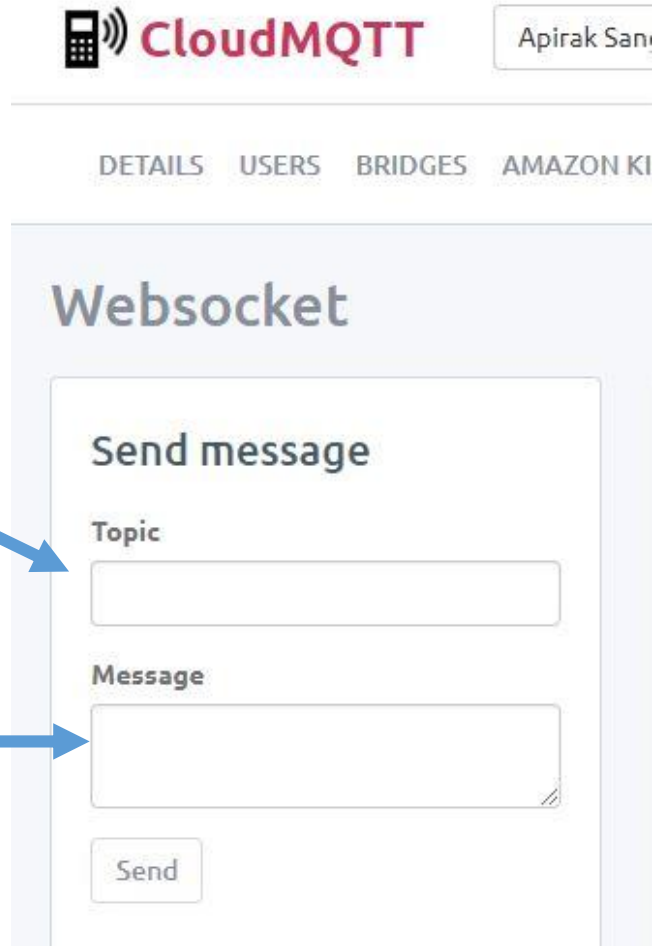
/esp32/LED

ON & OFF



ESP32 to CloudMqtt.com

ESP32 to CloudMqtt.com

```
52  mqtt.setServer(MQTT_SERVER, MQTT_PORT);
53  mqtt.setCallback(callback);
```

ESP32 to CloudMqtt.com

```
56 void loop() {
57   if (mqtt.connected() == false) {
58     Serial.print("MQTT connection... ");
59     if (mqtt.connect(MQTT_NAME, MQTT_USERNAME, MQTT_PASSWORD)) {
60       Serial.println("connected");
61       mqtt.subscribe("/esp32/LED");
62     } else {
63       Serial.println("failed");
64       delay(5000);
65     }
66   } else {
67     // coding here
68     mqtt.loop();
69   }
```

ESP32 to CloudMqtt.com

```
66    } else {
67      // coding here
68      mqtt.publish("/esp32/text", "CMTC");
69      mqtt.loop();
70    }
```

ESP32 to CloudMqtt.com

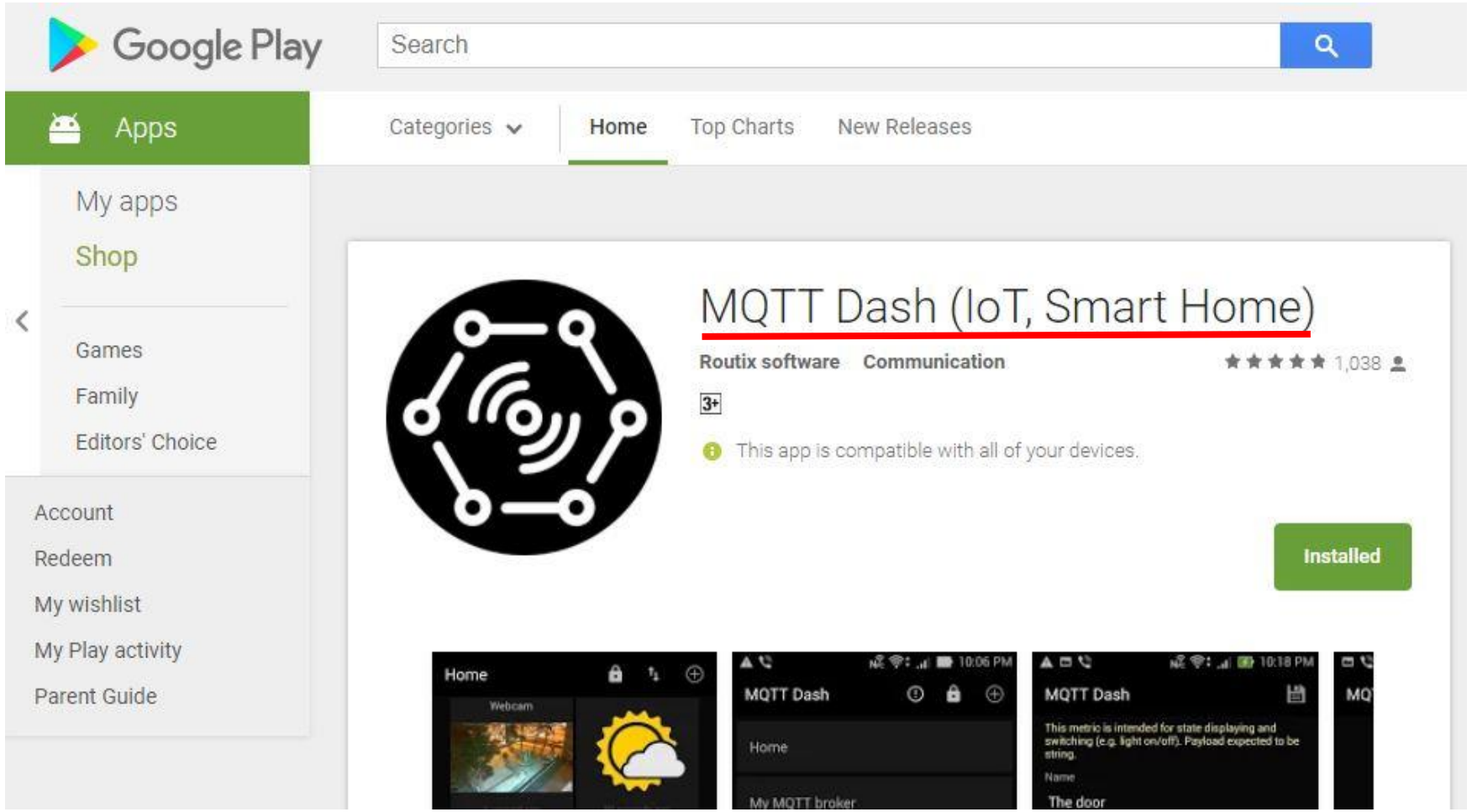
```
18 void callback(char* topic, byte* payload, unsigned int length) {
19   payload[length] = '\0';
20   String topic_str = topic, payload_str = (char*)payload;
21   Serial.println("[" + topic_str + "]: " + payload_str);
22
23   digitalWrite(LED_PIN, (payload_str == "ON") ? HIGH : LOW);
24   digitalWrite(LED_BUILTIN, (payload_str == "ON") ? HIGH : LOW);
25 }
```

ESP32 to CloudMqtt.com

Quick test

จงเขียนโปรแกรมอ่านค่าอุณหภูมิ และความชื้น จากโมดูลเซนเซอร์ DHT อัพโหลดข้อมูลไปยัง ClondMQTT

ESP32 to CloudMqtt.com



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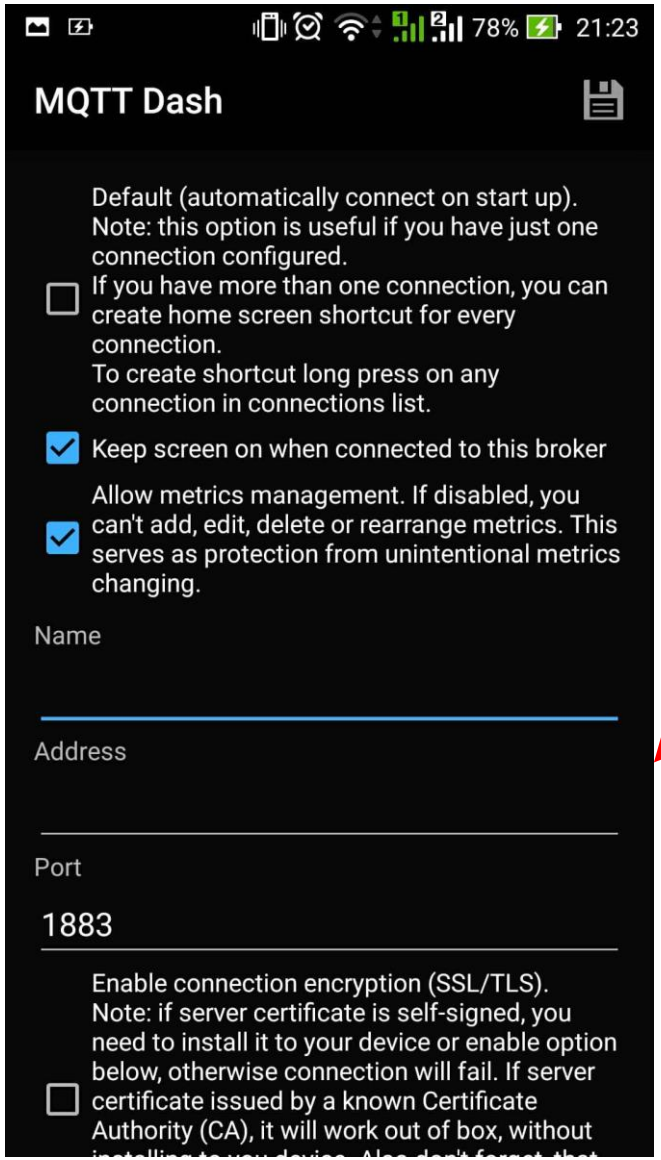

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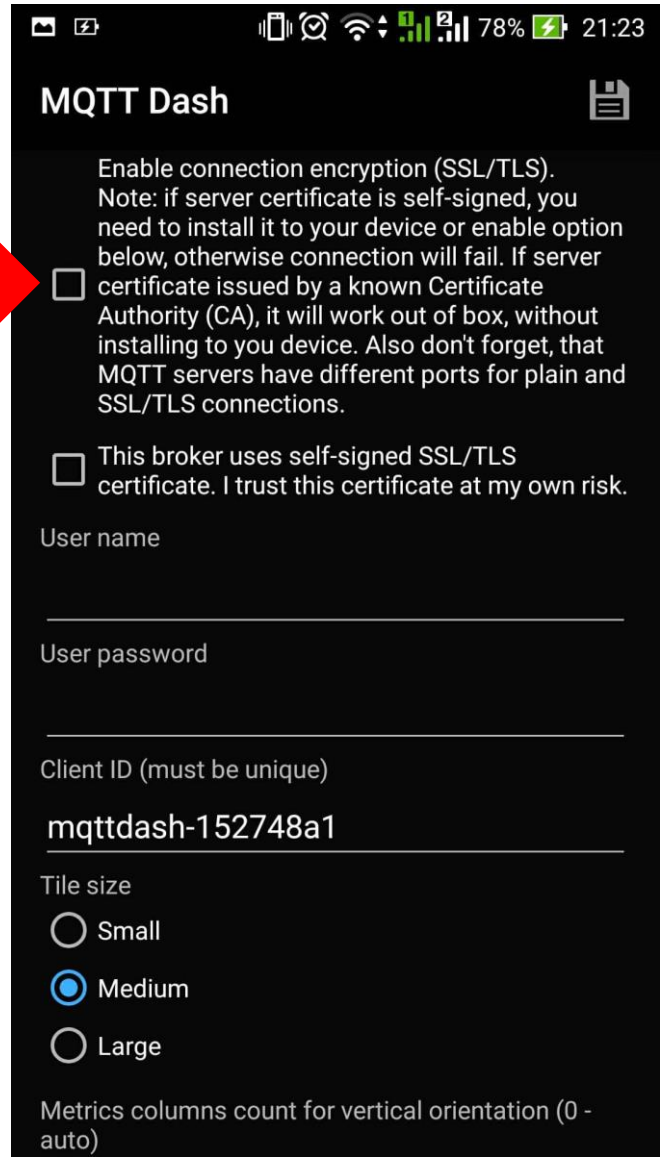

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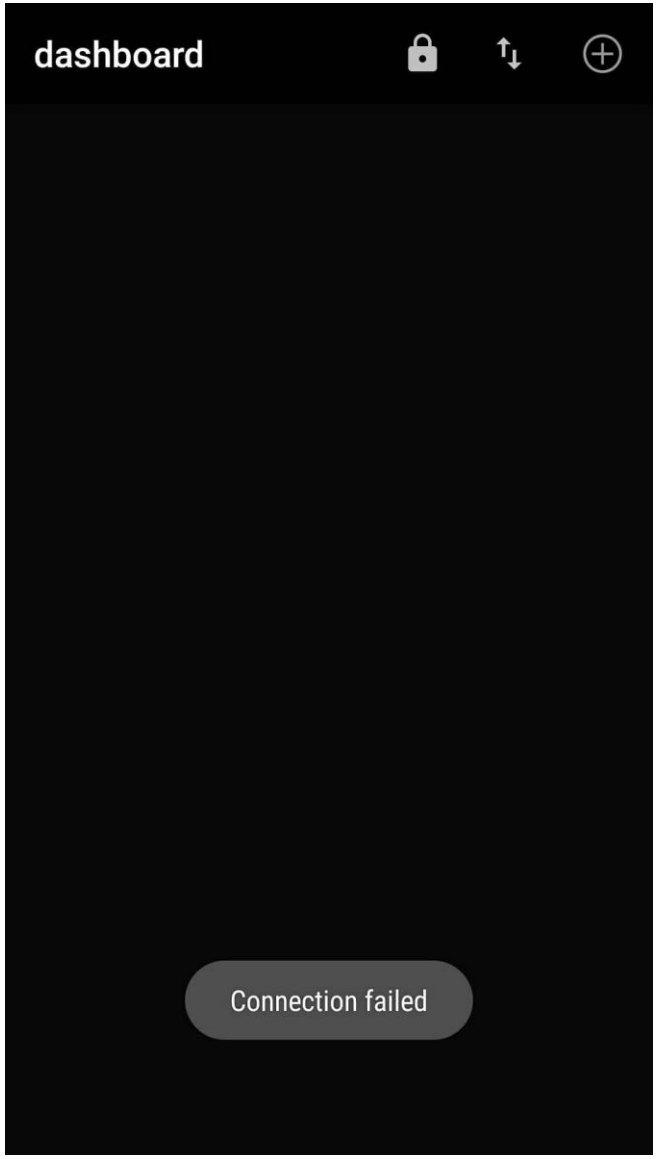

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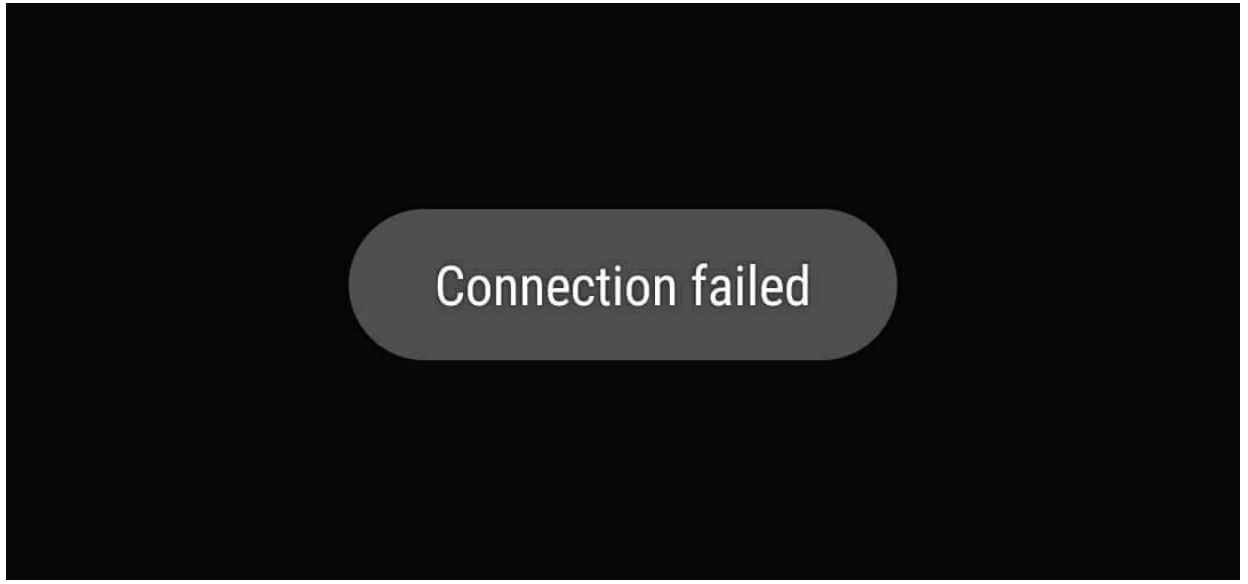

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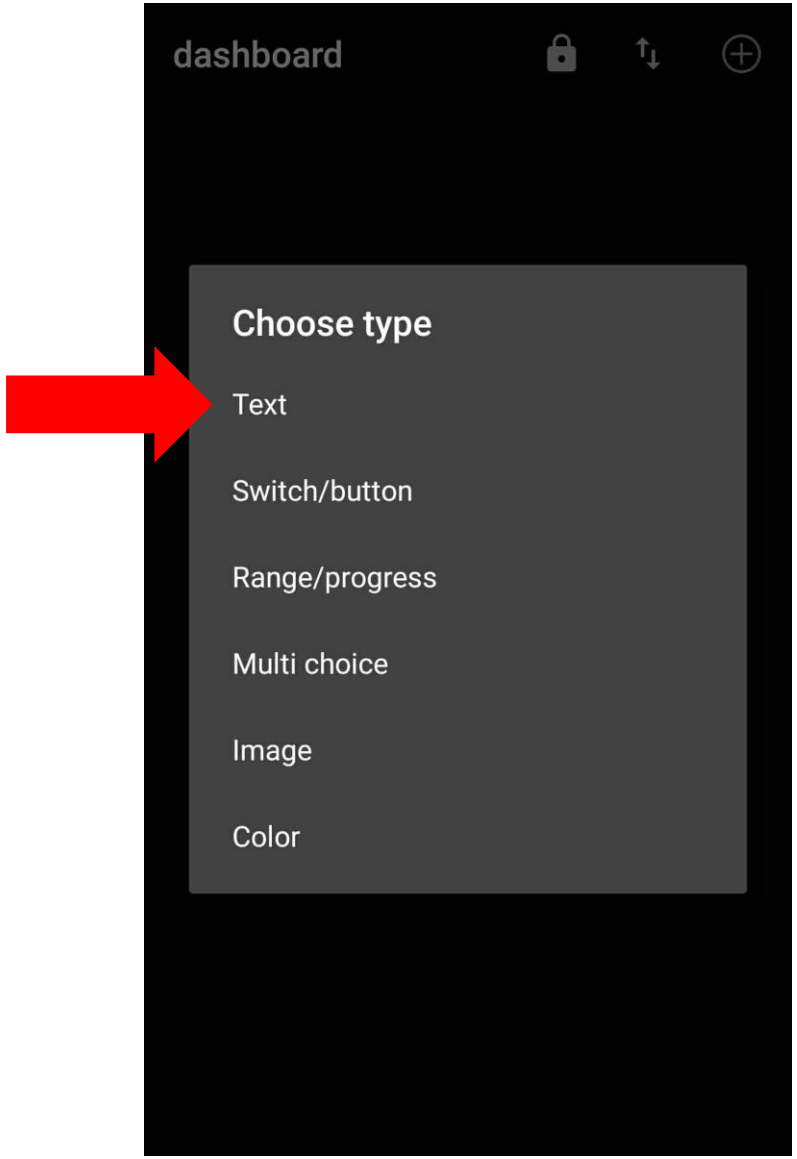

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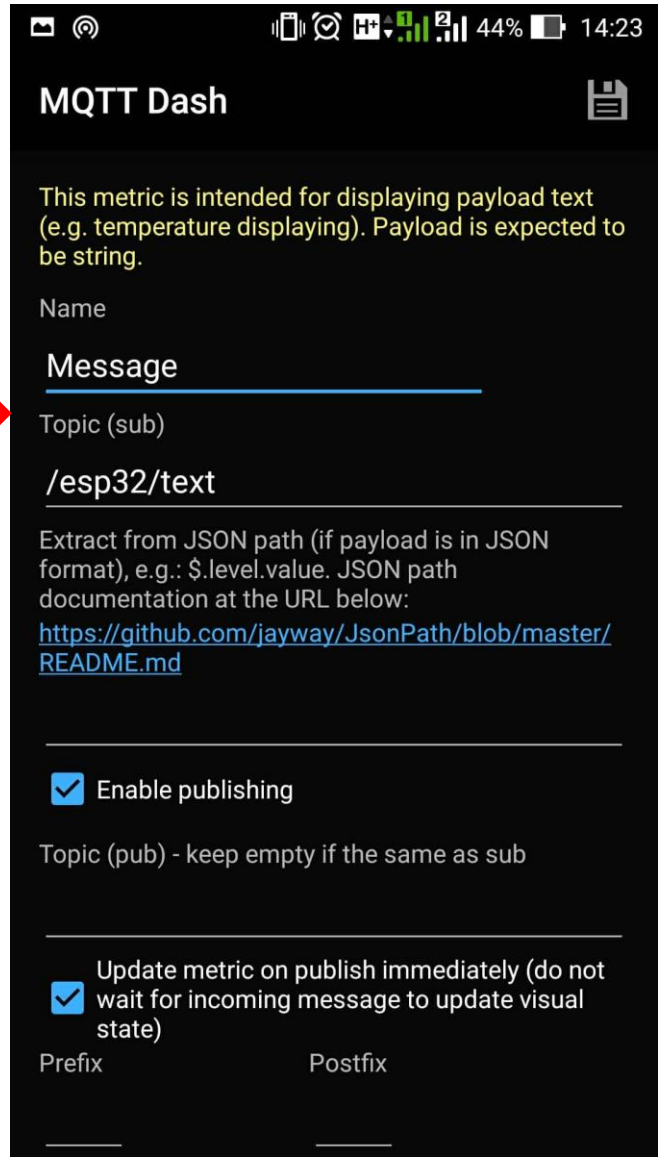

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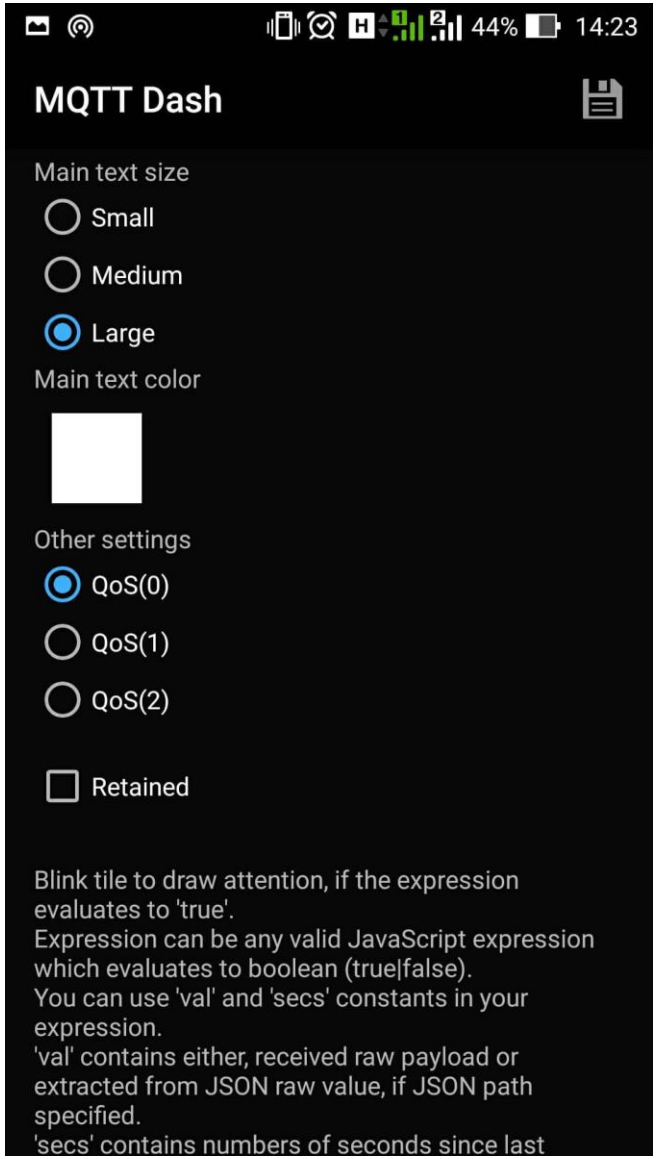

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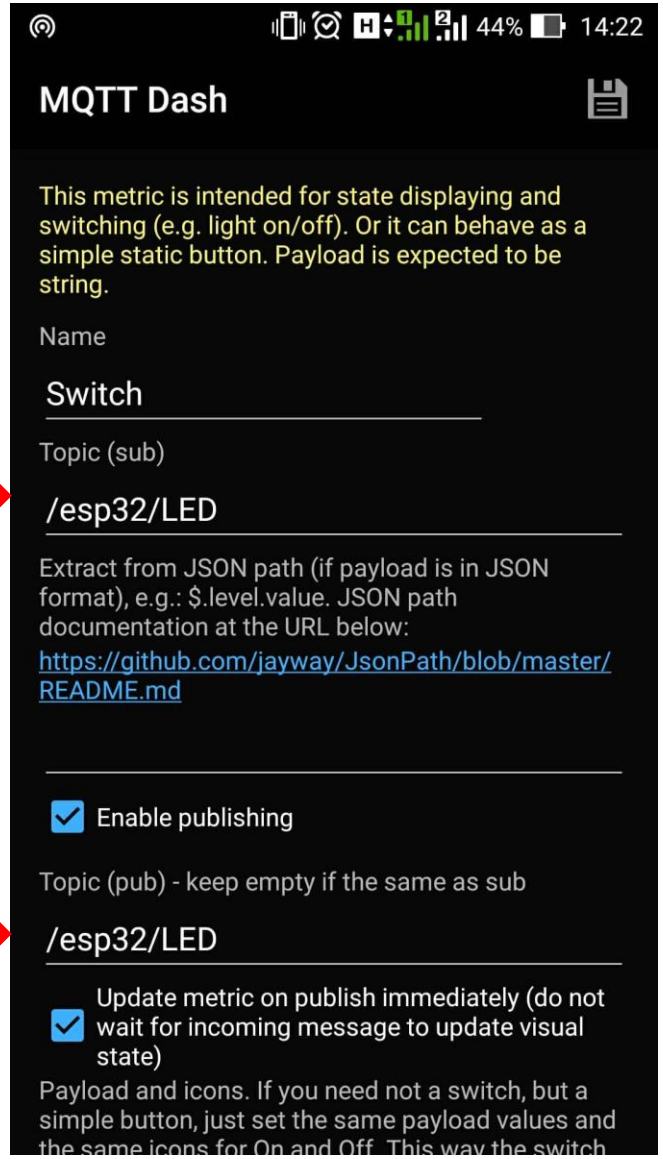

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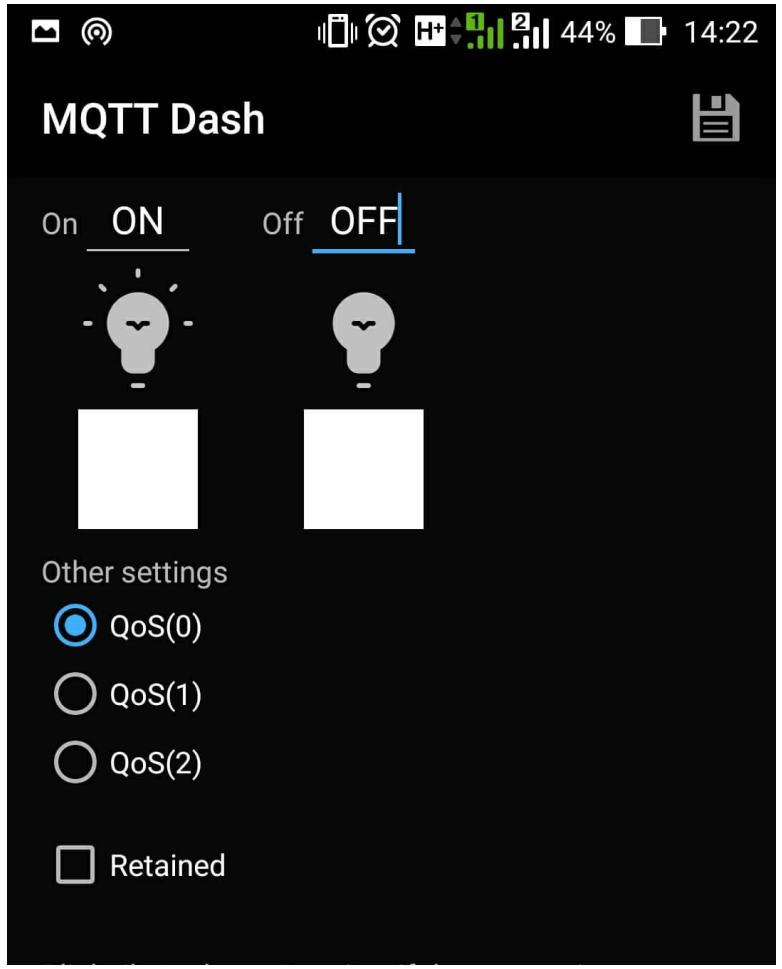

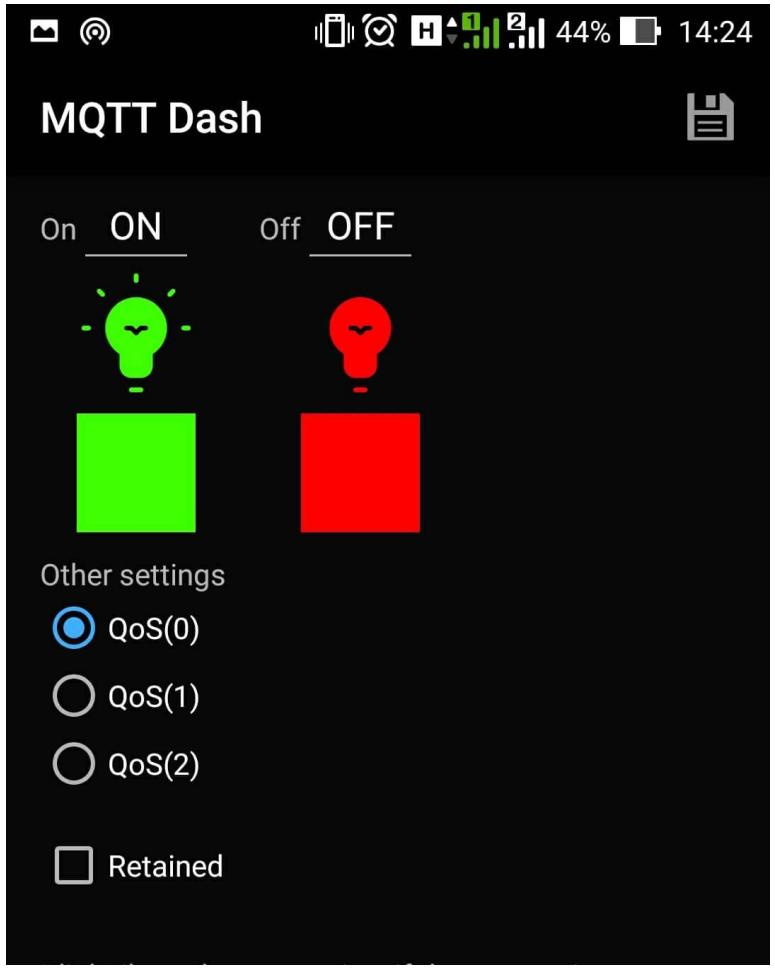

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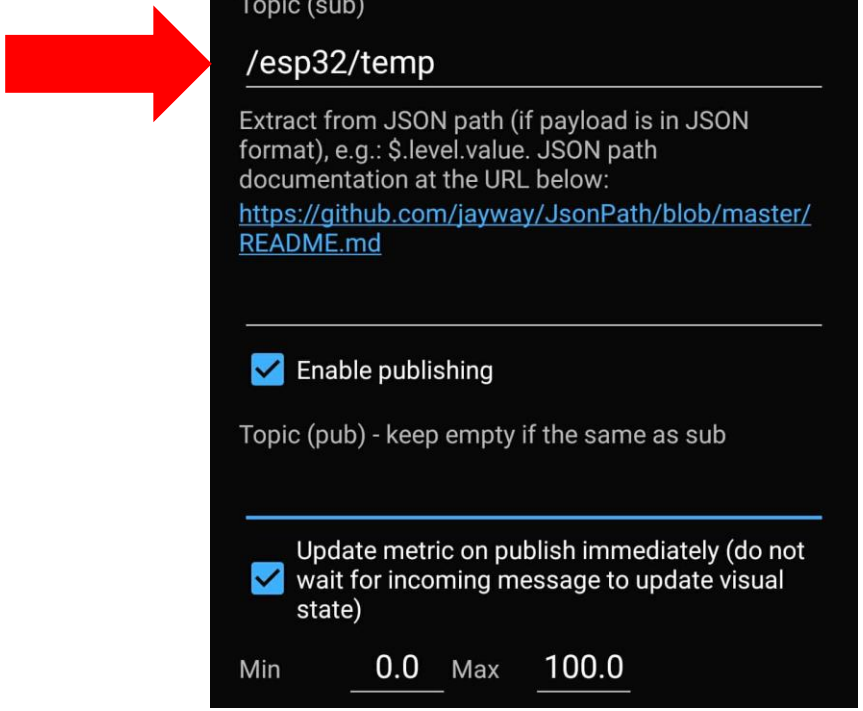

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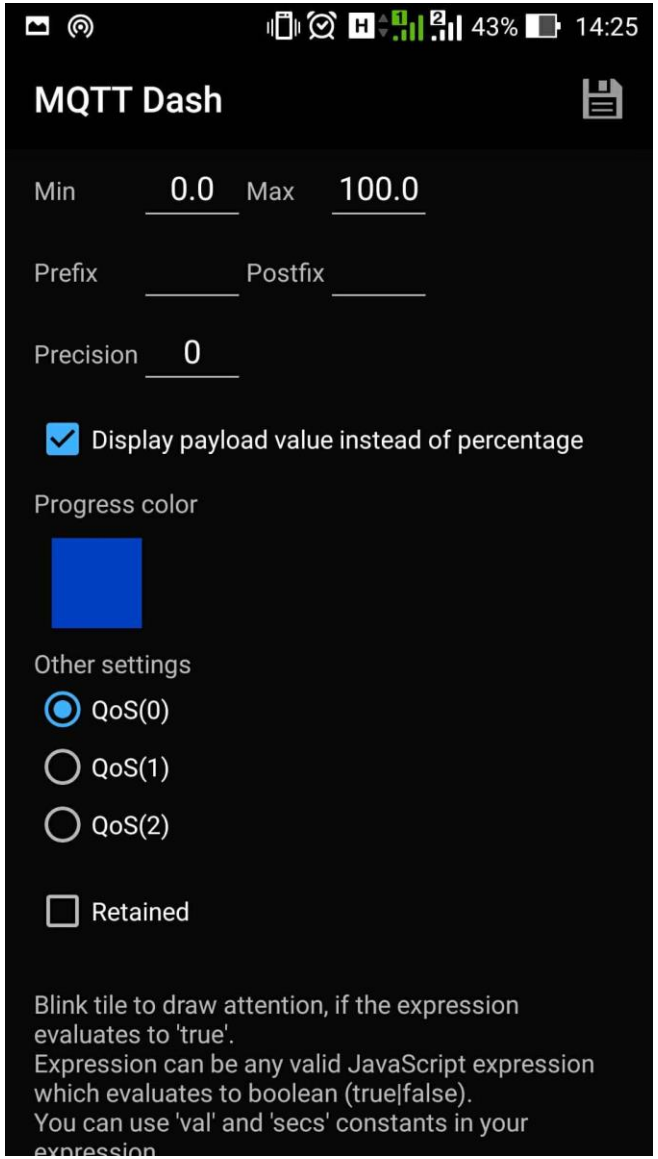

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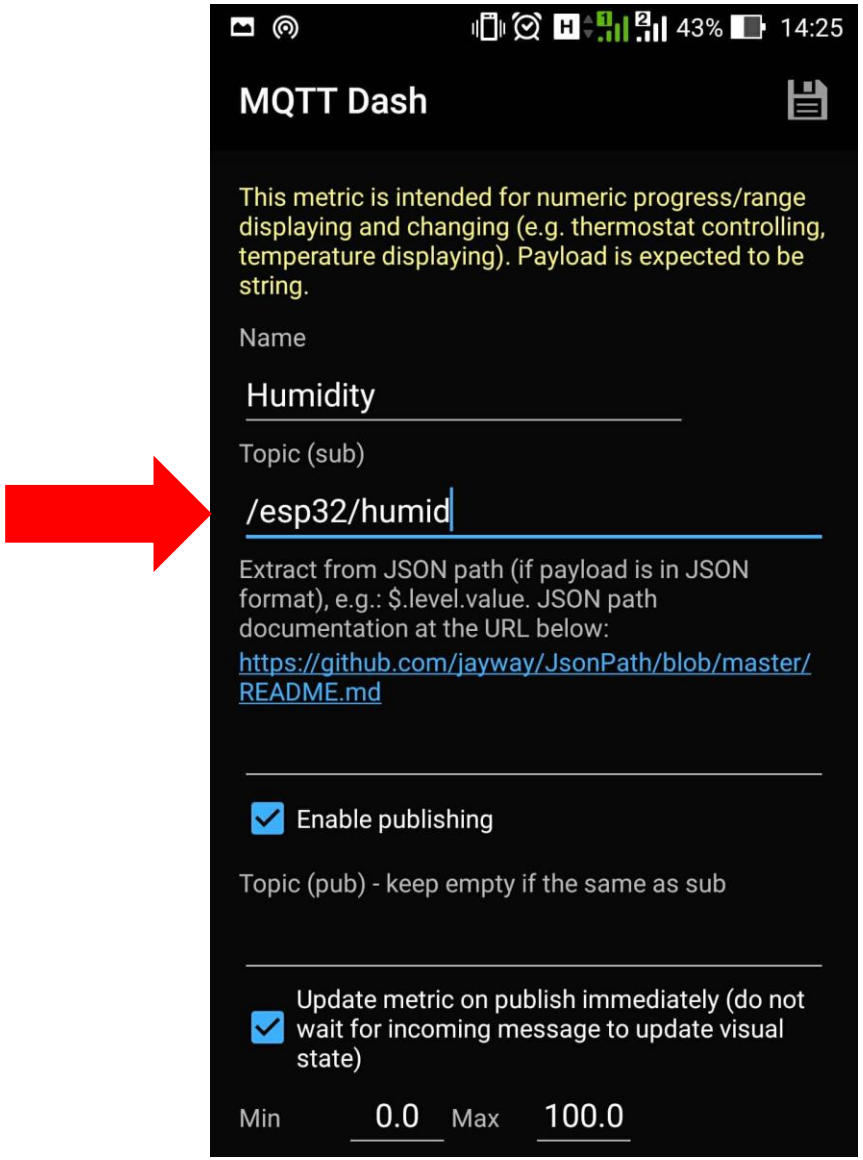

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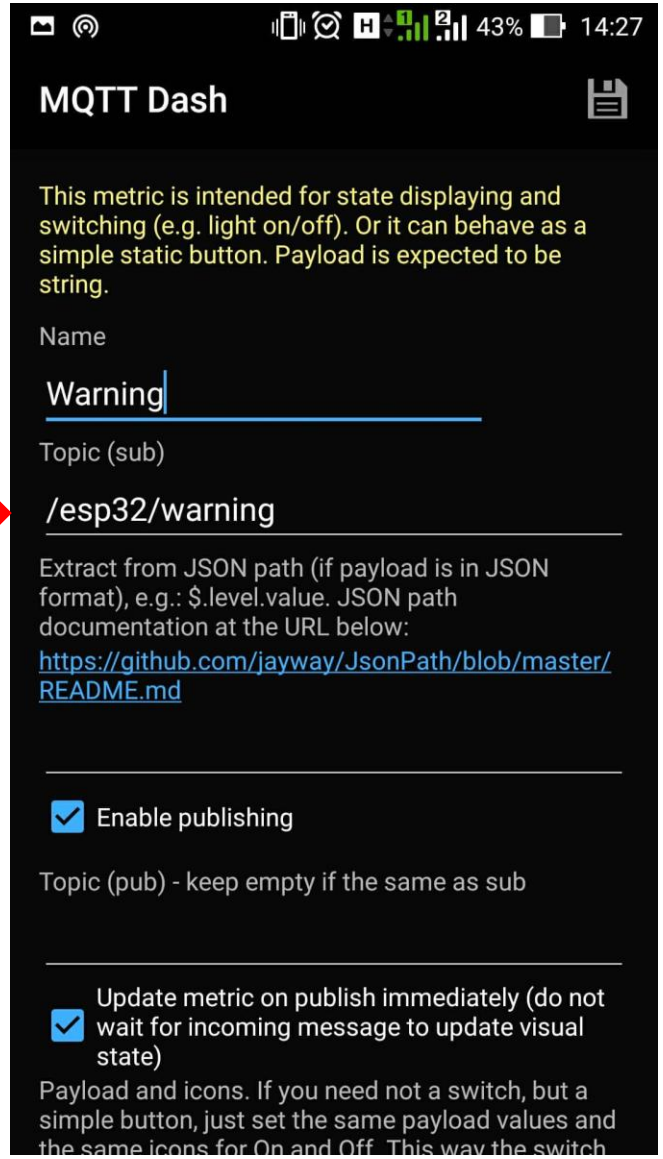

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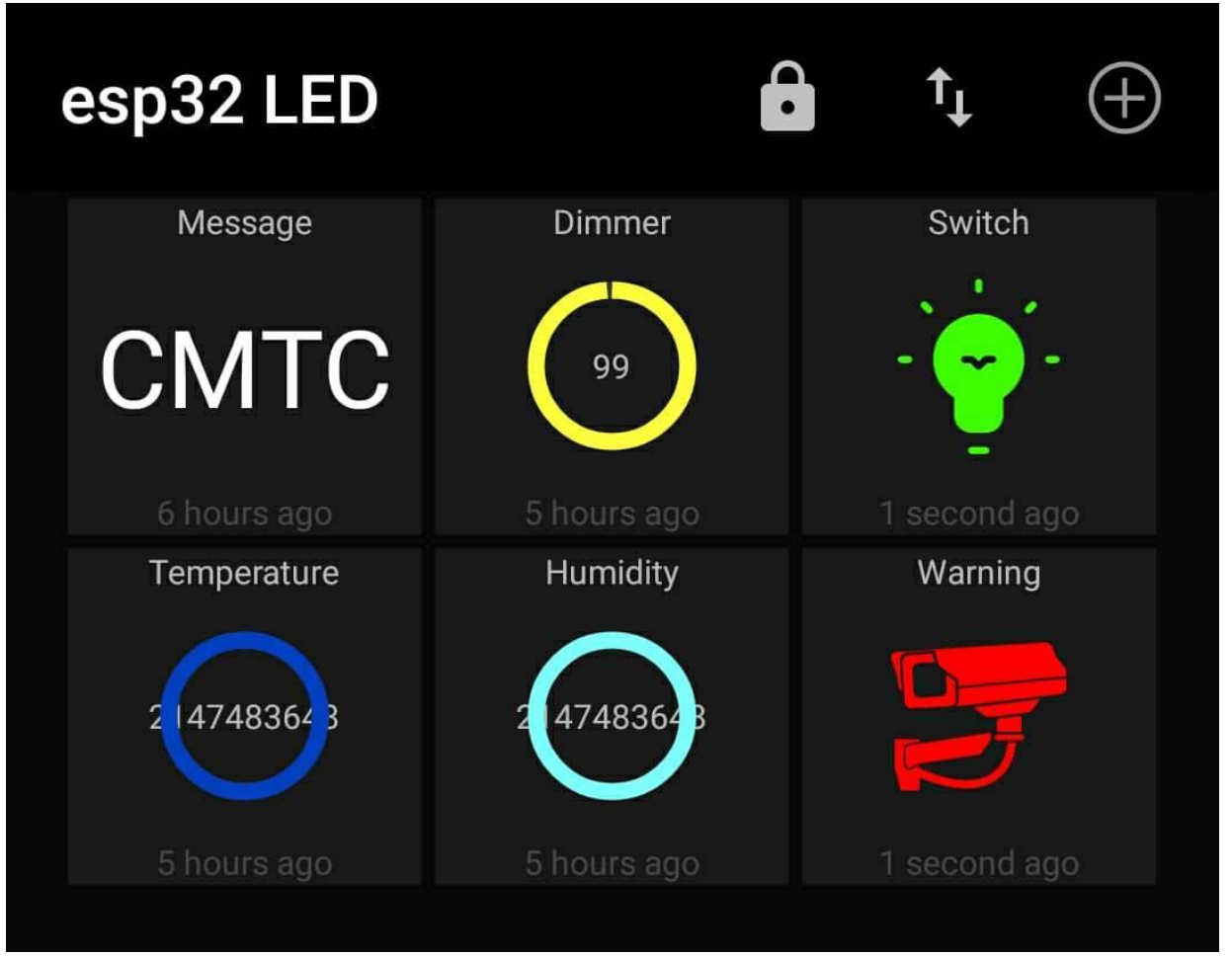

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