


TT230801 – LoRa - LoRaWAN Gateway MQTT

1. In this document, we will show you how setup the MQTT connection to the LoRaWAN gateway and sensor. Please refer to TT230701 for the setup of the LoRaWAN gateway.

LoRaWAN technology

Technology for intelligent buildings

LoRaWAN Gateway – with integrated Modbus interface for building automation

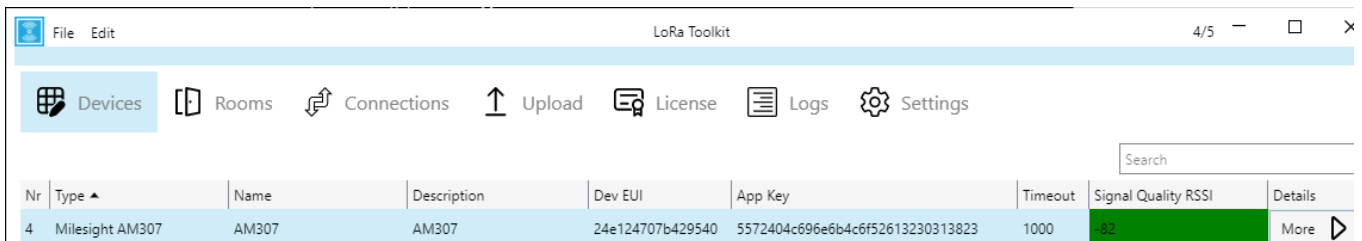


DS-LoRaGateway

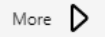
Highlights at a glance ¹⁾

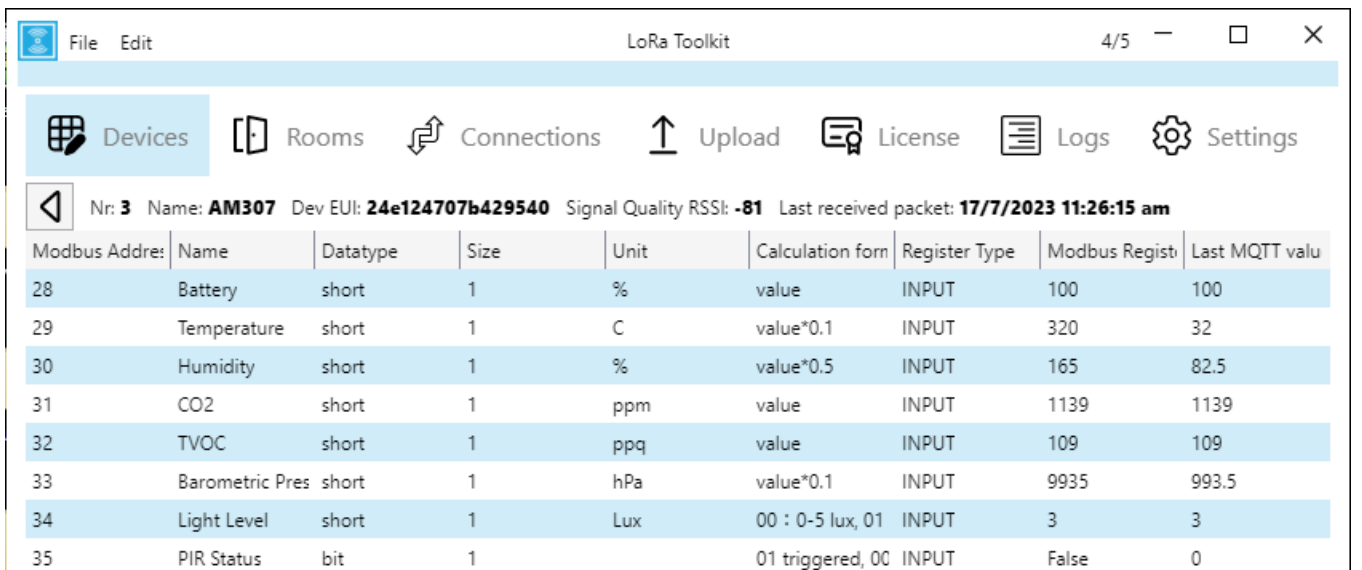
- ✓ Our data collector – exchanges building data with the DEOS pro.building Suite through the Internet
- ✓ Data provision for further use to the local control system via Modbus/TCP
- ✓ Accessories to strengthen the radio signal for indoor and outdoor use
 - ✓ Antennas
 - ✓ Antenna extension cables
- ✓ Expandable with LoRaWAN enabled DEOS or third-party components

2. Start “LoRa Toolkit”, under “Devices” tab, you should see the “Signal Quality RSSI” column show a negative number in green color, if the connection to the LoRa sensor is successful.



Nr	Type	Name	Description	Dev EUI	App Key	Timeout	Signal Quality RSSI	Details
4	Milesight AM307	AM307	AM307	24e124707b429540	5572404c696e6b4c6f52613230313823	1000	-81	More

3. Click the  button to see all the points in the sensor. The last column is the MQTT values.



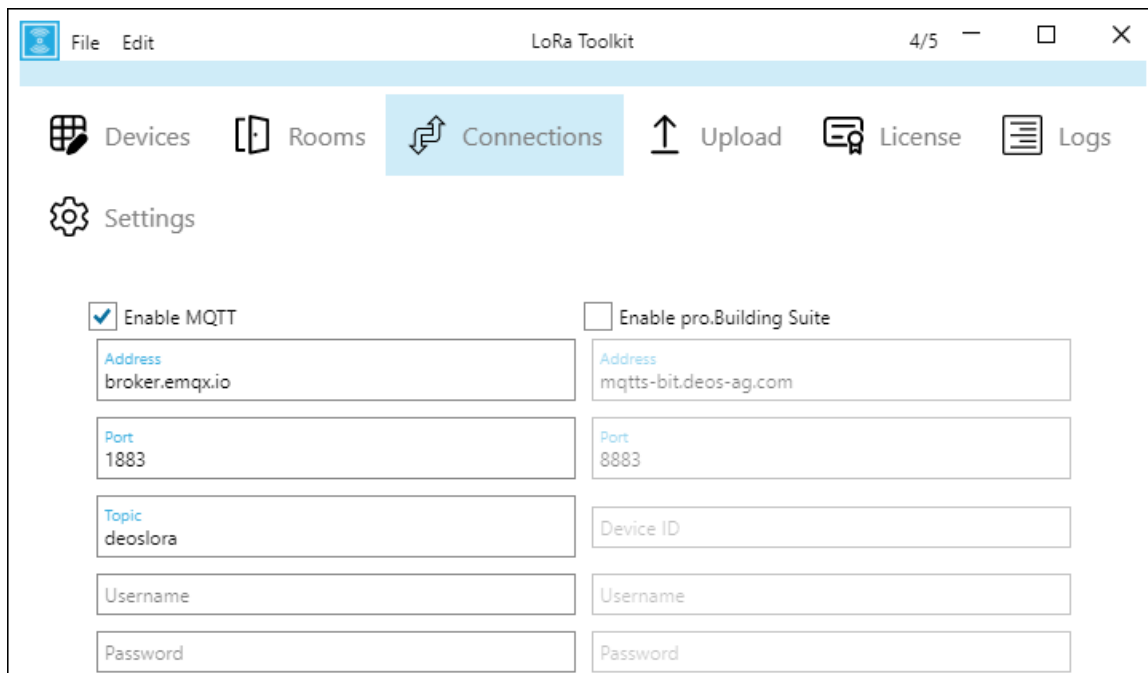
Nr: 3 Name: **AM307** Dev EUI: **24e124707b429540** Signal Quality RSSI: **-81** Last received packet: **17/7/2023 11:26:15 am**

Modbus Address	Name	Datatype	Size	Unit	Calculation form	Register Type	Modbus Regist	Last MQTT valu
28	Battery	short	1	%	value	INPUT	100	100
29	Temperature	short	1	C	value*0.1	INPUT	320	32
30	Humidity	short	1	%	value*0.5	INPUT	165	82.5
31	CO2	short	1	ppm	value	INPUT	1139	1139
32	TVOC	short	1	ppq	value	INPUT	109	109
33	Barometric Pres	short	1	hPa	value*0.1	INPUT	9935	993.5
34	Light Level	short	1	Lux	00 : 0-5 lux, 01	INPUT	3	3
35	PIR Status	bit	1		01 triggered, 00	INPUT	False	0

4. Please note that the update rate of the sensor is slow (e.g. 10 minutes). You can see the last received packet date/time.

Last received packet: **17/7/2023 10:26:15 am**

5. To enable the "MQTT" connection, click the "Connections" tab and set the MQTT settings accordingly. In this example, we use the "free" MQTT broker (broker.emqx.io) for the testing. Note: please make sure you do not use the same "Topic" name in your testing. For example, you can use "deoslor1" for your testing.

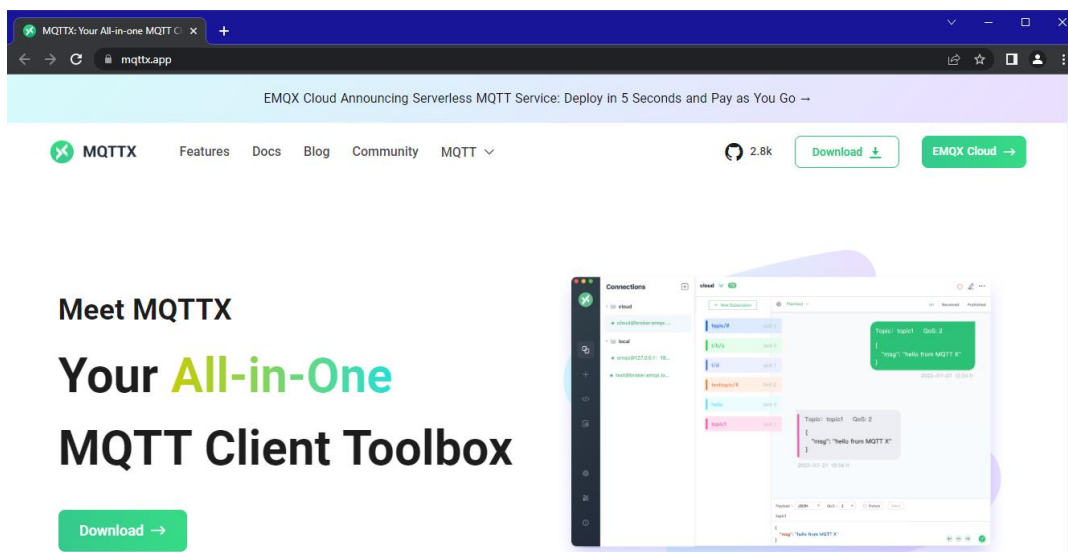


The screenshot shows the 'LoRa Toolkit' application window with the 'Connections' tab selected. The 'Enable MQTT' checkbox is checked. The settings are configured for a free MQTT broker:

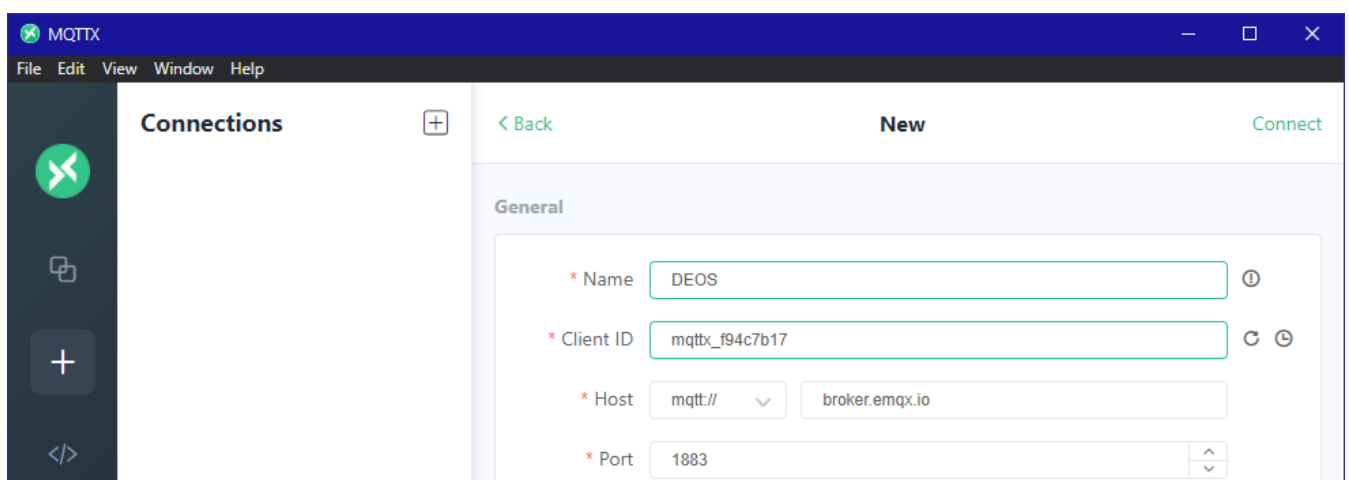
Field	Value
Address	broker.emqx.io
Port	1883
Topic	deoslor1
Username	
Password	

Other fields like 'Enable pro.Building Suite', 'Address', 'Port', 'Device ID', 'Username', and 'Password' are present but not filled out for this configuration.

6. To test the MQTT connection to the LoRaWAN gateway/device, we use "MQTTX" software.



7. Start the "MQTTX" software and create a new connection.

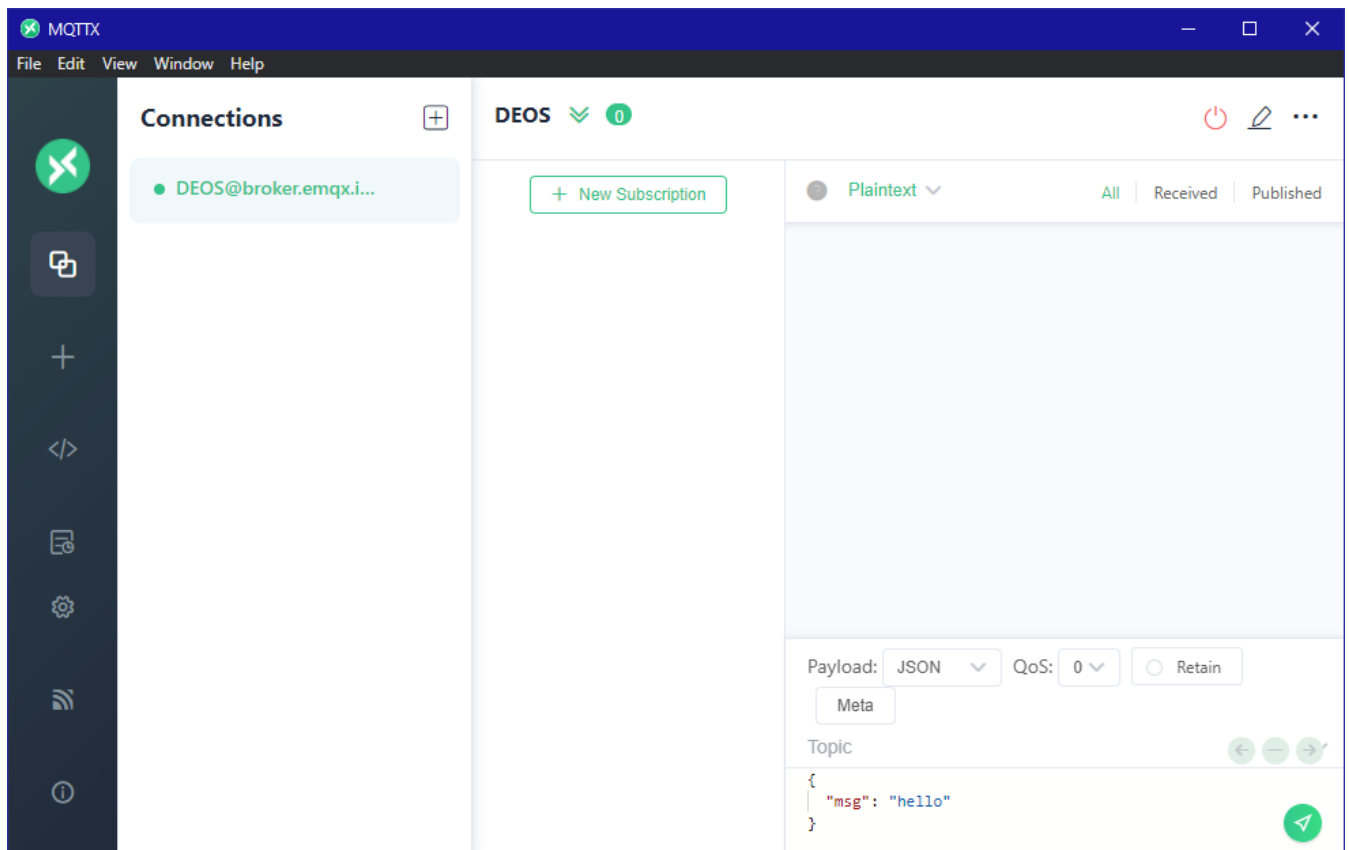


The screenshot shows the MQTTX application window with the 'New' connection configuration form. The fields are filled as follows:

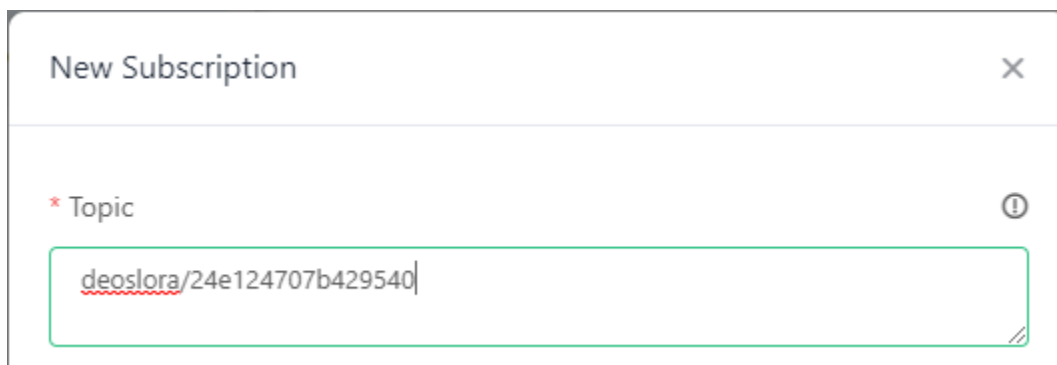
Field	Value
Name	DEOS
Client ID	mqtx_f94c7b17
Host	mqtt:// broker.emqx.io
Port	1883

The 'General' tab is selected, and the 'Connect' button is visible in the top right corner.

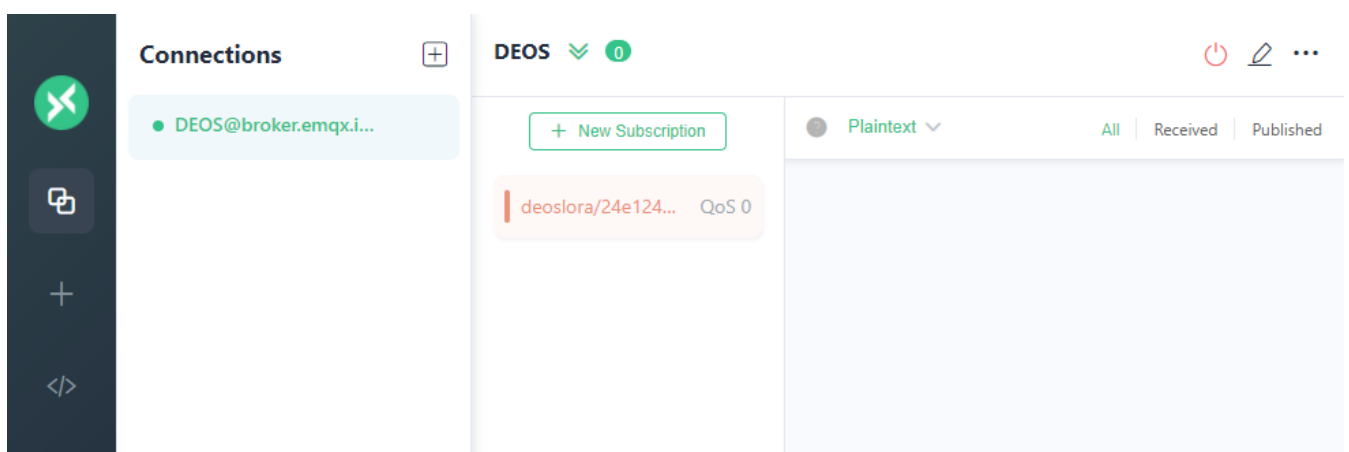
8. Set “Host” to “broker.emqx.io” and input a name as you like. The others can leave as default. Click the “Connect” button at the top right-hand corner. Now you’re connected to the MQTT broker.



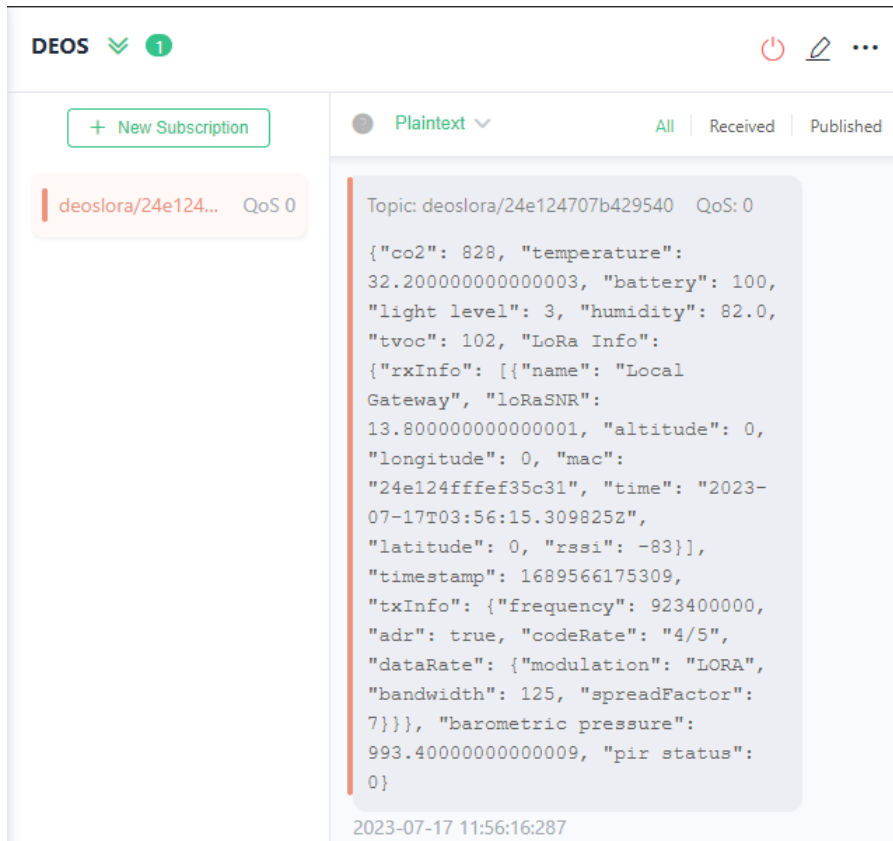
9. Click the “New Subscription” button. Set the “Topic” like below according to your previous setup. The string behind “/” is the “Dev EU1” of the LoRaWAN device.



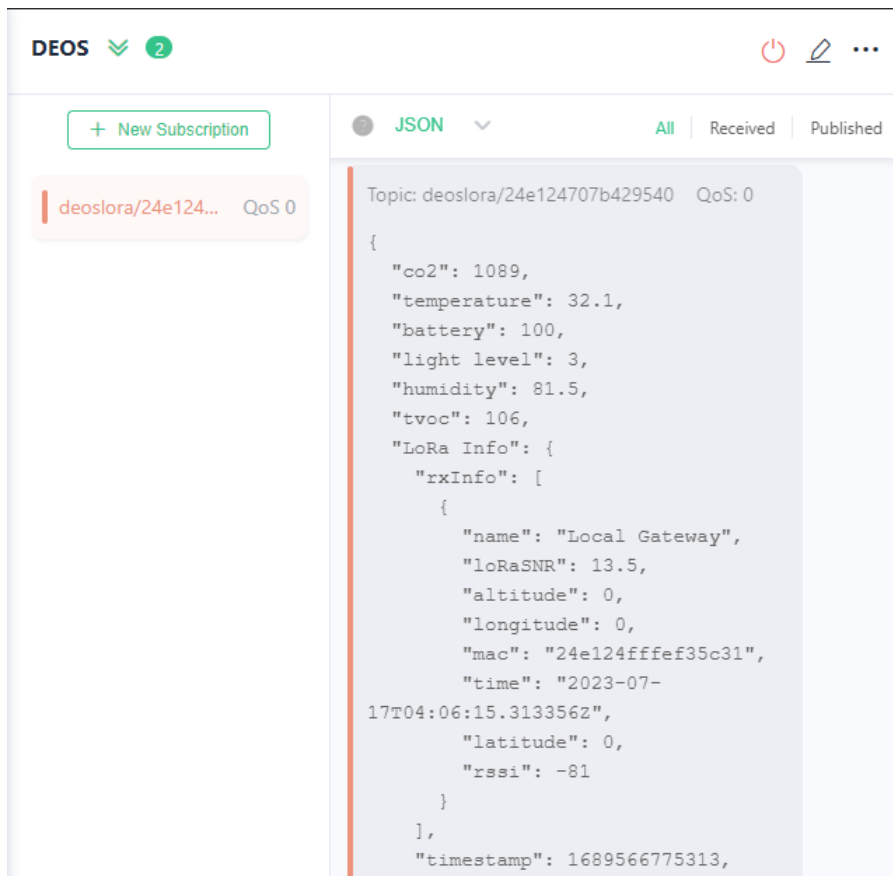
10. Click the “Confirm” button to add the new subscription. Now you’ve to wait for a few minutes.



11. Wait after a few minutes and you should see the MQTT messages received with all the sensor values.



12. Change the message from “Plaintext” to “JSON” and wait for another few minutes to see the sensor values in a more readable format.



13. There are many Apps in Google Play for MQTT testing and dashboard. Here is an example for your reference.

MQTT Dash (IoT, Smart Home)

Routix software

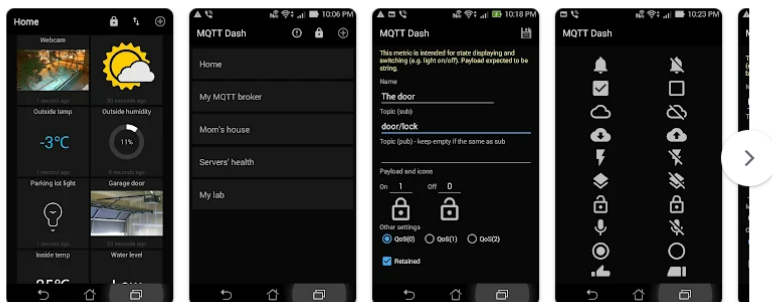
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5.53K reviews

100K+
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