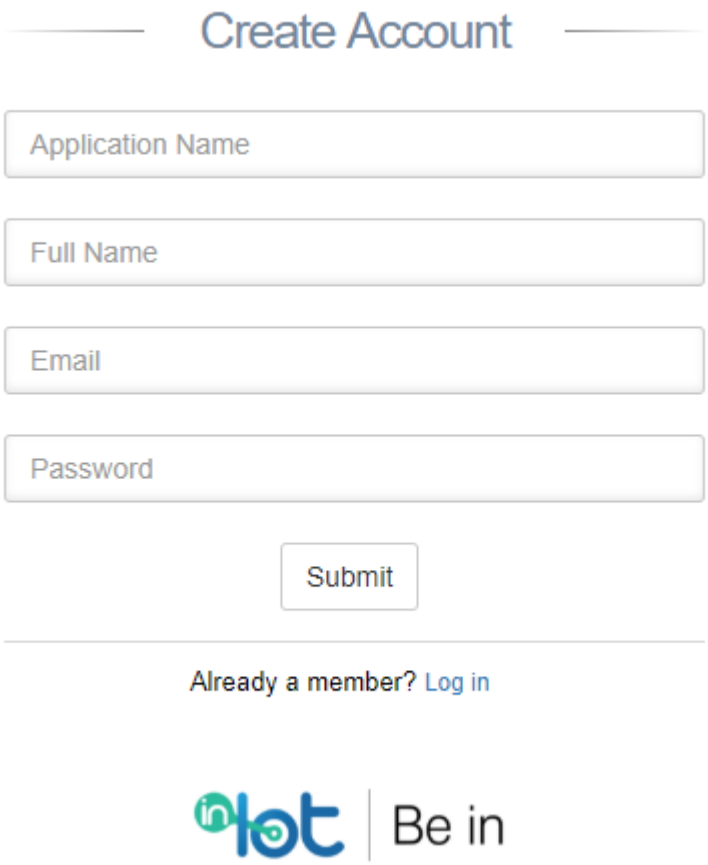
User Guide (Not need for a physical device)

Register a user on the In.IoT platform

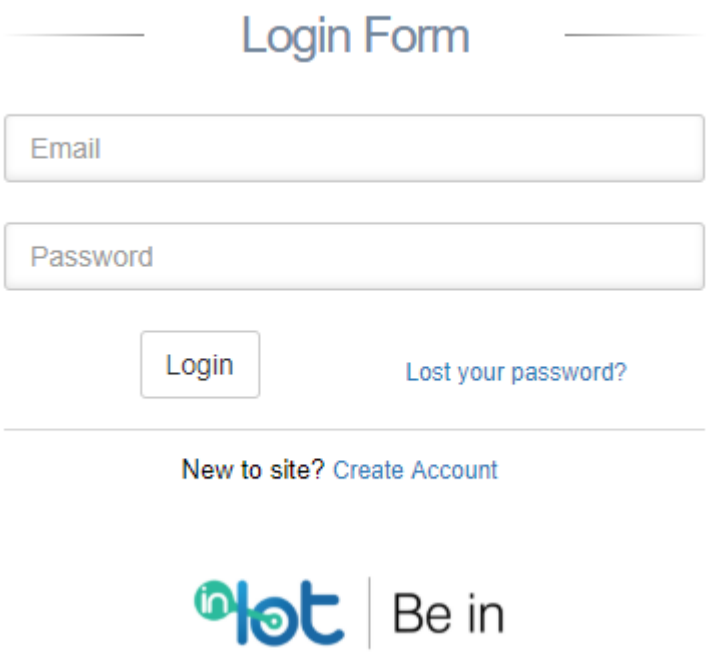
Open a Web browser

Access the following URL: http://192.168.60.52:8090/auth/signup fill the form.

Remember your application name (you will need it later)

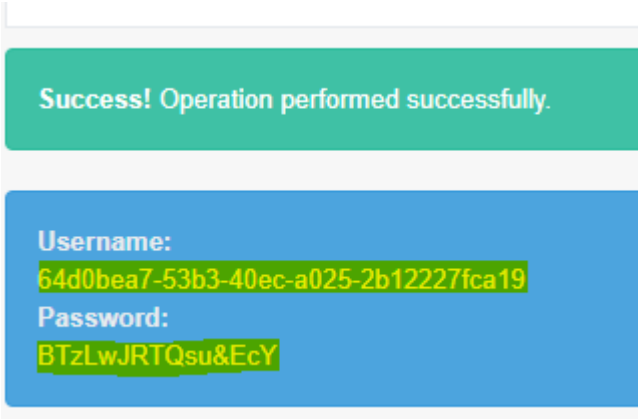


Login with the created user



Register a device

Register a device and save the username and password in a file (you will need it later)



Make an HTTP request with Postman

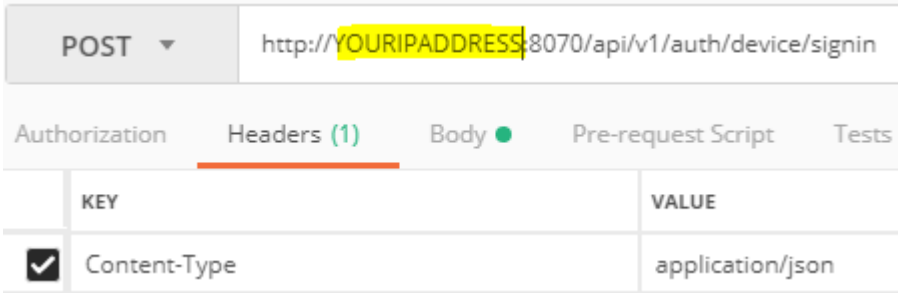
Download Postman from the website **https://www.getpostman.com/**

Run Postman (you can skip the registry process for Postman)

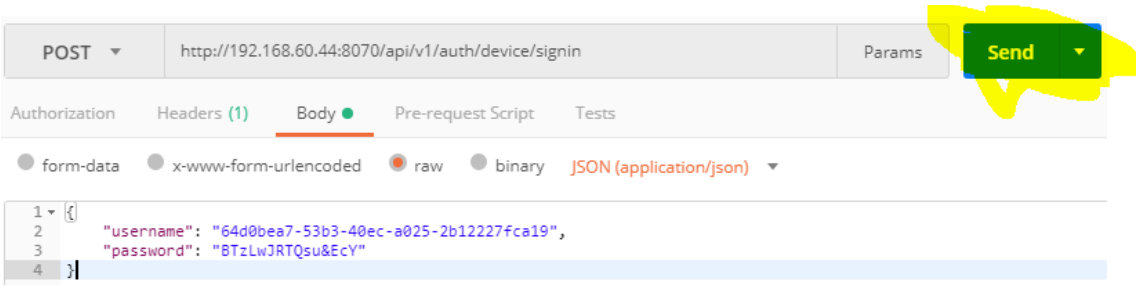
Fill the form like displayed in the figure below. In the area highlighted in yellow you should fill the IP address of the machine in which **In.IoT** is deployed.

For example, if the IP address is 192.168.60.44 you should fill as follows:

http://192.168.60.44:8070/api/v1/auth/device/signin
Remember that the REST API runs on port 8070

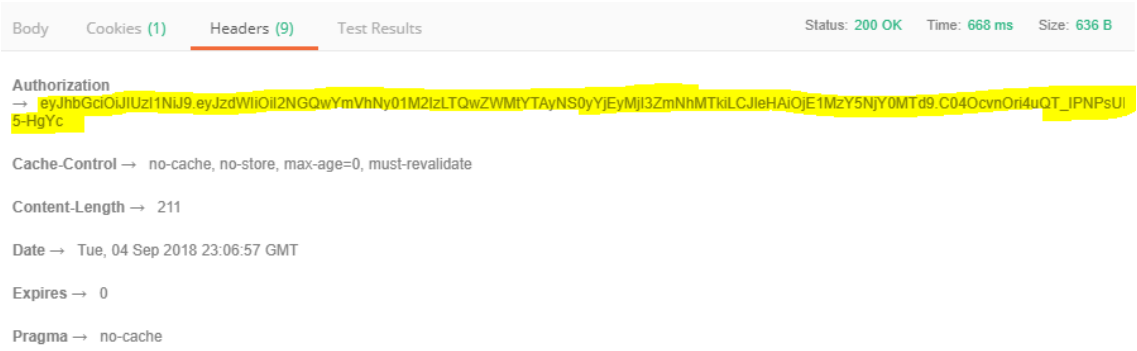


Go to the Body Tab and fill like the *username* and *password* obtained when registering a device (Similar to the example below). And Press the ***Send*** button.



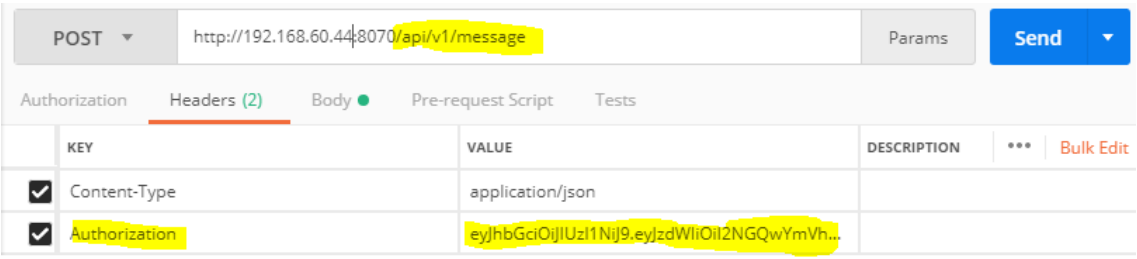
You will receive a response similar to this one:

Go to the *Headers* tab and copy the authorization token. **In.IoT** generates a token that is valid for 7 days.

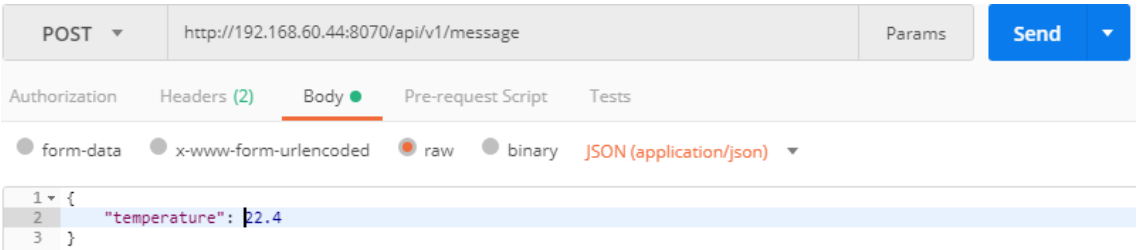


Send a message by changing the URL and header variables. In our example, the URL will change to http://192.168.60.44:8070/api/v1/message

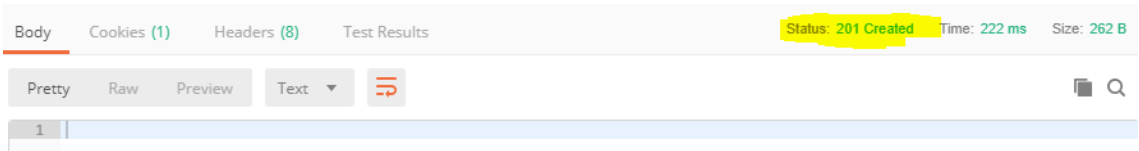
Add the Authorization header and paste the authorization token.



Switch to the *Body* tab and send the desired variables in the format "variable": value.
Example: to send a temperature of 22.4 Celsius degrees, you should write the following: {"temperature": 22.4}. Press the ***Send*** button.

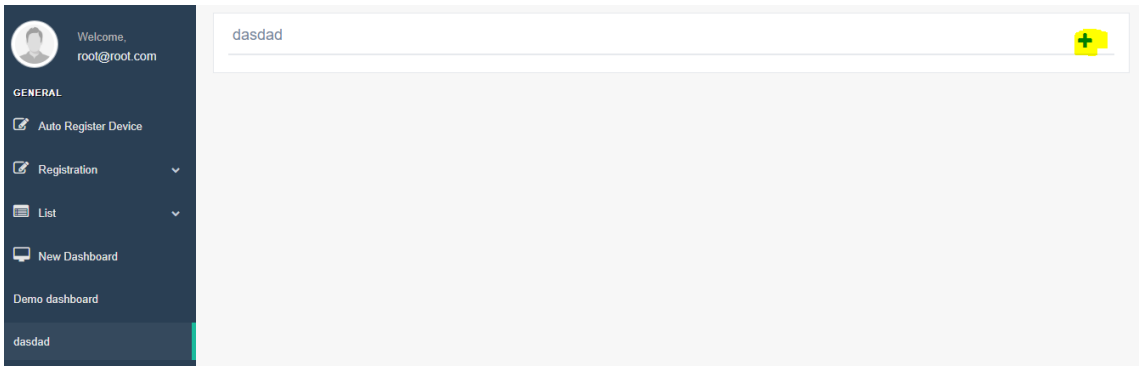


You will receive the following reply, which means the message was successfully sent.

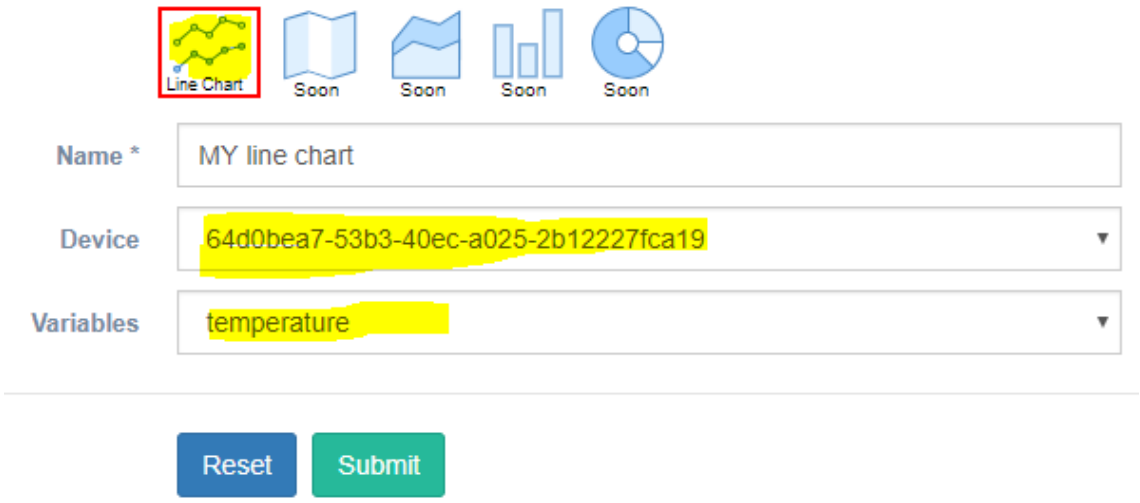


After that, you can go the graphical user Interface and add a new Dashboard http://192.168.60.44:8090/newDashboard

After, the dashboard is added its name will appear on the menu.
Click the dashboard that was added and add a Widget.



Select a line chart and a device.



Access the dashboard again and a line chart should appear.

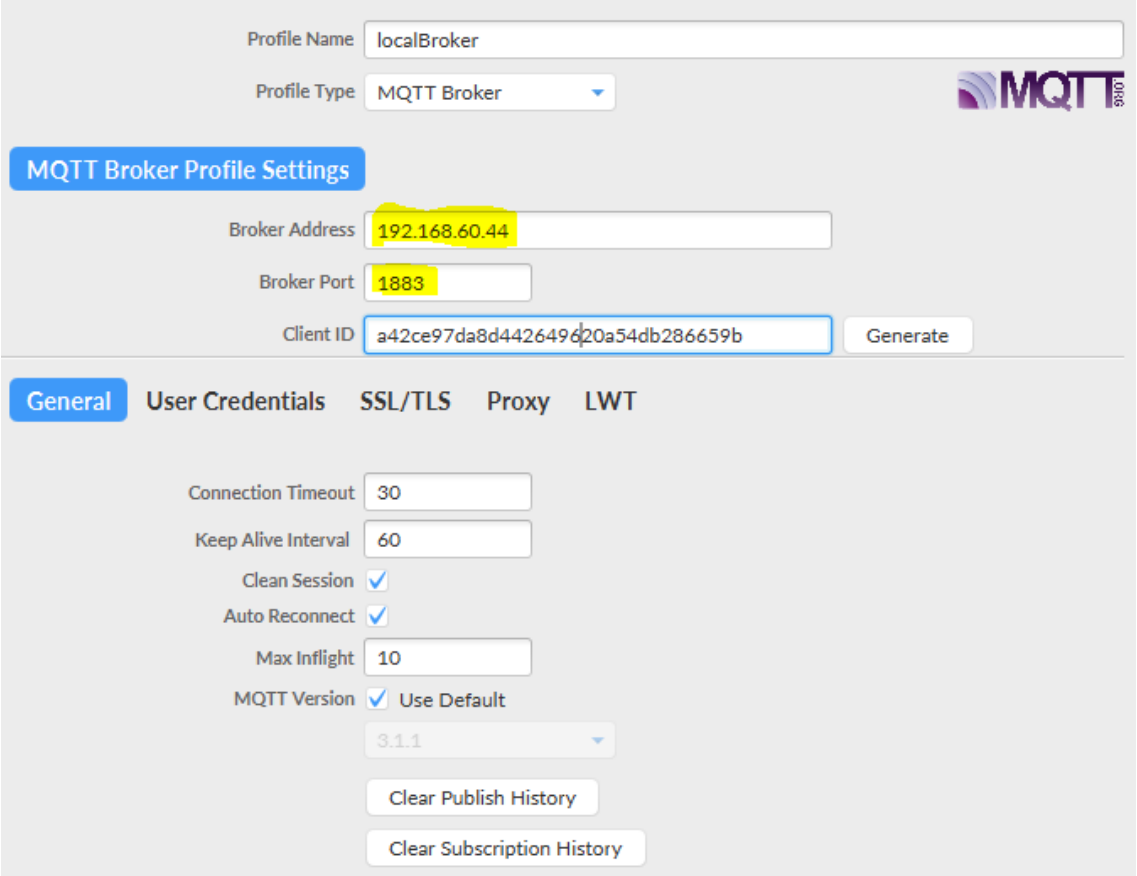
Publish in an MQTT topic with MQTTFx

Download MQTTFx from the website https://mqttfx.jensd.de/

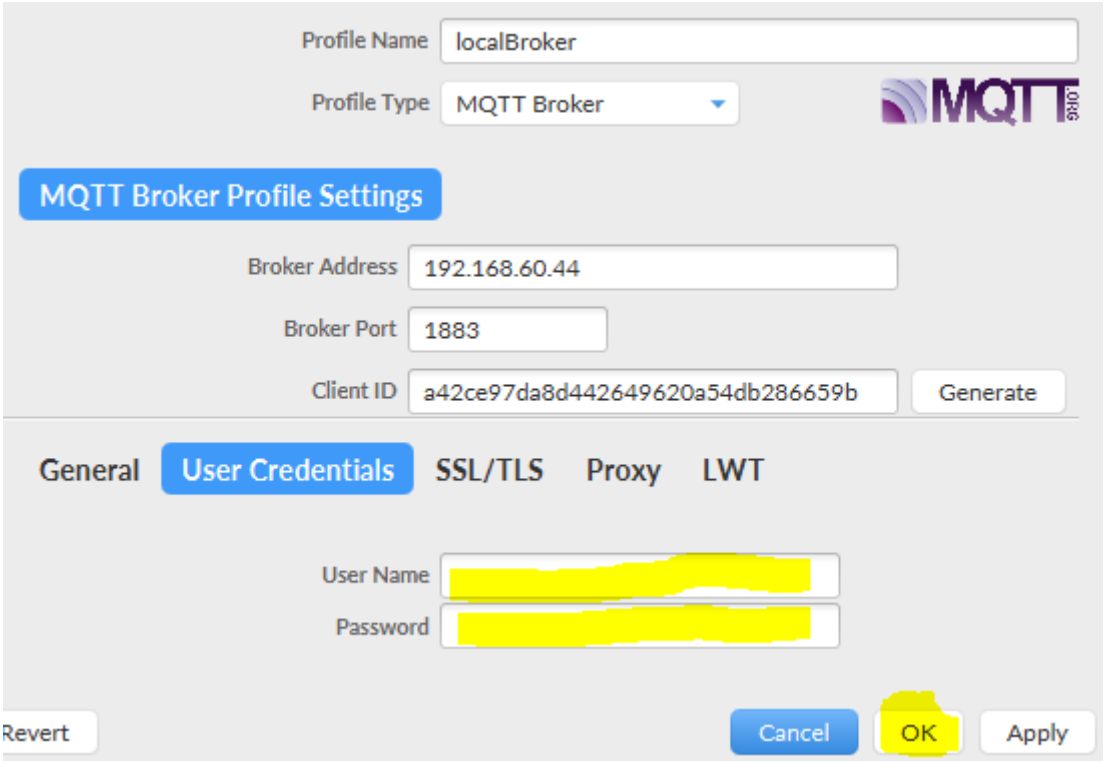
Run MQTTFx. Click the ***gear icon*** located at the top area of the screen.

Fill the form like displayed in the figure below. In the area highlighted in yellow you should fill the IP address of the machine in which **In.IoT** is deployed. For example, if the IP address is 192.168.60.44 you should fill it in the form. The other fields can be configured to their default values. Just confirm the Port number.

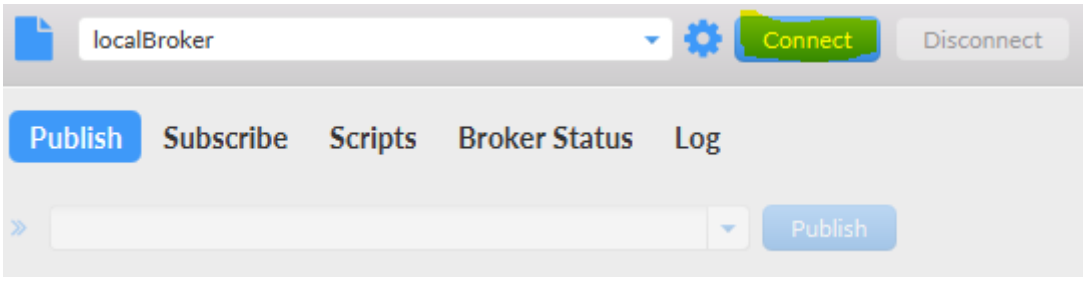
Remember that the MQTT Broker runs on port 1883.



Go to the User Credentials Tab and fill like the *username* and *password* obtained when registering a device (You can use a device that was registered before or create a new one). Then, press the ***OK*** Button **(Pressing the *Enter* Key will cancel all the changes).**



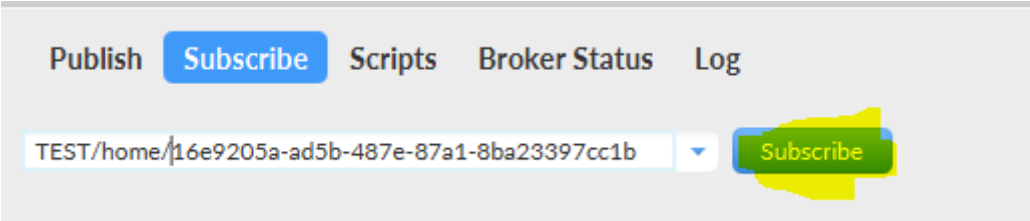
You will return to the main window and should press the ***connect button***.



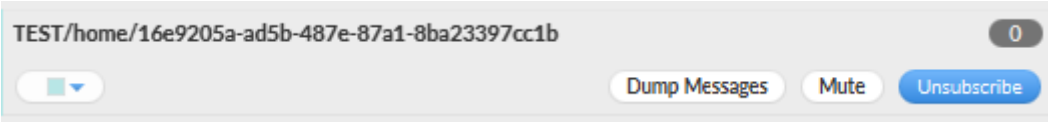
After connecting, the text fields will be enabled and you will able to publish and subscribe to Topics. To publish or subscribe to any topic you will need to insert the prefix of your application, followed by a topic name. You can only publish or subscribe to topics with the same prefix of your application name. This is a security feature to avoid devices from other applications from "eavesdropping" unauthorized communications. So, for example, if your application is named "TEST", you can only Publish/Subscribe to topics that start with "TEST/".

To subscribe a topic, switch to the ***Subscribe*** tab and enter the fill the text field in the format "YOUR_APPLICATION/home/YOUR_DEVICEID"

Where YOUR_APPLICATION = the name of your application
YOUR_DEVICEID = The username you used to connect



When successfully subscribed, the topic will appear.

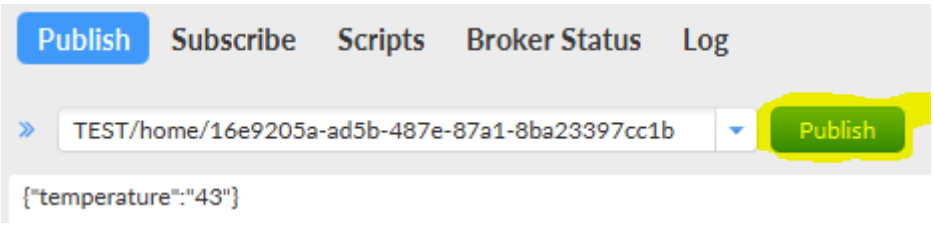


To publish in a topic, switch to the Publish tab and enter the fill the text field in the format "YOUR_APPLICATION/home/YOUR_DEVICEID"

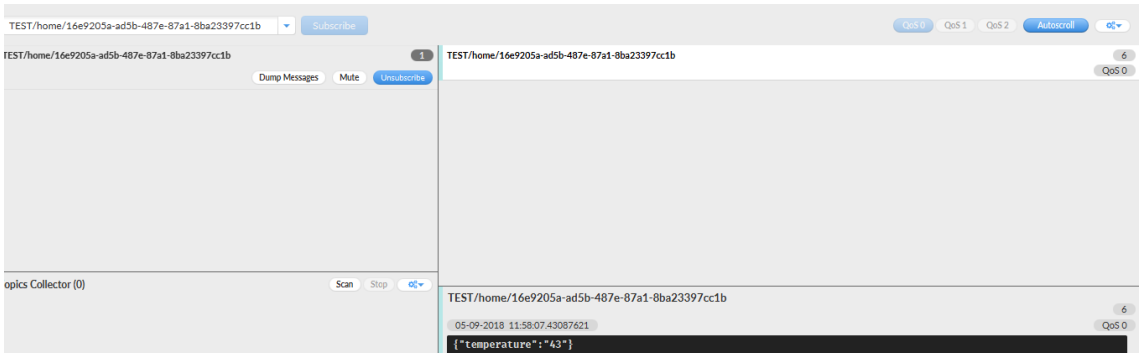
Where YOUR_APPLICATION = the name of your application.
YOUR_DEVICEID = The username you used to connect.

For security reasons, devices can only publish in topics that end with the Device username. For example, if the device username is TOM. He can publish in any topic that starts with "YOUR_APPLICATION/" and ends with "TOM". In practice,
"YOUR_APPLICATION/**SOME_RANDOM_STRING/…/ANOTHER_STRING**/YOUR_DEVICEID"

To send a temperature of 43 Celsius degrees, you should write the following: {"temperature": 43}. Press the ***Send*** button.



After the message is published, you can switch to the subscribe tab and you will see the published message.



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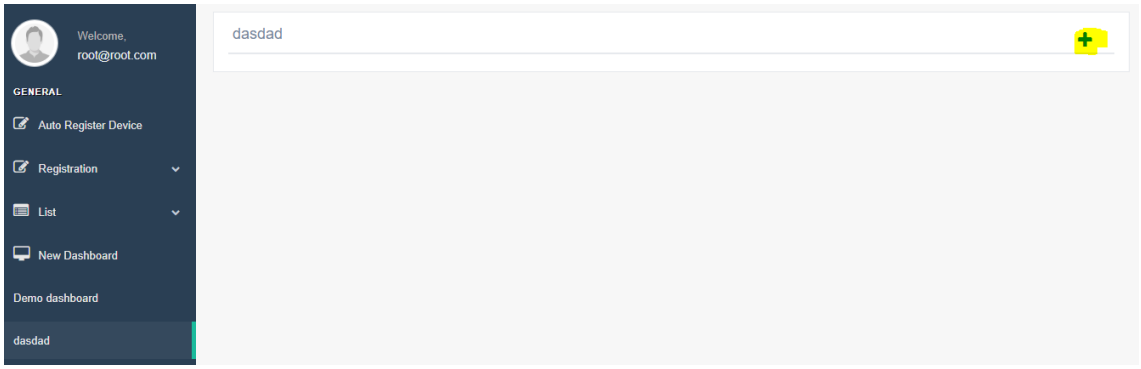

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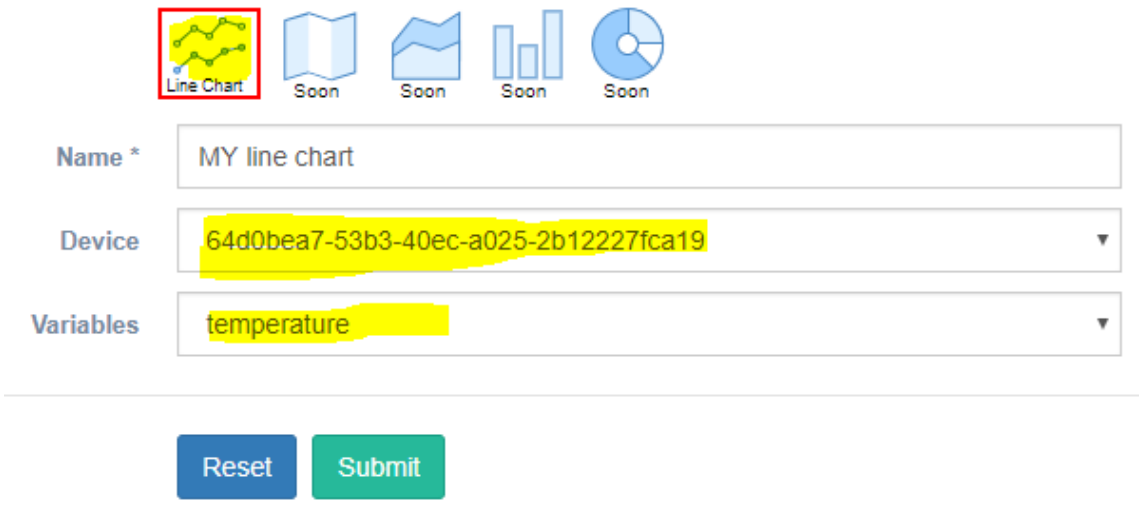

Access the dashboard again and a line chart should appear.