



StellarNet Live Demo Guide

Connecting to MQTT Using MQTT Explorer or Web Browser



Introduction to MQTT

MQTT (Message Queuing Telemetry Transport) is a lightweight, publish-subscribe messaging protocol commonly used in IoT and real-time data systems. It offers:

- **Efficient real-time data delivery** with minimal overhead
- **Cross-platform support** (Windows, macOS, Linux, web, Android, iOS)
- Features like **retained messages**, **last will/testament**, and **QoS (Quality of Service)**

Its low-bandwidth footprint and scalability make MQTT ideal for applications like live sensor data monitoring.



Connect to the StellarNet Radiometry Live Demo

This guide walks you through connecting to the **StellarNet Radiometry Live Demo** using either:

- **Option 1:** MQTT Explorer (full-featured desktop app with live charts)
- **Option 2:** Web browser (no installation required for a quick view)

You may also use **any MQTT dashboard**—desktop, mobile, or web-based. See the end of this guide for more options.



Broker Connection Info

Use the following details to connect from any MQTT client:

- **Protocol:** `mqtt://`
- **Host:** `test.mosquitto.org`
- **Port:** `1883`
- **Topic to Subscribe:** `StellarNet-Demo`



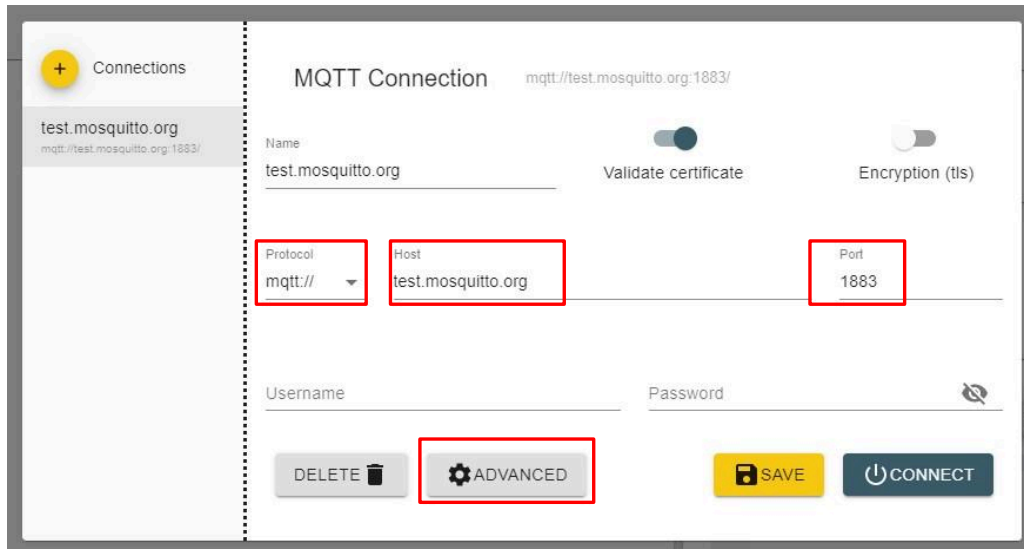
Option 1: MQTT Explorer (Desktop App + Live Charts)

1. Install and launch MQTT Explorer

- Download and install **MQTT Explorer** from: <https://mqtt-explorer.com/>
- Double-click the **MQTT Explorer** icon to launch the application.

2. Configure a New Connection

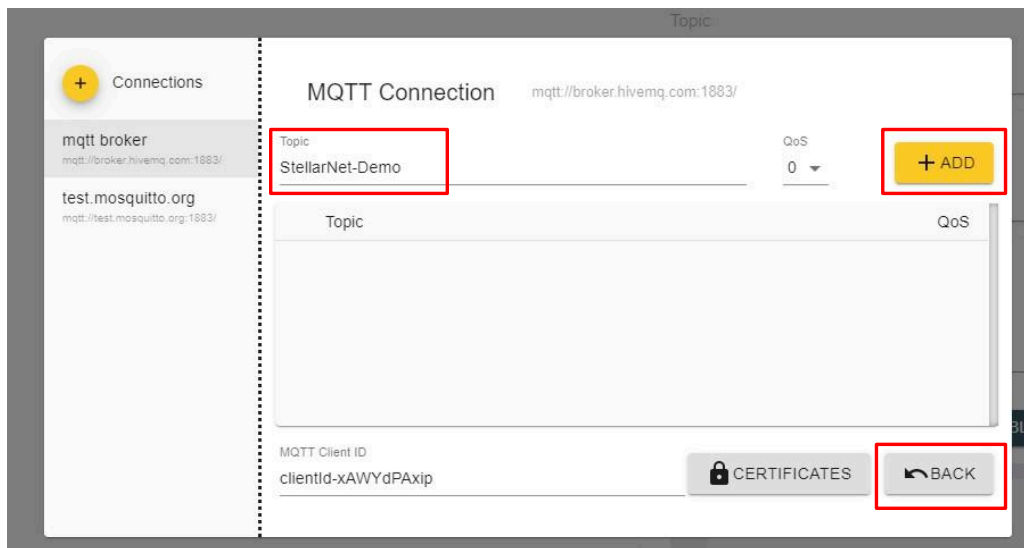
- On the connection screen, enter the following details:
 - **Protocol:** `mqtt://`
 - **Host:** `test.mosquitto.org`
 - **Port:** `1883`
- Click **ADVANCED**



The screenshot shows the 'MQTT Connection' configuration window. On the left, a list of connections includes 'test.mosquitto.org'. The main panel shows the configuration for 'mqtt://test.mosquitto.org:1883/'. Fields for 'Protocol' (mqtt://), 'Host' (test.mosquitto.org), and 'Port' (1883) are highlighted with red boxes. Below these are fields for 'Username' and 'Password'. At the bottom, there are buttons for 'DELETE', 'ADVANCED' (highlighted with a red box), 'SAVE', and 'CONNECT'. There are also toggle switches for 'Validate certificate' and 'Encryption (tls)'.

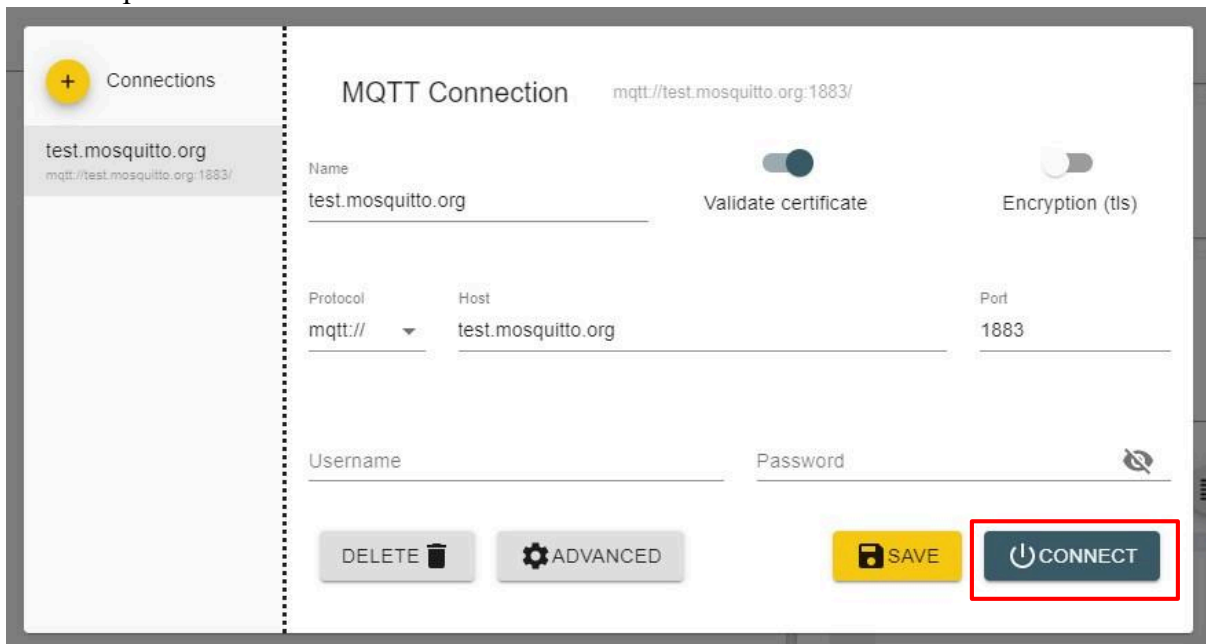
3. Add Subscription Topic

- In the **Advanced** panel, enter the following for the subscribe **Topic**:
`StellarNet-Demo`
- Click **ADD**
- Click **BACK**



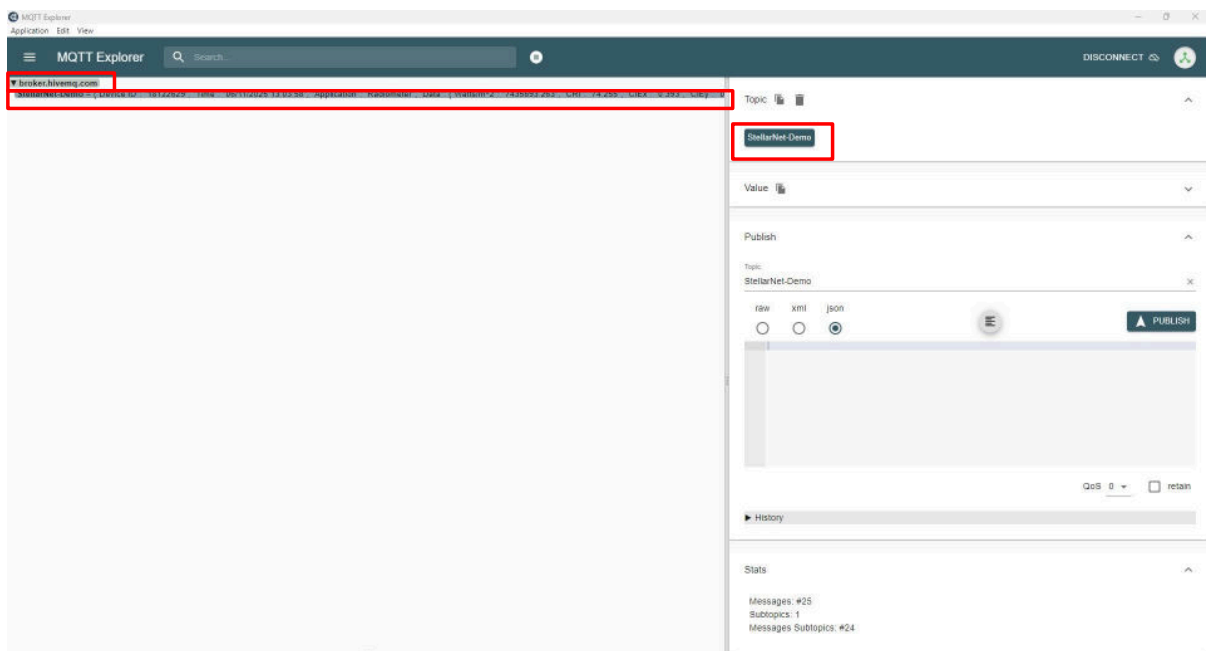
The screenshot shows the 'MQTT Connection' configuration window in the 'Advanced' panel. The 'Topic' field is set to 'StellarNet-Demo' and is highlighted with a red box. The 'QoS' dropdown is set to '0'. A red box highlights the '+ ADD' button. Below the 'Topic' field is a table with columns 'Topic' and 'QoS'. At the bottom, there is a field for 'MQTT Client ID' with the value 'clientId-xAWYdPAXip'. There are buttons for 'CERTIFICATES' and 'BACK' (highlighted with a red box).


- Click **CONNECT**. You are now connected and subscribed to the [StellarNet-Demo](#) topic for the StellarNet live data feed!

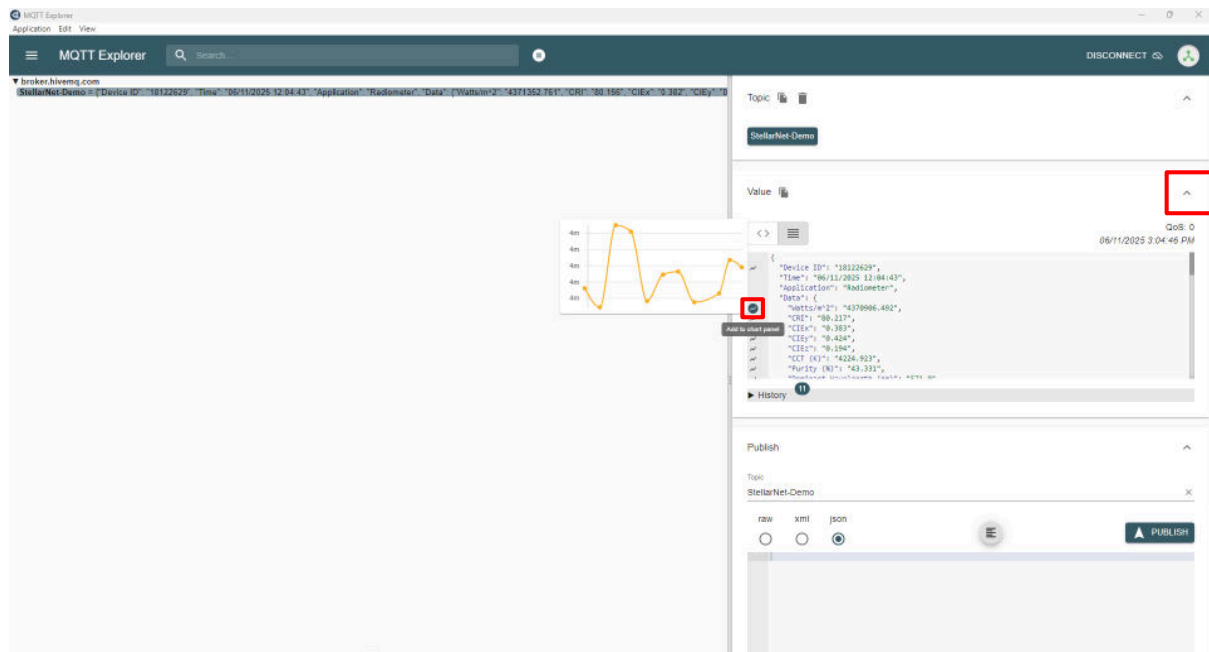


The image shows the 'MQTT Connection' configuration window. On the left, there is a 'Connections' sidebar with a yellow '+' icon and a list containing 'test.mosquitto.org' with its URL 'mqtt://test.mosquitto.org:1883/'. The main area is titled 'MQTT Connection' and shows the URL 'mqtt://test.mosquitto.org:1883/'. It includes fields for 'Name' (test.mosquitto.org), 'Protocol' (mqtt://), 'Host' (test.mosquitto.org), and 'Port' (1883). There are also fields for 'Username' and 'Password'. At the bottom, there are buttons for 'DELETE', 'ADVANCED', 'SAVE', and 'CONNECT'. The 'CONNECT' button is highlighted with a red rectangle.



- Expand the connection node labeled **test.mosquitto.org**. Click on the subscribed topic **StellarNet-Demo** under the node. In the top right-hand panel, **StellarNet-Demo** topic will be listed.

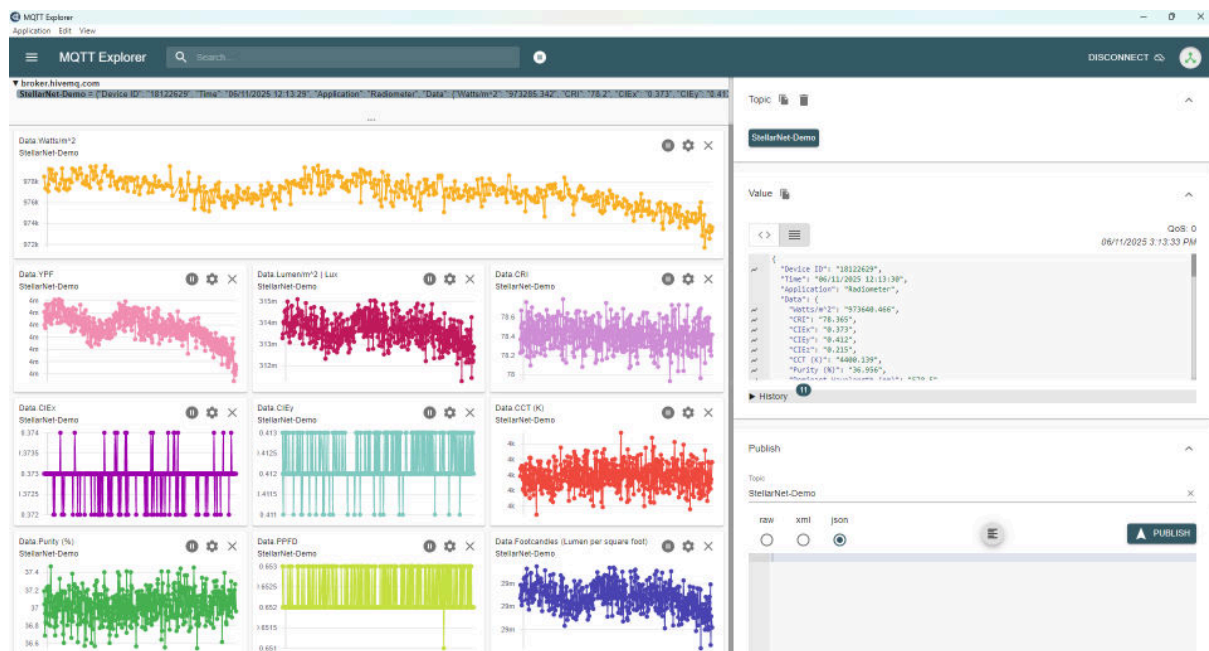


- Expand the **Value** tab to see live sensor data. Hover over the chart icon  next to a data value to preview a trend graph.



7. Customize Your Chart Panel

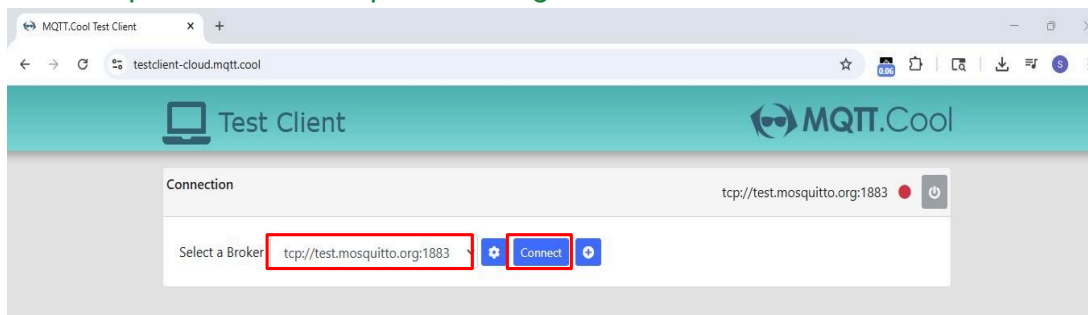
- Click the chart icon  next to each data value you want to track in your custom chart panel.
- You can add up to 12 charts.
- Click the gear/settings icon  at the top right of each chart to:
 - Change chart color
 - Adjust X-Axis or Y-Axis ranges
 - Resize the chart
 - Clear previously displayed data



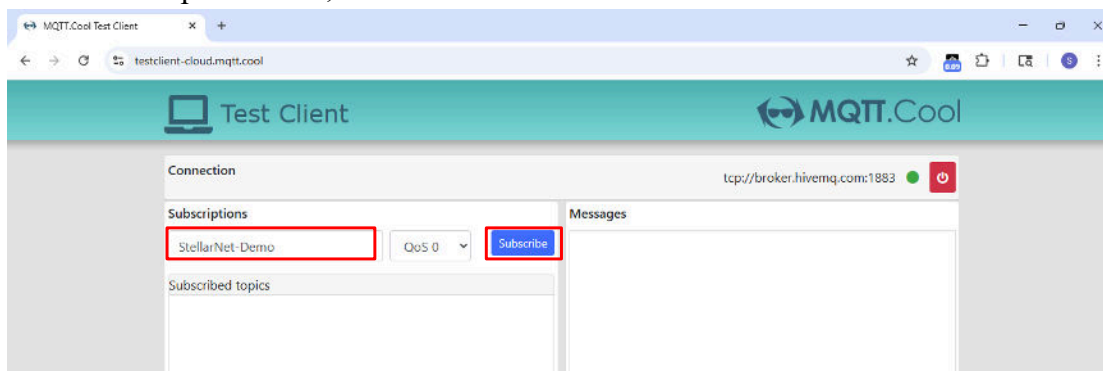
Option 2: Quick Demo in Web Browser (No Install)

If you prefer a quick, no-download experience, try this web-based MQTT client:

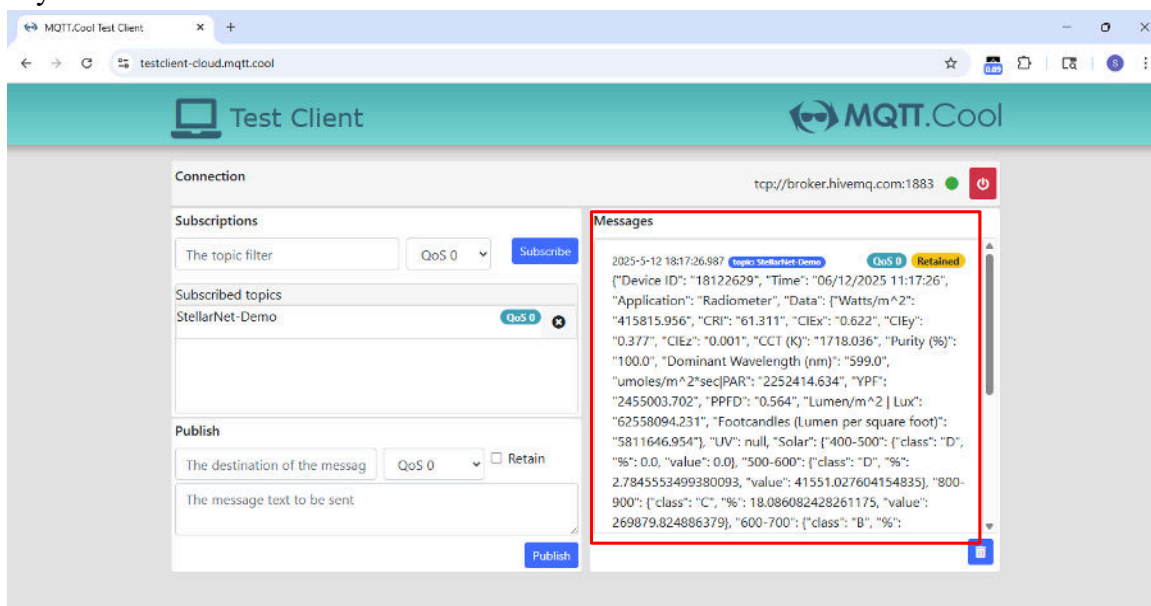
1. Go to: <https://testclient-cloud.mqtt.cool/>
2. Select `tcp://test.mosquitto.org:1883` and then click **Connect**



3. In the Subscriptions field, enter **StellarNet-Demo** and then click **Subscribe**.



4. You're now connected to the StellarNet Radiometry Live Demo and viewing live data in your browser.



Other MQTT Dashboard Options

Here are a few additional free MQTT apps available for various platforms:

Desktop:

- **MQTT Explorer** (Support Chart panels): <https://mqtt-explorer.com/>
- **MQTTX**: <https://mqttx.app/>

Android or iOS Apps:

- IoT MQTT Panel (Support Chart panels)
- MQTTTool
- MQTTPanelizer
- EasyMQTT

MQTT Client Libraries (For Developers)

If you prefer to code your own solution or integrate MQTT into your application, use one of these popular libraries:

- **Python**: [paho-mqtt](#)
- **C/C++**: Eclipse Paho C/C++
- **Java**: Eclipse Paho Java
- **.NET / C#**: [MQTTnet](#)
- **JavaScript / Node.js**: [mqtt.js](#)