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

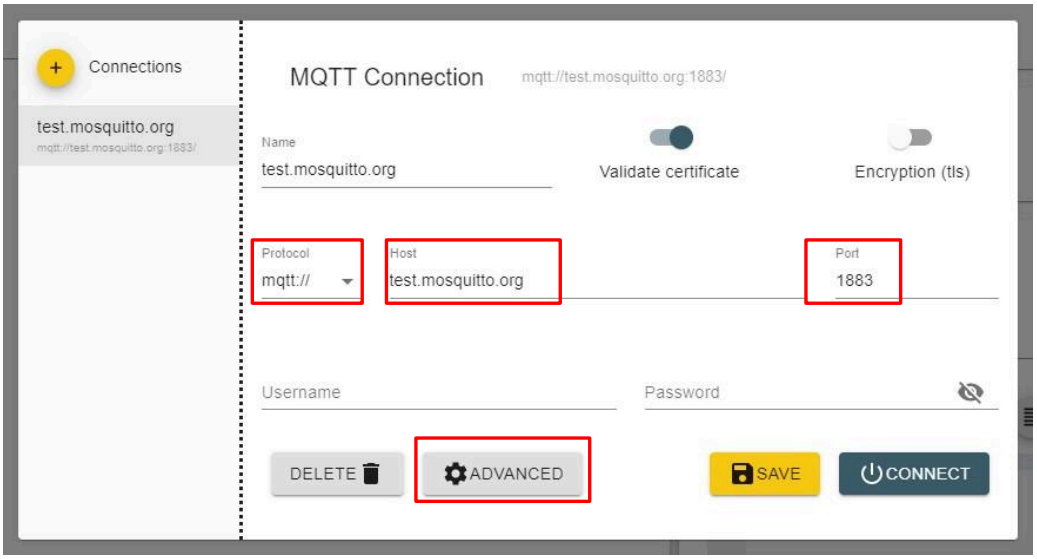
Use the following details to connect from any MQTT client:

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

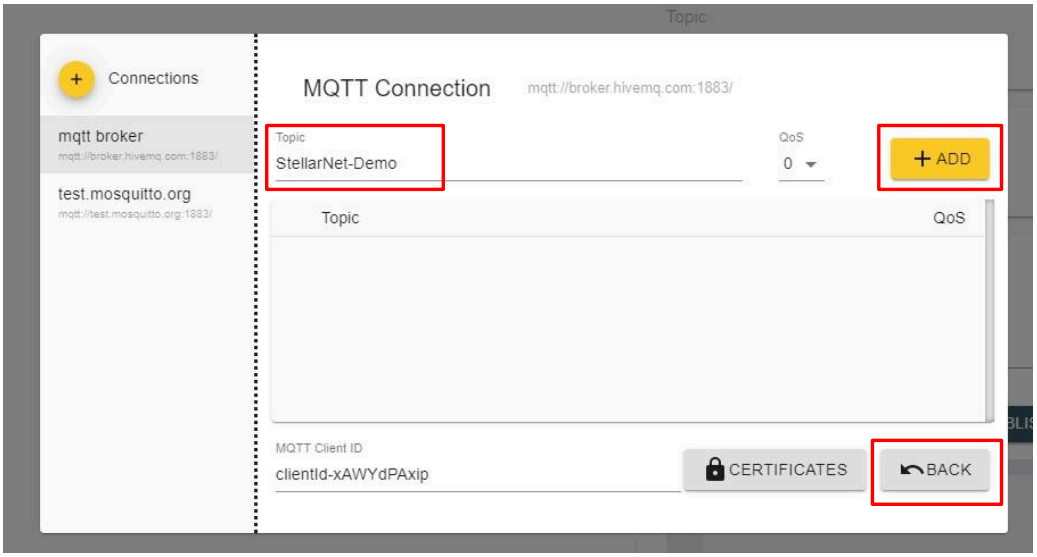
💻 Option 1: MQTT Explorer (Desktop App + Live Charts)

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.

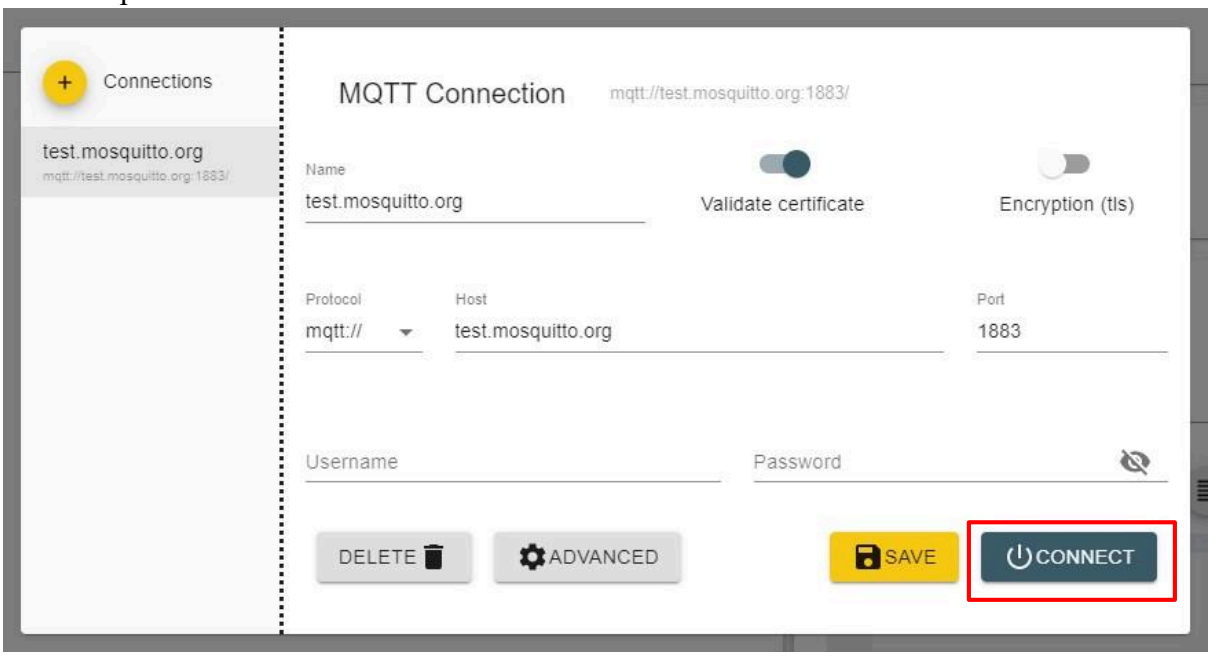
2. **Configure a New Connection**
   - On the connection screen, enter the following details:
     - **Protocol**: `mqtt://`
     - **Host**: `test.mosquitto.org`
     - **Port**: `1883`
   - Click **ADVANCED**



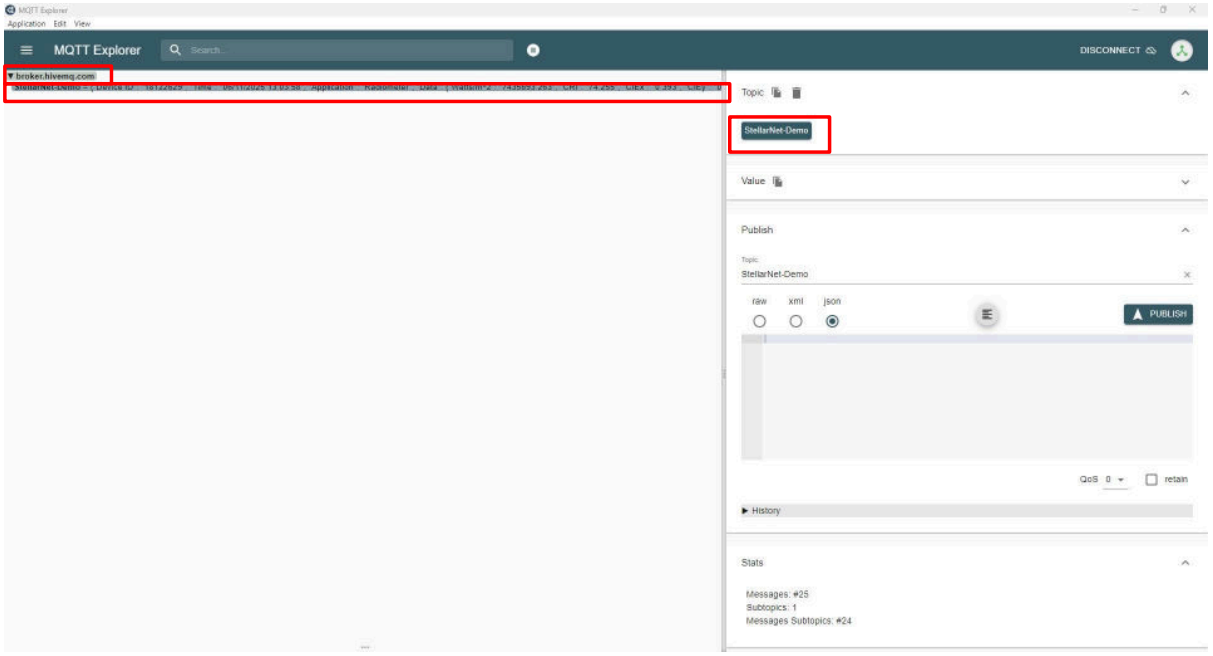
3. **Add Subscription Topic**
   - In the **Advanced** panel, enter the following for the subscribe **Topic**: `StellarNet-Demo`
   - Click **ADD**
   - Click **BACK**



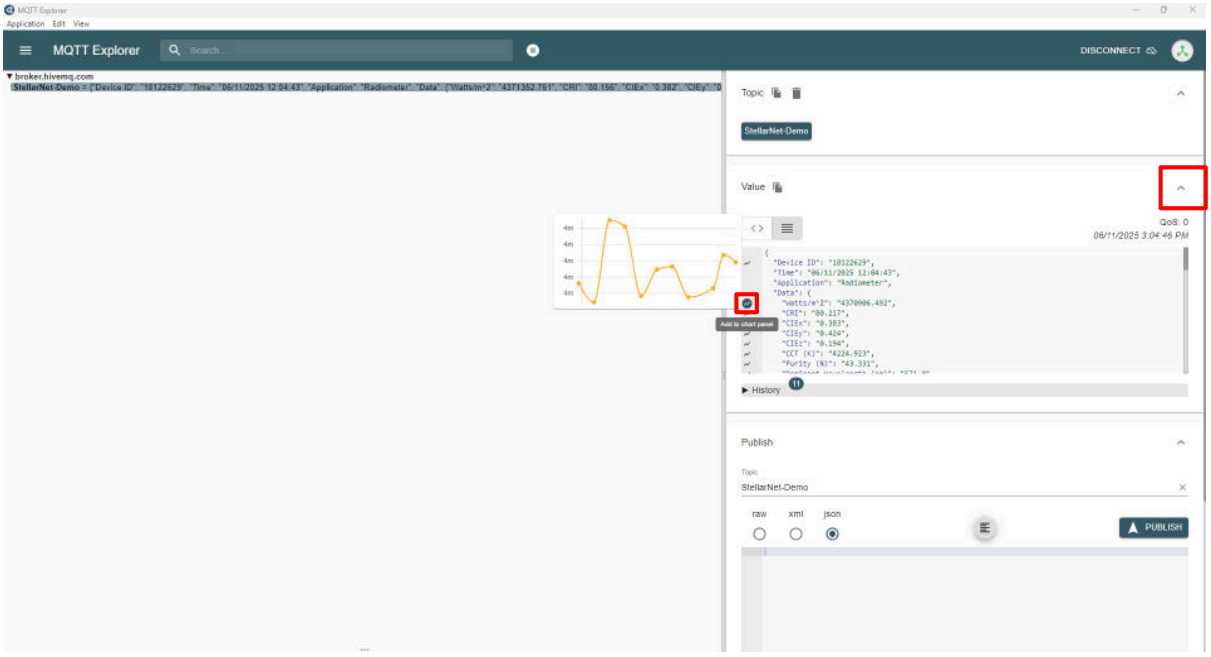
4. Click **CONNECT.** You are now connected and subscribed to the StellarNet-Demo topic for the StellarNet live data feed!



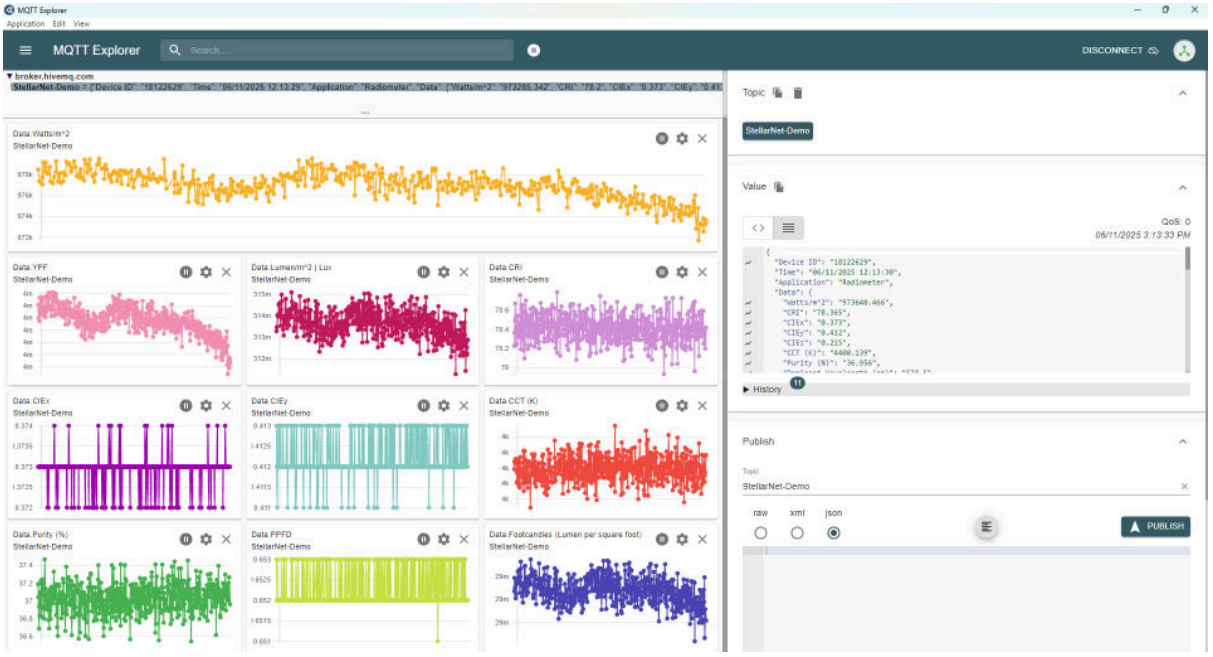
5. Expand the connection node labeled **test.mosquitto.org**. Click on the subscribed topic **StellarNet-Demo** under the node. In the top right-hand panel, **StellarNet-Demo** topic will be listed.



6. 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

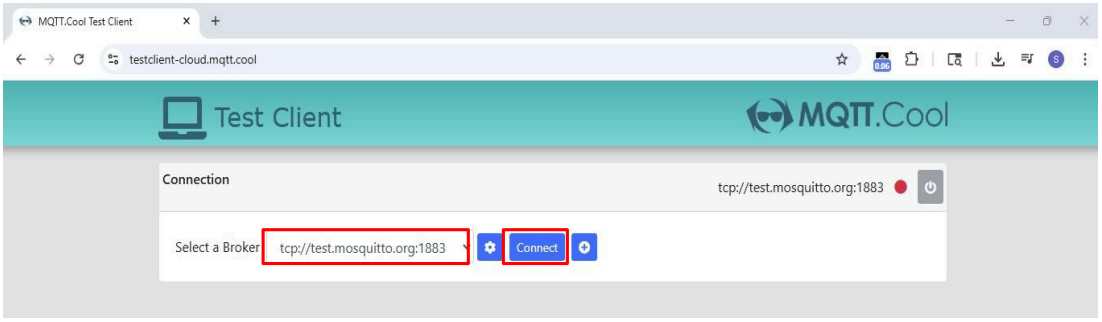


🌎 Option 2: Quick Demo in Web Browser (No Install)

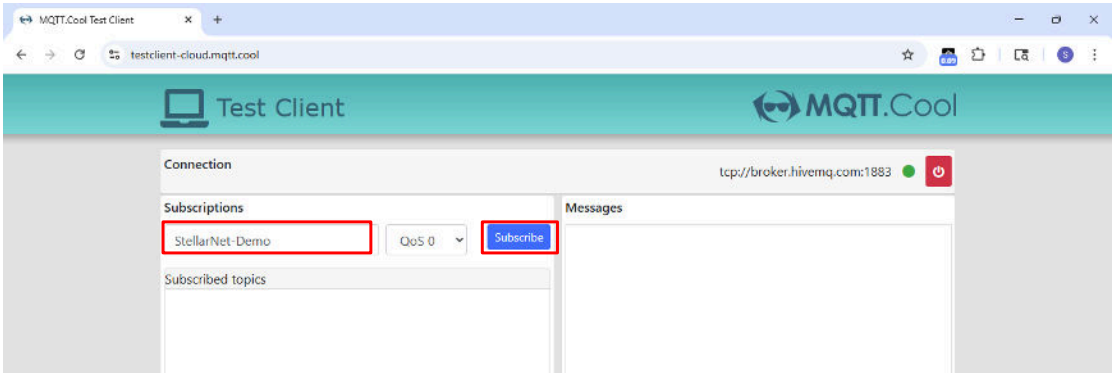
If you prefer a quick, no-download experience, try this web-based MQTT client:

1. Go to: https://testclient-cloud.mqtt.cool/

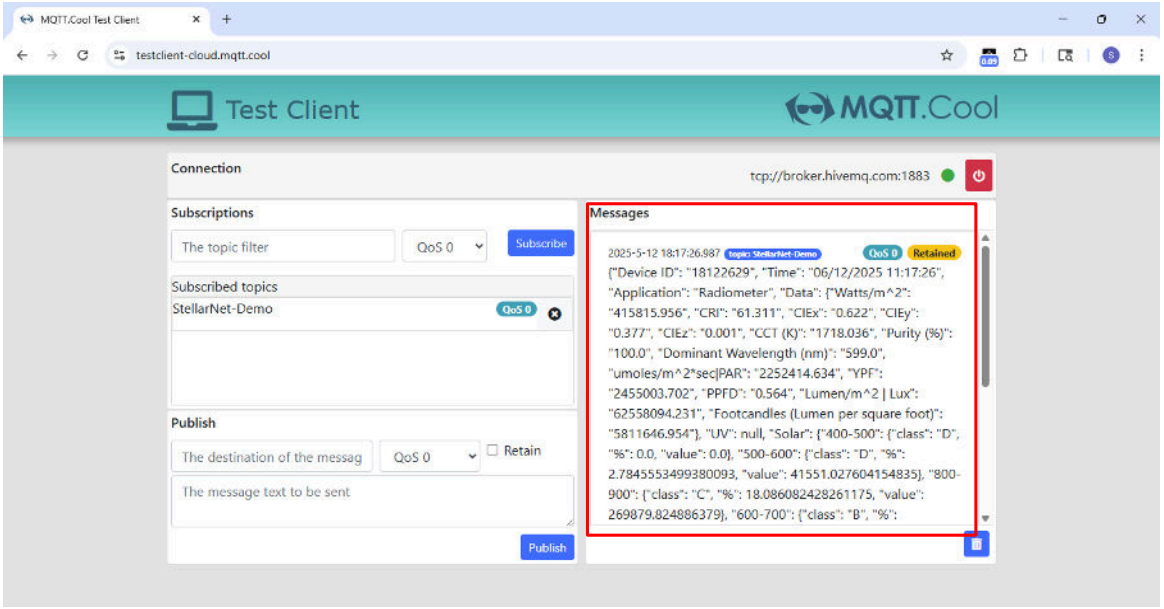
2. Select `tcp://test.mosquitto.org:1883` and then click **Connect**



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)
- MQTTool
- MQTTAnalyzer
- 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