



EDM C++ MQTT Demo User Guide

VCS/DSA

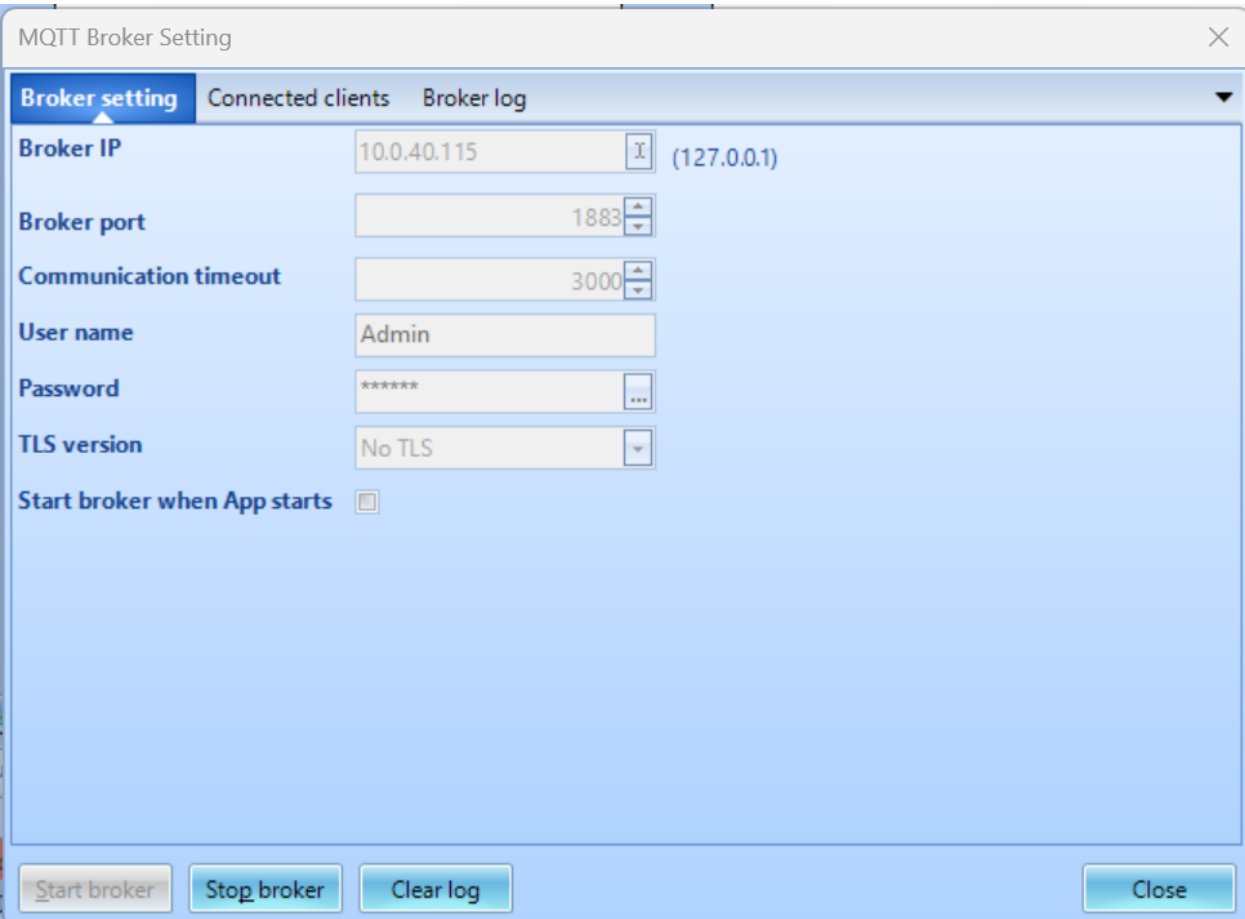
April 2, 2024

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CONNECTING

1. Host: IP address of the MQTT broker
See Broker IP in photo below
2. Port: Port of the MQTT broker
See Broker port in photo below
3. Username: Username specified when initializing the MQTT broker
See User name in photo below
4. Password: Password specified when initializing the MQTT broker
See Password in photo below



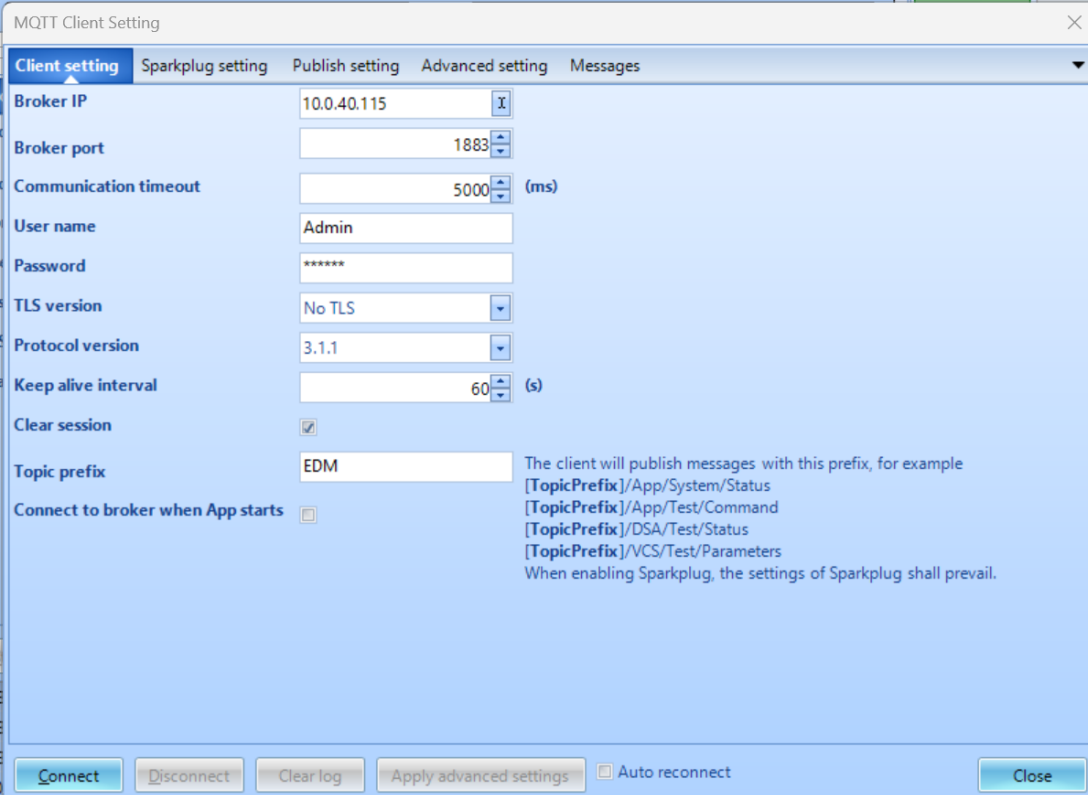
The screenshot shows a window titled "MQTT Broker Setting" with a close button (X) in the top right corner. The window has three tabs: "Broker setting" (selected), "Connected clients", and "Broker log". The "Broker setting" tab contains the following fields:

- Broker IP:** A text box containing "10.0.40.115" with a small icon to its right and "(127.0.0.1)" to its right.
- Broker port:** A spin box containing "1883".
- Communication timeout:** A spin box containing "3000".
- User name:** A text box containing "Admin".
- Password:** A text box containing "*****" with a small icon to its right.
- TLS version:** A dropdown menu showing "No TLS".
- Start broker when App starts:** A checkbox that is currently unchecked.

At the bottom of the window, there are four buttons: "Start broker", "Stop broker", "Clear log", and "Close".

5. Topic Prefix: Topic prefix specified when initializing the MQTT client

See Topic Prefix in photo below



The screenshot shows the 'MQTT Client Setting' dialog box with the 'Client setting' tab selected. The 'Topic prefix' is set to 'EDM'. The dialog includes fields for Broker IP, Broker port, Communication timeout, User name, Password, TLS version, Protocol version, Keep alive interval, Clear session, and Connect to broker when App starts. A help text box explains the topic prefix format and the precedence of Sparkplug settings.

Setting	Value
Broker IP	10.0.40.115
Broker port	1883
Communication timeout	5000 (ms)
User name	Admin
Password	*****
TLS version	No TLS
Protocol version	3.1.1
Keep alive interval	60 (s)
Clear session	<input checked="" type="checkbox"/>
Topic prefix	EDM
Connect to broker when App starts	<input type="checkbox"/>

The client will publish messages with this prefix, for example
[TopicPrefix]/App/System/Status
[TopicPrefix]/App/Test/Command
[TopicPrefix]/DSA/Test/Status
[TopicPrefix]/VCS/Test/Parameters
When enabling Sparkplug, the settings of Sparkplug shall prevail.

Buttons: Connect, Disconnect, Clear log, Apply advanced settings, Auto reconnect, Close

COMMANDS

Run: Runs the open test

Parameters: None

Reference:

```
The commands you can perform are: Run (Runs Current Test), Stop (Stops Current Test), Get (Gets Signal Data), Publish (Publishes a Topic and Payload), Subscribe (Subscribes to a Topic), and Exit (Exits Program). Please type the action you want to perform.  
run
```

Stop: Stops the running test

Parameters: None

Reference:

```
The commands you can perform are: Run (Runs Current Test), Stop (Stops Current Test), Get (Gets Signal Data), Publish (Publishes a Topic and Payload), Subscribe (Subscribes to a Topic), and Exit (Exits Program). Please type the action you want to perform.  
stop
```

Get: Creates a file containing the APS of Channel 1 of the Spider 80x

Parameters: None

Reference:

```
The commands you can perform are: Run (Runs Current Test), Stop (Stops Current Test), Get (Gets Signal Data), Publish (Publishes a Topic and Payload), Subscribe (Subscribes to a Topic), and Exit (Exits Program). Please type the action you want to perform.  
get
```

Subscribe: Subscribes the MQTT Client to a topic

Parameters:

Topic – the topic that the client will be subscribed to

Reference:

```
The commands you can perform are: Run (Runs Current Test), Stop (Stops Current Test), Get (Gets Signal Data), Publish (Publishes a Topic and Payload), Subscribe (Subscribes to a Topic), and Exit (Exits Program). Please type the action you want to perform.  
subscribe  
Please enter the subscribe topic: GlobalParameter/Response
```

Publish: MQTT Client publishes a payload to a topic

Parameters:

Topic – the topics that the client will publish to

Payload – the payload that will be published

Reference:

```
Please enter the subscribe topic: GlobalParameter/Response
The commands you can perform are: Run (Runs Current Test), Stop (Stops Current Test), Get (Gets Signal Data), Publish (Publishes a Topic and Payload), Subscribe (Subscribes to a Topic), and Exit (Exits Program). Please type the action you want to perform.
publish
Please enter the publish topic: GlobalParameter/Request
Please enter the payload: Test.Run.Parameter.ShakerName
```

Exit: Exits the program

Parameters: None

Reference:

```
The commands you can perform are: Run (Runs Current Test), Stop (Stops Current Test), Get (Gets Signal Data), Publish (Publishes a Topic and Payload), Subscribe (Subscribes to a Topic), and Exit (Exits Program). Please type the action you want to perform.
exit
```