

# Using the Chariot UI to investigate MQTT Client connections

The Chariot UI can be used to identify MQTT client connection properties when investigating memory or CPU usage issues at the broker.

## Session Connection

Navigate to the MQTT > Client Status > Clients view and select a Client ID. The details for Network, Session, Last Will and Subscriptions will be populated for the selected client.

Look for:

- Clients with a persistent session (Clean Session set to No)
- Clients with subscriptions with a QoS level > 0



An MQTT client that has connected with a persistent session with a very broad QoS 1 or 2 subscriptions, can cause the MQTT server to persist lots of messages in memory for a client that is not currently connected.

The screenshot displays the Chariot UI interface for an MQTT client. At the top, it shows '1 record selected.' and 'Records per page: 20' with a total of '1-20 of 157' records. The main content is divided into four sections: Network, Session, Last Will, and Subscriptions.

**Network**

- IP Address: 127.0.0.1
- State: CONNECTED
- Last Active: 2025/08/21 11:37:30
- Connection Since: 2025/08/21 10:14:53
- Bytes Received: 41
- Bytes Transmitted: 4245
- Inbound Queue Size: 0
- Outbound Queue Size: 0
- Packet Write Queue Size: 0

**Session**

- Client ID: MT-31dd85d0-d75d-4afa
- Username: admin
- Clean Session: Yes
- Keep Alive: 30
- Connection Type: MQTT

**Last Will**

- Will Topic: spBv1.0/g39/NDEATH/e2
- Will QoS: 1
- Will Retained: No

**Subscriptions**

QoS	Topic
0	spBv1.0/g39/DCMD/e2/#
1	STATE/testtest
0	spBv1.0/g39/NCMD/e2
0	spBv1.0/g39/NDEATH/e2
1	spBv1.0/STATE/testtest

Records per page: 5 1-5 of 5

# Retained Messages

Navigate to the MQTT > Client Status > Retained Messages view to display all the retained messages at the Chariot server.



A very large number of large retained messages will result in more memory being consumed on the MQTT server

The screenshot shows the Chariot MQTT Client Status interface. The left sidebar contains navigation menus for GENERAL, ADMINISTRATIVE, MQTT CLIENT, and MQTT SERVER. The 'Clients' menu item is highlighted. The main content area is titled 'MQTT Client Status' and is divided into two tabs: 'CLIENTS' and 'RETAINED MESSAGES'. The 'RETAINED MESSAGES' tab is active, displaying a table with the following data:

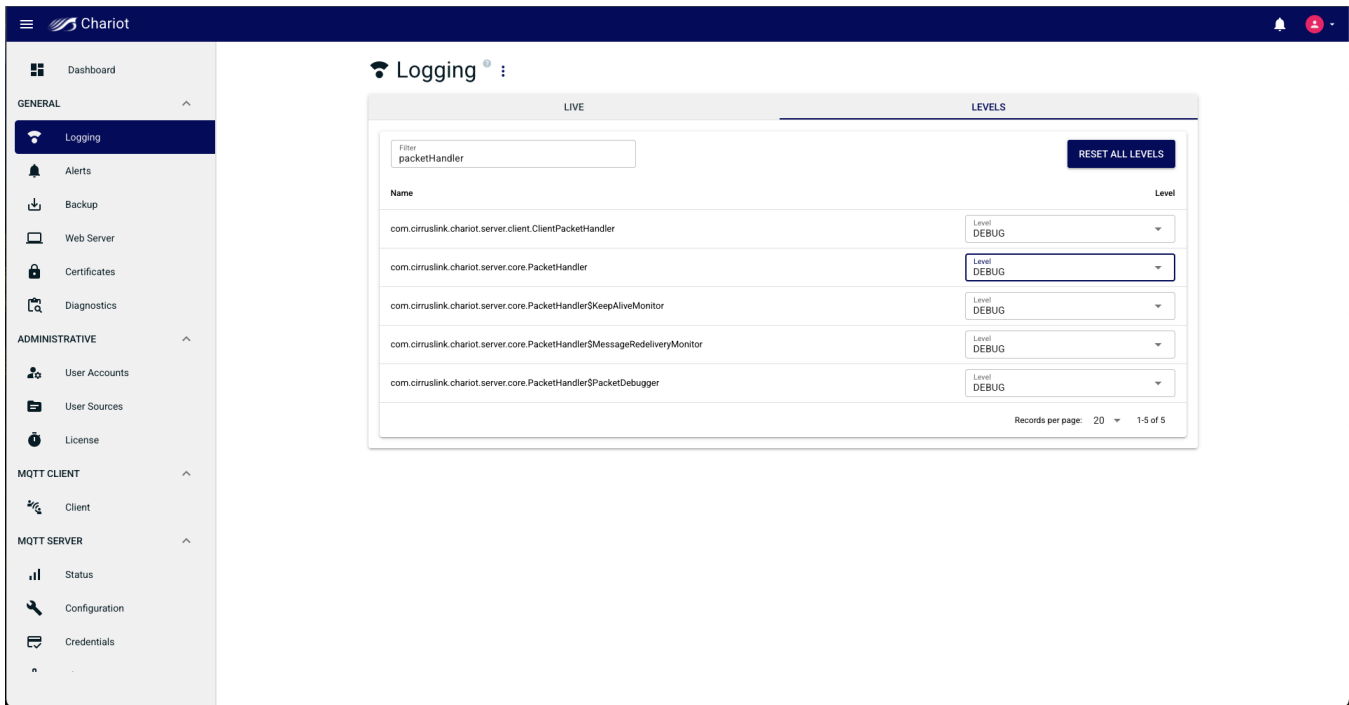
Topic	QoS	Size	Timestamp
spBv1.0/STATE/testtest	1	70	2026/04/03 09:46:34

At the top of the table, there is a 'Filter' input field and a 'DELETE' button. At the bottom right of the table, it indicates 'Records per page: 20' and '1-1 of 1'.

# Published message QoS level

You can track the MQTT message QoS for messages published from a specific client via logging.

- Navigate to the GENERAL > Logging > LEVELS view and set the level to DEBUG for the com.cirruslink.chariot.core.PacketHandler logger



- Navigate to the GENERAL > Logging > LIVE view and you will find a log message for every message coming into the Chariot MQTT Server.
- Hover over each PUBLISH log message to show the MQTT client ID, the client IP address, the message topic and the message QoS. For example,
  - MQTT client ID : MT-42fe99f9-95e6-4757
  - Client IP address : 127.0.0.1
  - Message topic : spBv1.0/MQTT Tags/DBIRTH/G1/E1
  - QoS: 0

