

# M015 Uf1 IoT



## MQTT per QT - versió 1

**Curs:** 2019-20

**CFGS:** DAM2

**Alumne :** Arnau Subirós Puigarnau

**Data :** 18-01-2020

Nom i Cognoms

Arnau Subirós Puigarnau

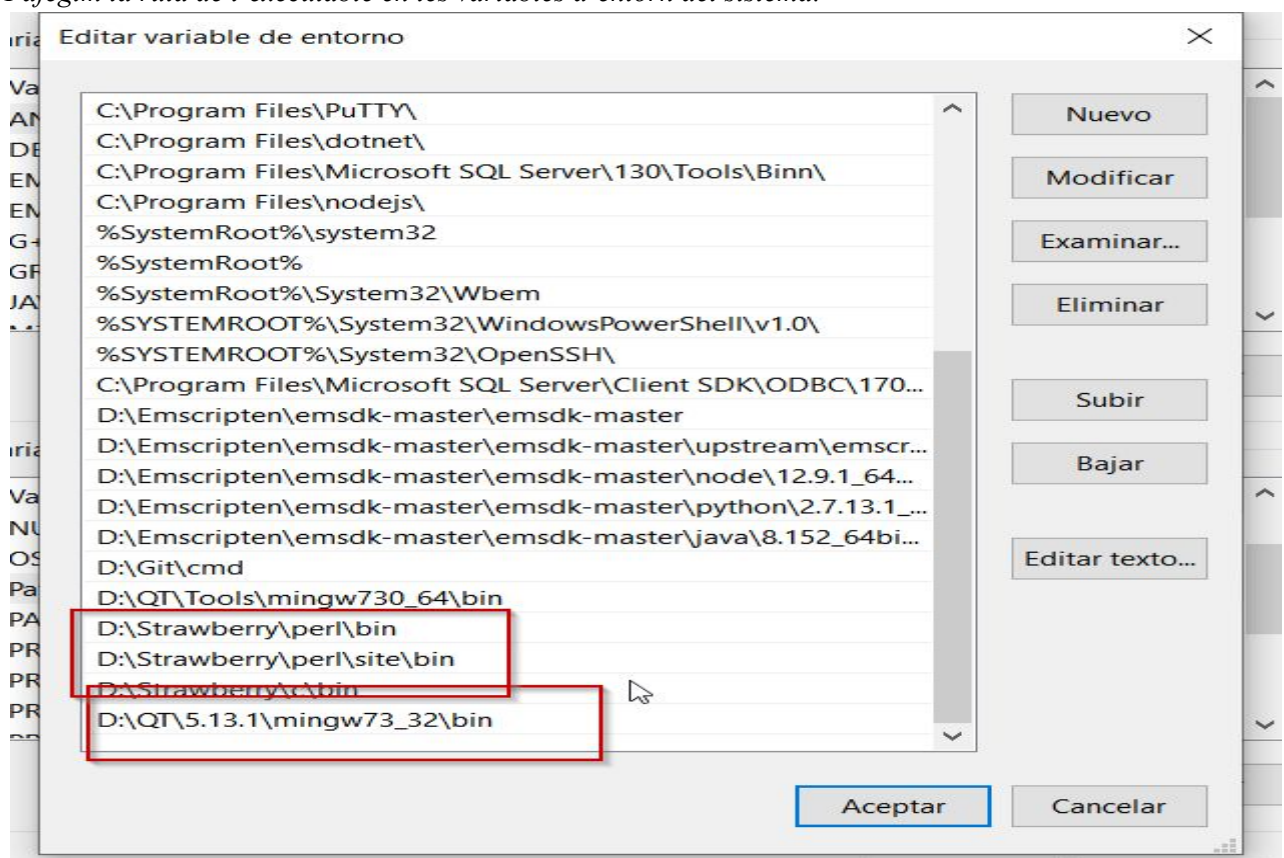
Data

13-01-2020

## Configuració MQTT per QT ( per Windows)

**NOTA:** per Windows: necessitarem instal·lar Strawberry Perl

- <http://strawberryperl.com/>
- *I afegim la ruta de l'executable en les variables d'entorn del sistema.*



- *Utilitzarem el terminal de QT (MinGW 7.3.0 de 32 bits) ja que 64 bits ens va dona errors.*



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- Clonem el repositori qtmqtt.git

```
Selecció Qt 5.13.1 (MinGW 7.3.0 32-bit)

C:\Users\arnau\qtmqtt\build>git clone git://code.qt.io/qt/qtmqtt.git
Cloning into 'qtmqtt'...
remote: Counting objects: 2705, done.
remote: Compressing objects: 100% (1806/1806), done.
Receiving objects: 97% (2624/2705)used 1365 (delta 870)Receiving objects: 95% (2570/2705)
Receiving objects: 100% (2705/2705), 575.63 KiB | 1.33 MiB/s, done.
Resolving deltas: 100% (1719/1719), done.
Updating files: 100% (131/131), done.

C:\Users\arnau\qtmqtt\build>cd qtmqtt2
El sistema no puede encontrar la ruta especificada.

C:\Users\arnau\qtmqtt\build>cd qtmqtt

C:\Users\arnau\qtmqtt\build\qtmqtt>mkdir build

C:\Users\arnau\qtmqtt\build\qtmqtt>cd build

C:\Users\arnau\qtmqtt\build\qtmqtt\build>D:\QT\5.13.1\mingw73_32\bin\qmake -r ..
Info: creating stash file C:\Users\arnau\qtmqtt\build\qtmqtt\build\qmake.stash
Info: creating cache file C:\Users\arnau\qtmqtt\build\qtmqtt\build\qmake.cache
Reading C:/Users/arnau/qtmqtt/build/qtmqtt/src/src.pro [C:/Users/arnau/qtmqtt/build/qtmqtt/build/src]
Reading C:/Users/arnau/qtmqtt/build/qtmqtt/src/mqtt/mqtt.pro [C:/Users/arnau/qtmqtt/build/qtmqtt/build/src/mqtt]
Project MESSAGE: perl -w D:\QT\5.13.1\mingw73_32\bin\syncqt.pl -module QtMqtt -version 5.15.0 -outdir C:/Users/arnau
rnau/qtmqtt/build/qtmqtt/build C:/Users/arnau/qtmqtt/build/qtmqtt
<srcbase> = C:/Users/arnau/qtmqtt/build/qtmqtt/build/qtmqtt
<bldbase> = C:/Users/arnau/qtmqtt/build/qtmqtt/build
<outbase> = C:/Users/arnau/qtmqtt/build/qtmqtt/build
```

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Qt 5.13.1 (MinGW 7.3.0 32-bit)

```
C:\Users\arnau\qtmqtt\build>git clone git://code.qt.io/qt/qtmqtt.git
Cloning into 'qtmqtt'...
remote: Counting objects: 2705, done.
remote: Compressing objects: 100% (1806/1806), done.
Receiving objects: 97% (2624/2705) used 1365 (delta 870)Receiving objects: 95% (2570/2705)
Receiving objects: 100% (2705/2705), 575.63 KiB | 1.33 MiB/s, done.
Resolving deltas: 100% (1719/1719), done.
Updating files: 100% (151/151), done.

C:\Users\arnau\qtmqtt\build>cd qtmqtt2
El sistema no puede encontrar la ruta especificada.

C:\Users\arnau\qtmqtt\build>cd qtmqtt

C:\Users\arnau\qtmqtt\build\qtmqtt>mkdir build

C:\Users\arnau\qtmqtt\build\qtmqtt>cd build

C:\Users\arnau\qtmqtt\build\qtmqtt\build>D:\QT\5.13.1\mingw73_32\bin\qmake -r ..
Info: creating stash file C:\Users\arnau\qtmqtt\build\qtmqtt\build\.qmake.stash
Info: creating cache file C:\Users\arnau\qtmqtt\build\qtmqtt\build\.qmake.cache
Reading C:/Users/arnau/qtmqtt/build/qtmqtt/src/src.pro [C:/Users/arnau/qtmqtt/build/qtmqtt/build/src]
Reading C:/Users/arnau/qtmqtt/build/qtmqtt/src/mqtt/mqtt.pro [C:/Users/arnau/qtmqtt/build/qtmqtt/build/src/mqtt]
Project MESSAGE: perl -w D:\QT\5.13.1\mingw73_32\bin\syncqt.pl -module QtMqtt -version 5.15.0 -outdir C:/Users/arnau/qtmqtt/build/qtmqtt/build C:/Users/arnau/qtmqtt/build/qtmqtt
<srcbase> = C:/Users/arnau/qtmqtt/build/qtmqtt
<bldbase> = C:/Users/arnau/qtmqtt/build/qtmqtt/build
<outbase> = C:/Users/arnau/qtmqtt/build/qtmqtt/build
```

[7] tcp winequality.csv gdrive/Mv\ Drive\MisColabs\data

Qt 5.13.1 (MinGW 7.3.0 32-bit)

```
programa o archivo por lotes ejecutable.

C:\Users\arnau\qtmqtt\build\qtmqtt\build>mingw32-make install
cd src\ && ( if not exist Makefile D:\QT\5.13.1\mingw73_32\bin\qmake.exe -o Makefile C:\Users\arnau\qtmqtt\build\qtmqtt\src\src.pro ) && mingw32-make -f Makefile in
mingw32-make[1]: Entering directory 'C:/Users/arnau/qtmqtt/build/qtmqtt/build/src'
cd mqtt\ && ( if not exist Makefile D:\QT\5.13.1\mingw73_32\bin\qmake.exe -o Makefile C:\Users\arnau\qtmqtt\build\qtmqtt\src\mqtt\mqtt.pro ) && mingw32-make -f Make
all
mingw32-make[2]: Entering directory 'C:/Users/arnau/qtmqtt/build/qtmqtt/build/src/mqtt'
mingw32-make -f Makefile.Release install
mingw32-make[3]: Entering directory 'C:/Users/arnau/qtmqtt/build/qtmqtt/build/src/mqtt'
++ -c -fno-keep-inline-dllexport -msse2 -mstackrealign -mfpmath=sse -O2 -std=c++1z -fno-exceptions -Wall -W -Wextra -Wvla -Wdate-time -Wshift-overflow=2 -Wduplicat
-Wno-stringop-overflow -DUNICODE -D_UNICODE -DWIN32 -DMINGW_HAS_SECURE_API=1 -DWINVER=0x0601 -D_WIN32_WINNT=0x0601 -DQT_NO_FOREACH -DQT_NO_JAVA_STYLE_ITERATORS -DQT
D_LIST -DQT_NO_NARROWING_CONVERSIONS_IN_CONNECT -DQT_BUILD_MQTT_LIB -DQT_BUILDING_QT -D_CRT_SECURE_NO_WARNINGS -D_USE_MATH_DEFINES -DQT_NO_CAST_TO_ASCII -DQT_ASCII
NINGS -DQT_MOC_COMPAT -DQT_USE_QSTRINGBUILDER -DQT_DEPRECATED_WARNINGS -DQT_DISABLE_DEPRECATED_BEFORE=0x040800 -DQT_NO_EXCEPTIONS -DQT_NO_DEBUG -DQT_NETWORK_LIB -D
IB -IC:\Users\arnau\qtmqtt\build\qtmqtt\src\mqtt -I. -I..\..\include -I..\..\include\QtMqtt -I..\..\include\QtMqtt\5.15.0 -I..\..\include\QtMqtt\5.15.0\QtMqtt -Itm
```



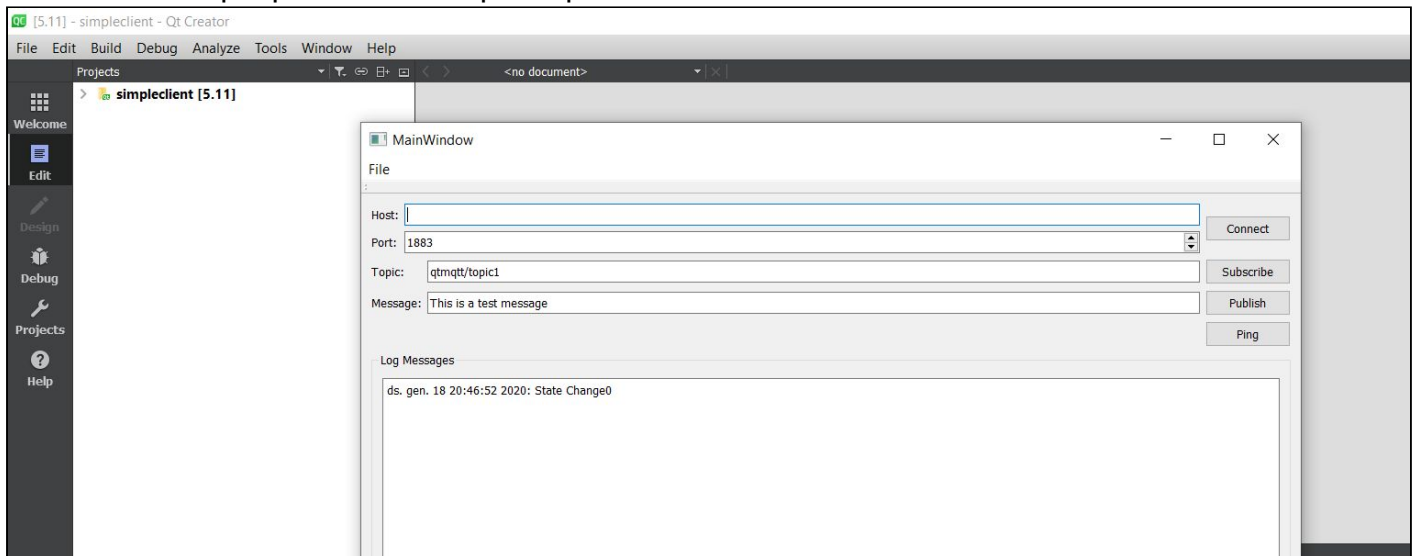
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## Data

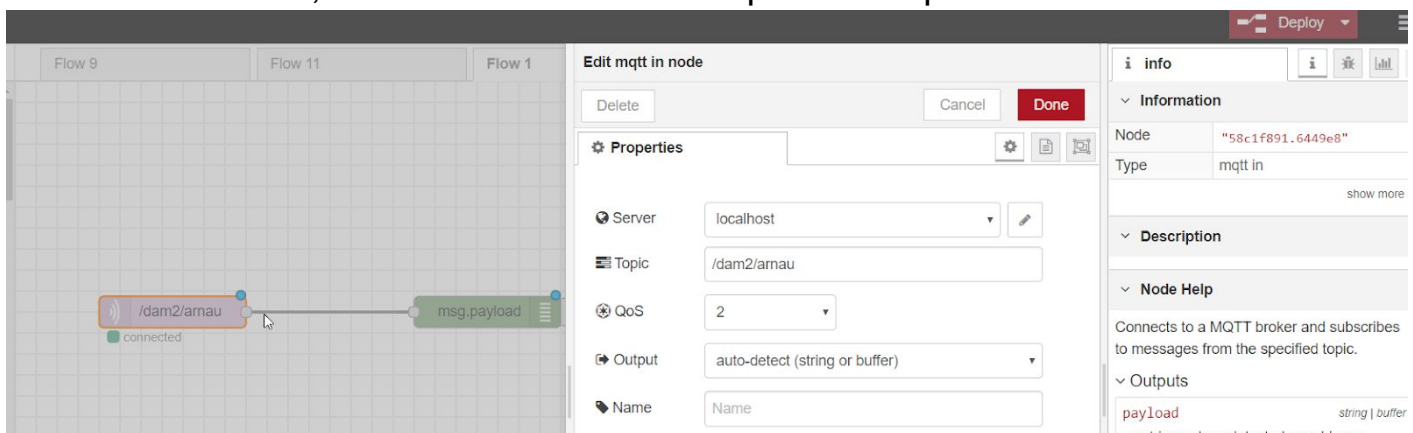
13-01-2020

Obrim un exemple per confirmar que el protocol MQTT funciona en les QT



## NODE-RED

Iniciem Node-Red , utilitzarem un flux senzill per fer les proves



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The screenshot shows the Node-RED web interface. On the left, the 'input' palette contains nodes like inject, catch, status, link, mqtt, http, websocket, tcp, and udp. The 'output' palette contains debug, link, and mqtt. The main workspace shows a flow with two MQTT nodes labeled '/dam2/arnau' connected to a 'msg.payload' node. Below this, there are two input nodes labeled 'adeu' and 'hola' connected to another MQTT node labeled '/dam2/arnau'. On the right, the 'debug' console shows a log of messages: 'hola', 'adeu', and 'Com anem'. Below the debug console, there is a 'MainWindow' window showing MQTT settings: Host: localhost, Port: 1883, Topic: /dam2/arnau, and Message: Com anem. The 'Log Messages' section shows a list of received messages and ping responses.

```

C:\> Indicador d'ordres - mosquitto_sub -d -h localhost -p 1883 -t "/dam2/arnau"

D:\> mosquitto> mosquitto_sub -d -h localhost -p 1883 -t "/dam2/arnau"
Client mosq-WAXOLL7iWzKzFgOYZe sending CONNECT
Client mosq-WAXOLL7iWzKzFgOYZe received CONNACK (0)
Client mosq-WAXOLL7iWzKzFgOYZe sending SUBSCRIBE (Mid: 1, Topic: /dam2/arnau, QoS: 0, Options: 0x00)
Client mosq-WAXOLL7iWzKzFgOYZe received SUBACK
Subscribed (mid: 1): 0
Client mosq-WAXOLL7iWzKzFgOYZe sending PINGREQ
Client mosq-WAXOLL7iWzKzFgOYZe received PINGRESP
Client mosq-WAXOLL7iWzKzFgOYZe received PUBLISH (d0, q0, r0, m0, '/dam2/arnau', ... (4 bytes))
hola
Client mosq-WAXOLL7iWzKzFgOYZe received PUBLISH (d0, q0, r0, m0, '/dam2/arnau', ... (4 bytes))
hola
Client mosq-WAXOLL7iWzKzFgOYZe sending PINGREQ
Client mosq-WAXOLL7iWzKzFgOYZe received PINGRESP
Client mosq-WAXOLL7iWzKzFgOYZe sending PINGREQ
Client mosq-WAXOLL7iWzKzFgOYZe received PINGRESP
Client mosq-WAXOLL7iWzKzFgOYZe sending PINGREQ
Client mosq-WAXOLL7iWzKzFgOYZe received PINGRESP
Client mosq-WAXOLL7iWzKzFgOYZe received PUBLISH (d0, q0, r0, m0, '/dam2/arnau', ... (4 bytes))
adeu
  
```