CONTROLLING A LED FROM THE HIVEMQTT BROKER IN WINDOWS:

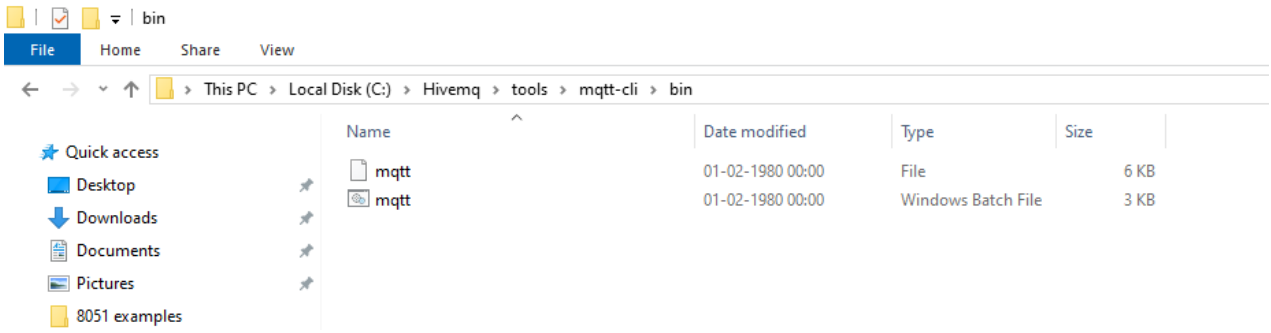
Installing HIVEMQTT platform:

Download the first link and run in powershell as administrator. Windows will install the files. In some computers JRE (Java runtime environment) needs to be installed. If needed install JRE also.

https://github.com/hivemq/support-examples/blob/main/windows-installer/Install-HiveMQ-WindowsServer-Standalone.ps1

file link (windows power shell) for uninstalling Hivemqtt platform:

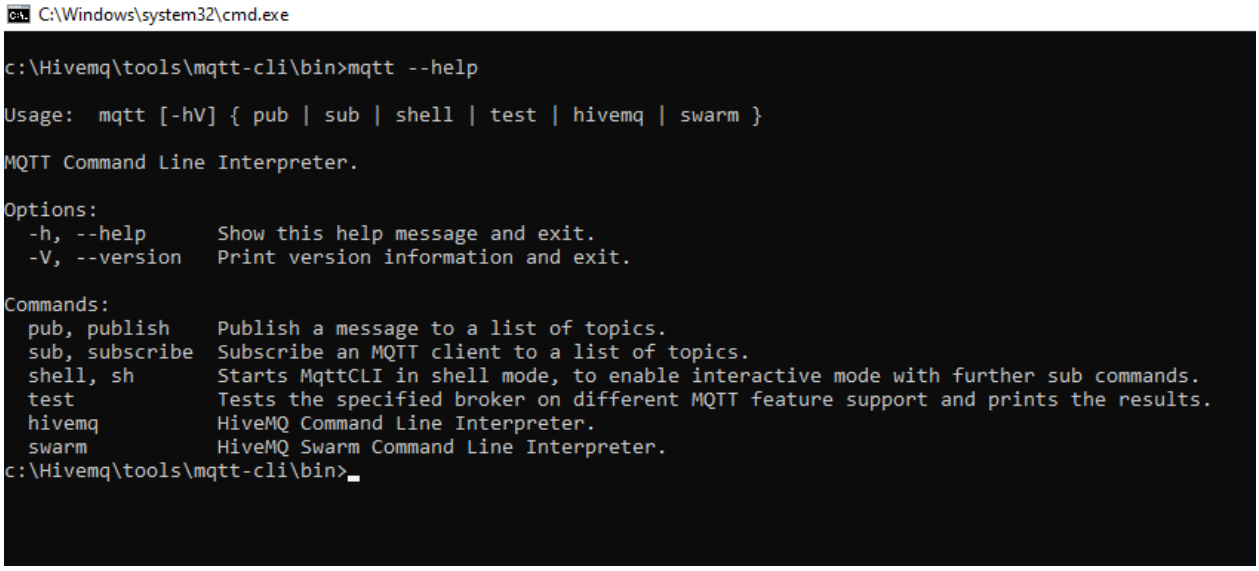
https://github.com/hivemq/support-examples/blob/main/windows-installer/Uninstall-HiveMQ-WindowsServer-Standalone.ps1



Open windows cmd (WIN + R)

Go to folder by typing cd c:\hivemq\tools\mqtt-cli\bin

We are going to use mqtt cli (command line interface) in command window



Type mqtt – help to view help commands

C:\Hivemq\tools\mqtt-cli\bin>mqtt --help

Usage: mqtt [-hV] { pub | sub | shell | test | hivemq | swarm }

MQTT Command Line Interpreter.

Options:

-h, --help Show this help message and exit.

-V, --version Print version information and exit.

Commands:

pub, publish Publish a message to a list of topics.

sub, subscribe Subscribe an MQTT client to a list of topics.

shell, sh Starts MqttCLI in shell mode, to enable interactive mode with further sub commands.

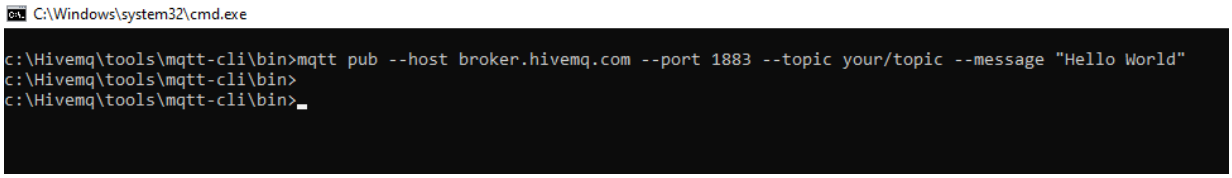
test Tests the specified broker on different MQTT feature support and prints the results.

hivemq HiveMQ Command Line Interpreter.

swarm HiveMQ Swarm Command Line Interpreter.

To publish a message in hive mqtt broker:

C:\hivemq\tools\mqtt-cli\bin>mqtt pub --host broker.hivemq.com --port 1883 --topic your/topic --message "Hello World"

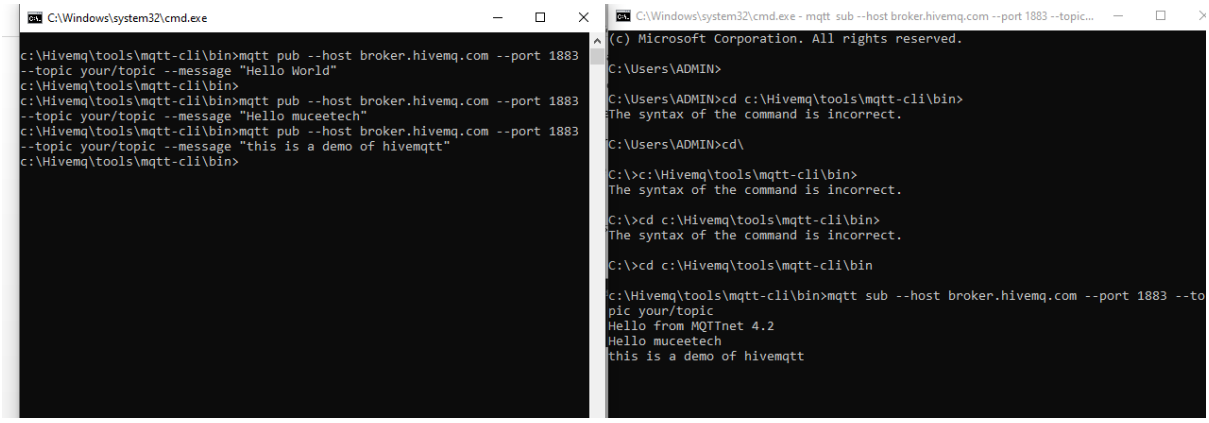


Now open another command window and type the subscribe mqtt command

In the second command window type command

mqtt sub --host broker.hivemq.com --port 1883 --topic your/topic

NOTE : the published and subscribed topic names should be same. Port 1883 indicates this is a simple TCP connection unsecured and unauthorised



CONTROLLING AN LED IN ESP 8266:

In the esp8266 or esp32 install micropython and also install umqtt simple from library

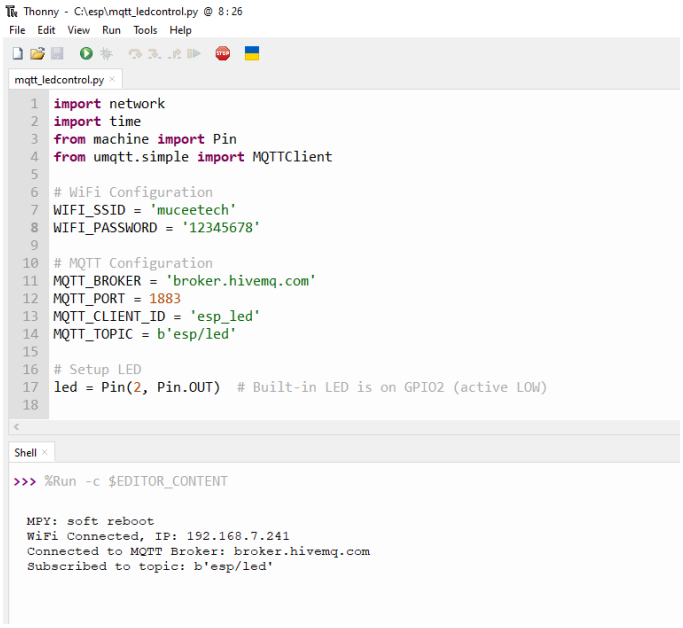
Or else you can copy the file from our github repository

https://github.com/muceetech/hivemqtt_espled

Save the following program as main.py in esp8266 or esp32 from Thonny ide

https://github.com/muceetech/hivemqtt_espled/blob/main/mqtt_ledcontrol.py

once you are running your esp8266 you will get the message in console that the mcu is connected to hivemqtt broker and subscribed to topic “esp\led”



On the computer give the following commands in command window to ON or OFF the led based on the message given to the led.

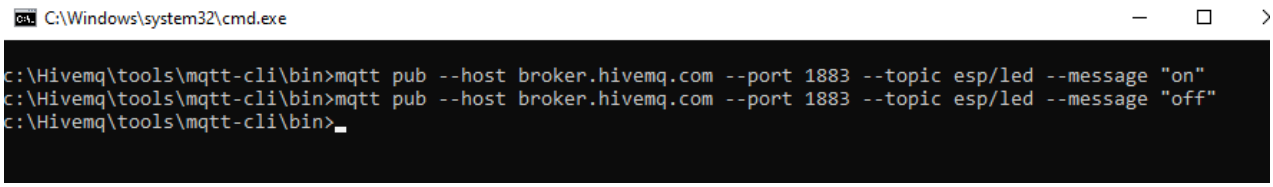
Publish a message to switch on the led: (in windows command window)

mqtt pub --host broker.hivemq.com --port 1883 --topic esp/led --message "on"

Publish a message to switch off the led: (in windows command window)

mqtt pub --host broker.hivemq.com --port 1883 --topic esp/led --message "off"

Note: once the message is send from windows no notification will come. If sent successfully the command prompt will be shown after a few seconds. The response may take less that 2 or 3 seconds to send the message.



On the thonny ide shell window you can see the message received by esp from the mqtt broker