Installing and using MQTT

Windows:

Installation

The installation of mosquitto (popular MQTT broker) on Windows is non-trivial.

I followed instructions here: <https://sivatechworld.wordpress.com/2015/06/11/step-by-step-installing-and-configuring-mosquitto-with-windows-7/>

Confusingly, you have to:

* Attempt to install mosquitto using its exe. It will fail, but before it fails it will create a directory in Program Files (x86)
* Download Pthreadvc2.dll and copy it to the mosquitto directory
* Download and install OpenSSL (version 1.0.2), go find the installation directory and copy over libeay32.dll and ssleay32.dll
* Attempt to install mosquitto using its exe AGAIN. This time, it should work.

Communicating

You should now be able to find 'mosquitto' in the services menu. However, calling mosquitto from the command prompt won't do shit... Instead, you have to navigate your command prompt to:

* C:\Program Files (x86)\mosquitto>

Pub/Sub to broker on local machine

* C:\Program Files (x86)\mosquitto>mosquitto\_sub –v –t iothingies/chat
* C:\Program Files (x86)\mosquitto>mosquitto\_pub –t iothingies/chat –m ‘Hello’

You will need two command prompts to test this! If you get the error: “**Error: No connection could be made because the target machine actively refused it**.”, then you may have to open a command prompt and call “**net start mosquito**”.

Pub/Sub to broker on another machine

* C:\Program Files (x86)\mosquitto>mosquitto\_sub **–h vm219.nubes.stfc.ac.uk –p 1883** –v –t iothingies/chat
* C:\Program Files (x86)\mosquitto>mosquitto\_pub **–h vm219.nubes.stfc.ac.uk –p 1883** –t iothingies/chat –m ‘Hello’

Raspberry Pi and Cloud machine

Installation

I found <http://www.instructables.com/id/Installing-MQTT-BrokerMosquitto-on-Raspberry-Pi/> fairly useful.

* sudo apt-get update
* sudo apt-get upgrade
* sudo apt-get install mosquitto mosquitto-clients

I had an error message when installing mosquitto on my Pi:

* depends libtinfo5 (=5.9+20140913-1) but 5.9+20140913-1+b 1 is installed

I fixed it using:

* sudo dpkg --force-all -r libtinfo5

Installing and using Paho

Paho is the python library for MQTT

On windows it can be installed with:

* pip install paho-mqtt

On Linux it can be installed with:

* sudo pip3 install paho-mqtt

The documentation is fairly good. However, if you have been forced to use an **Ubuntu 14.04** machine by the SCD cloud, all paho code requires that clients be set up using:

* import paho.mqtt.client as mqtt
* client = mqtt.Client(protocol=mqtt.MQTTv31)

This tells the client to use the old protocol (3.1) rather than the new one (3.1.1). It’s necessary because Ubuntu 14.04 is not compatible with the new one.