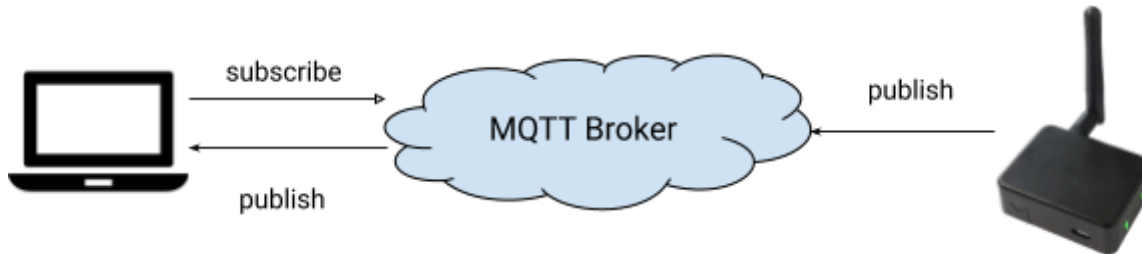


## Beacon Gateway MQTT Tutorial

### Introduction

This application note provides a guide to connect a public mqtt broker via mqtt bridge.



### Configuration on Beacon Gateway

The “test.mosquitto.org” host a publicly available MQTT broker for testing. In this tutorial we will configure the Beacon Gateway to publish data to the broker. The configuration list below:

- Server: **test.eclipse.org**
- Port: **1883**
- Publish topic: **test/gwdata**

Below sections show the detailed steps and screenshot to configure iGS01S/iGS02E or iGS03 series. After setup finishes, the device will automatically upload data once the gateway receives BLE broadcasting data. Please make sure there are some beacons around the gateway for testing.

#### iGS01S/iGS02E

Steps to configure iGS01S/iGS02E.

1. Set Server Host/IP, Port and Publish Topic
2. Press “Save”
3. Press “Reboot” to apply new settings

BLE-WIFI   Wi-Fi   Network   Applications   Advanced   System   Reboot

Application

Application: MQTT Client ▾

Host/IP: test.mosquitto.org

Port: 1883

Publish Topic: test/gwdata

Client ID: BLE-WIFI\_61\_B2

Username: username

Password: password

MQTTS: Disable ▾

Root CA: No Root CA ▾

Use Certificate: Disable ▾

Request Interval (in secs): 0

Drop reports while cache full

Throttle Control (filter out redundant records)

Save   Cancel

## iGS03W/iGS03M

Steps to configure iGS03W/iGS03M.

1. Set Target Host/IP, Port and Publish Topic



Mode  
MQTT Client

Target Host/IP  
test.mosquitto.org

Port  
1883

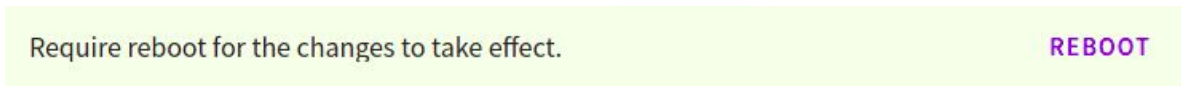
MQTT over TLS (MQTTS)

Publish Topic  
test/gwdata

2. Press save



3. Press “Reboot” to apply new settings



## Verify published data

Now we can use a MQTT subscriber to verify the data published by Beacon Gateway. We list three examples here for you to reference.

- Option 1. Use mosquitto\_sub command line tool

Mosquitto tool download link: <https://mosquitto.org/download/>

```
$ mosquitto_sub -h test.eclipse.org -p 1883 -t test/gwdata
```



```
ingics@raspics: ~  
ingics@raspics: ~ 81x8  
ingics@raspics:~ $ mosquitto_sub -h test.mosquitto.org -p 1883 -t test/gwdata  
$GPRP,0C61CFC14A4E,F008D1798C5C,-14,02010612FF0D0083BC2801004E0AFFFF000015040000  
$GPRP,0C61CFC14A4E,F008D1798C5C,-15,02010612FF0D0083BC2801004E0AFFFF000015040000  
$GPRP,0C61CFC14A4E,F008D1798C5C,-15,02010612FF0D0083BC2801004A0AFFFF000015040000  
$GPRP,0C61CFC14A4E,F008D1798C5C,-15,02010612FF0D0083BC2801004B0AFFFF000015040000
```

## Option 2. Use MQTTLens

MqttLens is a Google Chrome Application, you can install and launch it by below URL

<https://chrome.google.com/webstore/detail/mqttlens/hemojaaeigabkbcokmlgmdigohjobjm>

Click the “plus” button to create a new connection.



Fill the connect configuration

- Hostname: test.mosquitto.org
- Port: 1883

### Connection Details

<b>Connection name</b>	<input type="text" value="test.mosquitto.org"/>	<b>Connection color scheme</b>	<input type="color" value="#76c73a"/>
<b>Hostname</b>	<input type="text" value="tcp:// test.mosquitto.org"/>	<b>Port</b>	<input type="text" value="1883"/>
<b>Client ID</b>	<input type="text" value="lens_46ydWAGWeUp1yGROZC2JMJCnZbl"/>	<input type="button" value="Generate a random ID"/>	
<b>Session</b>	<input checked="" type="checkbox"/> Clean Session	<b>Automatic Connection</b>	<input checked="" type="checkbox"/> Automatic Connection
		<b>Keep Alive</b>	<input type="text" value="120"/> seconds

# INGICS TECHNOLOGY

After connection created, fill the subscribe topic: test/igs03m

Connection: test.mosquitto.org

Subscribe ^

 0 - at most once ▾ SUBSCRIBE

Click the "SUBSCRIBE" button, you should see the published data like below.

### Subscriptions

Topic: "test/gwdata" Showing the last 5 messages — + Messages: 0/21 ^

#	Time	Topic	QoS	
16	2:02:35	test/gwdata	0	<span>i</span>
Message: \$GPRP,0C61CFC14A4E,F008D1798C5C,-15,02010612FF0D0083BC280100480AFFFF000015040000 <span>📄</span>				
#	Time	Topic	QoS	
17	2:02:45	test/gwdata	0	<span>i</span>
Message: \$GPRP,0C61CFC14A4E,F008D1798C5C,-14,02010612FF0D0083BC280100460AFFFF000015040000 <span>📄</span>				

## Option 3. Use Ingics DemoBoard App

It is an application for Ingics Beacon Gateway testing & demonstration. The application includes a payload parser for most of Ingics BLE beacons and some public payload format (for example, iBeacon, Eddystone, ..., etc).

Download link: <https://github.com/ingics/ingics-blegw-demoboard/releases>

Click the "plus" button to create a new Gateway setting.

- Protocol: MQTT
- Host: test.mosquitto.org
- Port: 1883
- Subscribe Topic: test/gwdata



### Gateway Configuration

Protocol	MQTT
Name	test.mosquitto.org
Host	test.mosquitto.org
Port	1883
Subscribe Topic	test/gwdata

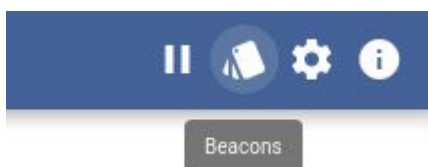
CANCEL SAVE

Click the gateway card to start receiving data.



### Logs

11/26/2020 2:04:35 PM	\$GPRP,0C61CFC14A4E,F008D1798C5C,-15,02010612FF0D0083BC280100440AFFFF000015040000
11/26/2020 2:04:30 PM	\$GPRP,0C61CFC14A4E,F008D1798C5C,-14,02010612FF0D0083BC280100440AFFFF000015040000
11/26/2020 2:04:25 PM	\$GPRP,0C61CFC14A4E,F008D1798C5C,-15,02010612FF0D0083BC280100420AFFFF000015040000

Click the “Beacon” icon on the right of the header to switch to the beacon view.



The beacon view will display the newest status (parsed from latest log) of beacon.

	MAC	Last Update	RSSI
 iBS03T	0C61CFC14A4E	11/26/2020 2:09:00 PM	-14 
Advertisement: 02010612FF0D0083BC280100370AFFFF000015040000 Flags: 0x6 Company: Ingics Type: iBS03T Battery: 2.96V Temperature: 26.15°C Events: 0x0 Manufacture Data: 0D0083BC280100370AFFFF000015040000			

## Revision History

DATE	REVISION	CHANGES
May 16, 2019	1	Initial release
Nov 26, 2020	2	Update test broker url Add iGS03W/iGS03M configuration Add Ingics DemoBoard usage