

Master in Cyber-Security
Course ID — Mobile and Embedded Computing:
Publishing IoT Sensor Data through a MQTT
publish/subscribe infrastructure

FONTAINE Romain, NYAKI Loïc, TIO NOGUERAS Gérard

May 29, 2018

Contents

1	Introduction	3
2	Architecture	3
3	Routing Protocol	3
3.1	Message Types	3

1 Introduction

The goal of this project is to create a sensor network, with a custom routing protocol, that is able to publish the data from its sensors by using the MQTT message protocol.

First, we need implement a custom routing protocol for sensor networks, similar to RPL, on top of 6LoWPAN which is a special version of IPv6 for low-power devices. Then, we build a messaging infrastructure using MQTT, which is a publish/subscribe messaging protocol. Lastly, we interface the sensor network with the MQTT message infrastructure, by using a border router, whose job will be to translate the message travelling between the sensor network and the MQTT message infrastructure. Lastly, the sensor data

2 Architecture

3 Routing Protocol

3.1 Message Types