# Chapter 7b: Cloud Connectivity using MQTT + Amazon Web Services

## Objective

This chapter goes into detail of using MQTT with AWS

Most important exercise is the one that takes you step by step through the code –think about and write down answers to the questions.

Thing – awkward word so we used italics

### Amazon Web Services (AWS)

Most important point is that it is more than just a message broker … it does database, messages, user authentication, queries, … etc.

This is not just your Raspberry Pi running Linux and Rabbit MQ.

### Amazon AWS IoT Introduction

Explain the AWS architecture

* Show what parts we are going to touch.
* Things on left is the WICED kit
* Line to Message Broker is the WiFi
* Everything else is the Amazon Cloud

### Amazon AWS IoT Resources

Thing – the “T” in IoT – typically this is your WICED device

Certificate

* Used for two sided TLS connection
* The “public key” they give you is actually a certificate signed by AWS IOT

Policy is an enterprise user management concept – allow or restrict access

### Amazon AWS MQTT

#### Internet Access

Need credit card for your own account but we have a class server for you to use

There are lots of devices that can do MQTT … including the test console … show test button

#### Thing Shadow

Thing Shadow is just a cache for an ephemeral thing in JSON format

#### MQTT Topics

$aws/… is reserved. Just about any other topic is allowed

Shadow Topics:

$aws/things/<thingName>/shadow/…

Explain /update, /update/documents, /get, and /get/accepted

These will be needed for the Project…

### Demonstrate and discuss the test server

## Exercise(s)

Time: 3 hours

Reminder that really understanding the example is critical – answer the questions

Exercise 07 has a WiFi introducer using a web page served by the WICED device