Developing a Wireless Sensor Network (WSN) and Internet of Things (IoT) system over the AWS Cloud

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Abstract

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Abstract

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0. Aim of this study

Develop a Wireless Sensor Network (WSN) and Internet of Things (IoT) system. Set up an IoT gateway on a Raspberry Pi (rPi), and an IoT broker. Set up two TI Sensor Tags as a simple WSN and use the gateway to send data from the tags to the broker.

1. Introduction

We use two TI sensor tags and a raspberry Pi to develop a Wireless Sensor Network as well as an IoT system. The Pi will be set up to be the IoT gateway, to transfer data from tags to IoT broker. Two tags are set up to constitute of the simple WSN.

1.1 Router

In network field, the router is a device by which data packets can be forwarded among different networks [1]. When one line of data comes, the router will judge where the data package should go, then utilizing the routing table or policy to direct data to its next destination. In this lab experiment, the router is one raspberry Pi which connects between the WSN and another Pi connecting Internet.

1.2 Gateway

Internet of Things AWS Research Cloud Computing Mqtt