

# M2M - 2016 - RDSMining

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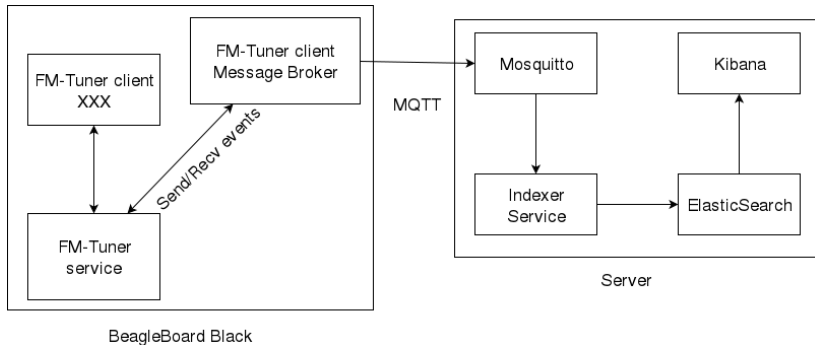
Université Joseph Fourier

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# 1 Architecture

## 2 Beagleboard black

## 3 Server



## 1 Architecture

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- FM-Tuner Service
- FM-Tuner Message Broker

## 3 Server

## FM-Tuner Service

- ▶ A high level si4703 service (C gnu99 program).
- ▶ Working on a single thread (RDS parser + server).
- ▶ Non-blocking I/O.
- ▶ Working with systemd.
- ▶ Send changes/notifications to clients.

## Messages

- ▶ A specific protocol working in TCP:

```
LENGTH TYPE_1 VALUE_1 [TYPE_N VALUE_N...]
```

## FM-Tuner Message Broker

- ▶ A simple broker. (nodeJS program, ES7)
- ▶ Set the channel/volume. (Send message to service)
- ▶ Print service notifications.
- ▶ Send by MQTT the radio name.

1 Architecture

2 Beagleboard black

3 Server

- ElasticSearch
- Kibana

## MAPPINGS FOR RADIOS



```
{
  "radios": {
    "properties": {
      "name": {
        "type": "string"
      },
      "data_raw": {
        "index": "not_analyzed",
        "type": "string"
      },
      "data": {
        "type": "string"
      },
      "date": {
        "format": "strict_date_optional_time||epoch_millis",
        "type": "date"
      }
    }
  }
}
```



