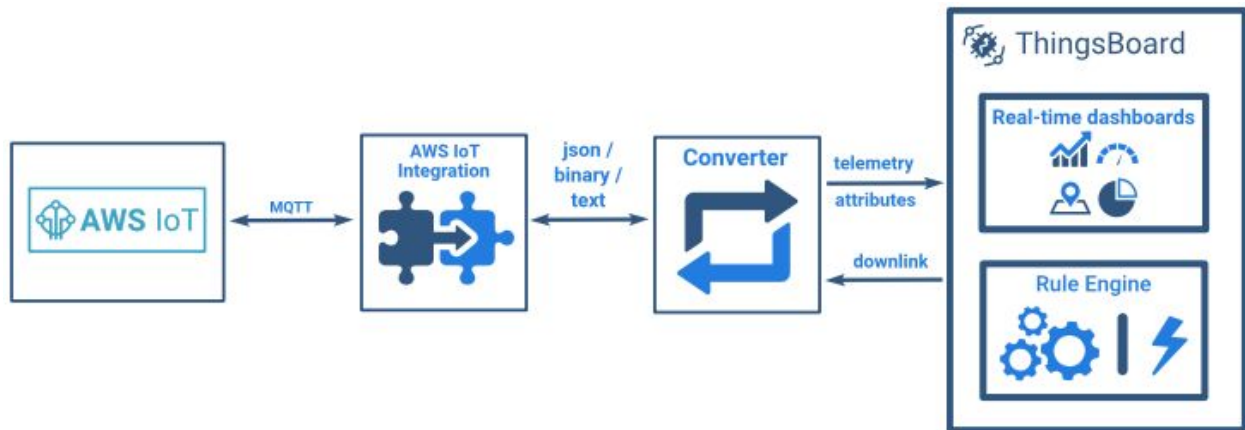# SensiEDGE
Simplify & Accelerate

Step by step how to connect SensiEDGE SensorBoard to ThingsBoard

The process of connection is described on the next page (there is a video instruction):
https://thingsboard.io/docs/user-guide/integrations/aws-iot/

The uplink data converter is :

```
// Decode an uplink message from a buffer
// payload - array of bytes
// metadata - key/value object

/** Decoder **/

// decode payload to string
var payloadStr = decodeToString(payload);

// decode payload to JSON
var data = decodeToJson(payload);

// Result object with device/asset attributes/telemetry data
var result = {};

var topic = metadata['topic'].split('/');
result.deviceName = topic[0];

if (topic[1] == 'accelerometer')
{
    result.deviceType = 'Motion sensor';
```

```javascript
    result.telemetry = {Accelerometer: {X:(data.X*0.001), Y:(data.Y*0.001),
Z:(data.Z*0.001)}};
} else if (topic[1] == 'magnetometer')
{
    result.deviceType = 'Magnetic sensor';
    result.telemetry = {Magnetometer: {X:(data.X*0.001), Y:(data.Y*0.001),
Z:(data.Z*0.001)}};
} else if (topic[1] == 'pressure')
{
    result.deviceType = 'Pressure sensor';
    result.telemetry = {Pressure: data.Pressure};
} else if (topic[1] == 'humidity')
{
    result.deviceType = 'humidity sensor';
    result.telemetry = {Humidity: data.Humidity};
} else if (topic[1] == 'temperature')
{
    result.deviceType = 'thermostat';
    result.telemetry = {Temperature: data.Temperature};
} else if (topic[1] == 'luminosity')
{
    result.deviceType = 'lux sensor';
    result.telemetry = {Luminosity: data.Luminosity};
} else if (topic[1] == 'co_sensor')
{
    result.deviceType = 'UV sensor';
    result.telemetry = {UV: data['CO Concentration']};
} else if (topic[1] == 'battery')
{
    var batStat = { 0:'LOW_BATTERY', 1:'DISCHARGING',
2:'PLUGGED_NOT_CHARGING', 3:'CHARGING', 4:'UNKNOWN', 0xFF:'ERROR' };

    result.deviceType = 'Battery details';
    result.telemetry = {Battery: {SOC:data.Level, Voltage:data.Voltage,
Status:batStat[data.Status]}};
} else if (topic[1] == 'mic_level')
{
    result.deviceType = 'Noise level';
    result.telemetry = {Noize:data.Mic};
} else if (topic[1] == 'accelerometer_events')
{
    var AccEvtCode =
    {
        0x0000: "No Event",
        0x0001: "Orient Top Right",
```

```javascript
        0x0002: "Orient Bottom Right",
        0x0003: "Orient Bottom Left",
        0x0004: "Orient Top Left",
        0x0005: "Orient Up",
        0x0006: "Orient Down",
        0x0008: "Tilt",
        0x0010: "Free Fall",
        0x0020: "Single Tap",
        0x0040: "Double Tap",
        0x0080: "Wake Up",
        0x0100: "Pedometer"
    } ;

    result.deviceType = 'Accelerometer Event';
    result.telemetry =
{Event:{Description:AccEvtCode[data.Event],Steps:data.nSteps}};
} else if (topic[1] == 'compass')
{
    result.deviceType = 'Angle to North';
    result.telemetry = {Azimuth:data.Angle};
}

result.attributes = {integrationName: metadata['integrationName']};

/** Helper functions **/

function decodeToString(payload) {
    return String.fromCharCode.apply(String, payload);
}

function decodeToJson(payload) {
    // covert payload to string.
    var str = decodeToString(payload);

    // parse string to JSON
    var data = JSON.parse(str);
    return data;
}

return result;
```
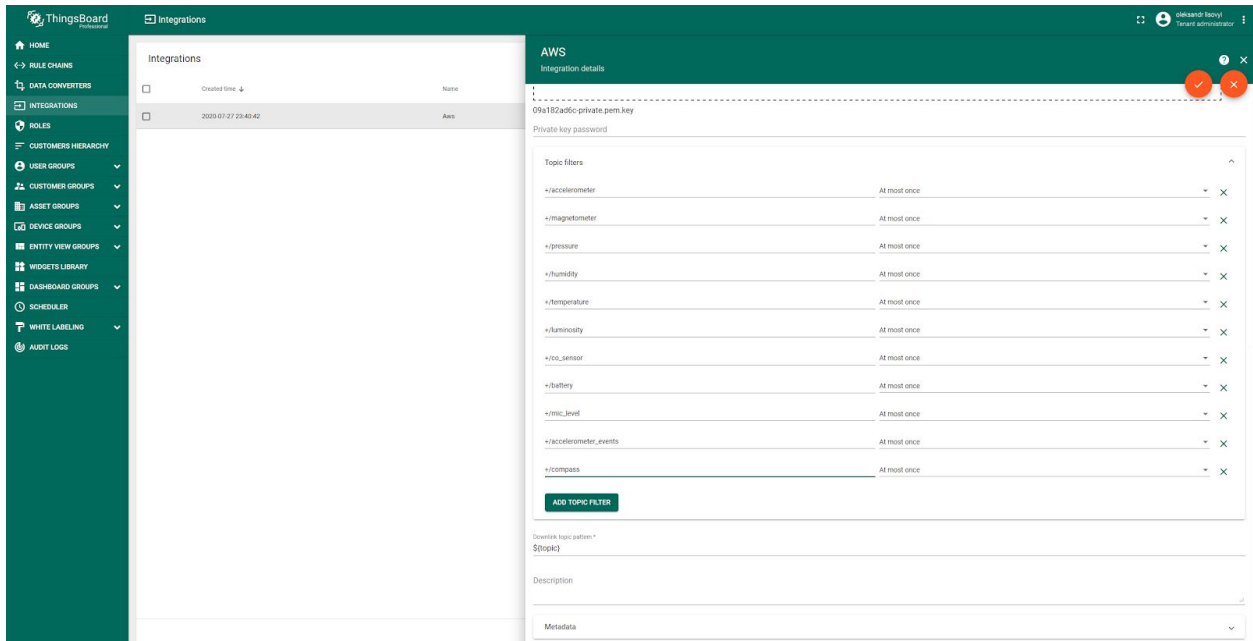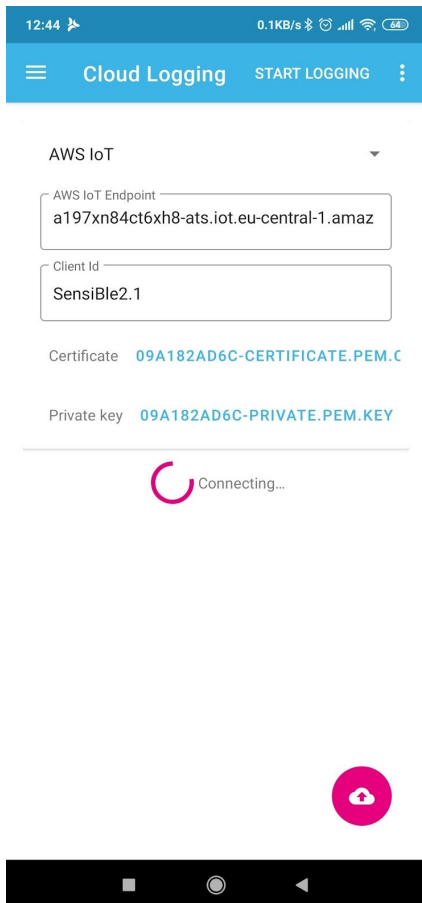
Topics for AWS Integration configuration for SensiEDGE support:

Screenshot with connecting to AWS using ST BLE Sensor app:

Received SensiBLE2 data on the ThingsBoard side: