

## Advantech AE Technical Share Document

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<b>Category</b>	■FAQ □ SOP	<b>Related OS</b>	N/A
<b>Abstract</b>	IAG_FAQ_WISE-4610_How to send MQTT command to WISE-6610 for controlling WISE-4610 RS-485 Slave devices		
<b>Keyword</b>	WISE-6610, WISE-4610, Downlink Control,		
<b>Related Product</b>	WISE-4610		

■ **Problem Description:**

To realize the downlink control function of WISE-4610, customer need to use WISE-6610 to send the downlink command to control WISE-4610 end node. It is highly suggest to use WISE-6610 GUI to send downlink command to control end node. However, some of the customer want to use MQTT instead of WISE-6610 GUI to send the downlink command.

In this document, we will use WISE-6610 to control the slave device of WISE-4610 as an example to describe what the MQTT topic and command is for sending to WISE-6610.

■ **Answer:**

**Prerequisite:**

- Update WISE-4610 FW to v1.13 B01, (For support downlink function)
- Update WISE-6610 user module to v1.1.7

The downlink control topic for WISE-4610 is **downlink/{devAddr}**, so if you want to control

WISE-4610 with device address FF389578, the downlink control MQTT topic is **downlink/FF389578**

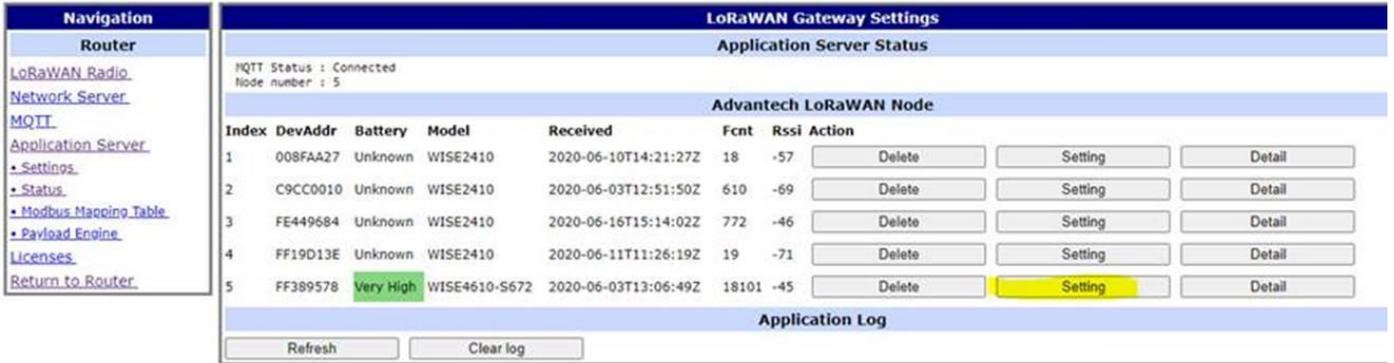
The MQTT downlink packet is in JSON format, which is written in below format

```
{"data": "control raw data for WISE-4610", "port": "application port of end node"}
```

Since understanding the payload format for WISE-4610 is much more complicated and time consuming compared to use the web GUI on WISE-6610 to generate the control raw data. We will use WISE-6610 to send the downlink control MQTT command to get the control raw data for any MQTT client.

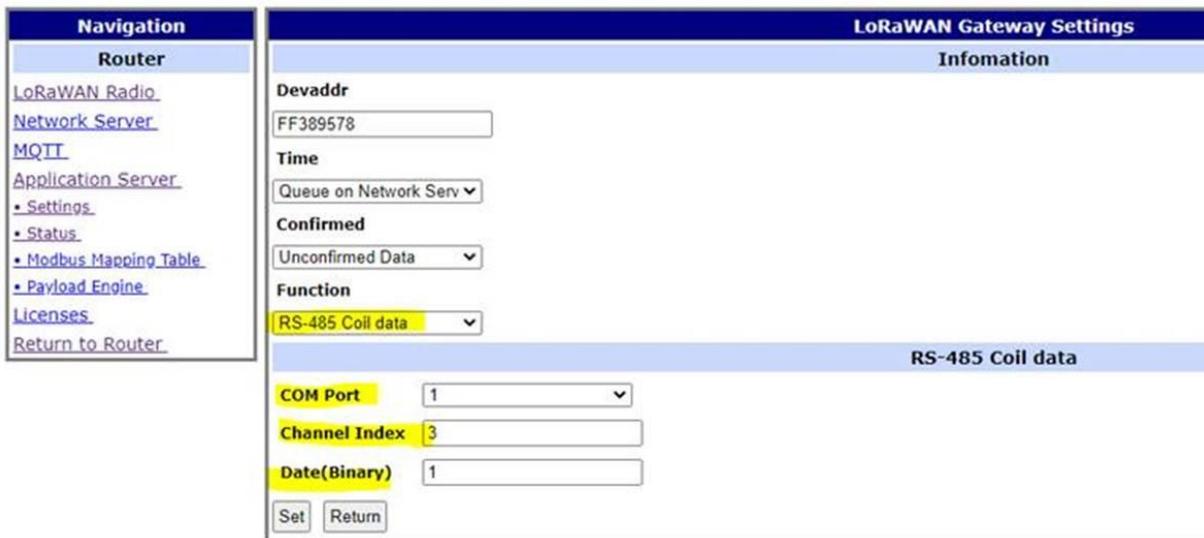
**Steps by steps:**

**Step1:** As below picture shows, you can click setting button of the node you want to control



**Figure1:** The setting button for generating downlink command on WISE-6610 Application Server

**Step2:** Choose the function you want, like DO channel of WISE-4610 or RS-485 coil data. Below example is for controlling RS-485 slave device's channel 3 logic status to high status, which is mapping to WISE-S672's COM1.



**Figure2:** The downlink command setting on WISE-6610 Application Server

**Step3:** Go to the Transmission Frames page on network server of WISE-6610 to get the generate control raw data and application port of end node.



**Figure3:** The downlink command generated by application server

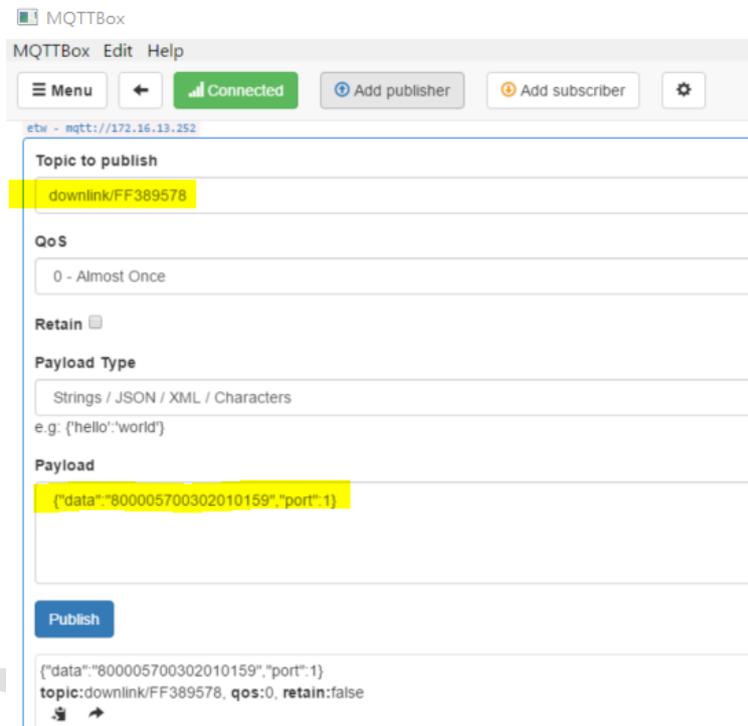
In Txdata Data column, you will see the control raw data for WISE-4610, including the CRC content. WISE-6610 will help you to generate the corresponding data and calculate the CRC based on the setting you set from application server. (picture in Step2). The port number is the same as Txdata port.

**Step4:** Send the MQTT command to downlink topic by any MQTT client.

Since the MQTT downlink packet contains the two parts, data and port number.

```
{"data": "control raw data for WISE-4610", "port": application port of end node}
```

So the MQTT command you send to WISE-6610 will be `{"data": "800005700302010159", "port": 1}`



WISE-4610 RS-485 slave device's channel 3 logic status will be changed to high status after the MQTT command is send to WISE-6610.