



TEKTELIC
communications
— IoT for life —

HTTP Integration



Introduction

- As of most recent release for Tektelic network server, the HTTP integration supports both LoRaWAN uplink and downlink packets.
- **Requirements**
 - Tektelic Network Server account
 - LoRaWAN Gateway
 - LoRaWAN Sensor
- **High-level procedure**
 1. Set up HTTP Endpoint to receive data
 2. Set up Integration on Tektelic NS
 3. Verification of data reaching to endpoint
 4. Verification of downlink over HTTP

Note: Before moving forward in this document, ensure you have commissioned your LoRaWAN gateway and sensors on Tektelic Network Server.

Set up HTTP Endpoint to receive data

- Various types of HTTP endpoints can be used to receive the data from the integration.
- In this example, we are using [Beeceptor](https://tektelichhttp.free.beeceptor.com) endpoint:
 1. Enter an endpoint name and click "Create Endpoint"
 2. Copy the URL provided: (i.e <https://tektelichhttp.free.beeceptor.com>), which acts as the application address for the integration.



Set up Integration on Tektelic NS

1. Click on '**Applications**' option.
2. Select your newly created Application and click the "**Manage Integrations**" button
3. Click on the '+' button in the top right corner to add your integration.
4. Enter the integrations name and select **HTTP** for the type.
5. Select your device's data converter. In this example a Kona Home Sensor is being used.
6. Enter the IP or the URL of the endpoint in "**Application Address**" field without the http/https prefix.
7. Enter port number as port 80 or configure it to match the open port on your endpoint.
8. Click the Add button

Confirm data reaches endpoint

- On your endpoint, when the device sends an uplink, you should be able to see the packet arrive at your HTTP endpoint.



The screenshot displays the Beeceptor web interface for a specific endpoint, #tektelichttp. The interface shows a successful POST request and response. The request body is a JSON object containing metadata for an application and a customer. The response body is a plain text message: "Hey ya! Great to see you here. It's, nothing is configured for this request path. Create a rule and start building a mock API."

Request Body:

```
{
  "uploadMeta": {
    "applicationMeta": {
      "entityType": "APPLICATION",
      "id": "195d33-128-11ab-934-0533M0427F",
      "customer": {
        "entityType": "CUSTOMER",
        "id": "9d343640-49b-11e9-80d0-a29c3be477",
        "subCustomer": null,
        "name": "CA",
        "text": "gatewayMetaData.M"
      }
    }
  }
}
```

Response Body:

```
Hey ya! Great to see you here. It's, nothing is configured for this request path.
Create a rule and start building a mock API.
```

For example, run the following command in shell terminal to get started.

```
curl -X POST -H 'Content-Type: application/json' -d '{"data": "tektelichttp"}'
```

(or click here to simulate in web browser)

Confirm downlink functionality over HTTP

1. Download [Insomnia](#) tool to send downlink messages to the device:
2. Open Insomnia and set the method as "POST".
3. On the Tektelic NS, open your integration details and copy the HTTP URL Path.
4. Combine the Tektelic Network Server address and [HTTP URL Path](#) as seen in the example on the next page.
5. Paste your combined NS/HTTP URL Path into the URL space next to "POST" on Insomnia.
6. Add the body with correct values (JSON type, see next page)
7. Click the Send button

Note: On the Tektelic NS, you should be able to see the downlink posted in your device's downlink queue.

Confirm downlink functionality over HTTP

The screenshot displays the Insomnia REST client interface. The top bar shows the application name "Insomnia" and the menu options "Application", "Edit", "View", "Window", "Tools", and "Help". The main area is divided into several sections:

- Request Section:** Shows a POST request to the URL `https://lorawan-ns-na.tektelic.com/api/v1/integrati`. The status is `200 OK`, the response time is `229 ms`, and the body size is `0 B`. The request was made `19 Days Ago`.
- Response Section:** The response body is displayed in JSON format, showing a successful response with the following structure:

```
1 {
2   "msgId": "11",
3   "devEUI": "647FDA000003A6D",
4   "confirmed": false,
5   "data": "{\"params\":{\"data\":\"oAAADhA=\", \"port\":100}}"
```
- Preview Section:** Shows the message "No body returned for response".

Confirm downlink functionality over HTTP

HS-01

Device details

MOVE TO APPLICATION **DELETE**

← ILS ADVANCED NETWORK SETTINGS API LIMITS ACTIVATION REAL-TIME PACKETS **DOWNLINK QUEUE** →

Note that the queue isn't updated automatically. Press the button to get the actual downlink queue

UPDATE DOWNLINK QUEUE

Clear all pending downlink messages

CLEAR DOWNLINK QUEUE

Message ID	Port	Confirmed	Data
1	100	false	oAAADhA=

Best-In-Class, Carrier Grade &
Most Cost Effective
Portfolio of Gateways, Network Server,
Sensors & Applications