

Project Development Phase SPRINT-2


Date	07 November 2022
Team ID	PNT2022TMID50351
Project Name	IoT Based Safety Gadget for Child Safety Monitoring & Notification
Maximum Marks	20 marks

Sprint-2	US-1	Configuration the connection security and create API keys that are used in the Node-RED	10
Sprint-2	US-2	Service for accessing the IBM IoT platform. Create a Node-RED service.	10

The API key has been added.

Authentication tokens are non-recoverable. If you misplace this token, you will need to re-register the API key to generate a new authentication token.

Generated Details

API Key a-cci0bq-mnyawbswml 

Authentication Token YrFLGag2gUDd7@j6YP 



Make a note of the generated authentication token.
Lost authentication tokens cannot be recovered. If you lose the token, you must reregister the API to generate a new token.

API Key Information

Description -

Role Standard Application

Expires Never

Node-RED interface showing a flow named "Flow 1" with two nodes: "IBM IoT" (connected) and "msg payload". The "debug" console displays a series of messages received from the IoT device, each containing a timestamp, node name, and a JSON payload with Latitude and Longitude coordinates.

```
04/11/2022, 02:16:25 node: msg payload
iot-2/type/LocationId/PNT2022TMID47484/evt/event_1/fmt/json : msg payload : Object
  { Latitude: -36, Longitude: 108 }

04/11/2022, 02:16:28 node: msg payload
iot-2/type/LocationId/PNT2022TMID47484/evt/event_1/fmt/json : msg payload : Object
  { Latitude: 80, Longitude: 43 }

04/11/2022, 02:16:31 node: msg payload
iot-2/type/LocationId/PNT2022TMID47484/evt/event_1/fmt/json : msg payload : Object
  { Latitude: -28, Longitude: 141 }

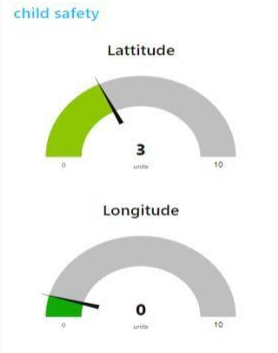
04/11/2022, 02:16:34 node: msg payload
iot-2/type/LocationId/PNT2022TMID47484/evt/event_1/fmt/json : msg payload : Object
  { Latitude: 58, Longitude: -58 }

04/11/2022, 02:16:37 node: msg payload
iot-2/type/LocationId/PNT2022TMID47484/evt/event_1/fmt/json : msg payload : Object
  { Latitude: -7, Longitude: 124 }

04/11/2022, 02:16:40 node: msg payload
iot-2/type/LocationId/PNT2022TMID47484/evt/event_1/fmt/json : msg payload : Object
  { Latitude: -39, Longitude: -122 }

04/11/2022, 02:16:43 node: msg payload
iot-2/type/LocationId/PNT2022TMID47484/evt/event_1/fmt/json : msg payload : Object
  { Latitude: -48, Longitude: 75 }
```

Node-RED Dashboard interface showing a "Home" page with two gauges labeled "Latitude" and "Longitude". The "Latitude" gauge shows a value of 3, and the "Longitude" gauge shows a value of 0. The dashboard is titled "child safety".



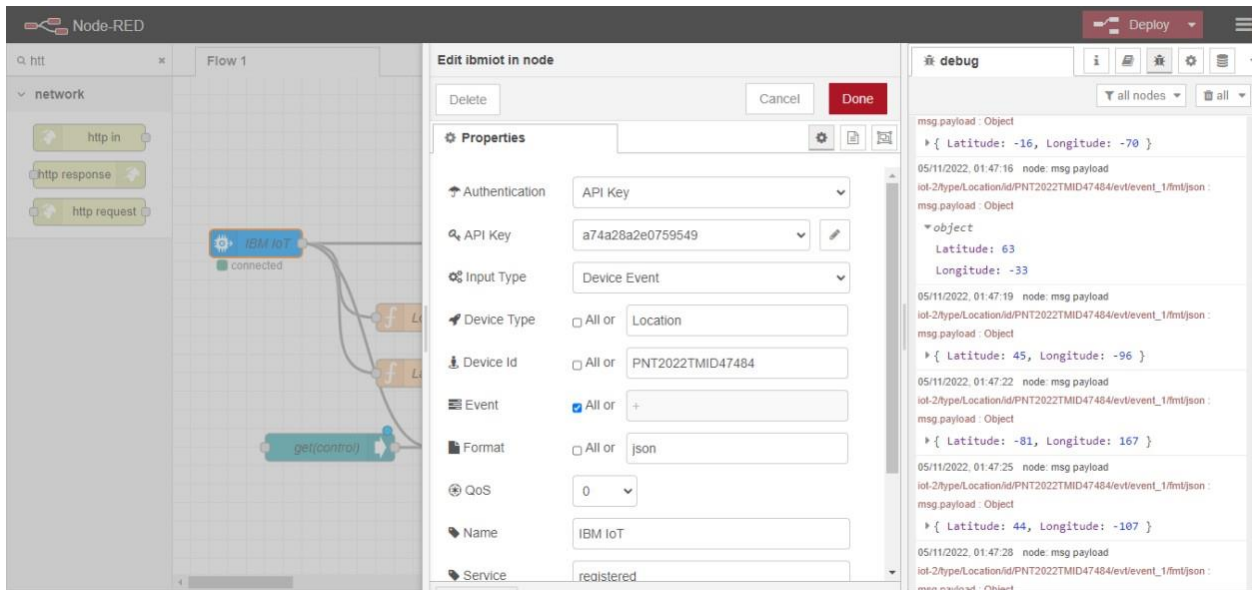
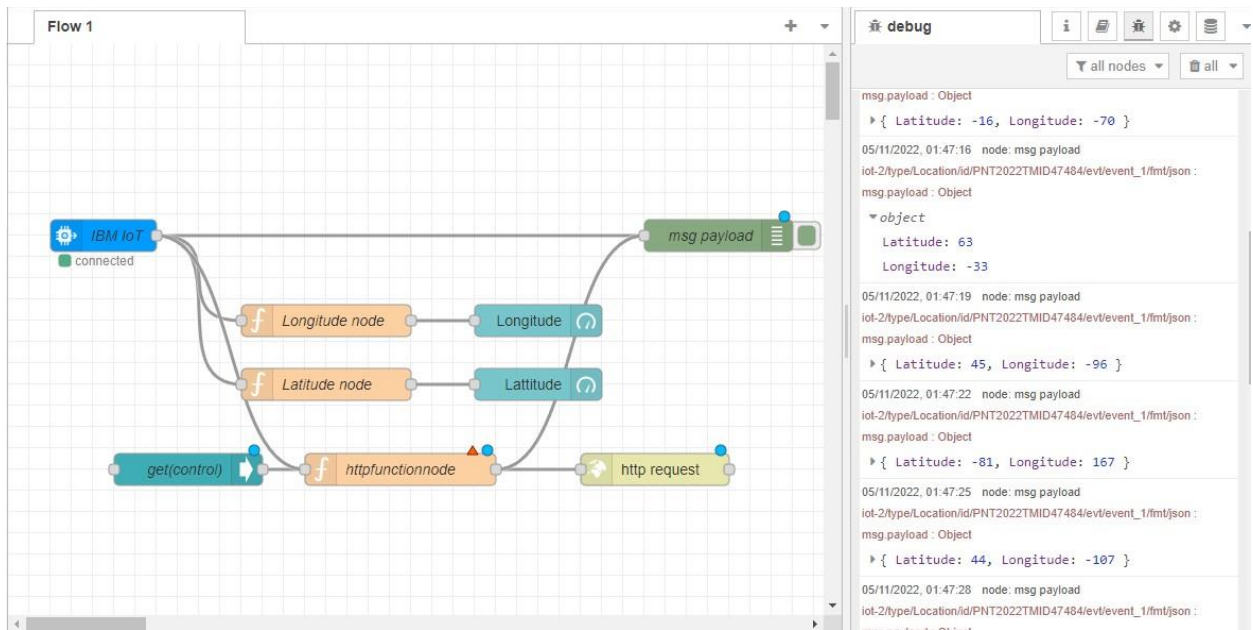
child safety

Latitude

3

Longitude

0



Node-RED interface showing the "Edit function node" configuration. The node is named "Longitude node" and is configured to trigger on "On Message". The function code is:

```
1 msg.payload = msg.payload.Longitude
2 return msg;
```

The debug console shows the following log entries:

```
msg.payload : Object
  { Latitude: -16, Longitude: -70 }

05/11/2022, 01:47:16 node: msg payload
iot-2/type/Location/id/PNT2022TMID47484/ev/levent_1/fmt/json :
msg.payload : Object
  { Latitude: 63, Longitude: -33 }

05/11/2022, 01:47:19 node: msg payload
iot-2/type/Location/id/PNT2022TMID47484/ev/levent_1/fmt/json :
msg.payload : Object
  { Latitude: 45, Longitude: -96 }

05/11/2022, 01:47:22 node: msg payload
iot-2/type/Location/id/PNT2022TMID47484/ev/levent_1/fmt/json :
msg.payload : Object
  { Latitude: -81, Longitude: 167 }

05/11/2022, 01:47:25 node: msg payload
iot-2/type/Location/id/PNT2022TMID47484/ev/levent_1/fmt/json :
msg.payload : Object
  { Latitude: 44, Longitude: -107 }

05/11/2022, 01:47:28 node: msg payload
iot-2/type/Location/id/PNT2022TMID47484/ev/levent_1/fmt/json :
```

Node-RED interface showing the "Edit gauge node" configuration. The node is named "Longitude node" and is configured to trigger on "On Message". The gauge properties are:

- Group: [Home] child safety
- Size: auto
- Type: Gauge
- Label: Longitude
- Value format: {{value}}
- Units: units
- Range: min 0 max 10
- Colour gradient: [Green, Yellow, Red]
- Sectors: 0 optional optional 10

The debug console shows the following log entries:

```
msg.payload : Object
  { Latitude: -16, Longitude: -70 }

05/11/2022, 01:47:16 node: msg payload
iot-2/type/Location/id/PNT2022TMID47484/ev/levent_1/fmt/json :
msg.payload : Object
  { Latitude: 63, Longitude: -33 }

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iot-2/type/Location/id/PNT2022TMID47484/ev/levent_1/fmt/json :
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05/11/2022, 01:47:22 node: msg payload
iot-2/type/Location/id/PNT2022TMID47484/ev/levent_1/fmt/json :
msg.payload : Object
  { Latitude: -81, Longitude: 167 }

05/11/2022, 01:47:25 node: msg payload
iot-2/type/Location/id/PNT2022TMID47484/ev/levent_1/fmt/json :
msg.payload : Object
  { Latitude: 44, Longitude: -107 }

05/11/2022, 01:47:28 node: msg payload
iot-2/type/Location/id/PNT2022TMID47484/ev/levent_1/fmt/json :
```


Node-RED interface showing a function node configuration and a debug console.

Function Node Configuration:

- Name: httpfunctionnode
- Trigger: On Message
- Code:

```
1 msg.payload={"longitude":global.get(long)
2
3   "latitude": global.get(lati)}
4 return msg;
```

Debug Console:

- msg.payload : Object
- { Latitude: -16, Longitude: -70 }
- 05/11/2022, 01:47:16 node: msg payload
- iot-2type/LocationId/PNT2022TMD47484/ev/levent_1/fmt/json :
- msg.payload : Object
- object
- Latitude: 63
- Longitude: -33
- 05/11/2022, 01:47:19 node: msg payload
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- msg.payload : Object
- { Latitude: 44, Longitude: -107 }
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- iot-2type/LocationId/PNT2022TMD47484/ev/levent_1/fmt/json :
- msg.payload : Object

Node-RED interface showing a function node configuration and a debug console.

Function Node Configuration:

- Name: httpfunctionnode
- Trigger: On Message
- Code:

```
1 msg.payload = msg.payload.command
2 return msg;
```

Debug Console:

- msg.payload : Object
- { Latitude: -16, Longitude: -70 }
- 05/11/2022, 01:47:16 node: msg payload
- iot-2type/LocationId/PNT2022TMD47484/ev/levent_1/fmt/json :
- msg.payload : Object
- object
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- { Latitude: -81, Longitude: 167 }
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- msg.payload : Object

Node-RED

Deploy

http

network

- http in
- http response
- http request

Flow 1

connected

IBM IoT

http

Properties

Method: GET

URL: /control

Name: Name

debug

msg.payload: Object

{ Latitude: -16, Longitude: -70 }

05/11/2022, 01:47:16 node: msg payload

iot-2/type/LocationId/PNT2022TMID47484/evt/event_1/fmt/json :

msg.payload: Object

object

Latitude: 63

Longitude: -33

05/11/2022, 01:47:19 node: msg payload

iot-2/type/LocationId/PNT2022TMID47484/evt/event_1/fmt/json :

msg.payload: Object

{ Latitude: 45, Longitude: -96 }

05/11/2022, 01:47:22 node: msg payload

iot-2/type/LocationId/PNT2022TMID47484/evt/event_1/fmt/json :

msg.payload: Object

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05/11/2022, 01:47:25 node: msg payload

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msg.payload: Object

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iot-2/type/LocationId/PNT2022TMID47484/evt/event_1/fmt/json :

msg.payload: Object