

Project Development Phase SPRINT- 2


Date	07 November 2022
Team ID	PNT2022TMID25450
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

Deploy

filter nodes

Flow 1

common

inject

debug

complete

catch

status

link in

link call

link out

comment

function

switch

IBM IoT

connected

msg payload

debug

all nodes

all

04/11/2022, 02:16:25 node: msg payload
iot-2/type/LocationId/PNT2022TMD47484/evt/event_1/mtljson : msg.payload : Object
↳ { Latitude: -36, Longitude: 108 }

04/11/2022, 02:16:28 node: msg payload
iot-2/type/LocationId/PNT2022TMD47484/evt/event_1/mtljson : msg.payload : Object
↳ { Latitude: 80, Longitude: 43 }

04/11/2022, 02:16:31 node: msg payload
iot-2/type/LocationId/PNT2022TMD47484/evt/event_1/mtljson : msg.payload : Object
↳ { Latitude: -28, Longitude: 141 }

04/11/2022, 02:16:34 node: msg payload
iot-2/type/LocationId/PNT2022TMD47484/evt/event_1/mtljson : msg.payload : Object
↳ { Latitude: 58, Longitude: -58 }

04/11/2022, 02:16:37 node: msg payload
iot-2/type/LocationId/PNT2022TMD47484/evt/event_1/mtljson : msg.payload : Object
↳ { Latitude: -7, Longitude: 124 }

04/11/2022, 02:16:40 node: msg payload
iot-2/type/LocationId/PNT2022TMD47484/evt/event_1/mtljson : msg.payload : Object
↳ { Latitude: -39, Longitude: -122 }

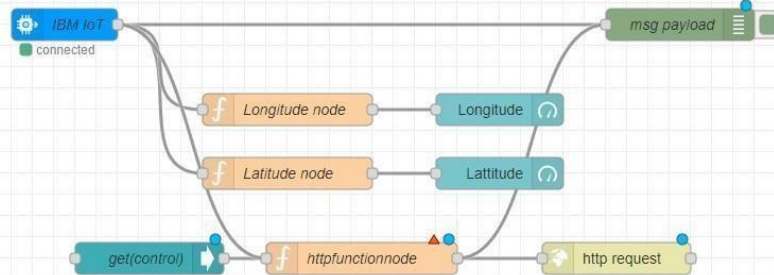
04/11/2022, 02:16:43 node: msg payload
iot-2/type/LocationId/PNT2022TMD47484/evt/event_1/mtljson : msg.payload : Object
↳ { Latitude: -48, Longitude: 75 }

Home

child safety



Flow 1



debug

msg.payload : Object

```
{ Latitude: -16, Longitude: -70 }
```

05/11/2022, 01:47:16 node: msg payload
iot-2/type/Location/id/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/Location/id/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/Location/id/PNT2022TMID47484/evt/event_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/evt/event_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/evt/event_1/fmt/json :
msg.payload : Object

Node-RED

Flow 1

network

- http in
- http response
- http request

IBM IoT

connected

get(control)

Edit ibmiot in node

Delete Cancel Done

Properties

Authentication API Key

API Key a74a28a2e0759549

Input Type Device Event

Device Type ☐ All or Location

Device Id ☐ All or PNT2022TMID47484

Event ☒ All or +

Format ☐ All or json

QoS 0

Name IBM IoT

Service registered

debug

msg.payload : Object

{ Latitude: -16, Longitude: -70 }

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

iot-2/type/location/id/PNT2022TMID47484/evt/event_1/fmt/json : msg.payload : Object

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Latitude: 63

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Node-RED

Flow 1

network

- http in
- http response
- http request

IBM IoT

connected

Edit function node

Delete Cancel Done

Properties

Name Longitude node

Setup On Start On Message On Stop

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

debug

msg.payload : Object

{ Latitude: -16, Longitude: -70 }

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

iot-2/type/location/id/PNT2022TMID47484/evt/event_1/fmt/json : msg.payload : Object

object

Latitude: 63

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

iot-2/type/location/id/PNT2022TMID47484/evt/event_1/fmt/json : msg.payload : Object

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{ Latitude: 44, Longitude: -107 }

05/11/2022, 01:47:28 node: msg payload

iot-2/type/location/id/PNT2022TMID47484/evt/event_1/fmt/json : msg.payload : Object

Node-RED

Flow 1

network

- http in
- http response
- http request

IBM IoT

connected

get/control

Edit gauge node

Properties

- 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
- Name:

debug

msg.payload : Object

```
{ Latitude: -16, Longitude: -70 }
```

05/11/2022, 01:47:16 node: msg.payload
iot-2/type/location/id/PNT2022TMD47484/ev/1event_1/fmt/json :
msg.payload : Object

object

```
{ Latitude: 63, Longitude: -33 }
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05/11/2022, 01:47:19 node: msg.payload
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{ Latitude: 44, Longitude: -107 }
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iot-2/type/location/id/PNT2022TMD47484/ev/1event_1/fmt/json :
msg.payload : Object

Node-RED

Flow 1

network

- http in
- http response
- http request

IBM IoT

connected

get/control

Edit gauge node

Properties

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

msg.payload : Object

```
{ Latitude: -16, Longitude: -70 }
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05/11/2022, 01:47:16 node: msg.payload
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object

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05/11/2022, 01:47:22 node: msg.payload
iot-2/type/location/id/PNT2022TMD47484/ev/1event_1/fmt/json :
msg.payload : Object

```
{ Latitude: -81, Longitude: 167 }
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05/11/2022, 01:47:25 node: msg.payload
iot-2/type/location/id/PNT2022TMD47484/ev/1event_1/fmt/json :
msg.payload : Object

```
{ Latitude: 44, Longitude: -107 }
```

05/11/2022, 01:47:28 node: msg.payload
iot-2/type/location/id/PNT2022TMD47484/ev/1event_1/fmt/json :
msg.payload : Object

Node-RED interface showing a flow named "Flow 1" with a "network" tab selected. The flow contains nodes: "http in", "http response", and "http request". A "debug" node is also present, showing a list of messages. The "Edit function node" dialog is open, showing the "Properties" tab with the name "Latitude node". The "On Message" tab is selected, displaying the following code:

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

The "debug" node shows a list of messages, including:

- msg.payload: Object
- { Latitude: -16, Longitude: -70 }
- 05/11/2022, 01:47:16 node: msg payload
- iot-2/type/Location/id/PNT2022TMD47484/ev/evnt_1/fmt/json :
- msg.payload: Object
- object
- Latitude: 63
- Longitude: -33
- 05/11/2022, 01:47:19 node: msg payload
- iot-2/type/Location/id/PNT2022TMD47484/ev/evnt_1/fmt/json :
- msg.payload: Object
- { Latitude: 45, Longitude: -96 }
- 05/11/2022, 01:47:22 node: msg payload
- iot-2/type/Location/id/PNT2022TMD47484/ev/evnt_1/fmt/json :
- msg.payload: Object
- { Latitude: -81, Longitude: 167 }
- 05/11/2022, 01:47:25 node: msg payload
- iot-2/type/Location/id/PNT2022TMD47484/ev/evnt_1/fmt/json :
- msg.payload: Object
- { Latitude: 44, Longitude: -107 }
- 05/11/2022, 01:47:28 node: msg payload
- iot-2/type/Location/id/PNT2022TMD47484/ev/evnt_1/fmt/json :

Node-RED interface showing a flow named "Flow 1" with a "network" tab selected. The flow contains nodes: "http in", "http response", and "http request". A "debug" node is also present, showing a list of messages. The "Edit function node" dialog is open, showing the "Properties" tab with the name "httpfunctionnode". The "On Message" tab is selected, displaying the following code:

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

The "debug" node shows a list of messages, including:

- msg.payload: Object
- { Latitude: -16, Longitude: -70 }
- 05/11/2022, 01:47:16 node: msg payload
- iot-2/type/Location/id/PNT2022TMD47484/ev/evnt_1/fmt/json :
- msg.payload: Object
- object
- Latitude: 63
- Longitude: -33
- 05/11/2022, 01:47:19 node: msg payload
- iot-2/type/Location/id/PNT2022TMD47484/ev/evnt_1/fmt/json :
- msg.payload: Object
- { Latitude: 45, Longitude: -96 }
- 05/11/2022, 01:47:22 node: msg payload
- iot-2/type/Location/id/PNT2022TMD47484/ev/evnt_1/fmt/json :
- msg.payload: Object
- { Latitude: -81, Longitude: 167 }
- 05/11/2022, 01:47:25 node: msg payload
- iot-2/type/Location/id/PNT2022TMD47484/ev/evnt_1/fmt/json :
- msg.payload: Object
- { Latitude: 44, Longitude: -107 }
- 05/11/2022, 01:47:28 node: msg payload
- iot-2/type/Location/id/PNT2022TMD47484/ev/evnt_1/fmt/json :

Node-RED interface showing the "Edit function node" dialog. The node is named "httpfunctionnode". The code in the "On Message" tab is:

```
1 msg.payload = msg.payload.command;
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/PNT2022TMD47484/ev/event_1/rmtjson :
msg.payload : Object
  { Latitude: 63, Longitude: -33 }
05/11/2022, 01:47:19 node: msg payload
iot-2/type/location/id/PNT2022TMD47484/ev/event_1/rmtjson :
msg.payload : Object
  { Latitude: 45, Longitude: -96 }
05/11/2022, 01:47:22 node: msg payload
iot-2/type/location/id/PNT2022TMD47484/ev/event_1/rmtjson :
msg.payload : Object
  { Latitude: -81, Longitude: 167 }
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iot-2/type/location/id/PNT2022TMD47484/ev/event_1/rmtjson :
msg.payload : Object
  { Latitude: 44, Longitude: -107 }
05/11/2022, 01:47:28 node: msg payload
iot-2/type/location/id/PNT2022TMD47484/ev/event_1/rmtjson :
```

Node-RED interface showing the "Edit http in node" dialog. The node is named "http". The properties are:

- Method: GET
- URL: /control
- Name: Name

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/PNT2022TMD47484/ev/event_1/rmtjson :
msg.payload : Object
  { Latitude: 63, Longitude: -33 }
05/11/2022, 01:47:19 node: msg payload
iot-2/type/location/id/PNT2022TMD47484/ev/event_1/rmtjson :
msg.payload : Object
  { Latitude: 45, Longitude: -96 }
05/11/2022, 01:47:22 node: msg payload
iot-2/type/location/id/PNT2022TMD47484/ev/event_1/rmtjson :
msg.payload : Object
  { Latitude: -81, Longitude: 167 }
05/11/2022, 01:47:25 node: msg payload
iot-2/type/location/id/PNT2022TMD47484/ev/event_1/rmtjson :
msg.payload : Object
  { Latitude: 44, Longitude: -107 }
05/11/2022, 01:47:28 node: msg payload
iot-2/type/location/id/PNT2022TMD47484/ev/event_1/rmtjson :
```