

## Project Development Phase SPRINT- 2


Date	07 November 2022
Team ID	PNT2022TMID23712
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

function

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/Location/id/PNT2022TMID47484/evl/event\_1/fmt/json : msg payload : Object

{ Latitude: -36, Longitude: 108 }

04/11/2022, 02:16:28 node: msg payload

iot-2/type/Location/id/PNT2022TMID47484/evl/event\_1/fmt/json : msg payload : Object

{ Latitude: 80, Longitude: 43 }

04/11/2022, 02:16:31 node: msg payload

iot-2/type/Location/id/PNT2022TMID47484/evl/event\_1/fmt/json : msg payload : Object

{ Latitude: -28, Longitude: 141 }

04/11/2022, 02:16:34 node: msg payload

iot-2/type/Location/id/PNT2022TMID47484/evl/event\_1/fmt/json : msg payload : Object

{ Latitude: 58, Longitude: -58 }

04/11/2022, 02:16:37 node: msg payload

iot-2/type/Location/id/PNT2022TMID47484/evl/event\_1/fmt/json : msg payload : Object

{ Latitude: -7, Longitude: 124 }

04/11/2022, 02:16:40 node: msg payload

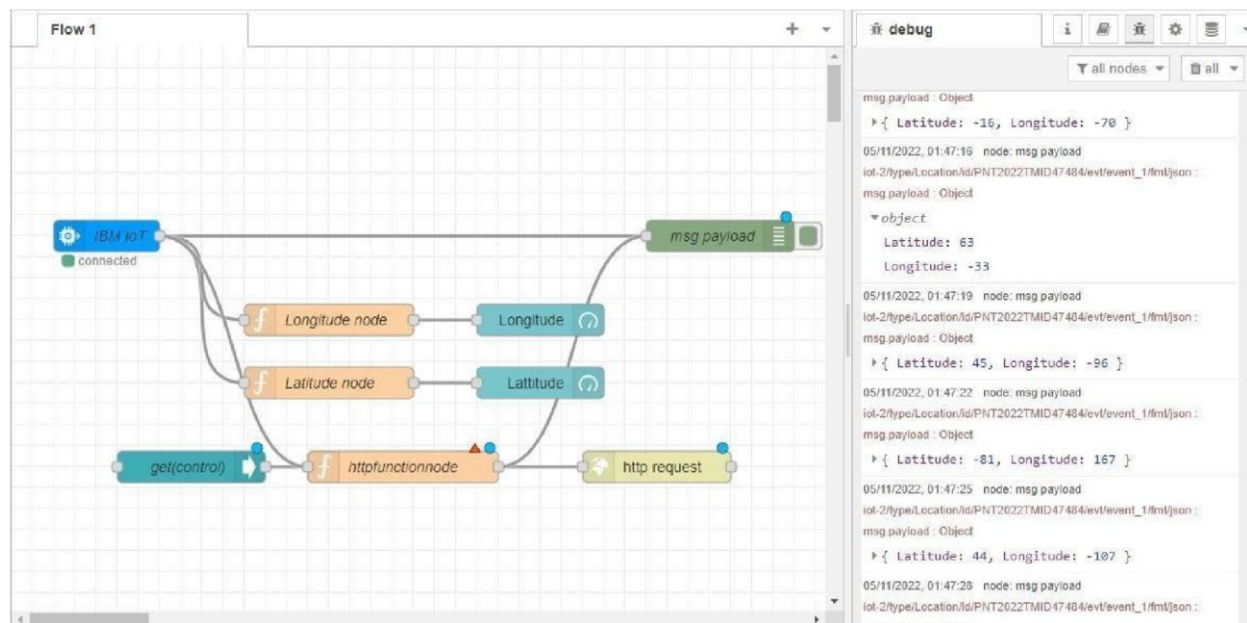
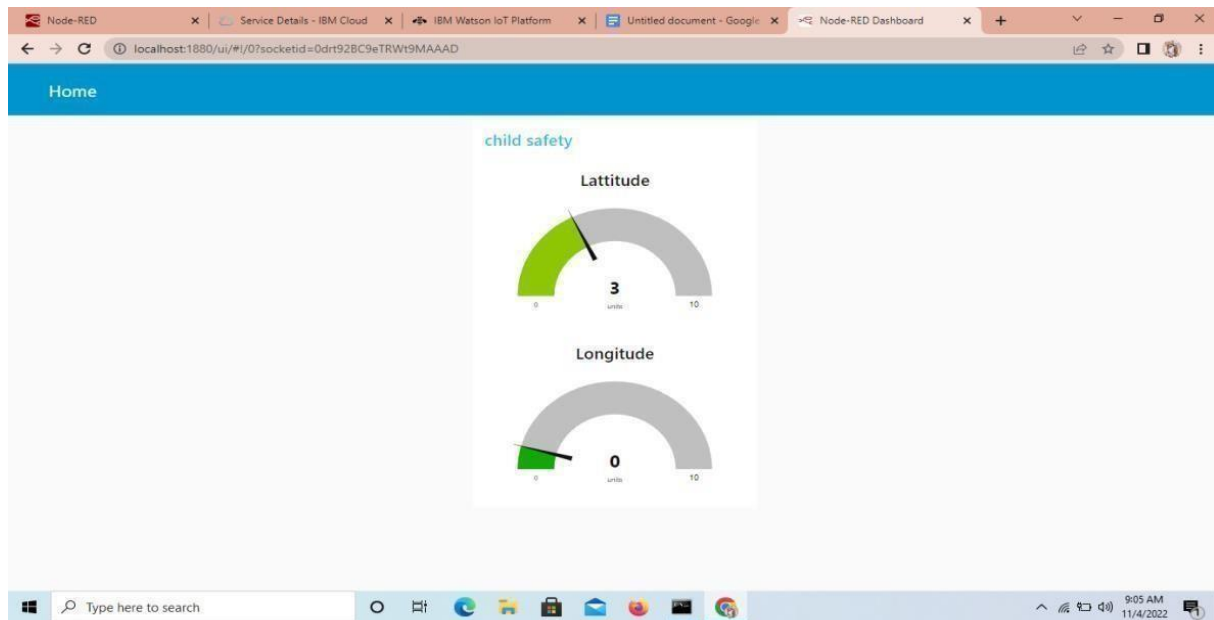
iot-2/type/Location/id/PNT2022TMID47484/evl/event\_1/fmt/json : msg payload : Object

{ Latitude: -39, Longitude: -122 }

04/11/2022, 02:16:43 node: msg payload

iot-2/type/Location/id/PNT2022TMID47484/evl/event\_1/fmt/json : msg payload : Object

{ Latitude: -48, Longitude: 75 }



Node-RED interface showing the configuration of an IBM IoT node. The node is named "ibmiot" and is connected to a flow. The configuration panel shows the following settings:

- Authentication: API Key
- API Key: a74a26a2e0759549
- Input Type: Device Event
- Device Type: ☐ All or ☐ Location
- Device Id: ☐ All or ☐ PNT2022TMD47484
- Event: ☒ All or ☐ Location

The debug console shows the following log entries:

```
msg.payload: Object
  { Latitude: -16, Longitude: -70 }
05/11/2022, 01:47:18 node: msg.payload
iot-2typeLocationIdPNT2022TMD47484event_1firstjson:
msg.payload: Object
  { Latitude: 63, Longitude: -33 }
05/11/2022, 01:47:19 node: msg.payload
iot-2typeLocationIdPNT2022TMD47484event_1firstjson:
msg.payload: Object
  { Latitude: 45, Longitude: -96 }
05/11/2022, 01:47:22 node: msg.payload
iot-2typeLocationIdPNT2022TMD47484event_1firstjson:
msg.payload: Object
  { Latitude: -81, Longitude: 167 }
05/11/2022, 01:47:25 node: msg.payload
iot-2typeLocationIdPNT2022TMD47484event_1firstjson:
msg.payload: Object
  { Latitude: 44, Longitude: -107 }
05/11/2022, 01:47:28 node: msg.payload
iot-2typeLocationIdPNT2022TMD47484event_1firstjson:
msg.payload: Object
  { Latitude: -81, Longitude: 167 }
```

Node-RED interface showing the configuration of a function node. The node is named "Longitude node" and is connected to a flow. The configuration panel shows the following settings:

- Name: Longitude node
- Setup: ☐ On Start ☒ On Message ☐ On Stop

The function code is as follows:

```
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-2typeLocationIdPNT2022TMD47484event_1firstjson:
msg.payload: Object
  { Latitude: 63, Longitude: -33 }
05/11/2022, 01:47:19 node: msg.payload
iot-2typeLocationIdPNT2022TMD47484event_1firstjson:
msg.payload: Object
  { Latitude: 45, Longitude: -96 }
05/11/2022, 01:47:22 node: msg.payload
iot-2typeLocationIdPNT2022TMD47484event_1firstjson:
msg.payload: Object
  { Latitude: -81, Longitude: 167 }
05/11/2022, 01:47:25 node: msg.payload
iot-2typeLocationIdPNT2022TMD47484event_1firstjson:
msg.payload: Object
  { Latitude: 44, Longitude: -107 }
05/11/2022, 01:47:28 node: msg.payload
iot-2typeLocationIdPNT2022TMD47484event_1firstjson:
msg.payload: Object
  { Latitude: -81, Longitude: 167 }
```

Node-RED interface showing a flow with an IBM IoT node connected to a gauge node. The gauge node is configured with the following 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:

The debug console shows the following message payload:

```
msg.payload - Object
  > { Latitude: -16, Longitude: -70 }
05/11/2022, 01:47:16 node: msg payload
iot-2/type/LocationId/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/LocationId/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/LocationId/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/LocationId/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/LocationId/PNT2022TMD47484/ev/evnt_1/fmt/json :
```

Node-RED interface showing a flow with an IBM IoT node connected to a gauge node. The gauge node is configured with the following 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
- Name:

The debug console shows the following message payload:

```
msg.payload - Object
  > { Latitude: -16, Longitude: -70 }
05/11/2022, 01:47:16 node: msg payload
iot-2/type/LocationId/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/LocationId/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/LocationId/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/LocationId/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/LocationId/PNT2022TMD47484/ev/evnt_1/fmt/json :
```

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

```
1 msg.payload={"longitude":global.get(long)
2
3 "latitude": global.get(lat)}
4 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&PNT2022TMD47484&ev=evnt_1&mt=json :
msg.payload : Object
  object
    Latitude: 63
    Longitude: -33
05/11/2022, 01:47:19 node: msg payload
iot-2?type=Location&PNT2022TMD47484&ev=evnt_1&mt=json :
msg.payload : Object
  { Latitude: 45, Longitude: -96 }
05/11/2022, 01:47:22 node: msg payload
iot-2?type=Location&PNT2022TMD47484&ev=evnt_1&mt=json :
msg.payload : Object
  { Latitude: -81, Longitude: 167 }
05/11/2022, 01:47:25 node: msg payload
iot-2?type=Location&PNT2022TMD47484&ev=evnt_1&mt=json :
msg.payload : Object
  { Latitude: 44, Longitude: -107 }
05/11/2022, 01:47:26 node: msg payload
iot-2?type=Location&PNT2022TMD47484&ev=evnt_1&mt=json :
```

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

```
1 msg.payload = msg.payload.Latitude
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&PNT2022TMD47484&ev=evnt_1&mt=json :
msg.payload : Object
  object
    Latitude: 63
    Longitude: -33
05/11/2022, 01:47:19 node: msg payload
iot-2?type=Location&PNT2022TMD47484&ev=evnt_1&mt=json :
msg.payload : Object
  { Latitude: 45, Longitude: -96 }
05/11/2022, 01:47:22 node: msg payload
iot-2?type=Location&PNT2022TMD47484&ev=evnt_1&mt=json :
msg.payload : Object
  { Latitude: -81, Longitude: 167 }
05/11/2022, 01:47:25 node: msg payload
iot-2?type=Location&PNT2022TMD47484&ev=evnt_1&mt=json :
msg.payload : Object
  { Latitude: 44, Longitude: -107 }
05/11/2022, 01:47:26 node: msg payload
iot-2?type=Location&PNT2022TMD47484&ev=evnt_1&mt=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
ist-2fype/location/ist/PNT2022TMD47484ev/evnt_1fntjso:
msg.payload : Object
  > { Latitude: 63, Longitude: -33 }
05/11/2022, 01:47:19 node: msg payload
ist-2fype/location/ist/PNT2022TMD47484ev/evnt_1fntjso:
msg.payload : Object
  > { Latitude: 45, Longitude: -96 }
05/11/2022, 01:47:22 node: msg payload
ist-2fype/location/ist/PNT2022TMD47484ev/evnt_1fntjso:
msg.payload : Object
  > { Latitude: -81, Longitude: 167 }
05/11/2022, 01:47:25 node: msg payload
ist-2fype/location/ist/PNT2022TMD47484ev/evnt_1fntjso:
msg.payload : Object
  > { Latitude: 44, Longitude: -107 }
05/11/2022, 01:47:28 node: msg payload
ist-2fype/location/ist/PNT2022TMD47484ev/evnt_1fntjso:
```

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
ist-2fype/location/ist/PNT2022TMD47484ev/evnt_1fntjso:
msg.payload : Object
  > { Latitude: 63, Longitude: -33 }
05/11/2022, 01:47:19 node: msg payload
ist-2fype/location/ist/PNT2022TMD47484ev/evnt_1fntjso:
msg.payload : Object
  > { Latitude: 45, Longitude: -96 }
05/11/2022, 01:47:22 node: msg payload
ist-2fype/location/ist/PNT2022TMD47484ev/evnt_1fntjso:
msg.payload : Object
  > { Latitude: -81, Longitude: 167 }
05/11/2022, 01:47:25 node: msg payload
ist-2fype/location/ist/PNT2022TMD47484ev/evnt_1fntjso:
msg.payload : Object
  > { Latitude: 44, Longitude: -107 }
05/11/2022, 01:47:28 node: msg payload
ist-2fype/location/ist/PNT2022TMD47484ev/evnt_1fntjso:
```