

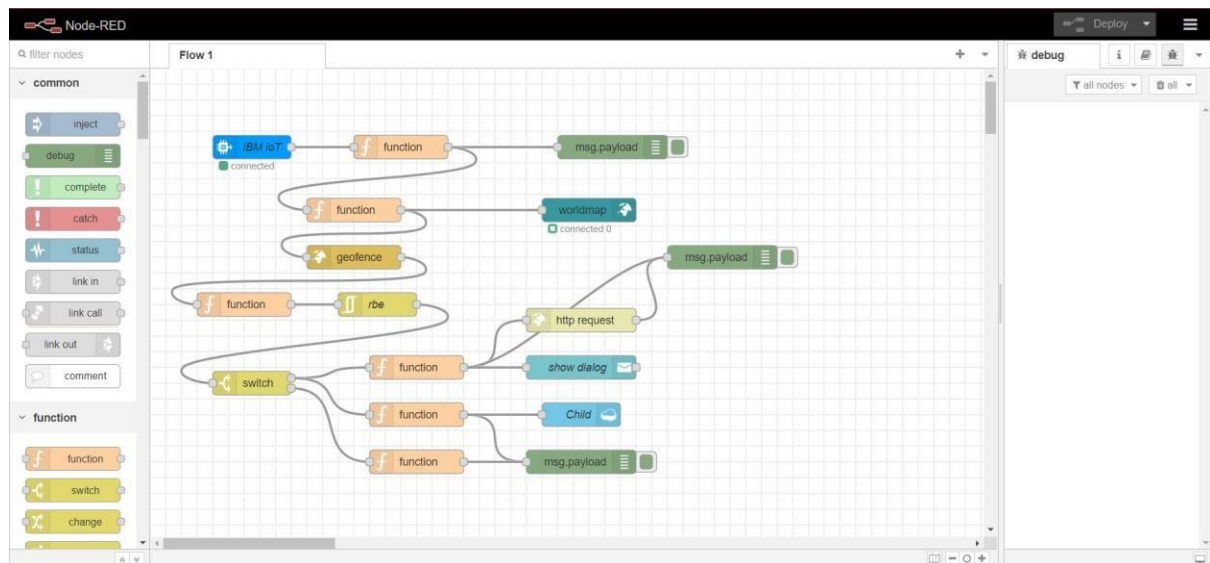
Project Development – Delivery plan sprint-2

IoT Based Safety Gadget for Child Safety Monitoring & Notification

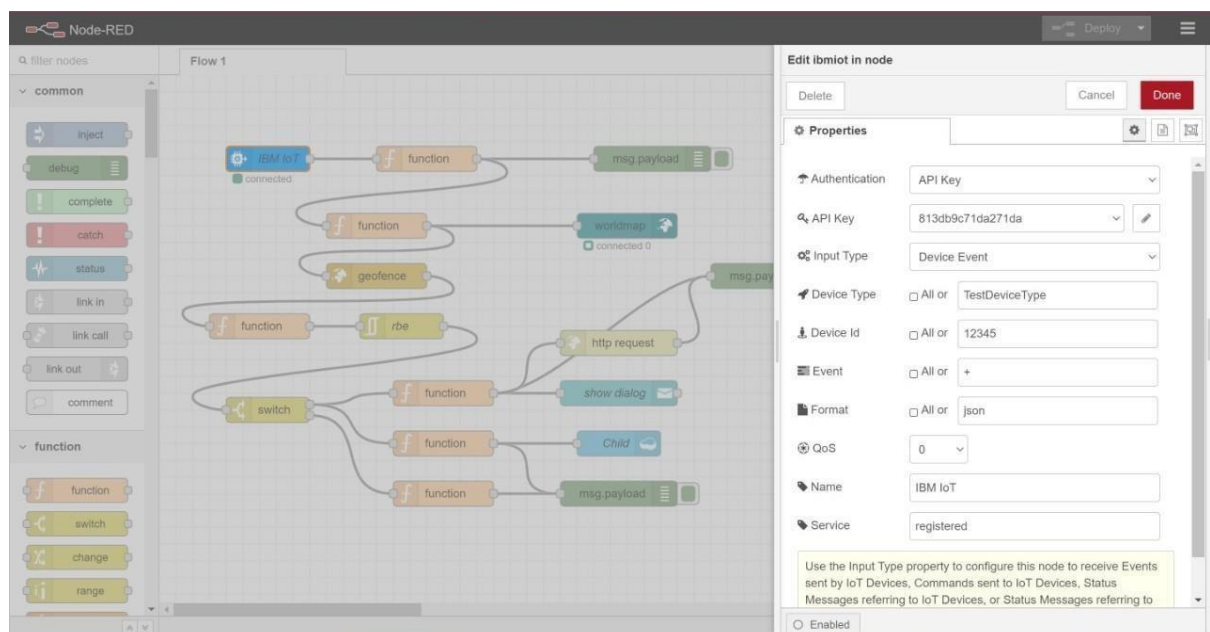
TEAM ID: PNT2022TMID12840

Creating Node-Red service and connecting with IBM cloud

Creating Node-Red service:



Codes in each Node:



Node-RED interface showing a flow named "Child Tracker" and the "Edit function node" panel.

Flow 1: A sequence of nodes: `inject` (with `IBM IoT` payload) → `function` → `function` → `function` → `geofence` → `function`.

Edit function node:

- Properties:** Name (empty)
- Setup:** On Start, On Message, On Stop
- Code:**

```
1 var name = msg.payload.name
2 var lat = msg.payload.lat
3 var lon = msg.payload.lon
4 global.set('latitude',lat)
5 global.set('longitude',lon)
6 global.set('name',name)
7 return msg;
```
- Enabled:** ☐

Dashboard: Shows a "Child Tracker" tab with a "Map" visualization.

<https://node-red-opszk-2022-11-04.eu-gb.mybluemix.net/red/#editor-tab-properties>

WhatsApp image...jpeg

Show all

Node-RED interface showing a flow named "Child Tracker" and the "Edit debug node" panel.

Flow 2: A sequence of nodes: `inject` (with `IBM IoT` payload) → `function` → `msg.payload` → `function` → `worldmap` → `function` → `geofence` → `function` → `rbe` → `switch`.

Edit debug node:

- Properties:** Name (empty)
- Output:** `msg.payload`
- To:** ☒ debug window, ☐ system console, ☐ node status (32 characters)
- Enabled:** ☐

Dashboard: Shows a "Child Tracker" tab with a "Map" visualization.

Node-RED interface showing a flow named "Child Tracker" and the "Edit function node" panel.

Flow 1: A sequence of nodes: `inject` (with `IBM IoT` payload) → `function` → `function` → `function` → `geofence` → `function`.

Edit function node:

- Properties:** Name (empty)
- Setup:** On Start, On Message, On Stop
- Code:**

```
1 msg.payload = {
2   "name": global.get('name'),
3   "lat": global.get('latitude'),
4   "lon": global.get('longitude')
5 }
6 return msg;
```
- Enabled:** ☐

Dashboard: Shows a "Child Tracker" tab with a "Map" visualization.

<https://node-red-opszk-2022-11-04.eu-gb.mybluemix.net/red/#editor-tab-properties>

Node-RED interface showing a flow named "Flow 1" and the "Edit worldmap node" configuration panel.

Flow 1: The flow starts with an "IBM IoT" node (connected), followed by a "function" node, then a "worldmap" node (connected 0), and finally a "msg.payload" node. Below this, there is a "geofence" node, followed by a "function" node, then a "rbe" node, and finally a "http request" node. The "http request" node is connected to a "show dialog" node, which is connected to a "Child" node, which is connected to a "msg.payload" node. There is also a "switch" node connected to the "function" node after "rbe", which branches into three "function" nodes, each connected to a "msg.payload" node.

Edit worldmap node Properties:

- Group: [Child Tracker] Map
- Size: auto
- Start: Latitude 17.4226372, Longitude 78.5456505, Zoom 16
- Map list: 7 selected
- Base map: ESRI Satellite
- Overlays: 5 selected
- Cluster when zoom level is less than 0 (0, off - 19)
- Max age: Remove markers after 600 seconds
- User menu: Show
- Layer menu: Hide
- Lock map: False
- Lock zoom: False
- Auto-pan: Disable
- Right click: Disable
- Enabled

Node-RED interface showing a flow named "Flow 1" and the "Edit geofence node" configuration panel.

Flow 1: The flow starts with an "IBM IoT" node (connected), followed by a "function" node, then a "worldmap" node (connected 0), and finally a "msg.payload" node. Below this, there is a "geofence" node, followed by a "function" node, then a "rbe" node, and finally a "http request" node. The "http request" node is connected to a "show dialog" node, which is connected to a "Child" node, which is connected to a "msg.payload" node. There is also a "switch" node connected to the "function" node after "rbe", which branches into three "function" nodes, each connected to a "msg.payload" node.

Edit geofence node Properties:

- Floor: ground
- Ceiling: infinity
- Action: add "inarea" property
- Enable output of zones to WorldMap node
- Enabled

Node-RED interface showing a flow named "Child Tracker" and the "Edit function node" configuration panel.

Child Tracker Flow: The flow starts with an "IBM IoT" node (connected), followed by a "function" node, then a "geofence" node, and finally a "function" node.

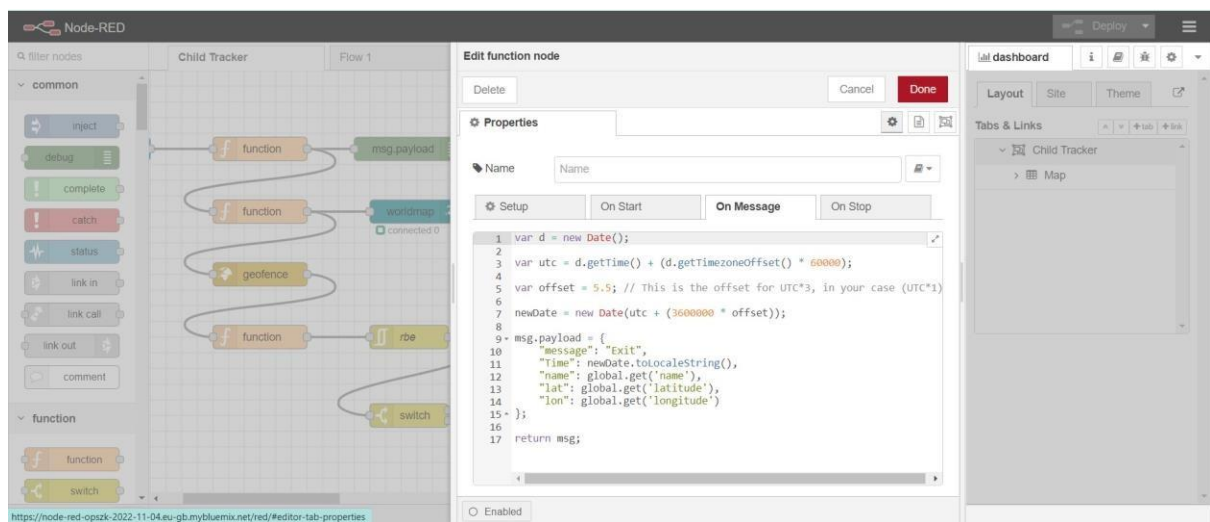
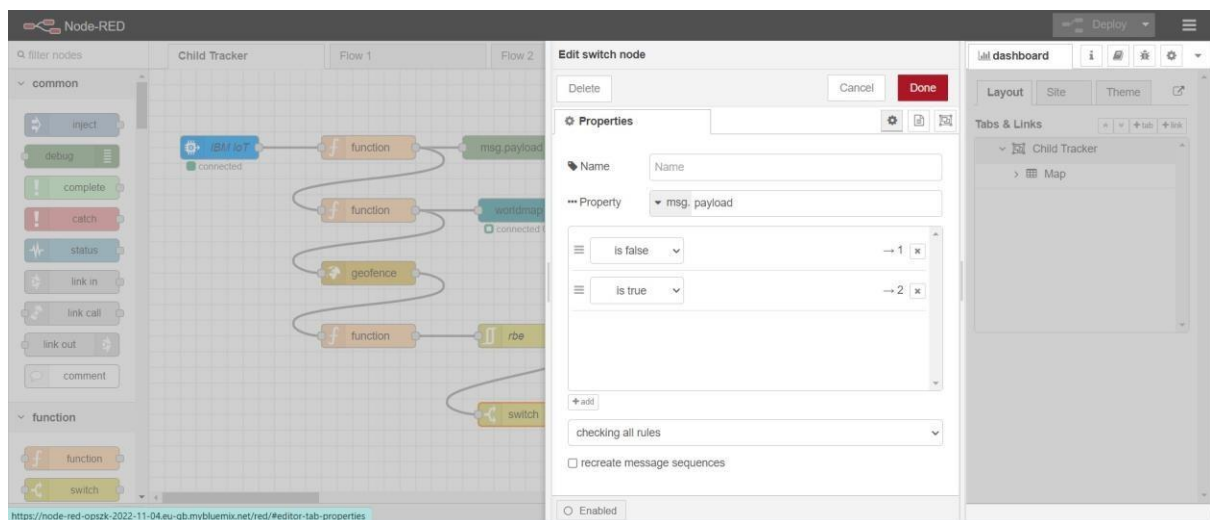
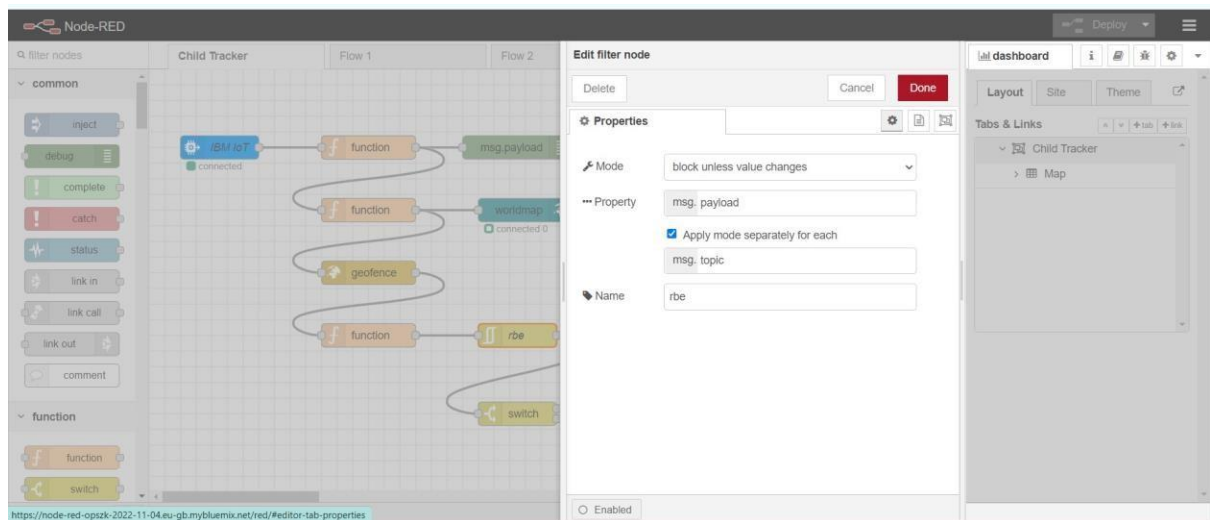
Edit function node Properties:

- Name: Name
- Setup: On Start, On Message, On Stop
- Code:

```
1 msg.payload=msg.location.inarea
2 return msg;
```
- Enabled

Dashboard: The dashboard shows a "Child Tracker" tab with a "Map" view.

<https://node-red-opsk-2022-11-04.eu-gb.mybluemix.net/red/#editor-tab-properties>



Node-RED interface showing a flow named "Child Tracker" and the "Edit function node" configuration.

Flow 1:

- Inject node
- Function node (msg.payload)
- Function node (worldmap)
- Geofence node
- Function node (rbe)
- Switch node

Edit function node:

```
1 var d = new Date();
2
3 var utc = d.getTime() + (d.getTimezoneOffset() * 60000);
4
5 var offset = 5.5; // This is the offset for UTC+3, in your case (UTC+1)
6
7 newDate = new Date(utc + (3600000* offset));
8
9 - msg.payload={
10   "message": "Entry",
11   "Time": newDate.toLocaleString(),
12   "name": global.get('name'),
13   "lat": global.get('latitude'),
14   "lon": global.get('longitude')
15 };
16
17 return msg;
```

Dashboard:

- Layout: Site, Theme
- Child Tracker: Map

Node-RED interface showing a flow named "Child Tracker" and the "Edit http request node" configuration.

Flow 1:

- Function node (msg.payload)
- Function node (worldmap)
- Geofence node
- Function node (rbe)
- Switch node
- Function node (http request)
- Function node (show dialog)
- Function node (Child)
- Function node (msg.payload)

Edit http request node:

- Method: GET
- URL: <https://www.fast2sms.com/dev/bulkV2?authorizati>
- Payload: Ignore
- Enable secure (SSL/TLS) connection: ☐
- Use authentication: ☐
- Enable connection keep-alive: ☐
- Use proxy: ☐
- Only send non-2xx responses to Catch node: ☐
- Return: a UTF-8 string
- Name: Name

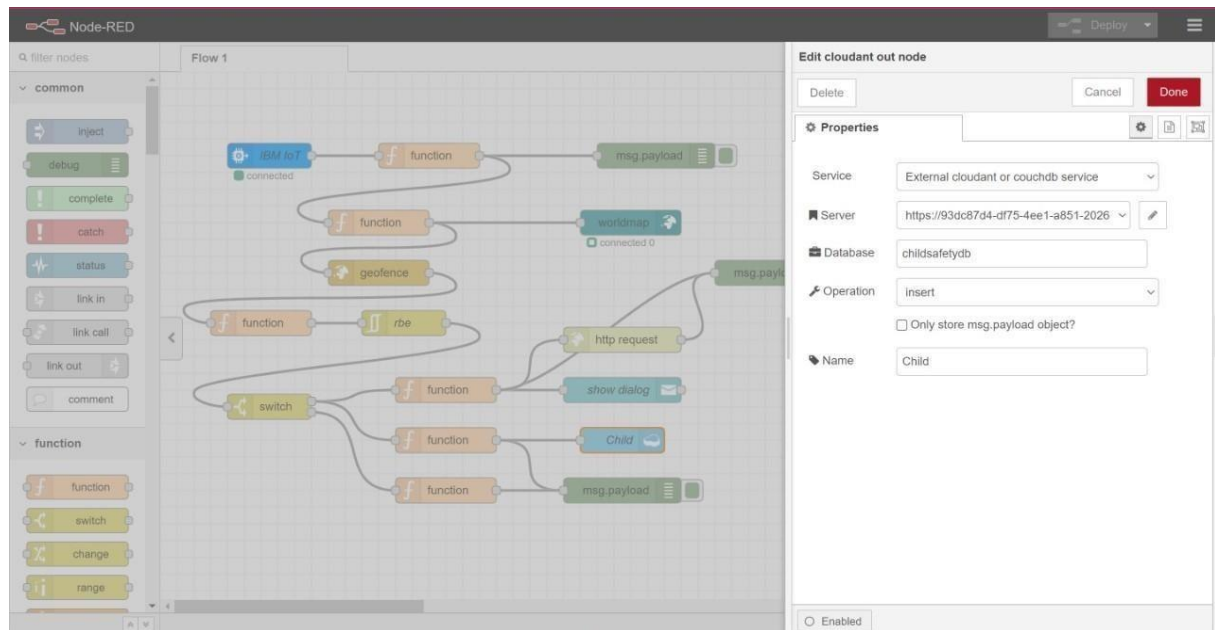
Node-RED interface showing a flow named "Child Tracker" and the "Edit notification node" configuration.

Flow 1:

- Function node (msg.payload)
- Function node (worldmap)
- Geofence node
- Function node (rbe)
- Switch node
- Function node (show dialog)
- Function node (Child)
- Function node (msg.payload)

Edit notification node:

- Layout: OK / Cancel Dialog
- Send to all browser sessions: ☒
- Default action label: OK
- Secondary action label: (optional label for Cancel button)
- Accept raw HTML/JavaScript input in msg.payload to format popup: ☐
- Class: [msg.className]
- Topic: [msg.topic]
- Name: Show Dialog
- Note: checking Accept raw HTML/JavaScript can allow injection of



Connecting with IBM Cloud: Using IBM IOT node through the API key

IBM Watson IoT Platform

310819106007@smartinternz.com
ID: 4a1qxb

Browse

IBM Cloud Apps

+ Generate API Key

Browse API Keys

Type the app description to search for

This table shows a summary of the API keys that have been added for the organization. It can be filtered, organized, and search on using different criteria. To get started, you can add API keys by clicking Generate API Key, or by using the API. For more information about adding API keys, see [API key connection](#).

<input type="checkbox"/>	Key	Description	Role	Expires	
2 results					
<input type="checkbox"/>	a-4a1qxb-d5wguvebrf	-	Standard Application	-	<div></div>
<input type="checkbox"/>	a-4a1qxb-ecmygwzdcx	API Key for the device simulator	Standard Application	-	<div></div>

1 Simulation running

Apps using your microphone:
Google Chrome

IBM Watson IoT Platform

310819106007@smartinternz.com
ID: 4a1qxb

Browse

IBM Cloud Apps

+ Generate API Key

Browse API Keys

Type the app description to search for

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<input type="checkbox"/>	Key	Description	Role	Expires	
2 results					
<input checked="" type="checkbox"/>	a-4a1qxb-d5wguvebrf	-	Standard Application	-	<div></div>

API Key Information

Access Control/Permissions

Key

a-4a1qxb-d5wguvebrf

Last Edited By

310819106007@smartinternz.com

Description

-

Expires

Never

Date Added

Nov 10, 2022 2:20 PM

Last Update

Nov 10, 2022 2:20 PM

1 Simulation running

Transferring values from Python Code:

[illegible]

Node-Red:

