

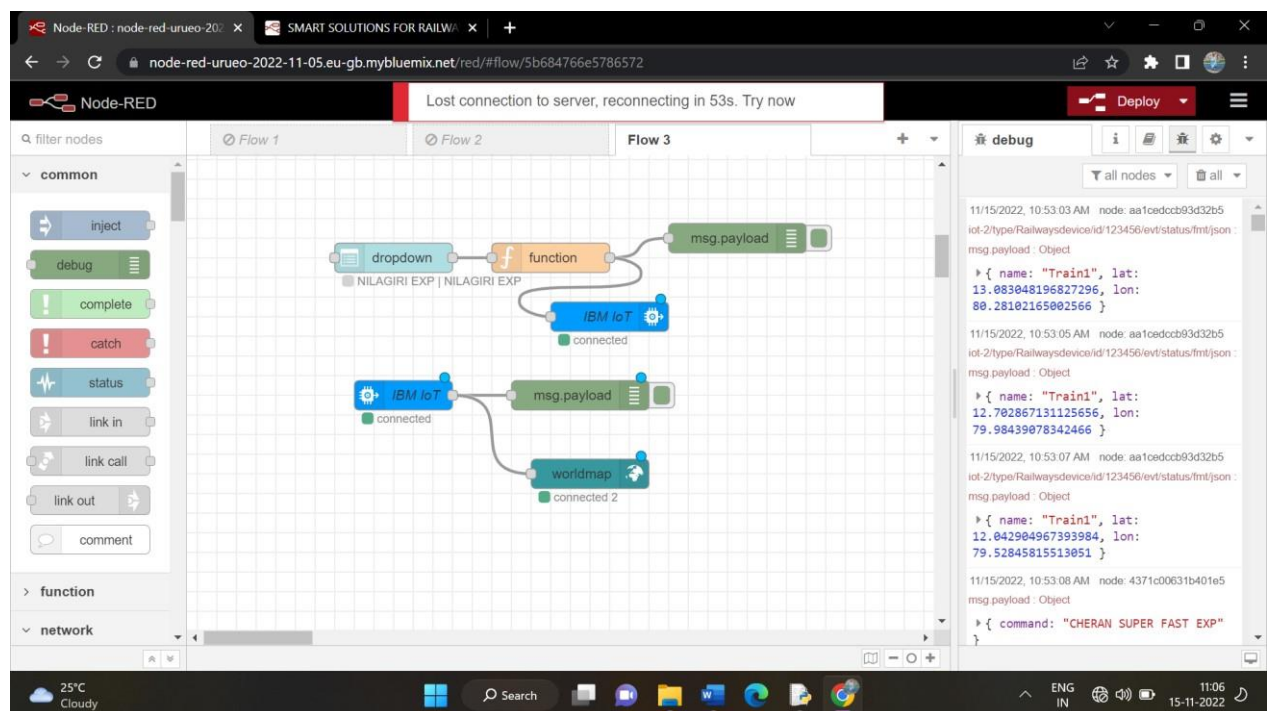
## PROJECT DEVELOPMENT PHASE - SPRINT 3

Date	12 November 2022
Team ID	PNT2022TMID26493
Project Name	Smart Solutions for Railways

### SPRINT 3– Train Tracking

At the time of the journey, the user could able to track their train location by selecting the particular train. Once the train is selected ,the live location of the train can easily be tracked by the user.

#### NODE-RED FLOW FOR TRAIN TRACKING:



**CODE:**

```
import wiotp.sdk.device
import time
import random

myConfig = {
    "identity": {
        "orgId": "j96451",
        "typeId": "Railwaysdevice",
        "deviceId": "123456"
    },
    "auth": {
        "token": " Hariharasusdhan@707"
    }
}

def myCommandCallback(cmd):
    print ("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    m=cmd.data['command']

client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()

def pub (data):
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)
    print ("Published data Successfully: %s", myData)
    while True:
        myData={'name': 'CHERAN SUPER FAST EXP', 'lat': 13.083048196827296, 'lon':
80.28102165002566}
        pub (myData)    time.sleep (2)    myData={'name':
'CHERAN SUPER FAST EXP', 'lat': 12.702867131125656,
'lon':79.98439078342466}
        pub (myData)    time.sleep (2)    myData={'name':
'CHERAN SUPER FAST EXP', 'lat': 12.042904967393984,
```

```
'lon':79.52845815513051}    pub(myData)    time.sleep(2)
myData={'name': 'CHERAN SUPER FAST EXP', 'lat':
11.81717546843628,
'lon':79.38563588602632}    pub (myData)    time.sleep (2)
myData={'name': 'CHERAN SUPER FAST EXP', 'lat':
11.591259751090618,
'lon':78.73194934666482}    pub (myData)    time.sleep (2)
myData={'name': 'CHERAN SUPER FAST EXP', 'lat':
11.580497272057597,
'lon':78.75392200345009}    pub (myData)    time.sleep (2)
myData={'name': 'CHERAN SUPER FAST EXP', 'lat':
11.51534247291403,
'lon':77.94873197618158}    pub (myData)    time.sleep (2)
myData={'name': 'CHERAN SUPER FAST EXP', 'lat':
11.208368689552955, 'lon':
77.53125149726162}    pub (myData)    time.sleep (5)
myData={'name': 'CHERAN SUPER FAST EXP', 'lat':
11.035888995239656,
'lon':76.94348292825593}    pub (myData)
client.commandCallback = myCommandCallback
client.disconnect ()
```

## WATSON IBM CLOUD:

The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. The main content area displays details for a device with ID '123456', which is 'Connected' and named 'Railwaysdevice'. The 'Recent Events' tab is selected, showing a table of events.

Event	Value	Format	Last Received
status	{"name":"NILAGIRI EXP","lat":11.20836868955...	json	a few seconds ago
status	{"name":"NILAGIRI EXP","lat":11.51534247291...	json	a few seconds ago
status	{"name":"NILAGIRI EXP","lat":11.58049727205...	json	a few seconds ago
status	{"name":"NILAGIRI EXP","lat":11.59125975109...	json	a few seconds ago
status	{"name":"NILAGIRI EXP","lat":11.81717546843...	json	a few seconds ago

## USER INTERFACE FOR TRAIN TRACKING:

The screenshot shows a web application titled 'Train Tracking'. It features a map of India with a red pin indicating the location of 'NILAGIRI EXP'. The map includes labels for various cities and states, such as Kurmool, Proddatur, Anantapur, Kadapa, Nellore, Tirupati, Kamagaluru, Kolar, Vellore, Chennai, Bengaluru, Mysuru, Coimbatore, Madurai, and Nagercoil. The interface is displayed on a desktop environment with a taskbar at the bottom.