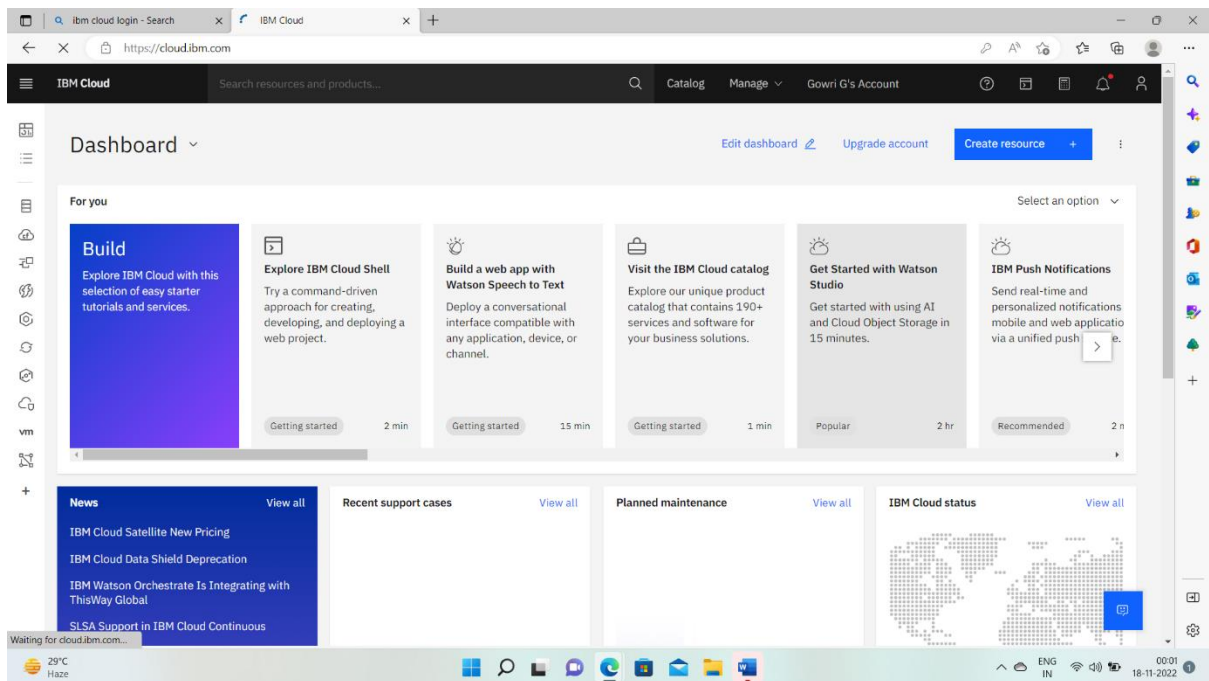


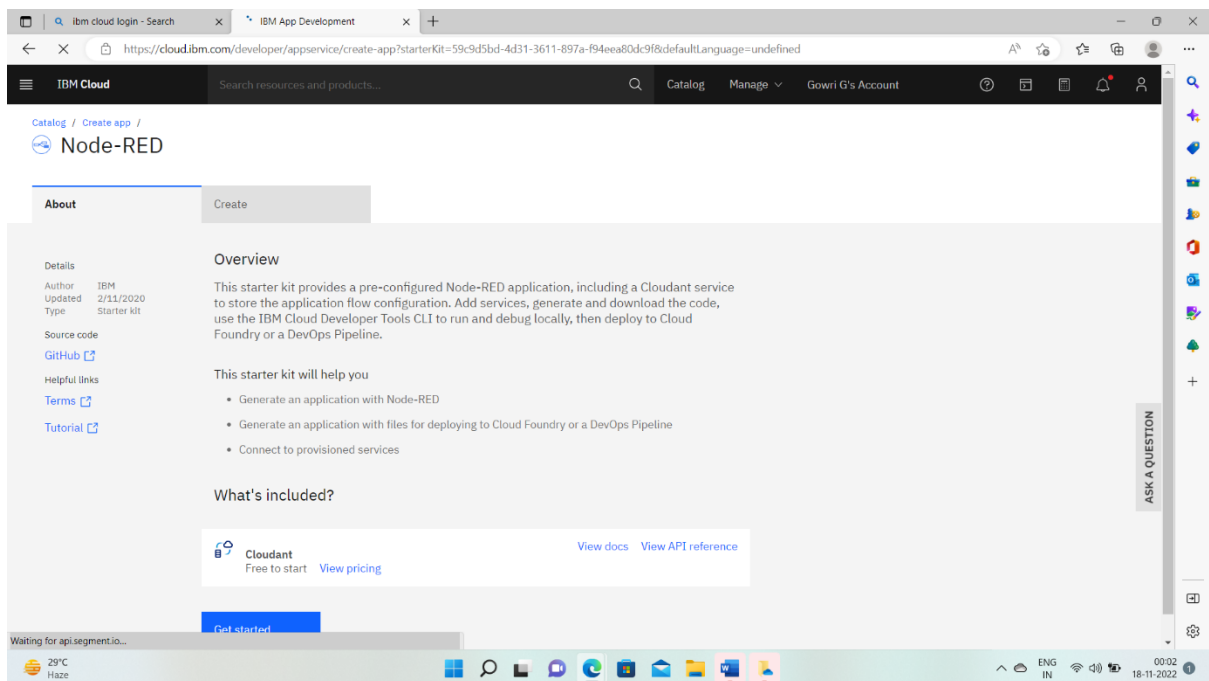
Date	05 November 2022
Team ID	PNT2022YMID38248
Project Name	SMART SOLUTIONS FOR RAILWAYS

CREATING NODE-RED IN IBM CLOUD

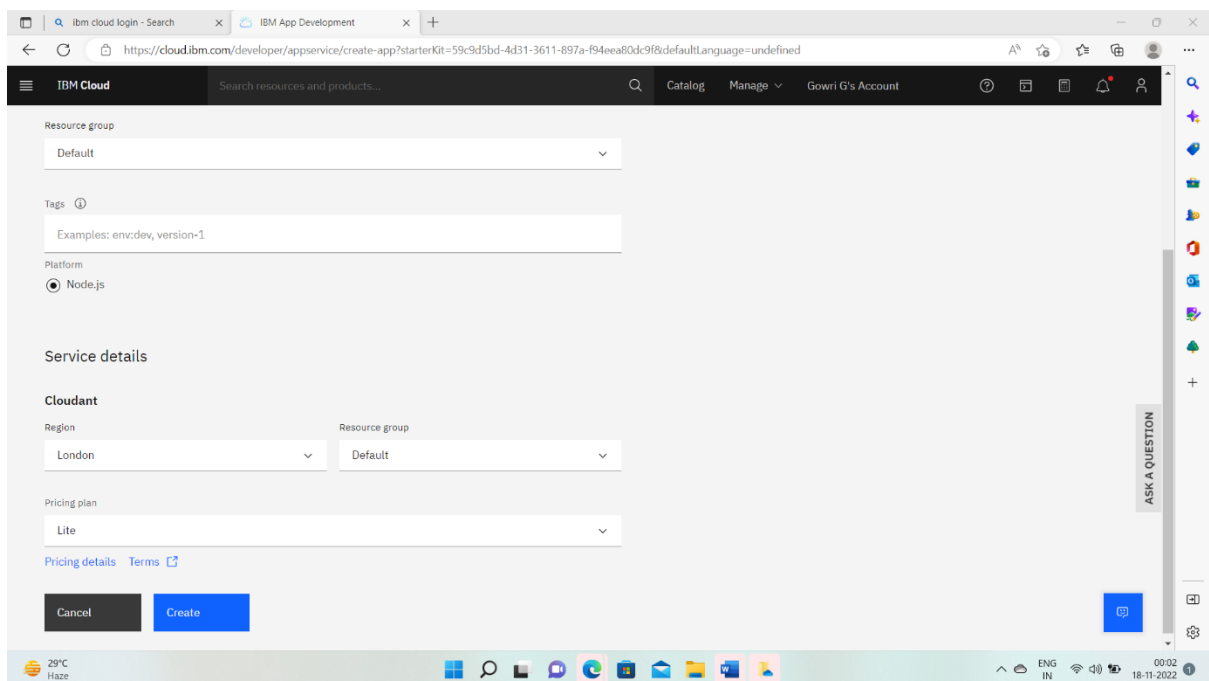
STEP 1: Open ibm cloud:



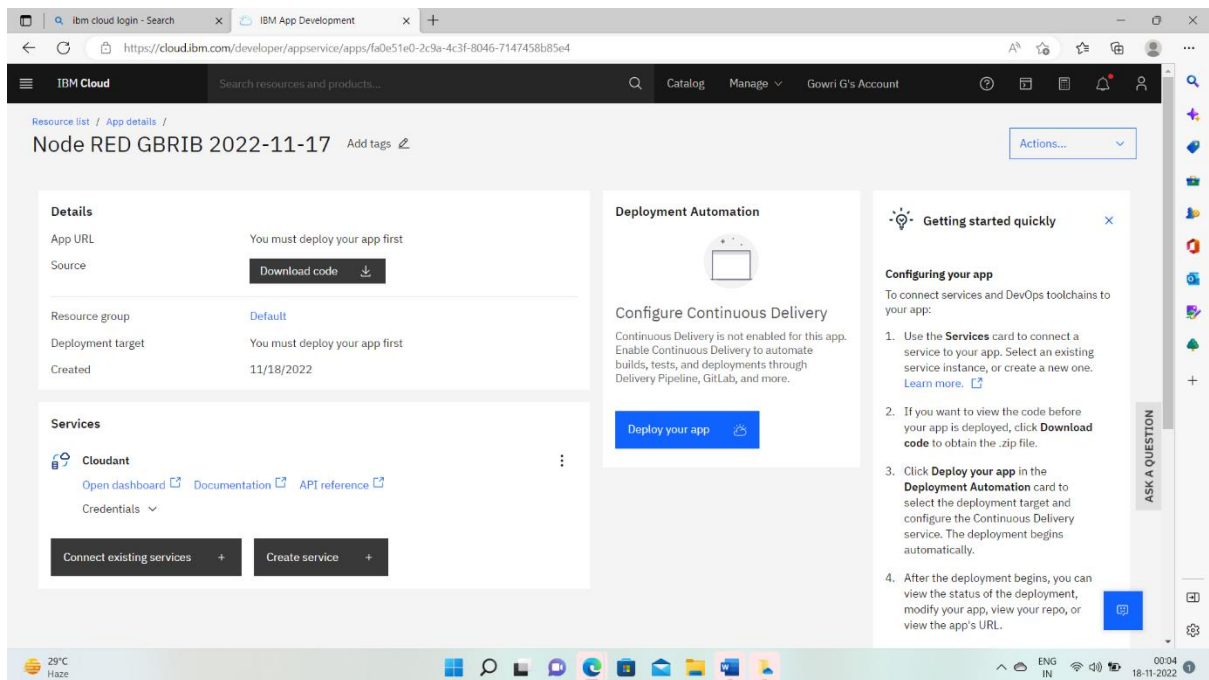
STEP 2: Go to catalog and search for node red app and open it:



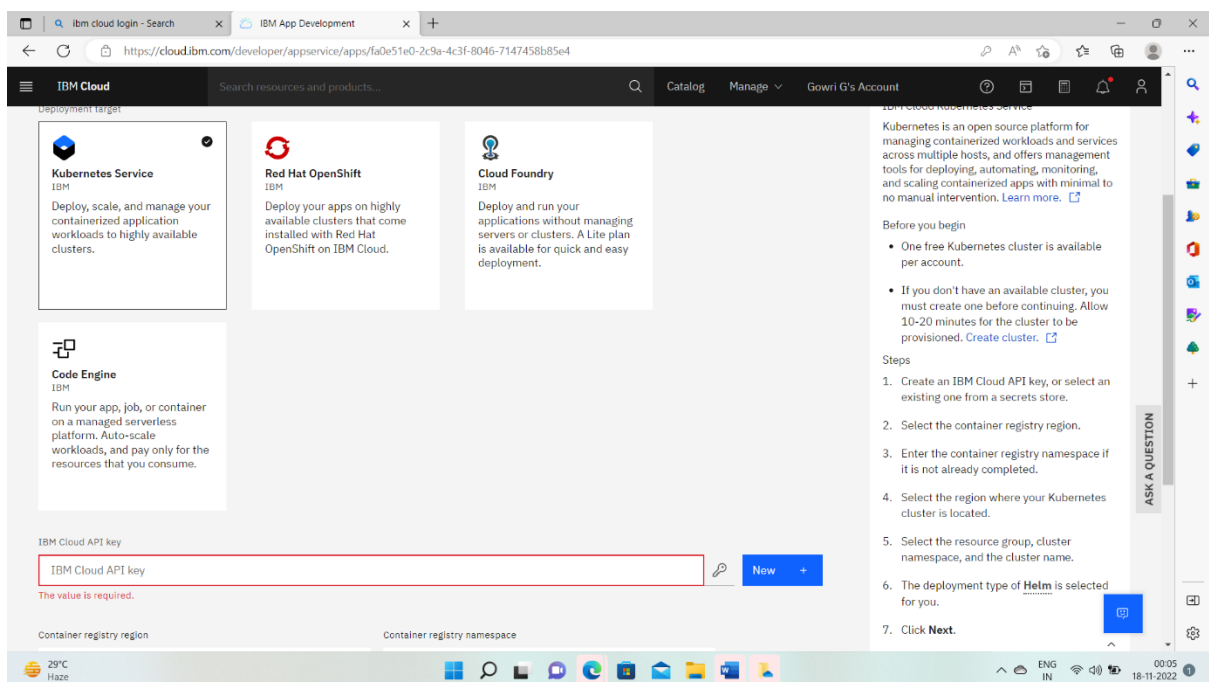
STEP 3: Enter the app name, location and select the plan and click on create.:



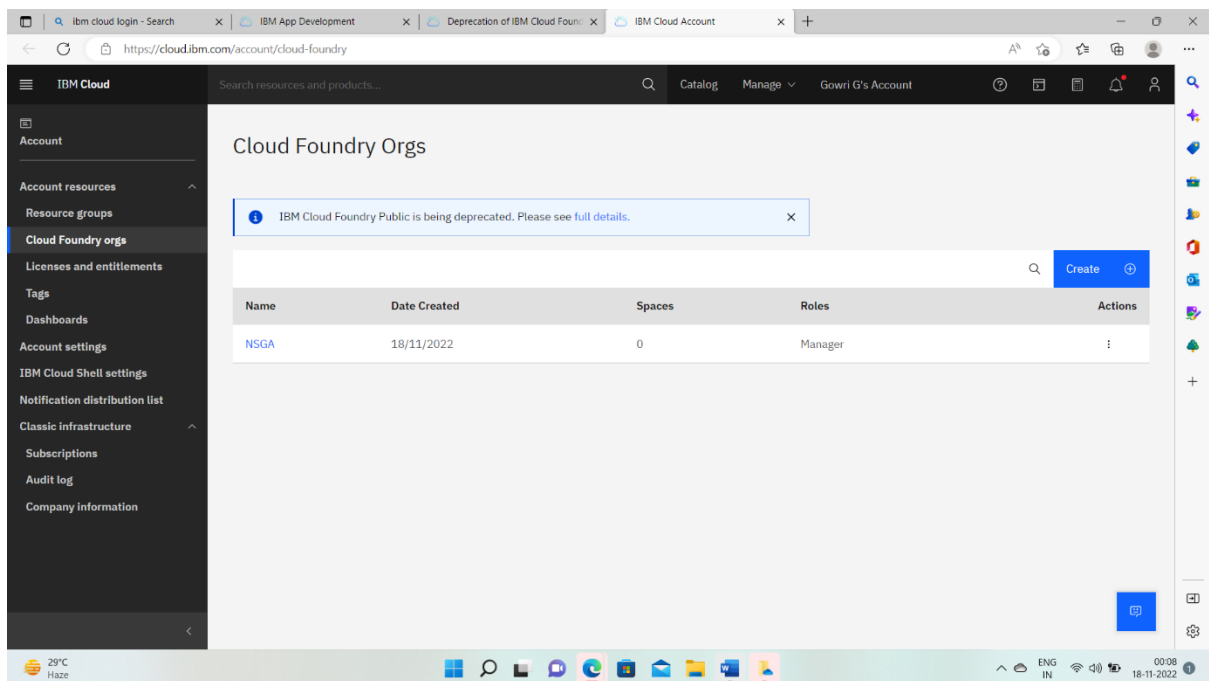
STEP 4: click on deploy your app button:



STEP 5: In deployment automation select cloud foundry and click on create.org:

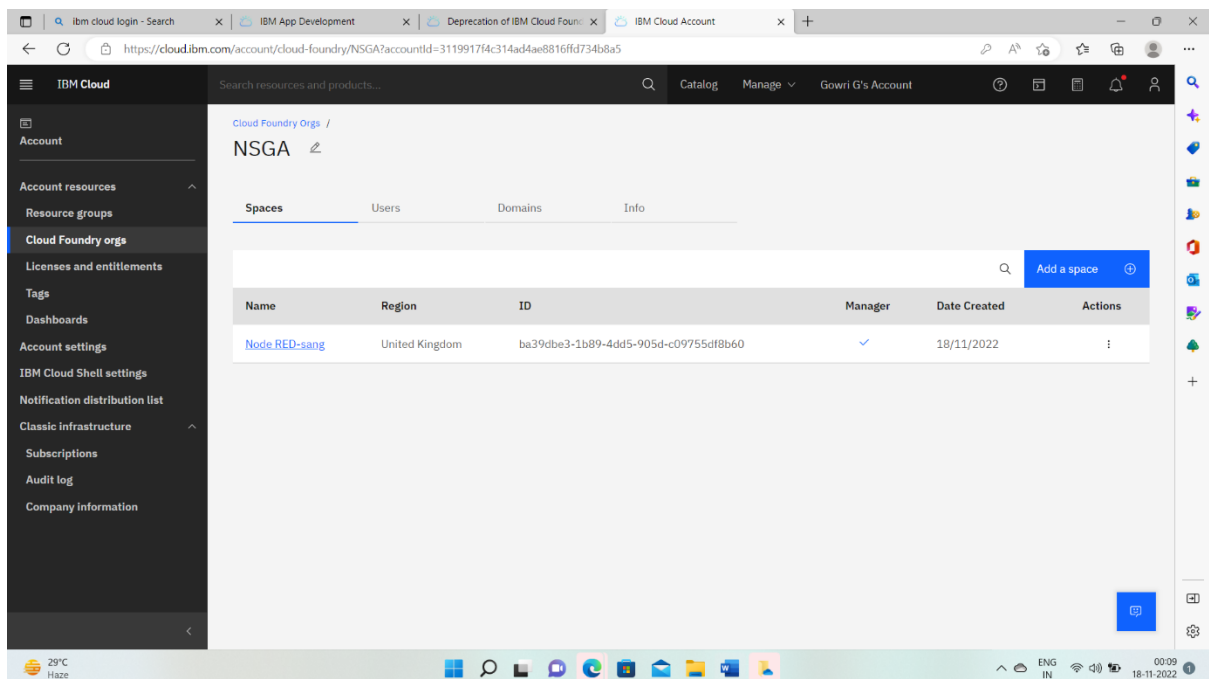


STEP 6: click on create button and enter the name and create a space:



The screenshot shows the IBM Cloud Account page for 'Gowri G's Account'. The left sidebar contains navigation links: Account, Account resources, Resource groups, Cloud Foundry orgs (selected), Licenses and entitlements, Tags, Dashboards, Account settings, IBM Cloud Shell settings, Notification distribution list, Classic infrastructure, Subscriptions, Audit log, and Company information. The main content area is titled 'Cloud Foundry Orgs' and displays a table with one entry: 'NSGA' created on 18/11/2022 with 0 spaces and a Manager role. A 'Create' button is located in the top right corner of the table.

Name	Date Created	Spaces	Roles	Actions
NSGA	18/11/2022	0	Manager	



The screenshot shows the IBM Cloud Account page for 'Gowri G's Account', specifically the 'Cloud Foundry Orgs' section for the 'NSGA' org. The left sidebar is the same as in the previous screenshot. The main content area is titled 'Cloud Foundry Orgs / NSGA' and displays a table with one entry: 'Node RED-sang' created on 18/11/2022, located in the United Kingdom region, with ID 'ba39dbe3-1b89-4dd5-905d-c09755df8b60'. A 'Add a space' button is located in the top right corner of the table.

Name	Region	ID	Manager	Date Created	Actions
Node RED-sang	United Kingdom	ba39dbe3-1b89-4dd5-905d-c09755df8b60	✓	18/11/2022	

STEP 7: In app development click new on api key and select region and click next:

The screenshot shows the IBM Cloud API key creation interface. At the top, there's a navigation bar with 'IBM Cloud' and a search bar. Below it, a message states 'IBM Cloud Foundry Public is deprecated.' The main section is titled 'IBM Cloud API key'. It features a text input field containing a long alphanumeric string, a 'New' button with a plus icon, and a 'Number of instances' dropdown set to '1'. A slider for 'Memory allocation per instance' is set between 64 MB and 256 MB. Below the slider are three dropdown menus: 'Region' (set to 'London'), 'Organization' (set to 'NSGA'), and 'Space' (set to 'Node RED-sang'). Further down are 'Host' and 'Domain' dropdowns, with 'Host' set to 'node-red-gbrib-2022-11-17' and 'Domain' set to 'eu-gb.mybluemix.net'. At the bottom are 'Cancel' and 'Next' buttons. The right sidebar contains an 'ASK A QUESTION' button and a vertical list of application icons. The bottom status bar shows the temperature as 29°C, weather as 'Haze', and the time as 00:11 on 18-11-2022.

STEP 8: select the region and click create:

The screenshot shows the 'Node RED GBRIB 2022-11-17' page in the IBM Cloud developer console. The breadcrumb trail is 'Resource list / App details /'. The page title is 'Node RED GBRIB 2022-11-17'. Below the title, there are two tabs: 'Select the deployment target' (active) and 'Configure the DevOps toolchain'. The 'Configure the DevOps toolchain' section has a sub-header 'Configure the DevOps toolchain' and a prompt 'Give your toolchain a name and select the region to create your toolchain in.' It includes a 'DevOps toolchain name' text input field with the value 'NodeREDGBRIB2022-11-17' and a note 'Accept the default name, or enter a value up to 100 characters.' Below this is a 'Region' dropdown menu set to 'Dallas'. At the bottom are 'Back' and 'Create' buttons. A 'Getting started with apps' card is visible on the right. The right sidebar has an 'ASK A QUESTION' button and application icons. The bottom status bar shows 29°C, 'Haze', and the time 00:12 on 18-11-2022.

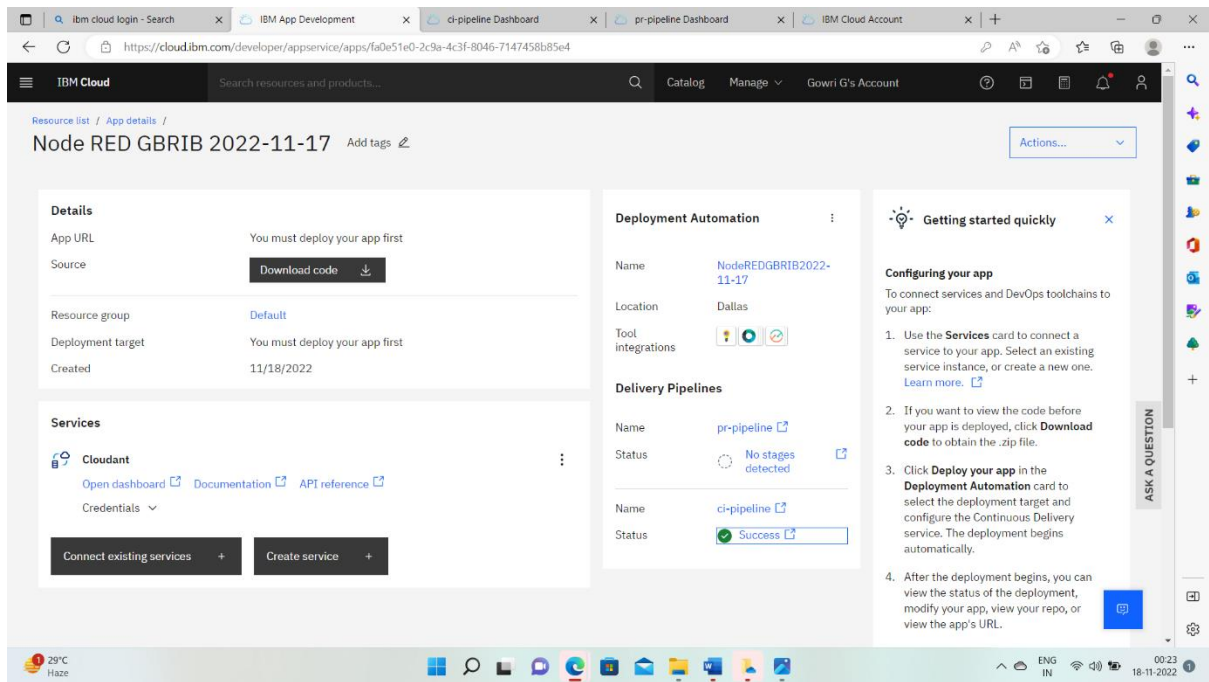
STEP 9: Wait till you get the success in ci-pipeline and app URL is generated:

The screenshot displays the IBM Cloud Developer console for an application named "Node RED GBRIB 2022-11-17". The interface is divided into several sections:

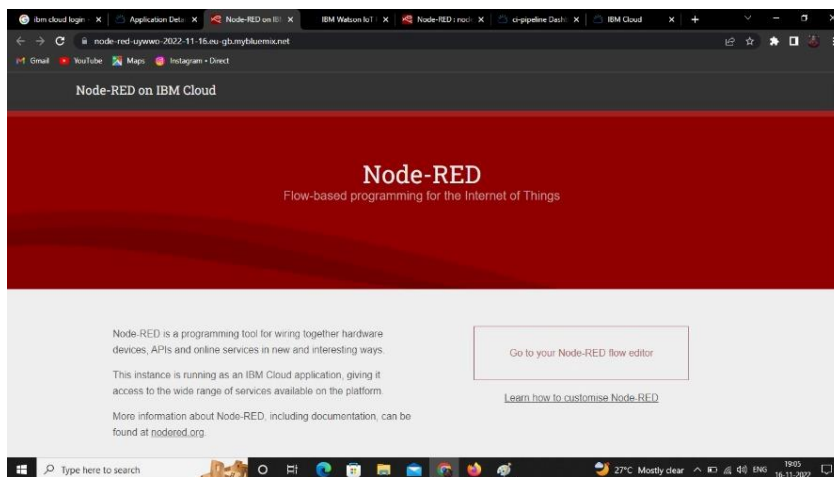
- Details:** Shows the App URL (empty), Source (with a "Download code" button), Resource group (Default), Deployment target (empty), and Created date (11/18/2022).
- Services:** Lists the "Cloudant" service with links to "Open dashboard", "Documentation", and "API reference". It also includes a "Credentials" dropdown and buttons for "Connect existing services" and "Create service".
- Deployment Automation:** Shows the Name "NodeREDGBRIB2022-11-17", Location "Dallas", and Tool integrations. Below this, the "Delivery Pipelines" section lists two pipelines: "pr-pipeline" and "ci-pipeline", both with a status of "No stages detected".
- Getting started quickly:** A sidebar on the right provides instructions for configuring the app, including connecting services, downloading code, and deploying the app.

The bottom of the screen shows a Windows taskbar with various application icons and a system tray displaying the temperature (29°C) and time (00:13 on 18-11-2022).

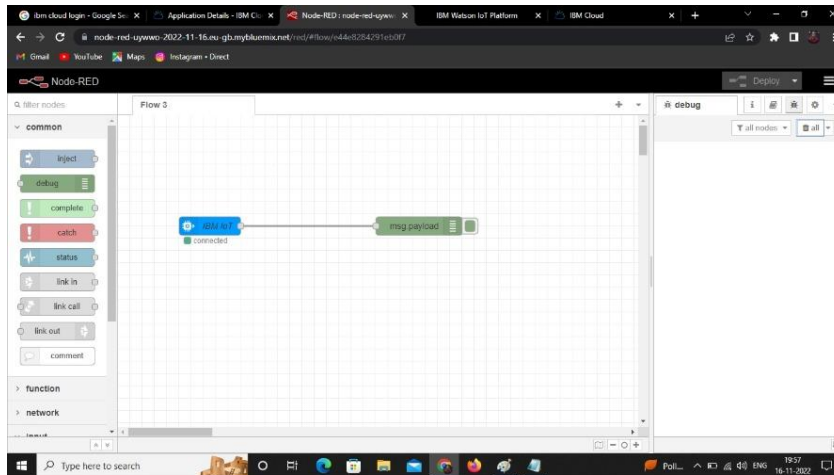
STEP 10: Now click on the generated APP URL:



STEP 11 : You will redirected to your node-red on ibm cloud page:

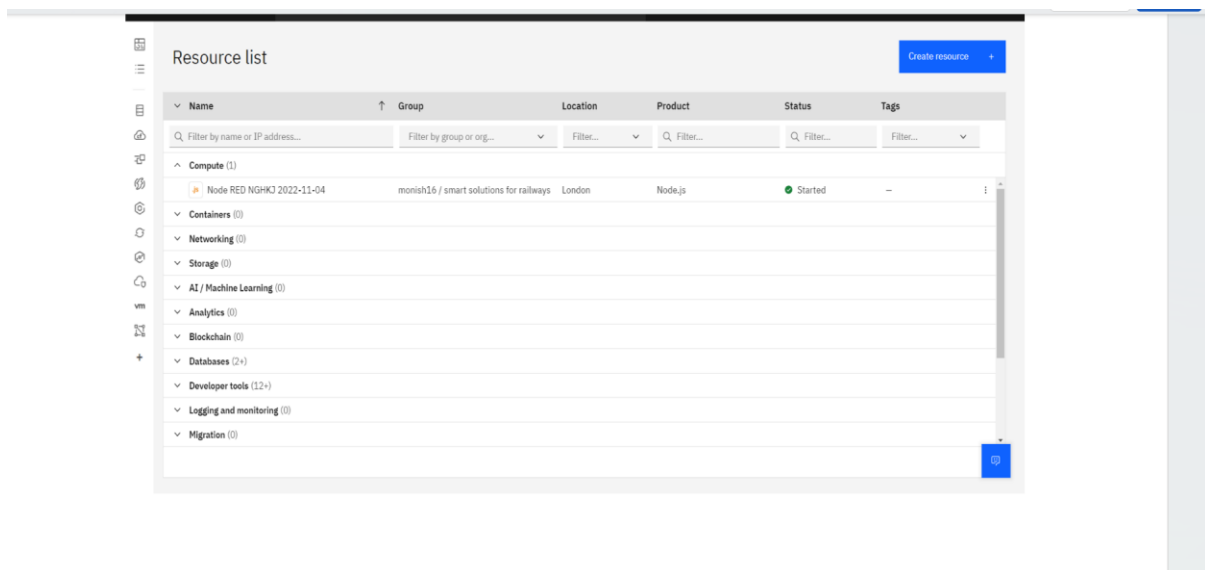


STEP 12: Click on node-red flow editor and you will be redirected to your node-red workspace:

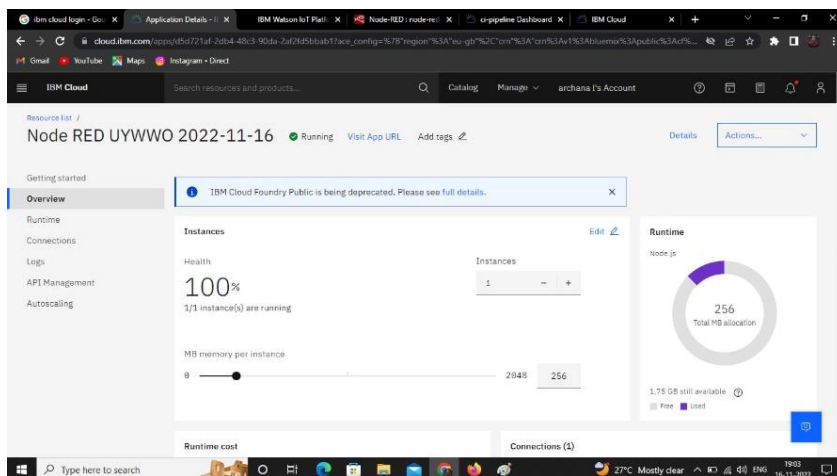


DIRECTING TO CREATED NODE-RED WORKSPACE

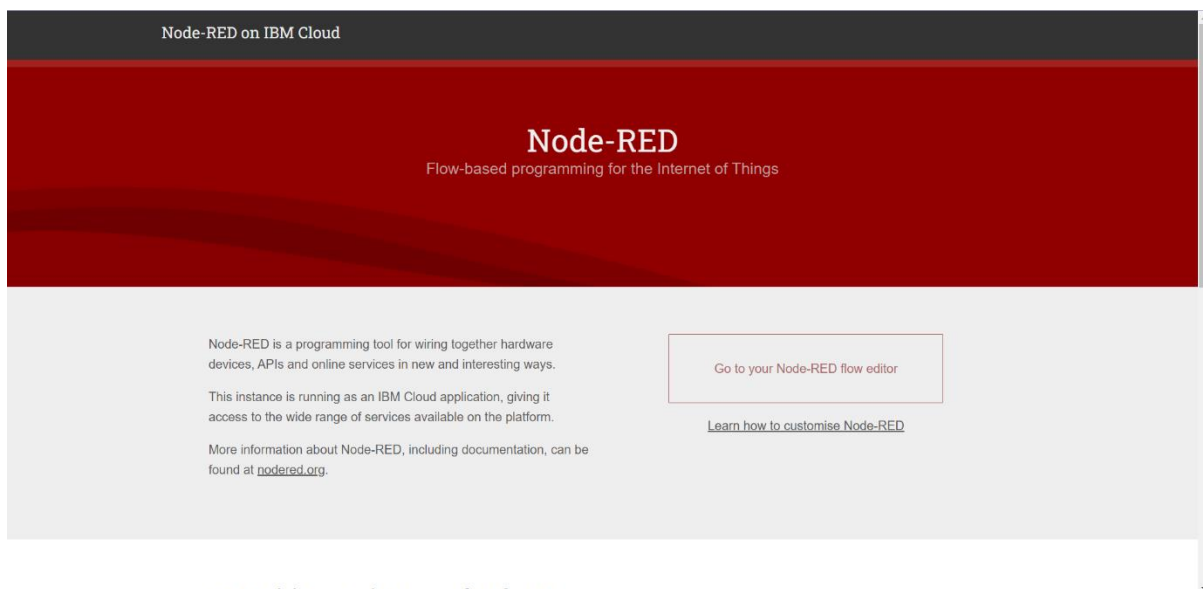
STEP 13: In resource select compute and click on node-red :



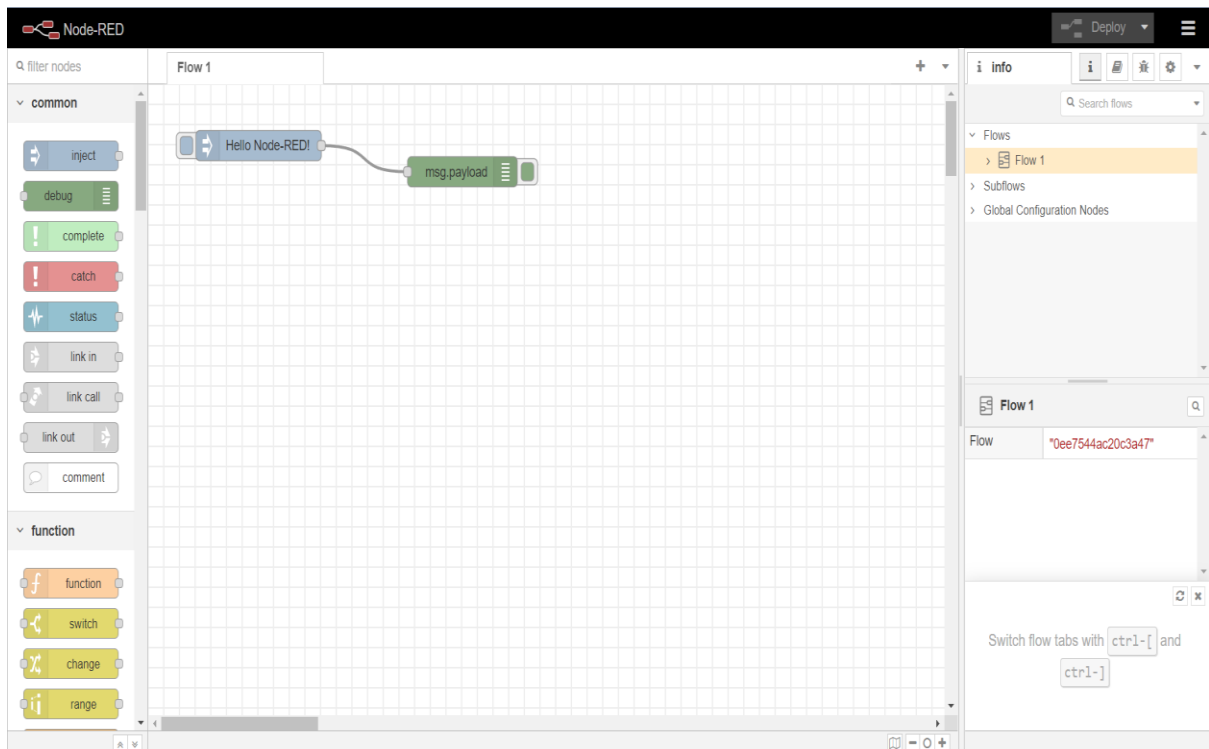
STEP 14: click on visit app url to be redirected to node red:



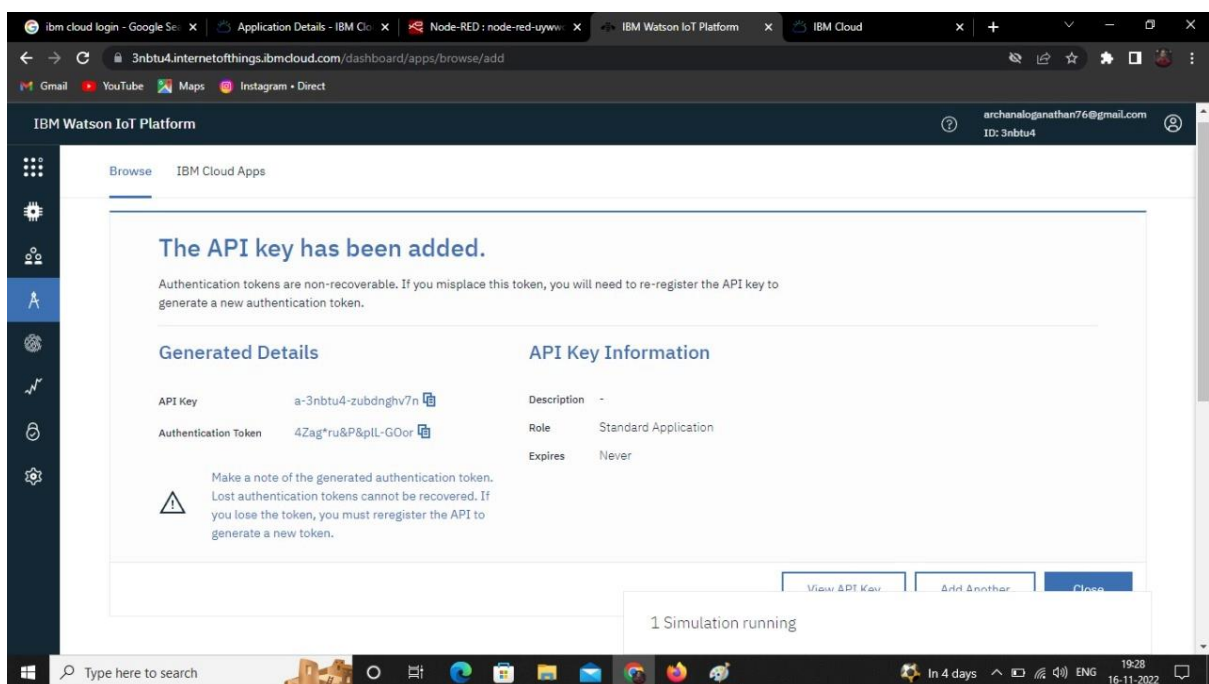
STEP 15: Click on go to your NODE-RED flow editor button:



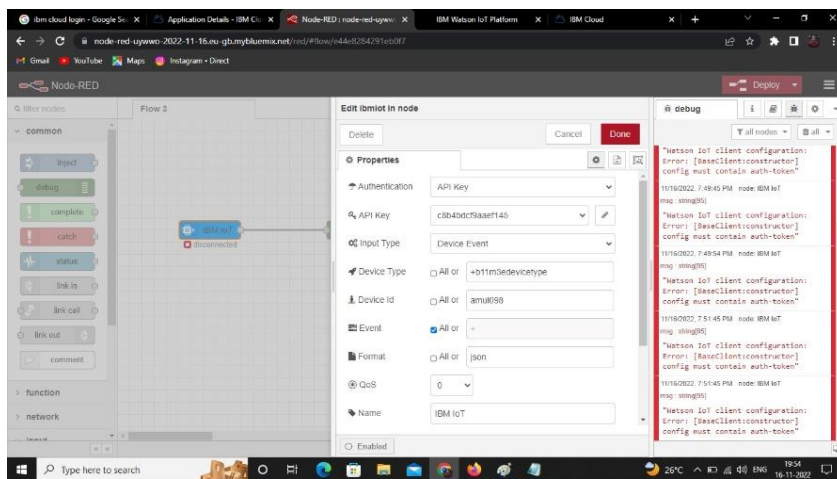
STEP 16: You will be redirected to the node red flow editor:



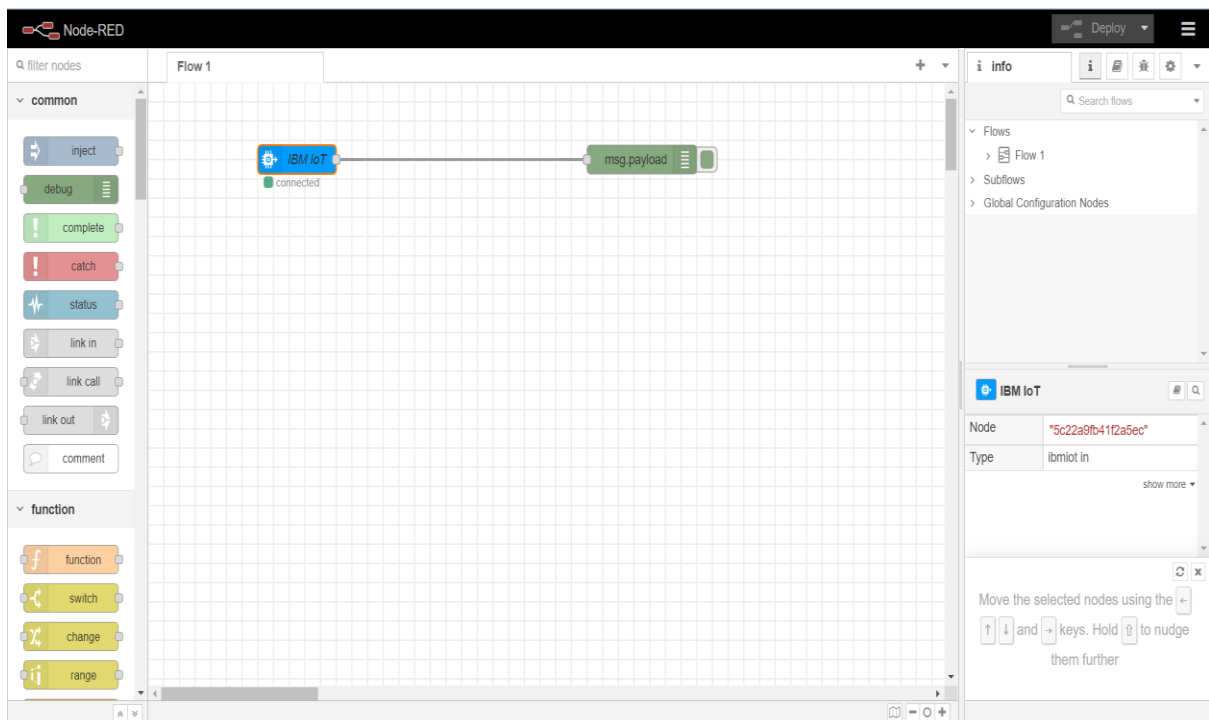
STEP 17: Generating API key and Authentication token:



STEP 18: Edit Ibmmiot in node:



STEP 19: Connect Ibmmiot in and debug 1 and deploy:



STEP 20: Edit gauge node (the gauge nodes named latitude,longitude and available_seats as fig1,fig2,fig3):

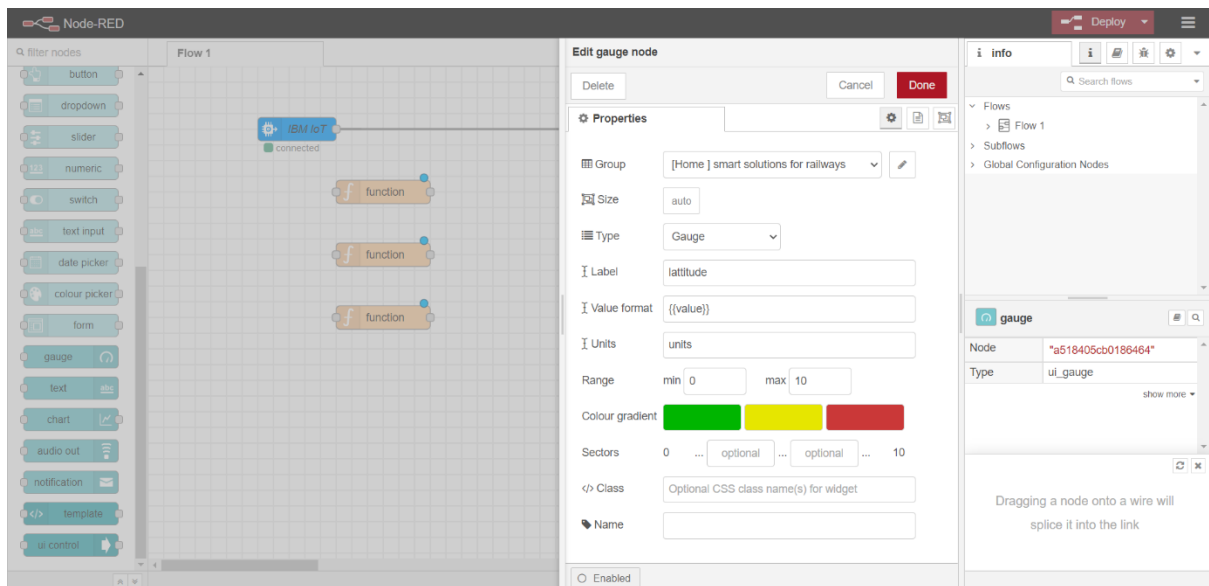


FIG 1

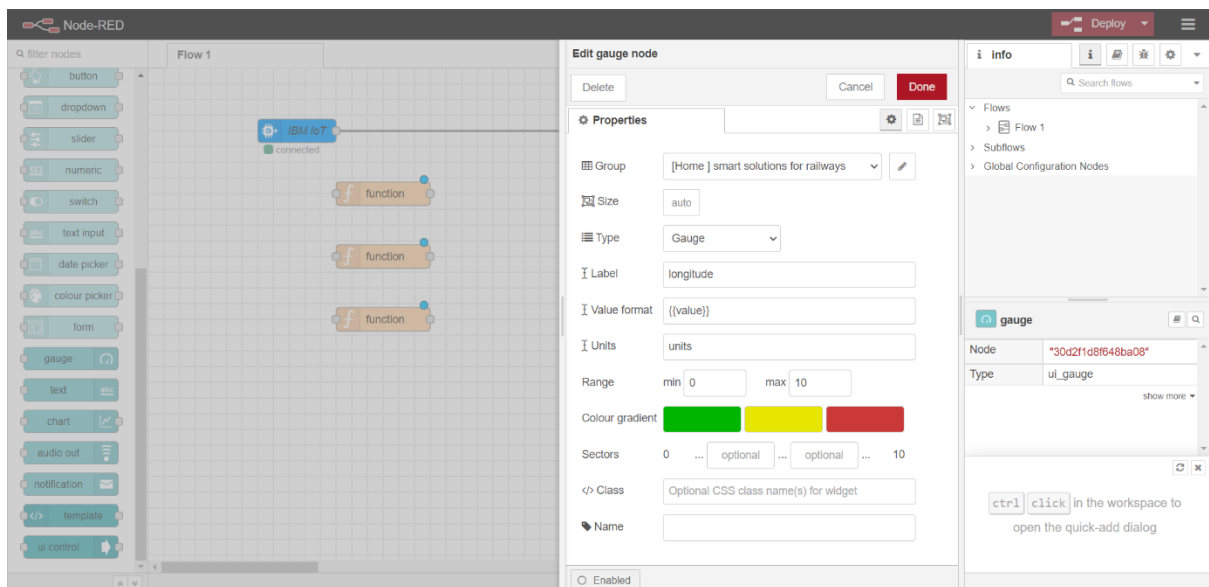


FIG 2

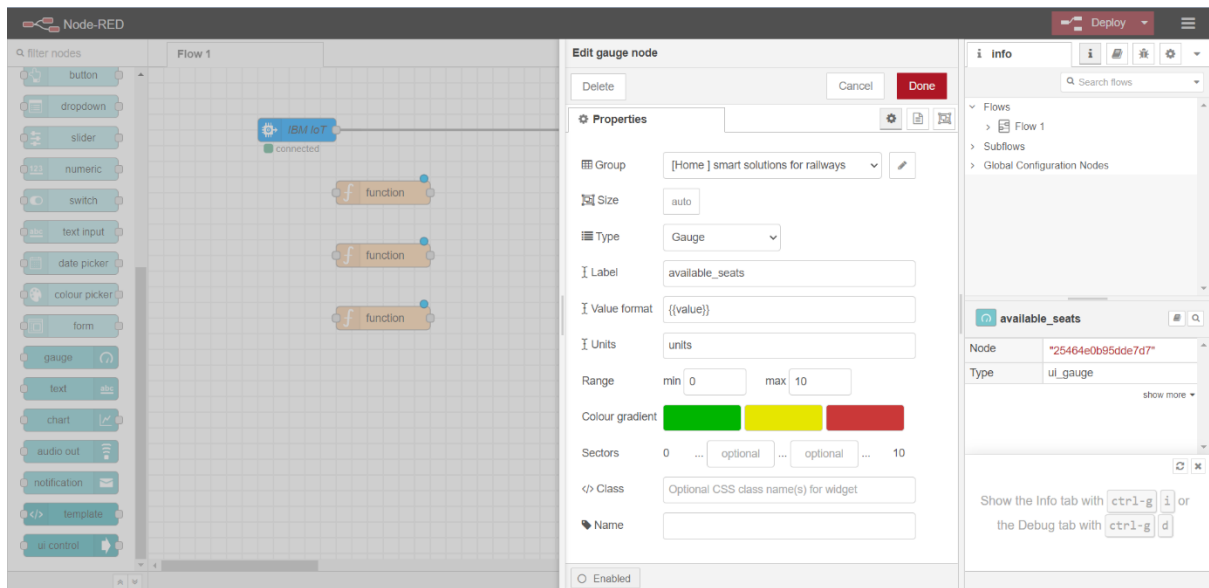
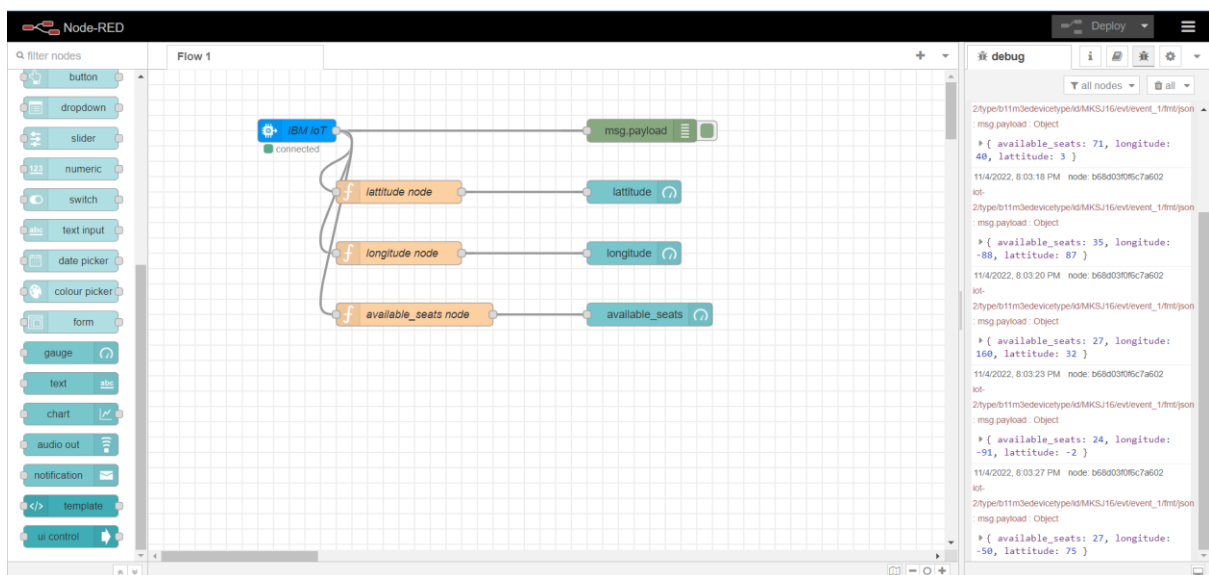


FIG 3

STEP 21: Generate debug message from IBM Watson IoT Platform and connect the nodes:



[illegible]