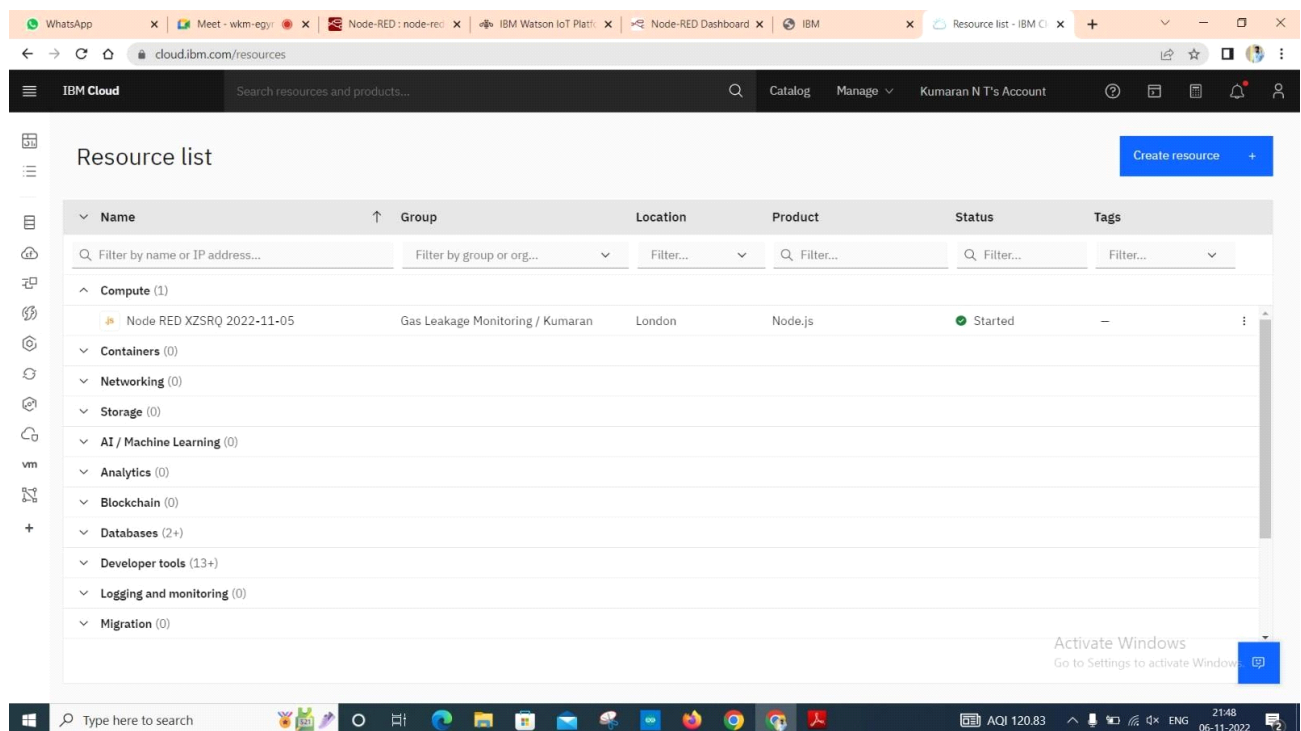


Creating a Node-Red Web Application

TEAM ID : PNT2022TMID52298

PROJECT NAME : GAS LEAKAGE MONITORING AND ALARTING SYSTEM

- In IBM cloud dashboard, click on Cloud Foundry apps

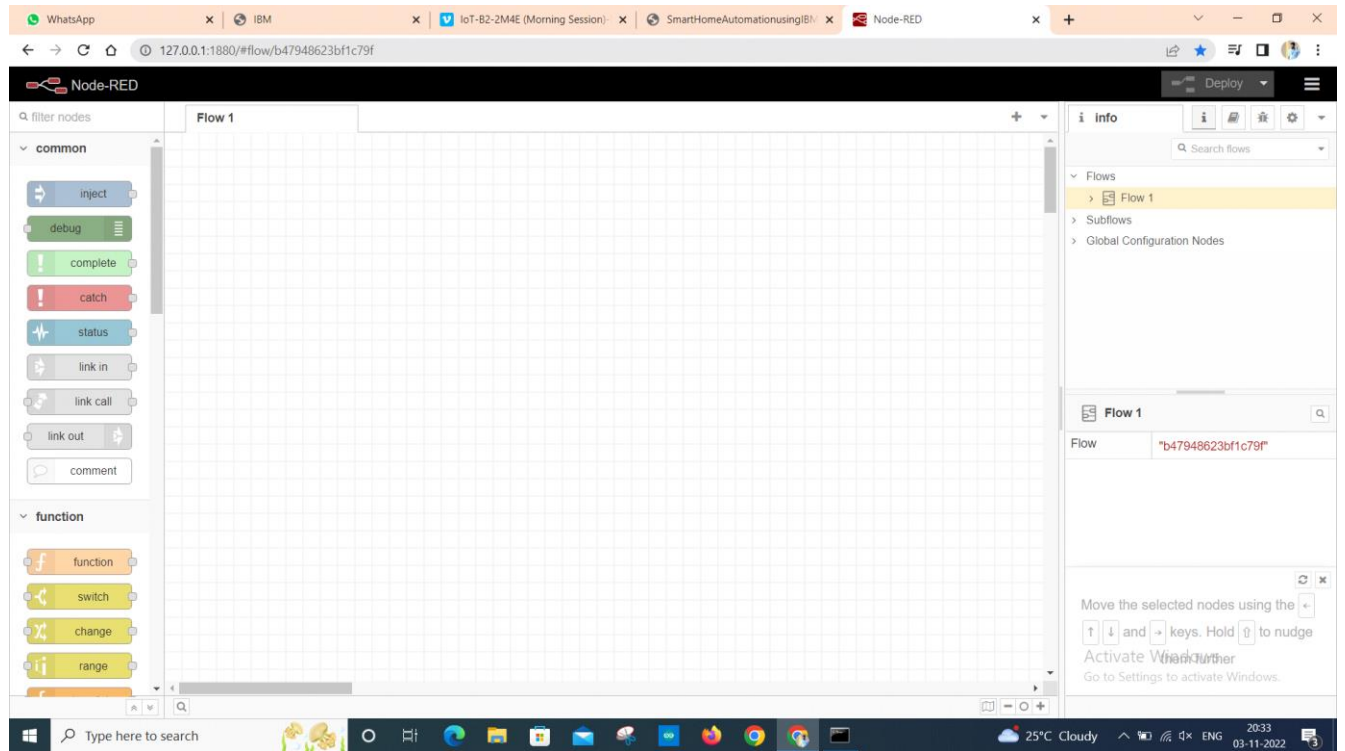


- A new window appears where we need to NODE-RED SELDZ app created before.

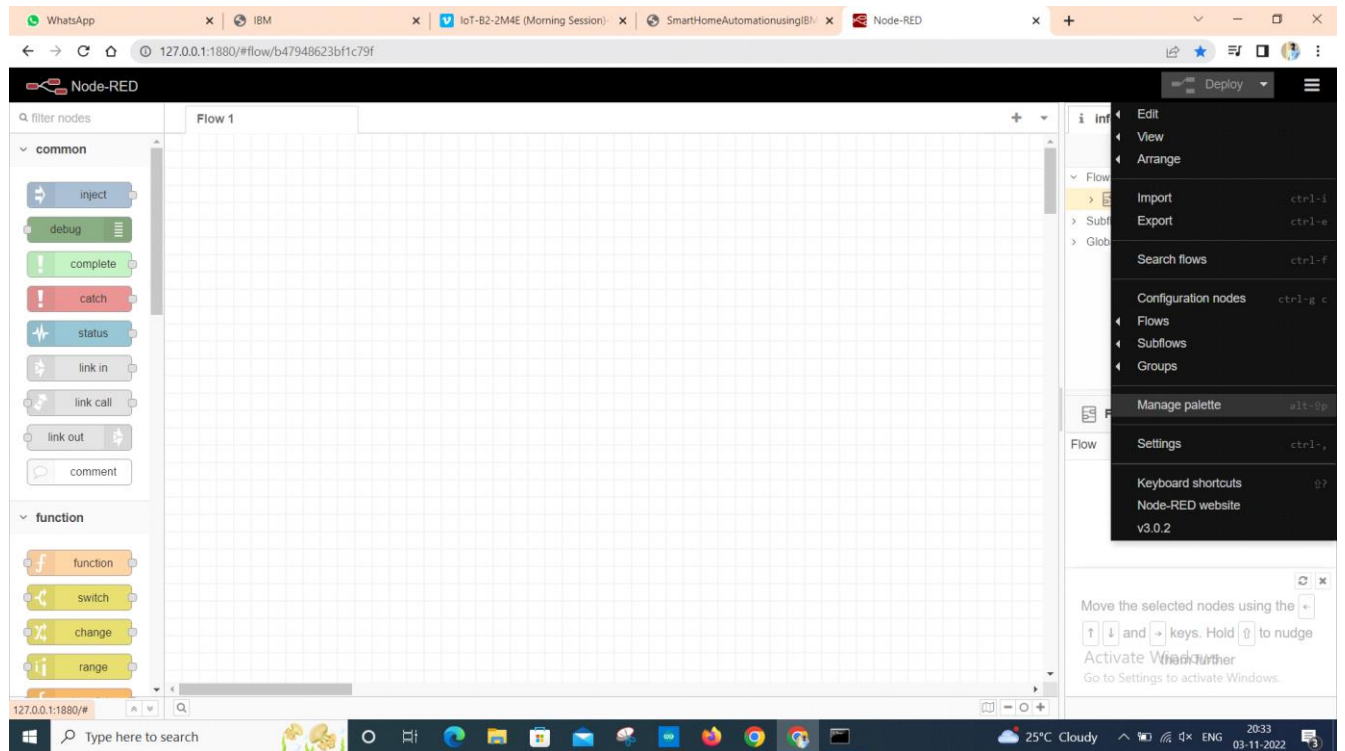
The screenshot shows the IBM Cloud console interface for a Node RED application. The top navigation bar includes the IBM Cloud logo, a search bar, and user account information. The main content area displays the application details for 'Node RED XZSRQ 2022-11-05', which is in a 'Running' state. A sidebar on the left provides navigation options like 'Overview', 'Runtime', 'Connections', 'Logs', 'API Management', and 'Autoscaling'. The 'Overview' section shows the application is running on 1 instance with 100% health. A 'Runtime' section features a donut chart indicating 256 MB total allocation, with 1.75 GB still available. A 'Runtime cost' section shows the current and estimated cost as \$0.00. A 'Connections' section lists one connection. A notification banner at the top states 'IBM Cloud Foundry Public is being deprecated. Please see full details.'

- Click on your Node-RED flow editor where you will be redirected to the Node-RED flow editor.

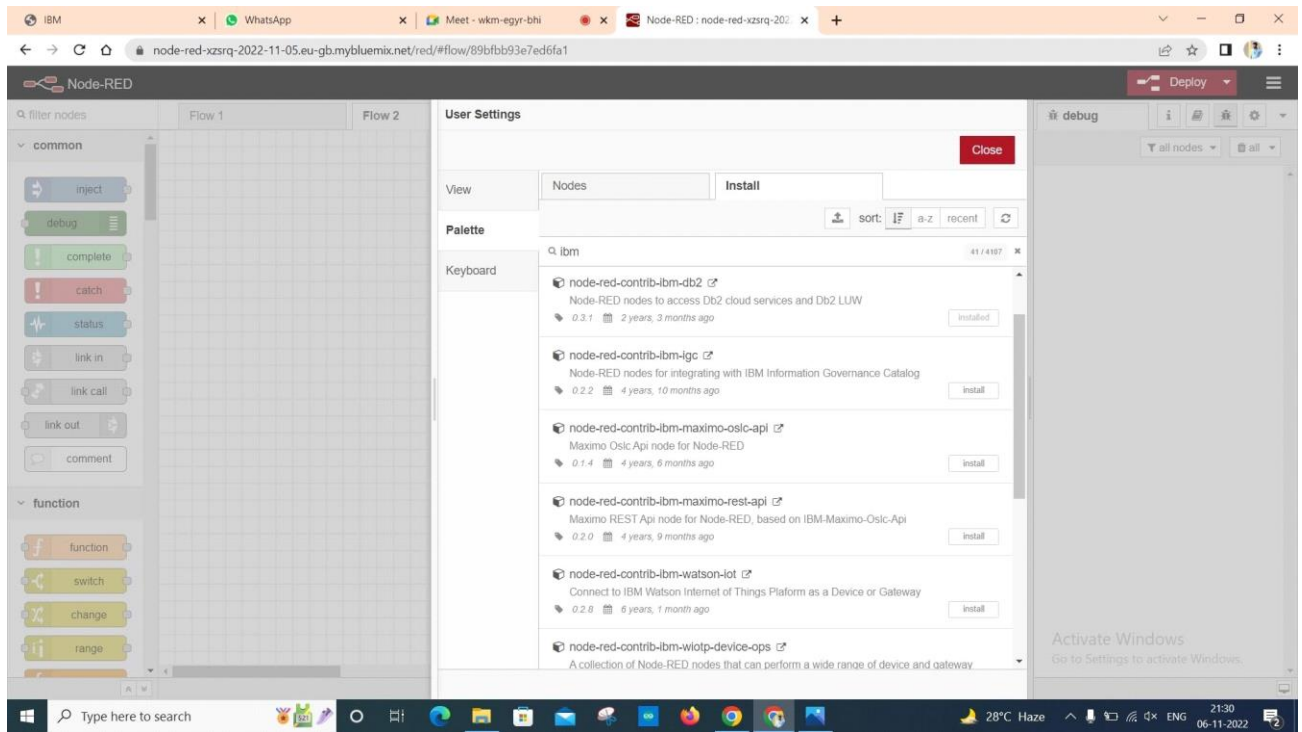
The screenshot shows the 'Node-RED on IBM Cloud' landing page. The page has a dark red header with the 'Node-RED' logo and the tagline 'Flow-based programming for the Internet of Things'. The main content area is white and contains text describing Node-RED as a programming tool for wiring together hardware devices, APIs, and online services. It mentions that the instance is running as an IBM Cloud application. A prominent button labeled 'Go to your Node-RED flow editor' is located on the right. Below it is a link to 'Learn how to customise Node-RED'. At the bottom, there is a section titled 'Customising your instance of Node-RED' and an 'Activate Windows' watermark.



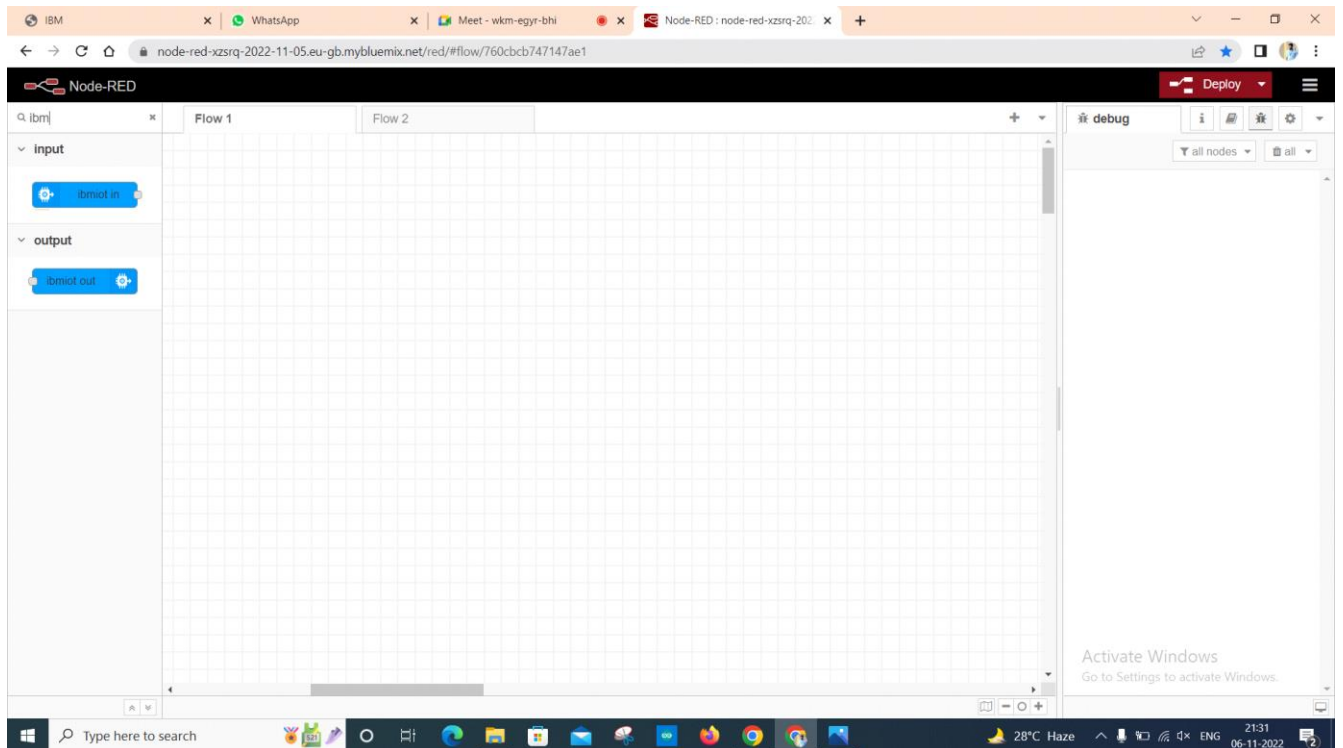
- To install IBM nodes in Node-red flow editor click on manage palette in the menu option which is on the top-right of the screen.



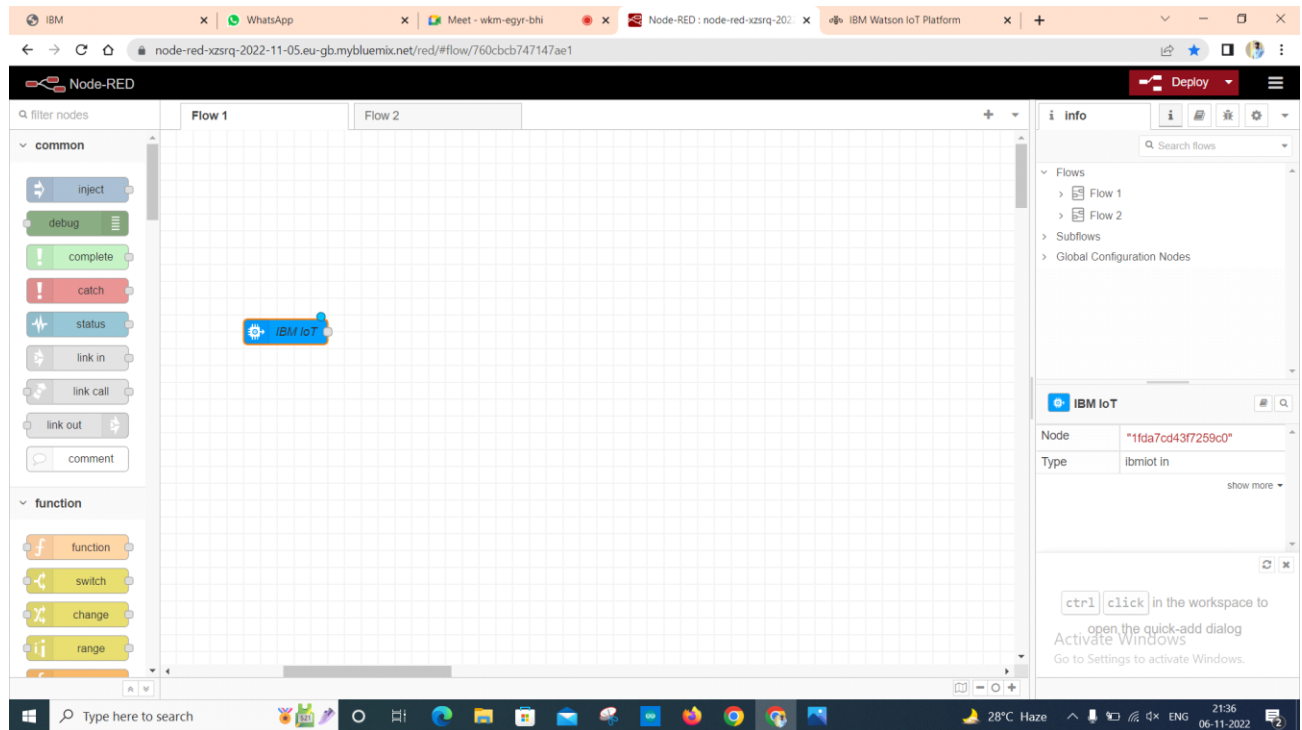
- In install section search for ibmiot and install the ibm nodes to flow editor.



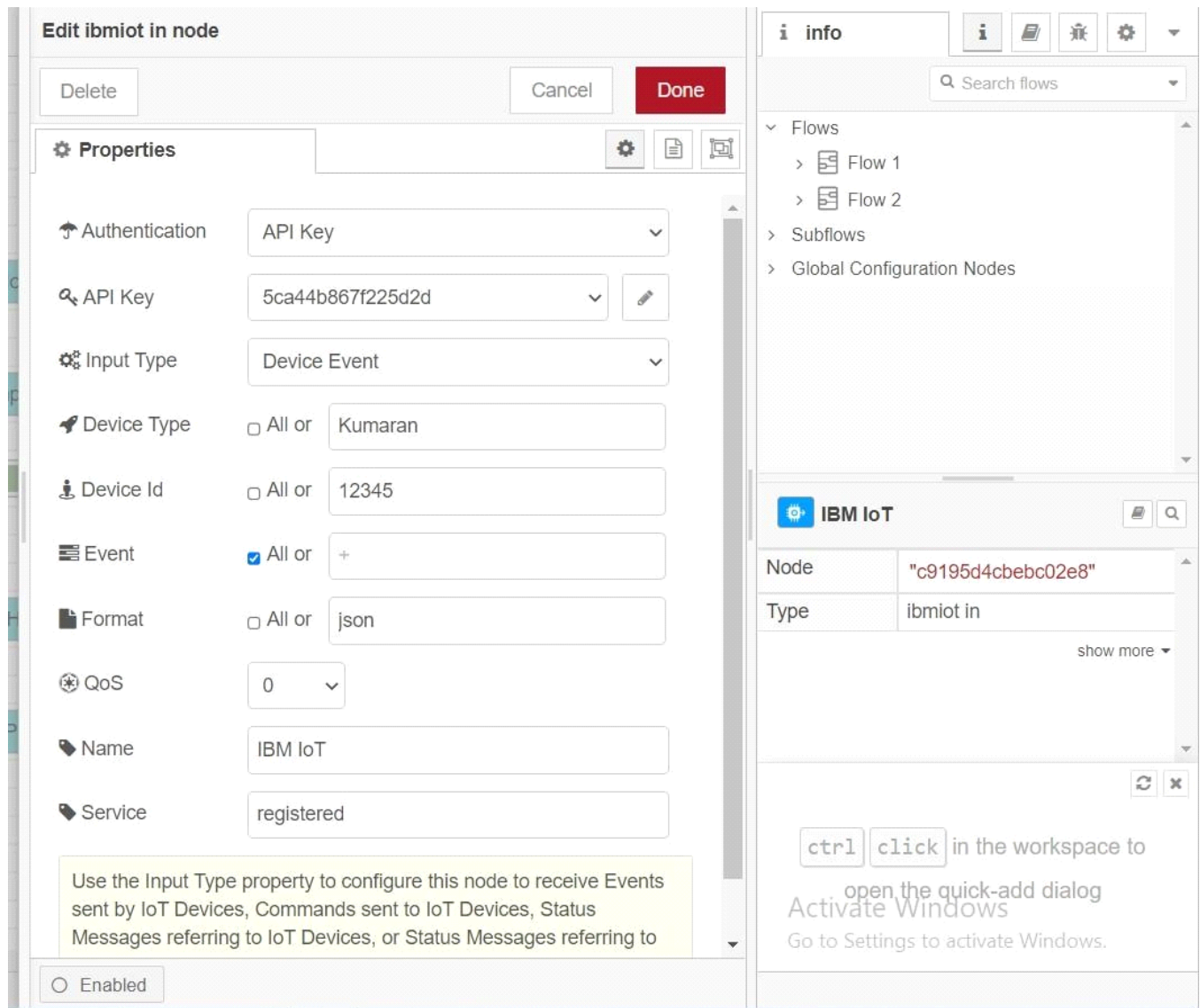
- Search for IBM nodes in the filter nodes section



- To Retrieve the data from the IBM IoT platform by using Node-RED IBM IoT Input node and doubleclick on the IBM IoT input node



- Select API Key from Authentication in properties.
- In API Key paste API Key, API Token and server name and update it



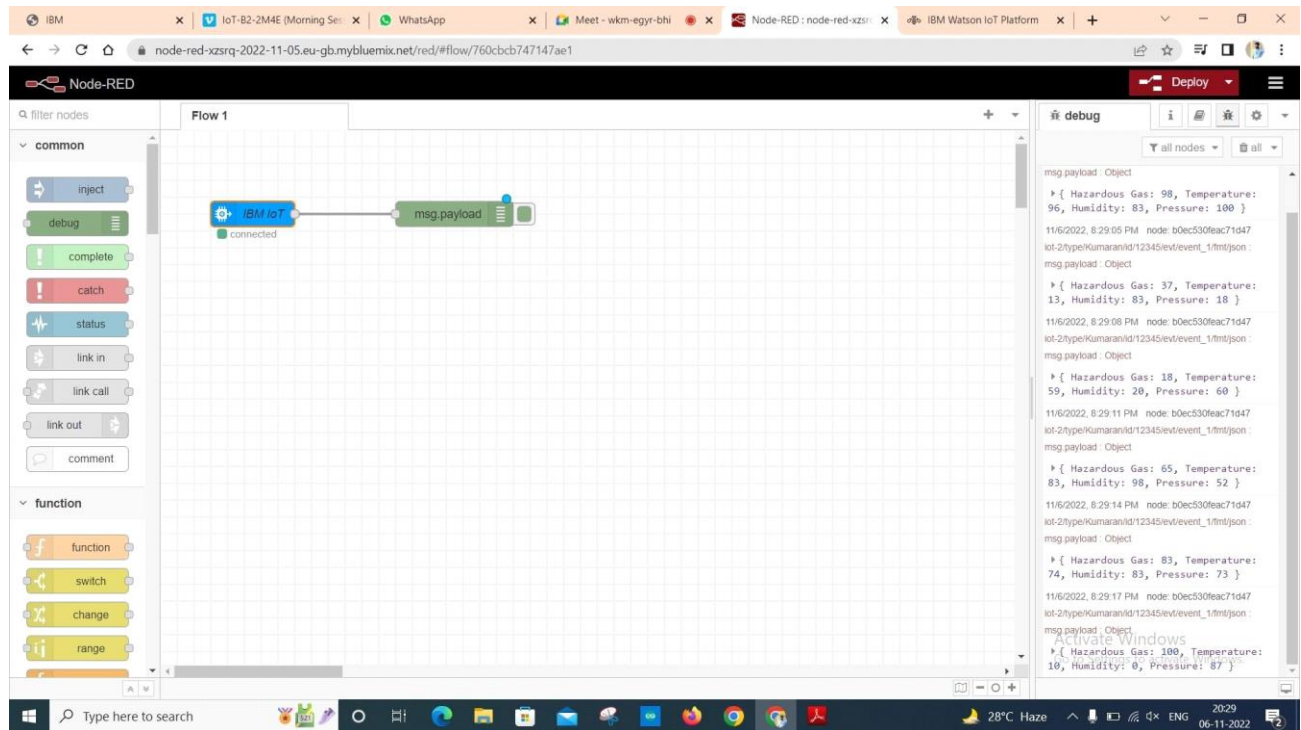
- Also update your input type as event, Device type, Device ID, command and format in the properties section and click on Done
- **To generate API Key go to IBM IoT platform**
- In Apps Section -> Click on Generate API Key

The screenshot displays the IBM Watson IoT Platform dashboard. The top navigation bar includes the IBM logo and a user profile section with the email 310819106044@smartinternz.com and ID: yf0dyy. The main content area is titled 'Browse IBM Cloud Apps' and features a table of API keys. The first key, 'a-yf0dyy-iwy9pm96o', is selected, and its details are shown in a modal window. The modal has two tabs: 'API Key Information' and 'Access Control/Permissions'. The 'API Key Information' tab is active, showing the following details:

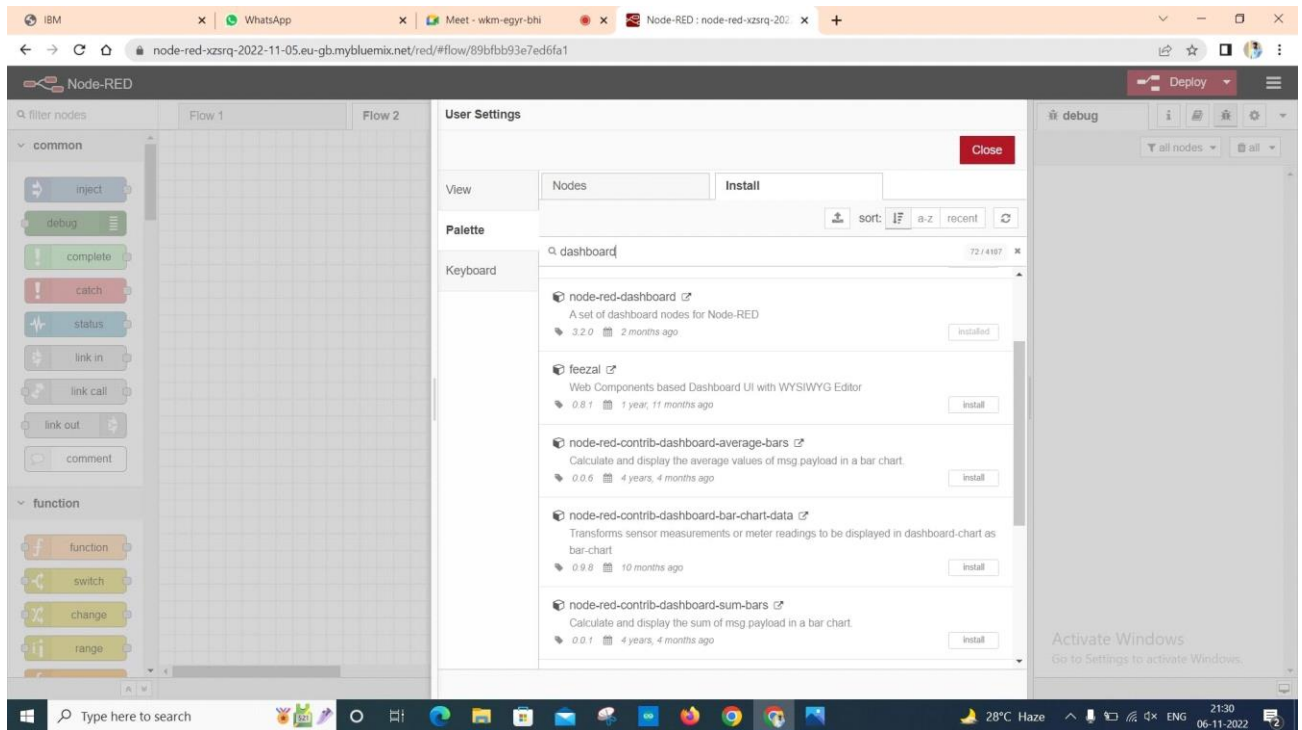
Key	Description	Date Added	Last Update	Last Edited By	Expires
a-yf0dyy-iwy9pm96o	API Key for the device simulator	Nov 6, 2022 9:33 PM	Nov 6, 2022 9:33 PM	-	Never

Below the modal, a second API key 'a-yf0dyy-tbwwm8i7z2' is visible. At the bottom of the dashboard, a status bar indicates '1 Simulation running'. The Windows taskbar at the very bottom shows the search bar, task icons, and system tray information including the date 06-11-2022 and time 21:34.

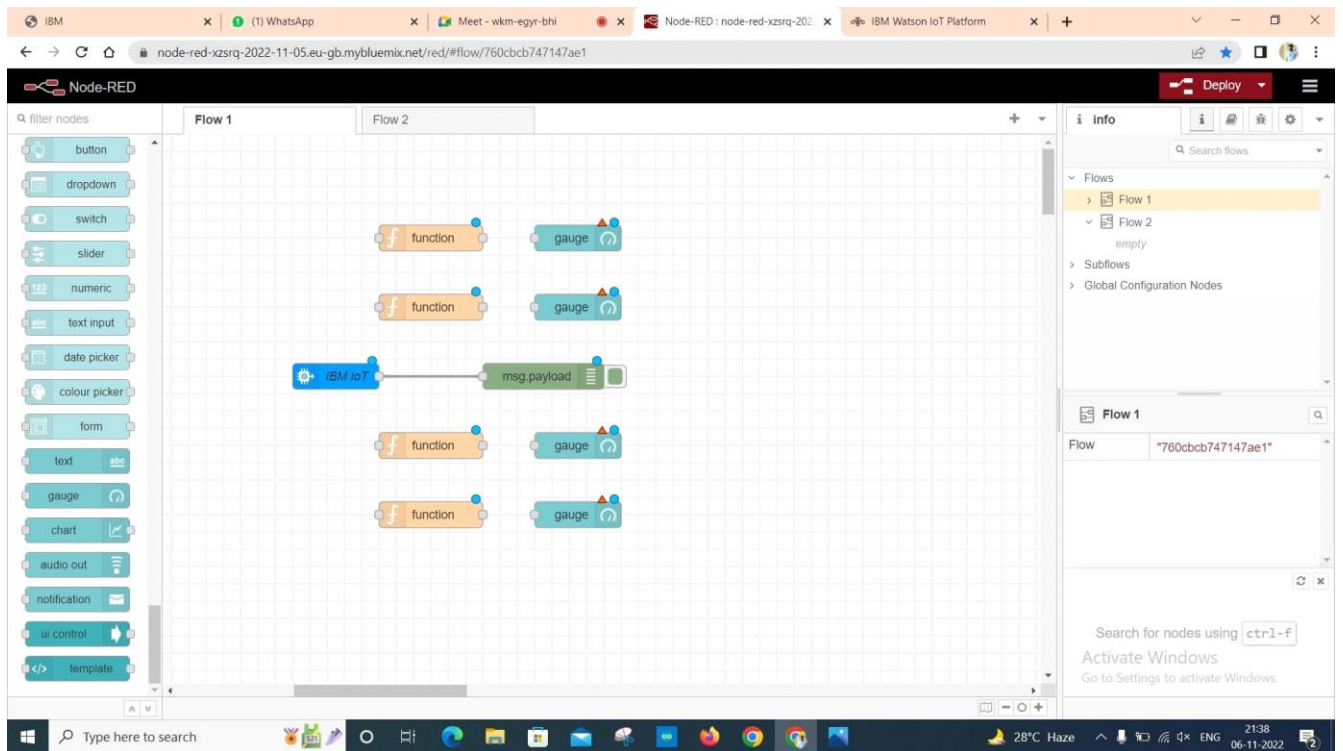
- Click on Deploy option to check the connection status. If the status is disconnected check for IBM IoT properties and try again.



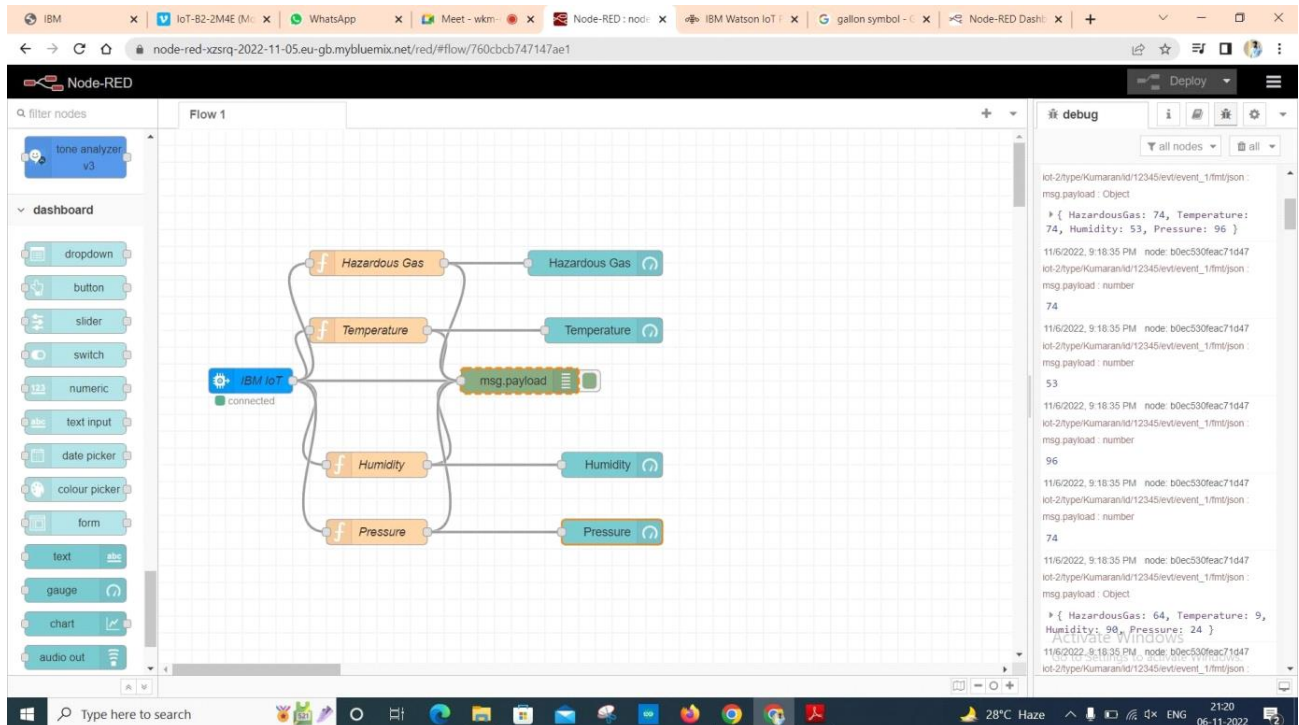
- Place the debug node in the flow editor and click on deploy to see the temperature and humidity value in the debug tab
- Install the dashboard node from the manage pallet to create a UI to display temperature and humidity values in the Dashboard



- Drag and place the function node and gauge node in the flow editor to separate the temperature and humidity value

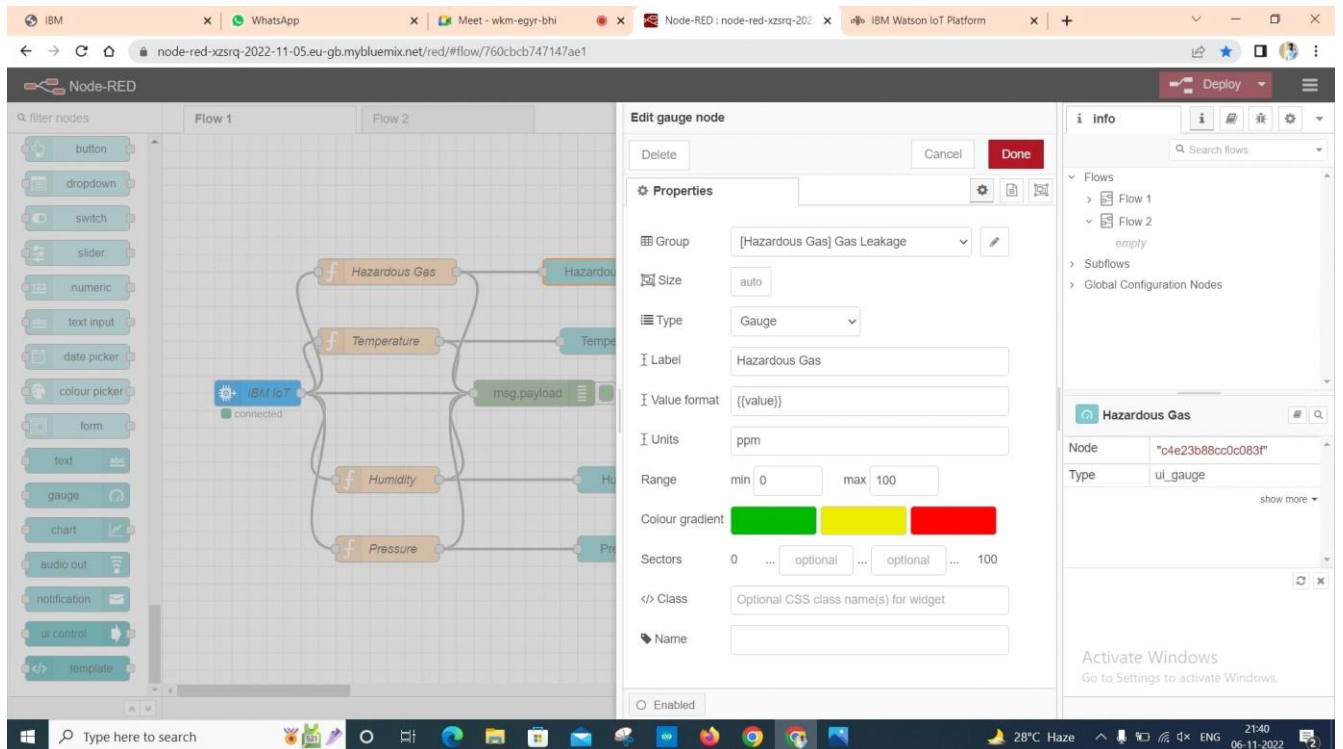


- Double click on function and update the details as follow,
- Type `msg.payload=msg.payload.Temperature` in one function.
- Type `msg.payload=msg.payload.Humidity` in another function
- Type `msg.payload=msg.payload.HazardousGas`
- Type `msg.payload=msg.payload.d.Pressure`
- To separate the humidity and temperature values from payload and click deploy

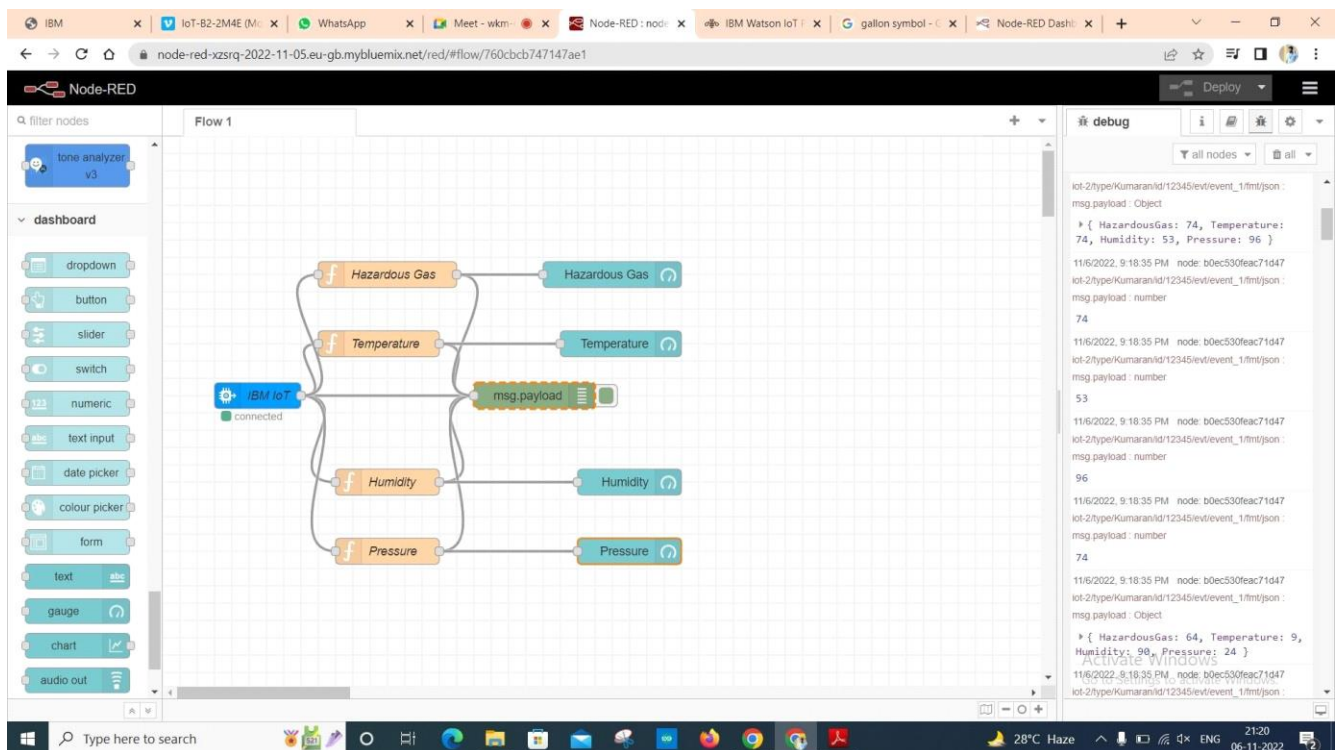


- Select gauge function and these nodes to temperature, pressure, hazardous gas and humidity

- Edit temperature, hazardous gas, pressure and humidity nodes and deploy it.



- After editing the nodes, deploy it



RESULT:

Thus, the Node-Red Web Application is created successfully.