Team ID: PNT2022TMID39421

Node-RED

What is node-RED?

Node-RED is a programming tool for wiring together hardware devices, APIs and online services. Primarily, it is a visual tool designed for the Internet of Things, but it can also be used for other applications to very quickly assemble flows of various services.

It is open source and was originally created by the IBM Emerging Technology organisation. It is included in IBM's Bluemix (a Platform-as-a-Service or PaaS) IoT starter application package. Node-RED can also be deployed separately using the Node.js application. At present, Node-RED is a JS Foundation project.

Node-RED enables users to stitch together Web services and hardware by replacing common low-level coding tasks (like a simple service talking to a serial port), and this can be done with a visual drag-drop interface. Various components in Node-RED are connected together to create a flow. Most of the code needed is created automatically.

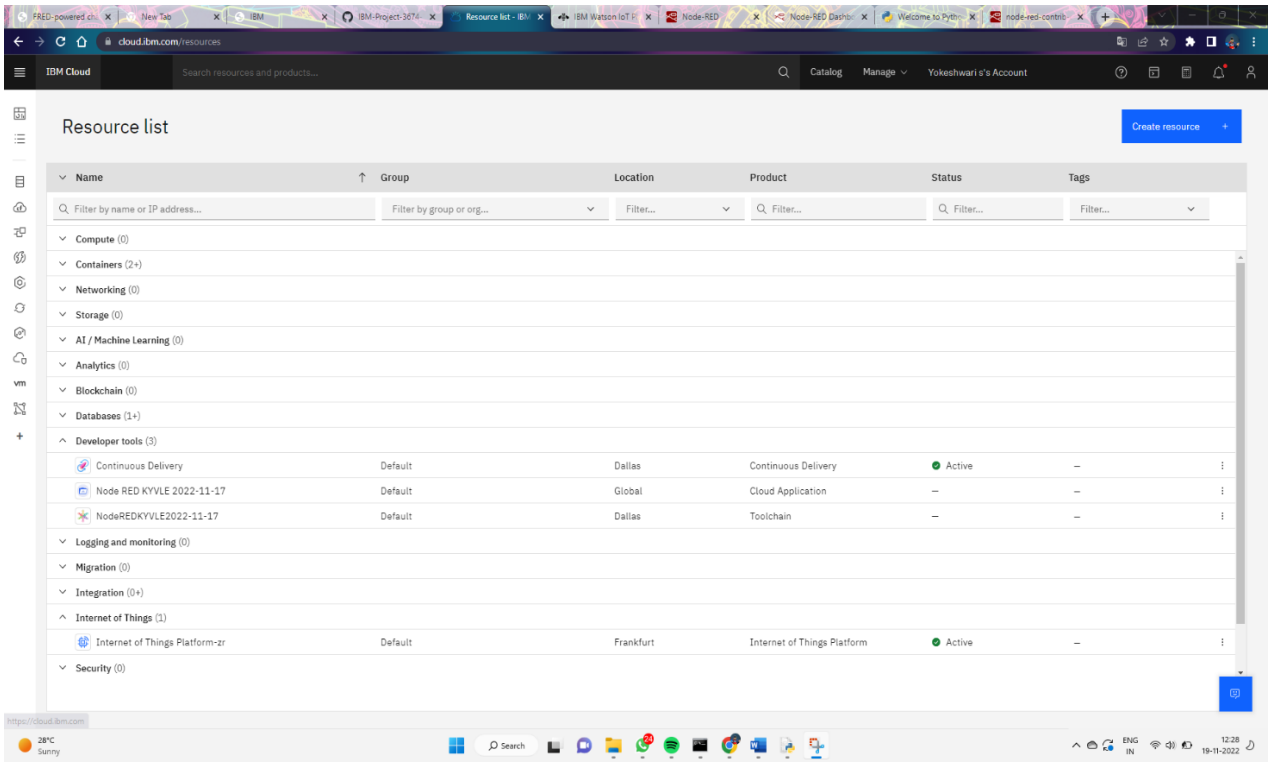
Features of Node-RED:

The major features of Node-RED are listed below.

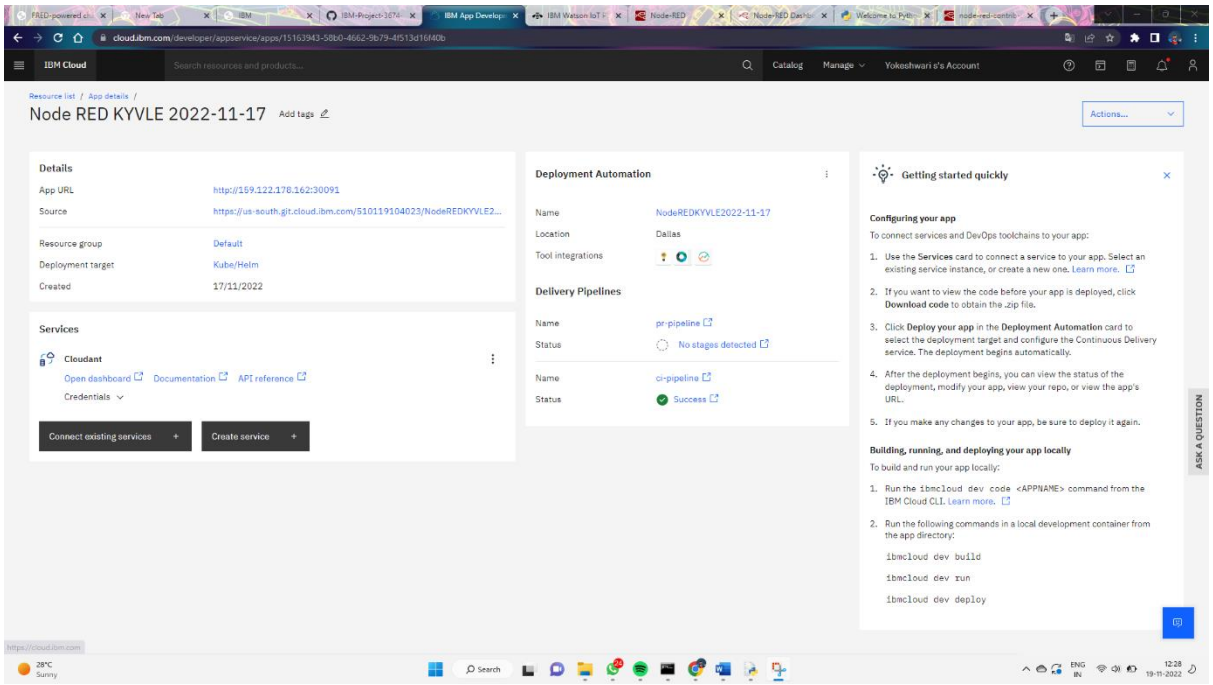
- It supports browser-based flow editing.
- As it is built on Node.js, it supports a lightweight runtime environment along with the event driven and non-blocking model.
- The various flows created in Node-RED are stored using JSON, which can be easily imported and exported for sharing with others.
- You can run it locally (Docker support, etc).
- It can easily fit on most widely used devices like Raspberry Pi, BeagleBone Black, Arduino, Android based devices, etc.
- It can run in the cloud environment like Bluemix, AWS, MS-Azure, etc.

Node-RED installation:

STEP:1



STEP:2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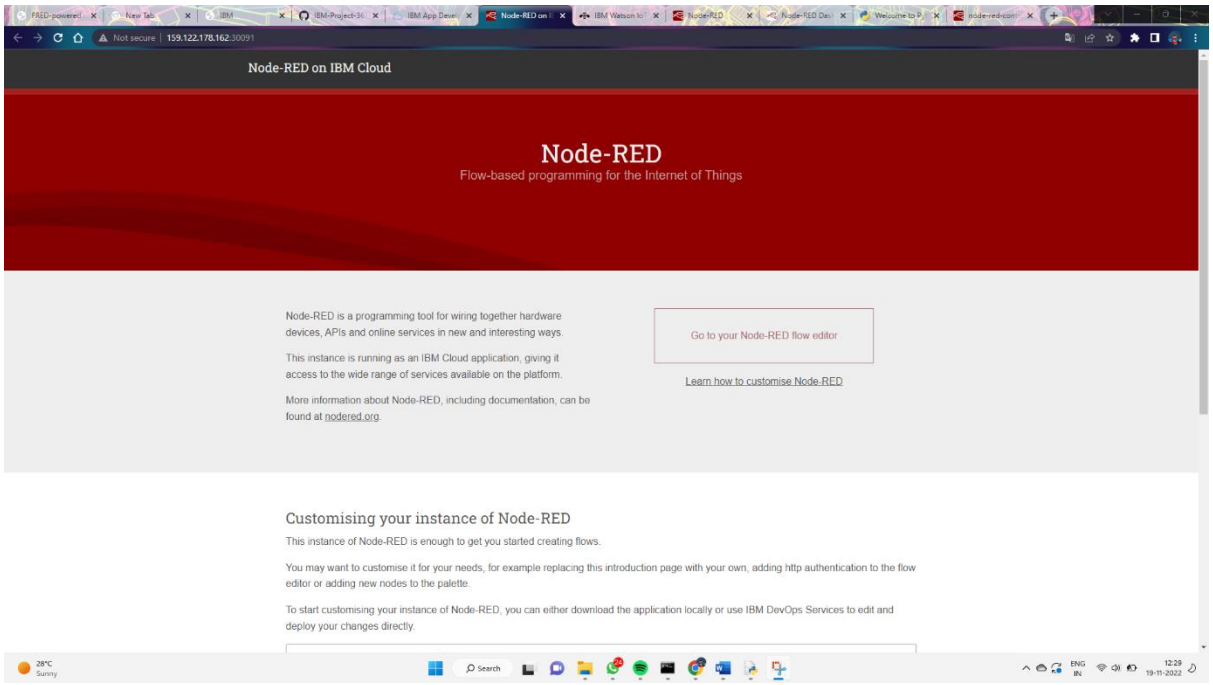
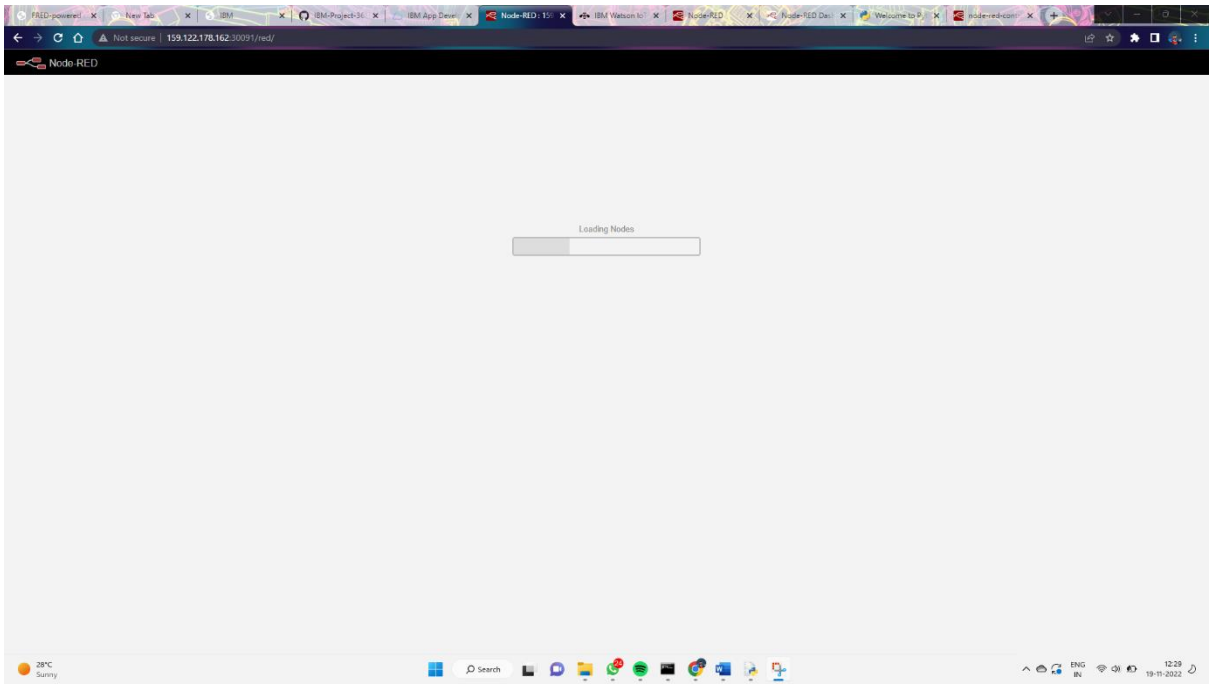
IBM Cloud
Search resources and products...
Catalog
Manage
Yokeshwari's Account
Resource list / App details /
Node RED KYVLE 2022-11-17
Add tags
Actions...
Details
App URL
http://159.122.178.162:30091
Source
https://us-south.git.cloud.ibm.com/510119104023/NodeREDKYVLE2...
Resource group
Default
Deployment target
Kube/Helm
Created
17/11/2022
Services
Cloudant
Open dashboard
Documentation
API reference
Credentials
Connect existing services
Create service
Deployment Automation
Name
NodeREDKYVLE2022-11-17
Location
Dallas
Tool integrations
Delivery Pipelines
Name
pr-pipeline
Status
No stages detected
Name
ci-pipeline
Status
Success
Getting started quickly
Configuring your app
To connect services and DevOps toolchains to your app:
1. Use the Services card to connect a service to your app. Select an existing service instance, or create a new one. Learn more.
2. If you want to view the code before your app is deployed, click Download code to obtain the .zip file.
3. Click Deploy your app in the Deployment Automation card to select the deployment target and configure the Continuous Delivery service. The deployment begins automatically.
4. After the deployment begins, you can view the status of the deployment, modify your app, view your repo, or view the app's URL.
5. If you make any changes to your app, be sure to deploy it again.
Building, running, and deploying your app locally
To build and run your app locally:
1. Run the ibmcloud dev code <APPNAME> command from the IBM Cloud CLI. Learn more.
2. Run the following commands in a local development container from the app directory:
ibmcloud dev build
ibmcloud dev run
ibmcloud dev deploy
ASK A QUESTION
28°C
Sunny
Search
ENG
IN
12:28
19-11-2022

STEP:3


Not secure | 159.122.178.162:30091
Node-RED on IBM Cloud
Node-RED
Flow-based programming for the Internet of Things
Node-RED is a programming tool for wiring together hardware devices, APIs and online services in new and interesting ways.
This instance is running as an IBM Cloud application, giving it access to the wide range of services available on the platform.
More information about Node-RED, including documentation, can be found at nodered.org.
Go to your Node-RED flow editor
Learn how to customise Node-RED
Customising your instance of Node-RED
This instance of Node-RED is enough to get you started creating flows.
You may want to customise it for your needs, for example replacing this introduction page with your own, adding http authentication to the flow editor or adding new nodes to the palette.
To start customising your instance of Node-RED, you can either download the application locally or use IBM DevOps Services to edit and deploy your changes directly.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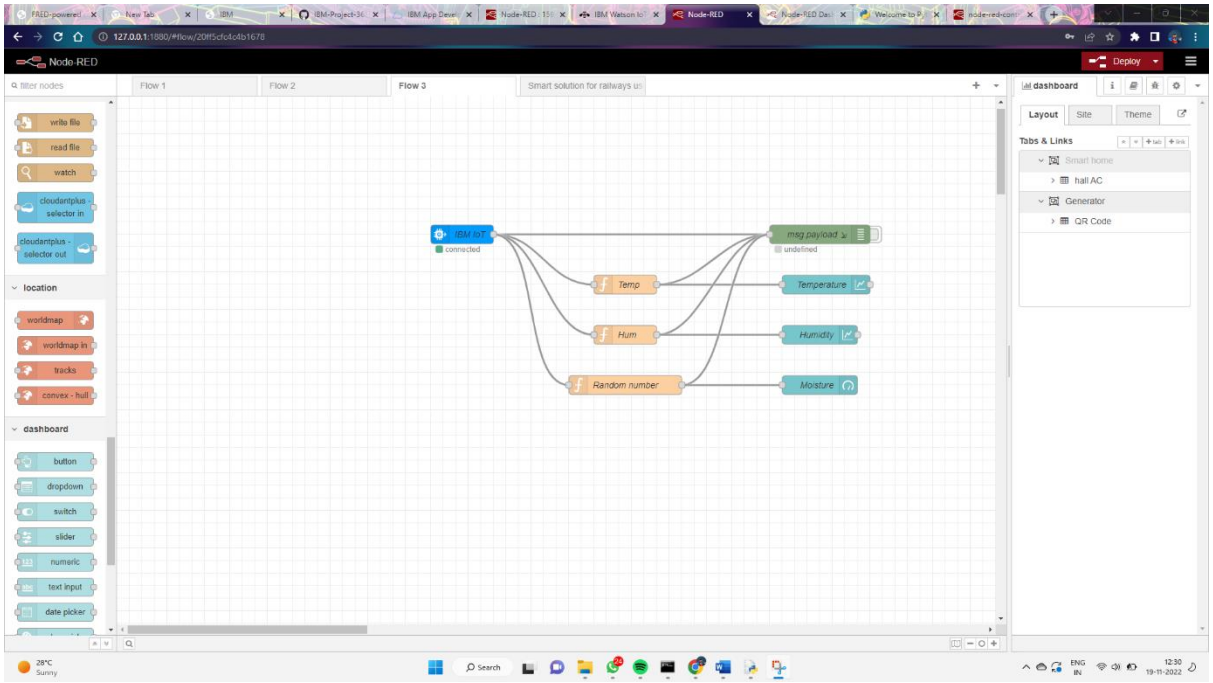
Node-RED
Loading Nodes

STEP:4


Node-RED
Deploy
Flow 1
Flow 2
Flow 3
write file
read file
watch
cloudantplus - selector in
cloudantplus - selector out
location
worldmap
worldmap in
tracks
convex - hull
dashboard
button
dropdown
switch
slider
numeric
text input
date picker
IBM IoT
connected
msg.payload
undefined
Temp
Hum
Random number
Temperature
Humidity
Moisture
dashboard
Layout
Site
Theme
Tabs & Links
Smart home
hall AC
Generator
QR Code