

## **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.

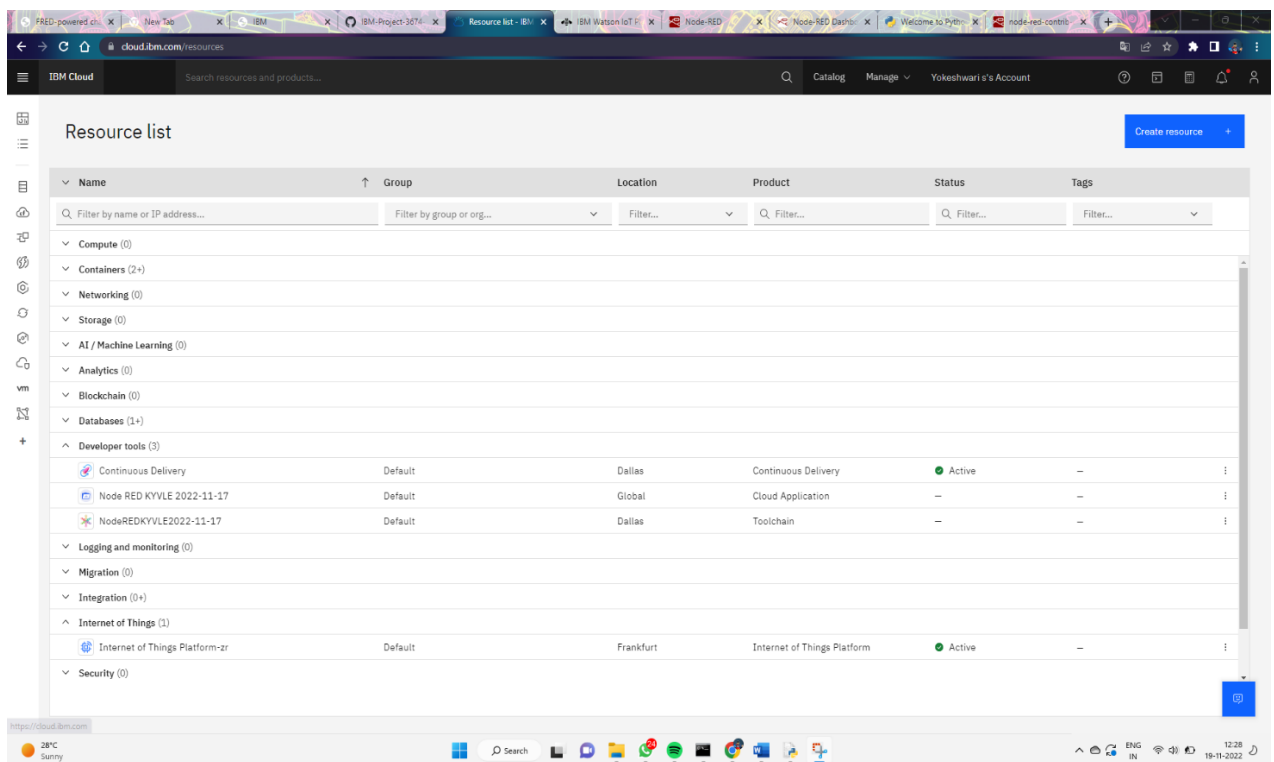
### **Features of Node-RED:**

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

The screenshot displays the IBM Cloud Developer console interface. The main heading is "Node RED KYVLE 2022-11-17" with an "Add tags" link. Below this, there are three main sections: "Details", "Services", and "Deployment Automation".

**Details:**

- App URL: <http://169.122.178.162:30091>
- 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: [GitHub](#) [Docker](#)

**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.

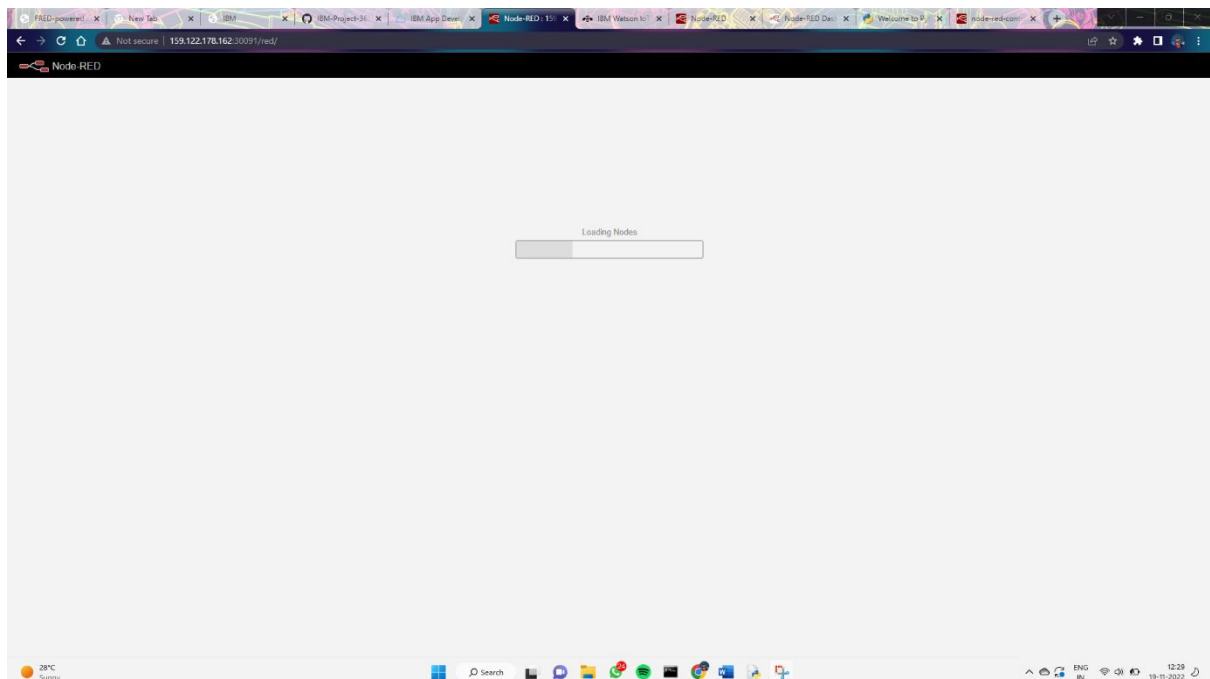
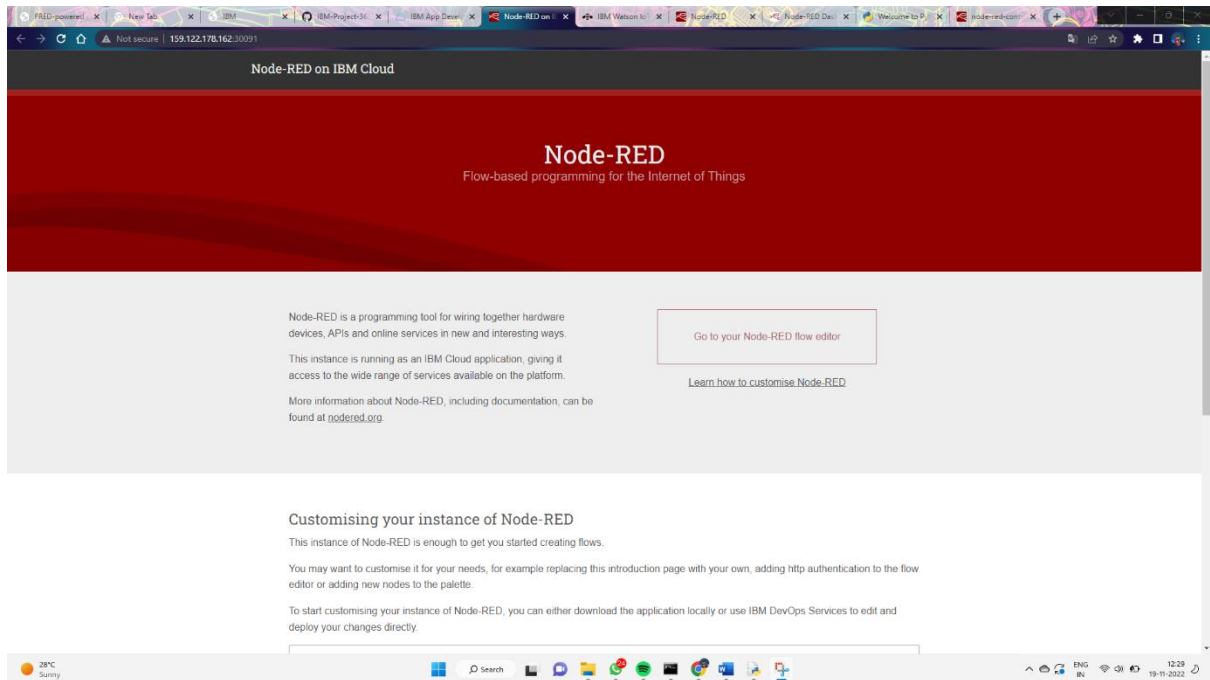
**Building, running, and deploying your app locally**

To build and run your app locally:

1. Run the `ibmcloud dev code <APIName>` 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
```

## STEP:3



## STEP:4

