

Sprint-2

Date	3 November 2022
Team ID	PNT2022TMID47485
Project Name	Project: Signs with Smart Connectivity for Better Road Safety
Marks	20 Marks

Create Node-Red Service:

The screenshot shows the IBM Cloud dashboard interface. At the top, there are four tabs: 'IBM' (selected), 'IBM-EPBL/IBM-Project-6501-1', 'IBM Watson IoT Platform', and 'IBM Cloud'. Below the tabs is a header bar with a search bar, a catalog icon, and a manage icon. On the far right of the header is a user profile for 'N Rachel sarah Yazhini...' with options for 'Edit dashboard', 'Upgrade account', and a dropdown menu. The dropdown menu is open, showing options: 'Profile', 'Log in to CLI and API', 'Privacy', 'Change theme', and 'Log out'. The main content area is titled 'Dashboard' and contains several cards: 'Build' (Explore IBM Cloud with this selection of easy starter tutorials and services), 'Create a Kubernetes cluster' (Automate deployments and manage your containerized apps in a native Kubernetes experience), 'Create an OpenShift cluster' (Deploy apps on highly available clusters with Red Hat OpenShift on IBM Cloud), 'Deploy on Kubernetes' (With Kubernetes clusters, you can run, update, and scale containerized applications), 'Get started with Containers & Kubernetes' (Containers are a standard way to package apps, and their dependencies, to allow seamless movement between environments), and 'News' (listing articles like 'TrustRadius Best Software: Five IBM Offerings to Make the List', 'Announcing IBM Cloud Pak for Network Automation Version 2.4', 'No Prerequisites for IBM Cloud Certifications', and 'IBM Tech Now: October 24, 2022'). There are also sections for 'Recent support cases', 'Planned maintenance', and 'IBM Cloud status'.

Screenshot of the IBM Cloud Catalog page showing search results for "node".

Search Results:

- Node-RED App**
- Node.js Express App**
- Natural Language Understanding Node.js App**
- Code Engine**
- Natural Language Understanding**
- CloudHedge App Modernization Platform**
- AI / Machine Learning (17)**
- Analytics (10)**
- Blockchain (1)**
- Databases (28)**
- Developer tools (25)**
- Logging and monitoring (3)**
- Migration (8)**

App Configuration (By IBM) is highlighted.

Selected Item: <https://cloud.ibm.com/developer/appservice/starter-kits/59c9d5bd-4d31-3611-897a-f94eea80dc9f/nodered>

Catalog Settings: Sell on IBM Cloud, Catalog settings

Screenshot of the IBM App Development page showing the "Create app" section for the Node-RED Starter Kit.

Page Headers: Catalog / Create app / Node-RED

Left Sidebar:

- About
- Create
- Details
- Author: IBM
- Updated: 11/02/2020
- Type: Starter kit
- Source code
- [GitHub](#)
- Helpful links
- [Terms](#)
- [Tutorial](#)

Overview:

This starter kit provides a pre-configured Node-RED application, including a Cloudant service to store the application flow configuration. Add services, generate and download the code, use the IBM Cloud Developer Tools CLI to run and debug locally, then deploy to Cloud Foundry or a DevOps Pipeline.

This starter kit will help you:

- Generate an application with Node-RED
- Generate an application with files for deploying to Cloud Foundry or a DevOps Pipeline
- Connect to provisioned services

What's included?

Cloudant (Free to start) [View pricing](#) [View docs](#) [View API reference](#)

Get started

Bottom Status Bar: Waiting for cloud.ibm.com...

IBM | IBM-EPBL/IBM-Project-6501-1 | IBM Watson IoT Platform | IBM App Development | cloud.ibm.com/developer/appservice/apps/89a39639-fb6c-4fb3-87f0-3e27e8fa3847

IBM Cloud Search resources and products... Catalog Manage N Rachel sarah Yazhini... Actions... Update

[Resource list](#) / [App details](#) / Node RED LTLPO 2022-11-03 Add tags ↗

Details

App URL	You must deploy your app first
Source	Download code
Resource group	Default
Deployment target	You must deploy your app first
Created	03/11/2022

Services

- Cloudant
 - [Open dashboard](#)
 - [Documentation](#)
 - [API reference](#)
- Credentials

[Connect existing services](#) + [Create service](#) +

Deployment Automation

Configure Continuous Delivery

Continuous Delivery is not enabled for this app. Enable Continuous Delivery to automate builds, tests, and deployments through Delivery Pipeline, GitLab, and more.

[Deploy your app](#)

Getting started quickly

Configuring your app

ASK A QUESTION

IBM | IBM-EPBL/IBM-Project-6501-1 | IBM Watson IoT Platform | IBM App Development | cloud.ibm.com/developer/appservice/apps/89a39639-fb6c-4fb3-87f0-3e27e8fa3847

IBM Cloud Search resources and products... Catalog Manage N Rachel sarah Yazhini... Actions... Update

[Resource list](#) / [App details](#) / Node RED LTLPO 2022-11-03

[Select the deployment target](#) [Configure the DevOps toolchain](#)

Deployment Automation

Select your deployment target and configure your DevOps toolchain. After you click **Create**, the toolchain is created, and the deployment process is started automatically.

Deployment target

- Kubernetes Service** IBM Deploy, scale, and manage your containerized application workloads to highly available clusters.
- Red Hat OpenShift** IBM Deploy your apps on highly available clusters that come installed with Red Hat OpenShift on IBM Cloud.
- Cloud Foundry** IBM Deploy and run your applications without managing servers or clusters. A Lite plan is available for quick and easy deployment.
- Code Engine** IBM Run your app, job, or container on a managed serverless platform. Auto-scale workloads, and pay only for the resources that you consume.

Getting started with apps

Step 1. Select the deployment target

Select your deployment target, and then provide the configuration information.

IBM Cloud Kubernetes Service

Kubernetes is an open source platform for managing containerized workloads and services across multiple hosts, and offers management tools for deploying, automating, monitoring, and scaling containerized apps with minimal to no manual intervention. [Learn more](#).

Before you begin

- One free Kubernetes cluster is available per account.
- If you don't have an available cluster, you must create one before continuing. Allow 10-20 minutes for the cluster to be provisioned. [Create cluster](#).

Steps

- Create an IBM Cloud API key, or select an existing one from a secrets store.
- Select the container registry region.
- Enter the container registry namespace if it is not already completed.

ASK A QUESTION

IBM | IBM-EPBL/IBM-Project-6501-1 | IBM Watson IoT Platform | IBM App Development | Clusters - IBM Cloud

cloud.ibm.com/kubernetes/clusters

IBM Cloud Search resources and products... Catalog Manage N Rachel sarah Yazhini...

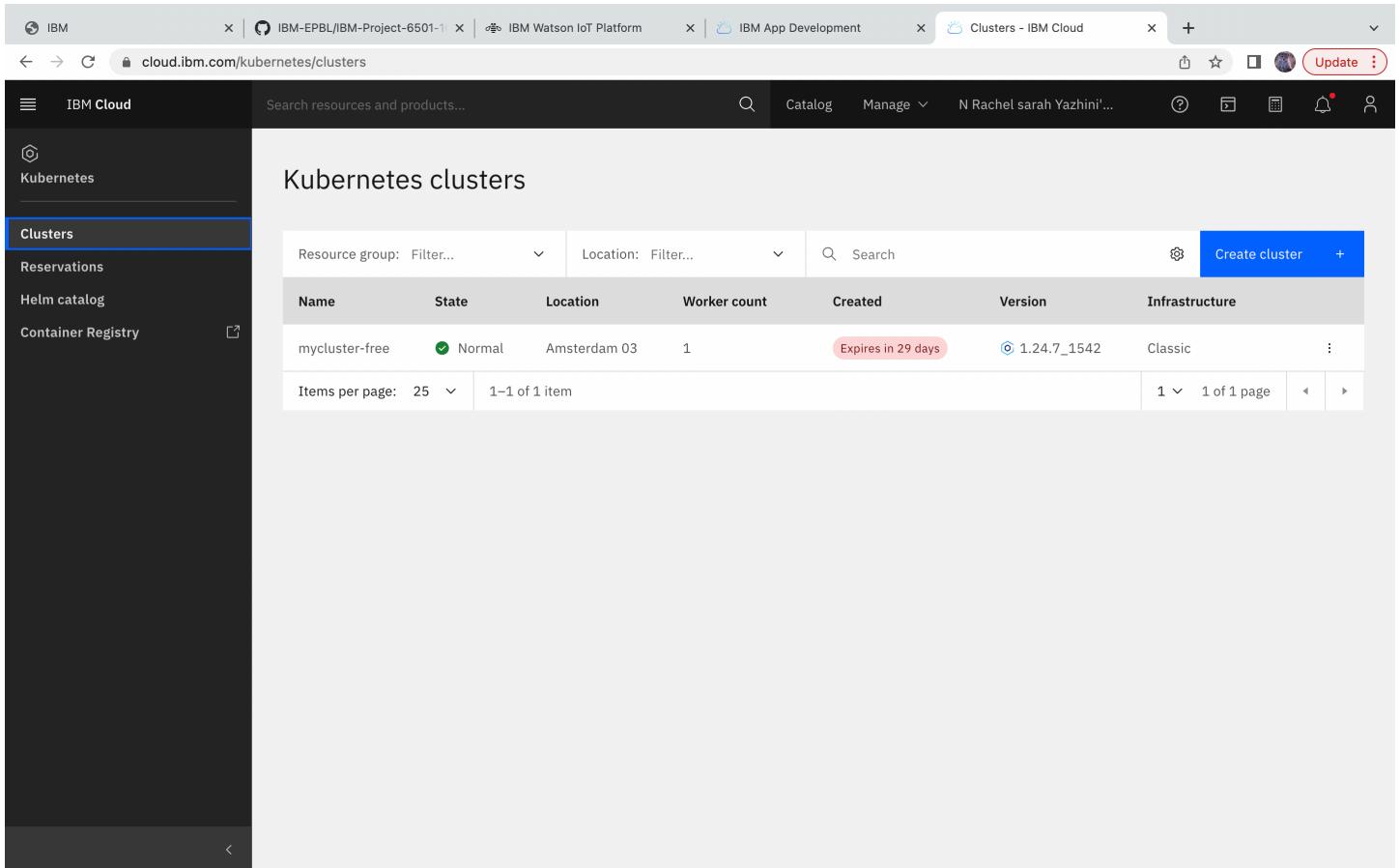
Kubernetes Clusters

Clusters Reservations Helm catalog Container Registry

Resource group: Filter... Location: Filter... Search Create cluster +

Name	State	Location	Worker count	Created	Version	Infrastructure
mycluster-free	Normal	Amsterdam 03	1	Expires in 29 days	1.24.7_1542	Classic

Items per page: 25 1–1 of 1 item 1 1 of 1 page



IBM | IBM-EPBL/IBM-Project-6501-1 | IBM Watson IoT Platform | IBM App Development | Clusters - IBM Cloud

cloud.ibm.com/developer/appservice/apps/89a39639-fb6c-4fb3-87f0-3e27e8fa3847

IBM Cloud Search resources and products... Catalog Manage N Rachel sarah Yazhini...

Code Engine IBM Run your app, job, or container on a managed serverless platform. Auto-scale workloads, and pay only for the resources that you consume.

IBM Cloud API key New +

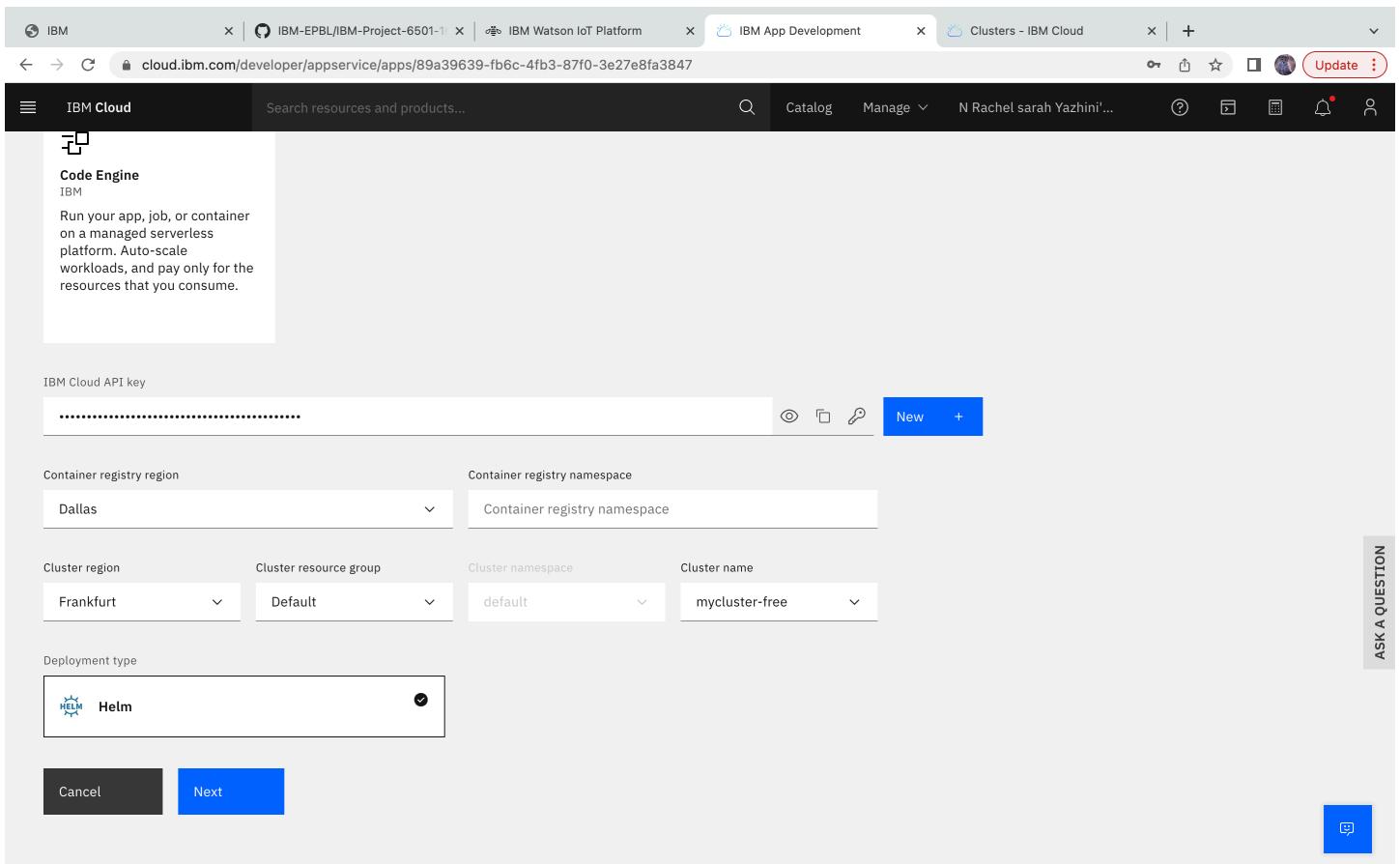
Container registry region Dallas Container registry namespace Container registry namespace

Cluster region Frankfurt Cluster resource group Default Cluster namespace default Cluster name mycluster-free

Deployment type Helm

Cancel Next

ASK A QUESTION



IBM | IBM-EPBL/IBM-Project-6501-1 | IBM Watson IoT Platform | IBM App Development | Clusters - IBM Cloud | + | Update

cloud.ibm.com/developer/appservice/apps/89a39639-fb6c-4fb3-87f0-3e27e8fa3847

IBM Cloud Search resources and products... Catalog Manage N Rachel sarah Yazhini... Actions... Update

Resource list / App details / Node RED LTLPO 2022-11-03 Add tags ⚙️ Actions...

Details

App URL	You must deploy your app first
Source	Download code
Resource group	Default
Deployment target	You must deploy your app first
Created	03/11/2022

Services

Cloudant [Open dashboard](#) [Documentation](#) [API reference](#)

Credentials

[Connect existing services](#) [Create service](#)

Deployment Automation

Configure Continuous Delivery

Continuous Delivery is not enabled for this app. Enable Continuous Delivery to automate builds, tests, and deployments through Delivery Pipeline, GitLab, and more.

Checking cache...

ASK A QUESTION

Getting started quickly

Configuring your app

IBM | IBM-EPBL/IBM-Project-6501-1 | IBM Watson IoT Platform | IBM App Development | Clusters - IBM Cloud | + | Update

cloud.ibm.com/developer/appservice/apps/89a39639-fb6c-4fb3-87f0-3e27e8fa3847

IBM Cloud Search resources and products... Catalog Manage N Rachel sarah Yazhini... Actions... Update

Resource list / App details / Node RED LTLPO 2022-11-03 Add tags ⚙️ Actions...

Details

App URL	You must deploy your app first
Source	https://eu-gb.git.cloud.ibm.com/910019106032/NodeREDLTLPO2022-11...
Resource group	Default
Deployment target	You must deploy your app first
Created	03/11/2022

Services

Cloudant [Open dashboard](#) [Documentation](#) [API reference](#)

Credentials

[Connect existing services](#) [Create service](#)

Deployment Automation

Name: NodeREDLTLPO2022-11-03
Location: London
Tool integrations:

Delivery Pipelines

Name	ci-pipeline
Status	In progress
Name	pr-pipeline
Status	No stages detected

ASK A QUESTION

Getting started quickly

Configuring your app

IBM | IBM-EPBL/IBM-Project-65 | IBM Watson IoT Platform | IBM App Development | ci-pipeline Dashboard | Clusters - IBM Cloud | + | Update

cloud.ibm.com/devops/pipelines/tekton/492a9ec7-2f09-4582-87ca-9e413365b77?env_id=ibm:yp:eu-gb&app_id=89a39639-fb6c-4fb3-87f0-3e27e8fa3847

IBM Cloud Search resources and products... Catalog Manage N Rachel sarah Yazhini... Run pipeline

Toolchains / NodeREDLTLPO2022-11-03 / ci-pipeline Dashboard

PipelineRuns Status: All Trigger: All

Definitions Worker Triggers Environment properties Other settings

Status

Run #1 simple-helm-e382d14f-553d-4ccf-ae57-d6ec461148e1 Manual manual-run Running 3 Nov, 21:26 12m 17s

Items per page: 25 1 - 1 items 1 Page 1

ASK A QUESTION

IBM | IBM-EPBL/IBM-Project-65 | IBM Watson IoT Platform | IBM App Development | ci-pipeline Dashboard | Clusters - IBM Cloud | + | Update

cloud.ibm.com/developer/appservice/apps/89a39639-fb6c-4fb3-87f0-3e27e8fa3847

IBM Cloud Search resources and products... Catalog Manage N Rachel sarah Yazhini... Actions...

Resource list / App details / Node RED LTLPO 2022-11-03 Add tags

Details

App URL	http://169.51.206.102:30859
Source	https://eu-gb.git.cloud.ibm.com/910019106032/NodeREDLTLPO2022-11-03
Resource group	Default
Deployment target	Kube/Helm
Created	03/11/2022

Services

Cloudant

Open dashboard Documentation API reference

Credentials

Connect existing services Create service

Deployment Automation

Name	NodeREDLTLPO2022-11-03
Location	London
Tool integrations	

Delivery Pipelines

Name	ci-pipeline
Status	Success
Name	pr-pipeline
Status	No stages detected

Getting started quickly

Configuring your app

To connect services and DevOps toolchains to your app.

ASK A QUESTION

Welcome to your new Node-RED instance on IBM Cloud

We know you're eager to start wiring up your flows, but first there are a couple of tasks you should do:

- Secure your Node-RED editor
- Learn how to install additional nodes



Previous

Next

Secure your Node-RED editor

Secure your editor so only authorised users can access it

Not recommended: Allow anyone to access the editor and make changes

Your editor will not be secured. Anyone with the URL will be able to access your flows, data and bound services.

Tick this box to confirm you want your editor to be insecure



Previous

Next

Learn how to install additional nodes

Node-RED provides a [huge catalog of extra nodes](#) you can install into the editor.

Many of these nodes can be installed directly from the editor's palette manager feature. However that can cause issues due to the limited memory of the default Node-RED starter application.

The *recommended approach* is to edit your application's package.json file to include the additional node modules and then redeploy the application. This can be done using the Continuous Delivery feature on the application's IBM Cloud dashboard.

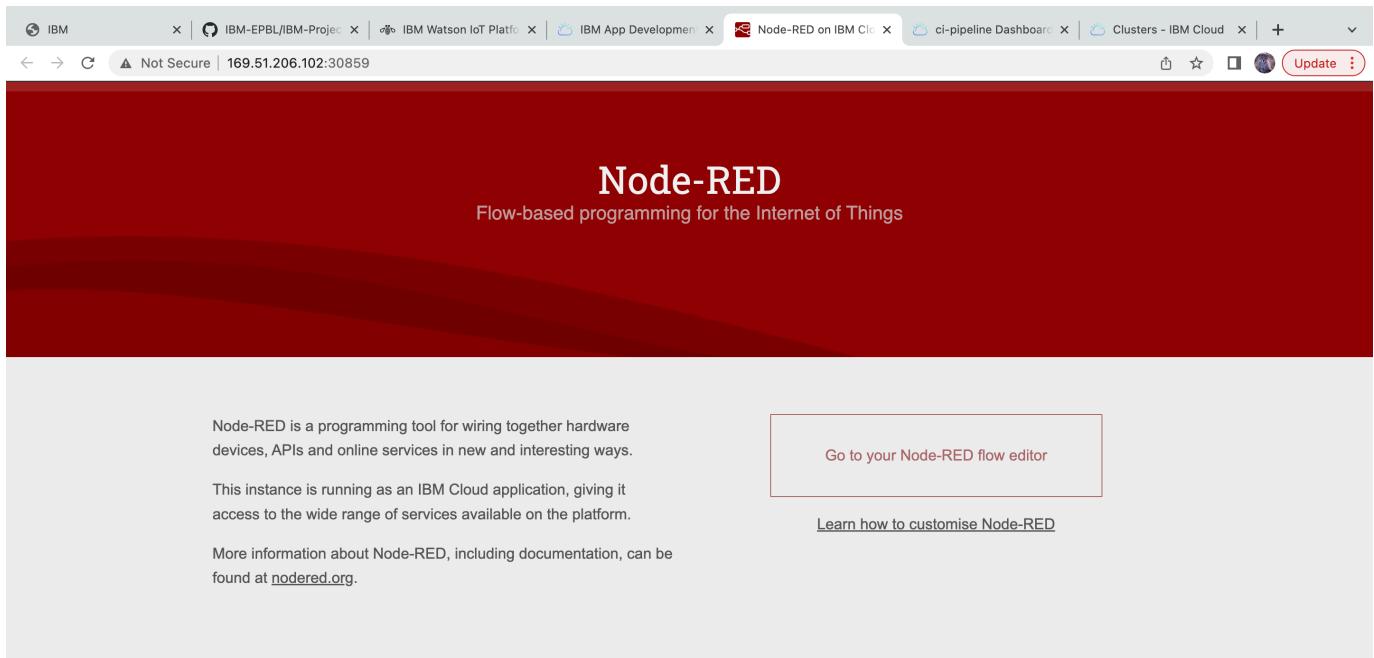
For more information, follow [this tutorial on IBM Developer](#).

Previous

Next

Applying your settings and starting Node-RED





The screenshot shows the Node-RED welcome page. At the top, there is a red header bar with the text "Node-RED" and "Flow-based programming for the Internet of Things". Below the header, there is a section with text about Node-RED's purpose and its status as an IBM Cloud application. To the right, there is a button labeled "Go to your Node-RED flow editor" and a link to "Learn how to customise Node-RED".

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.

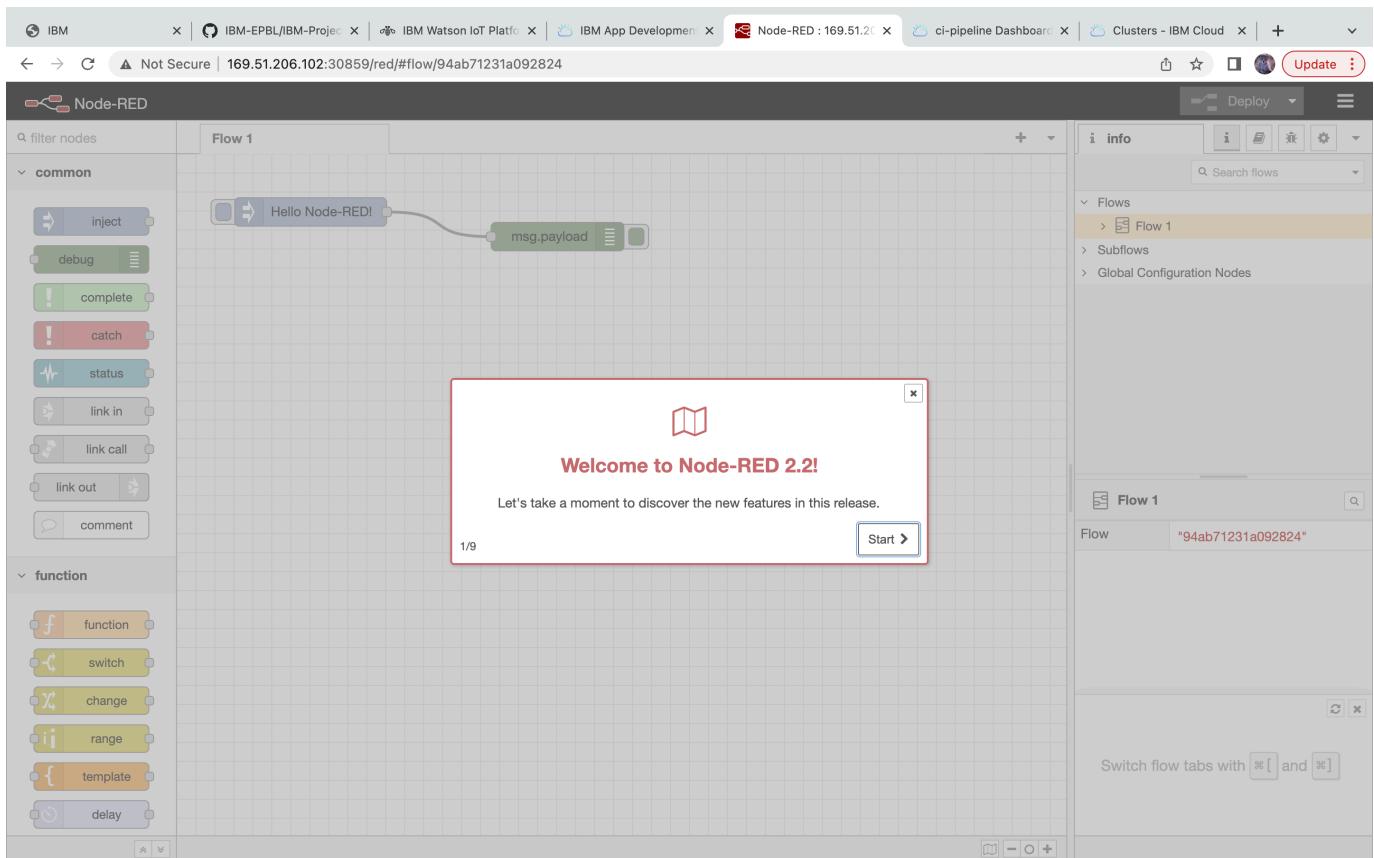
[Go to your Node-RED flow editor](#)

[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.



The screenshot shows the Node-RED flow editor interface. On the left, there is a palette with categories like "common" and "function", each containing various nodes. In the center, there is a canvas with a flow named "Flow 1" containing a single node labeled "Hello Node-RED!". On the right, there is a sidebar with tabs for "info", "Flows", and "Subflows". A modal window titled "Welcome to Node-RED 2.2!" is open in the center of the canvas, prompting the user to discover new features. The bottom right corner of the modal has a note: "Switch flow tabs with [and]".

filter nodes

common

- inject
- debug
- complete
- catch
- status
- link in
- link call
- link out
- comment

function

- function
- switch
- change
- range
- template
- delay

Flow 1

Hello Node-RED!

msg.payload

Welcome to Node-RED 2.2!

Let's take a moment to discover the new features in this release.

Start >

1/9

info

Search flows

Flows

Flow 1

Subflows

Global Configuration Nodes

Flow 1

"94ab71231a092824"

Switch flow tabs with [and]

