Create Node-RED Service

Learning objectives

This guide will teach you how to:

> ➢ Make a beginning Node-RED application that runs on the IBM Cloud.
> ➢ Ensure application security
> ➢ Add more nodes to the Node-RED Starter Kit to make it your own.

Prerequisites

You require a valid IBM Cloud account in order to finish this tutorial.

A Pay-As-You-Go account with IBM Cloud is necessary for this training. Go to your account settings to upgrade your Lite account. To upgrade to a Pay-As-You-Go account, click Add credit card in the Account Upgrade section. To upgrade to a subscription account, click Upgrade. For additional information, see Upgrading your account.

The IBM Cloud Code Engine, a fully managed, serverless platform that runs your containerized workloads and takes care of the underlying infrastructure for you, is where you may deploy the app according to the instructions in this Node-RED beginning guide. 100000 vCPU seconds are provided by IBM Cloud Code Engine without charge each month. You won't be charged for light to moderate usage because your Node-RED flow frequently scales to 0. On a frequent basis, check your billing and use.

Estimated time

Steps

> ➢ In the IBM Cloud catalogue, look for the Node-RED Starter Kit.
> ➢ Create your programme.
> ➢ Turn on the function for continuous delivery.
> ➢ Launch the Node-RED programme.
> ➢ Set up your Node-RED programme.
> ➢ Fill up your Node-RED palette with more nodes.

Step 1: In the IBM Cloud catalogue, look for the Node-RED Starter Kit.

> ➢ Register with IBM Cloud.
> ➢ Enter "node-red" into the catalog's search bar.
> ➢ On the Node-RED App tile, click.

You can see an overview of the Starter Kit's features in here.

Step 2: Create your programme.

The Node-RED starting application must now be made.

➢ A randomly created app name will be suggested on the Create tab. Accept the default name or give your application a special name. The URL for the application will now include this.
➢ To save your application flow settings, the Node-RED starter application needs a Cloudant database service instance with IBM Cloud IAM and Cloudant credentials. Choose the service's pricing structure and the area where it should be launched.
➢ To proceed, click the Create button. Despite not yet been deployed to IBM Cloud, this will generate your application and, if necessary, a Cloudant database service instance.

Step 3: Turn on the functionality for Continuous Delivery

➢ To enable the Continuous Delivery functionality for your application, click the Deploy your app button on the next screen.
➢ Select the Code Engine tile on the following screen.
➢ After choosing the Code Engine tile, scroll down. To provide the deployment process access to your resources, you must create an IBM Cloud API key. To create the key, select New from the menu. An alert dialogue will show up. Accepting the default settings will end the dialogue box.
➢ When deploying your application, choose the region and container registry region. This needs to be the same region where your Cloudant instance was built.
➢ Enter a distinct Project name or accept the predetermined "project-name" For the next step, click.
➢ Set the region in which the DevOps toolchain should be created. Once more, make an effort to match the region you previously chose.
➢ The Deployment Automation section will update with information about your newly formed Delivery Pipeline after a brief delay. The pipeline's Status field will finally display In progress.This indicates that your application is being developed and released.
➢ It will take a few minutes to complete the Deploy stage. To view the status of the Delivery Pipeline, click the ci-pipeline Status link. The Deploy step will eventually provide a green checkmark and a Success message to indicate that it has succeeded. This indicates that your Node-RED starting application is now active.

Step 4: Launch the Node-RED programme.

Let's open your Node-RED application now that it has been deployed. You might need to reload the page.

The fields for the App URL, Source, and Deployment target should now be filled in on the application information page.

To launch your Node-RED application in a new browser tab, click the App URL.

Step 5: Set up your Node-RED programme.

You must configure and set up security for your Node-RED app the first time you launch it.

➢ The Node-RED start page will appear in a new browser tab.
➢ To proceed, click Next on the first screen.
➢ Establish a username and password to protect your Node-RED editor. You can alter the values in the Cloudant database or override them using environment variables if you ever need to change any of these. How to accomplish this is outlined in the nodered.org manual. For the next step, click.
➢ The last screen lists all of the choices you've made and emphasises the environmental factors you can utilise in the future to alter your choices. Press Finish to continue. The default flow is displayed when the Node-RED editor launches.
➢ Your changes will be saved by Node-RED, which will then load the main programme. To access the editor, click the Go to your Node-RED flow button from this location.
The default flow is displayed when the Node-RED editor launches.

Step 6: Expand the Node-RED palette with additional nodes.

The suggested course of action is to change the package.json file for your application to include the extra node modules, and then redeploy the application.

This procedure demonstrates how to add the node-red-dashboard module by doing so.

➢ Click Source URL on the information page for your application. This will direct you to a git repository where you may use your browser to edit the application's source code.
➢ Select package.json from the list of files by scrolling down. The module dependencies for your application are listed in this file.
➢ Select Edit from the menu.
➢ Increase the dependents section(1top)'s entry to include the following entry:
➢ Node-Red Dashboard: "2.x,"
Click Commit modifications after adding a Commit message (2). (3)
➢ A build and deployment of that update into your application will then be carried out automatically via the Continuous Delivery pipeline. You may monitor it by viewing the Delivery Pipeline. The most recent commit is displayed in the Build portion of Create Node-RED Service, and the application's redeploying process is progressed in the Deploy section.

➢ Your application will have resumed and the node-reddashboard nodes will now be installed after the Deploy stage is finished.

Summary

Currently, an IBM Cloud-hosted Node-RED application has been established. Additionally, you've learnt how to make modifications to the application's source code automatically.