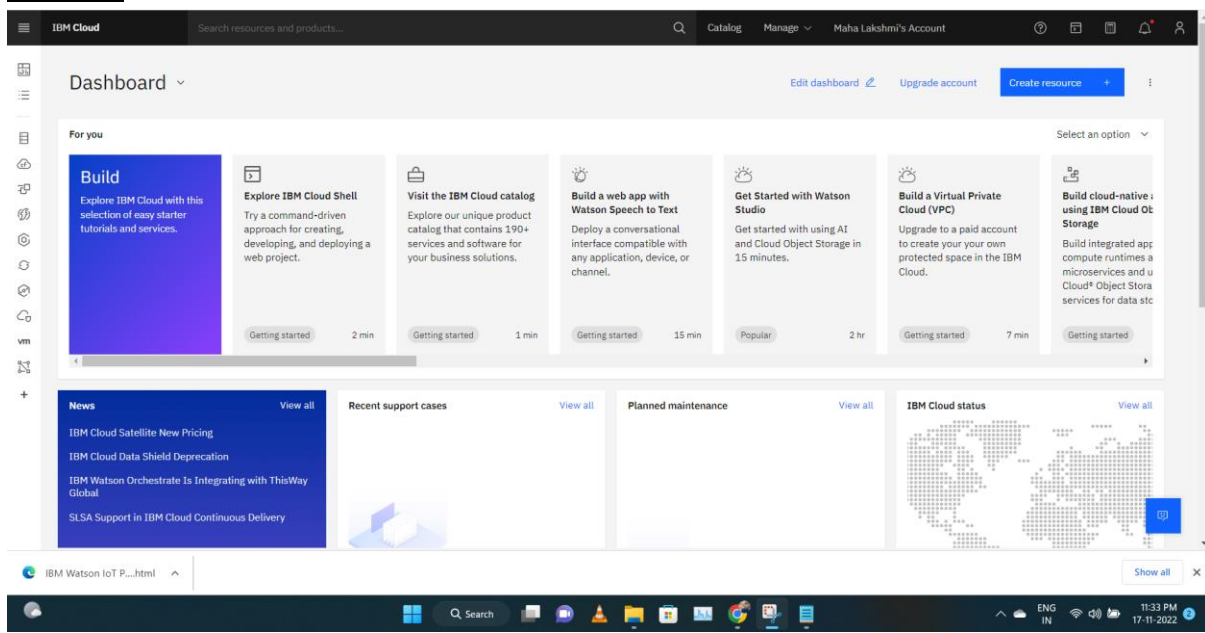


CREATE AND CONFIGURE IBM CLOUD SERVICE

Date	18 November2022
Team id	PNT2022TMID38469
Project Name	Signs with smart connectivity for better road safety
Maximum Marks	

CREATE NODE-RED SERVICE

STEP:1



STEP:2

The screenshot shows the IBM Cloud Catalog interface. The top navigation bar includes 'IBM Cloud', 'Catalog', 'Manage', and 'Maha Lakshmi's Account'. A search bar at the top left shows '0 resource results found'. The main content area displays 'Catalog Results' for the search term 'NODE'. On the left, a 'Catalog' sidebar lists various categories like Compute, Containers, Networking, Storage, AI / Machine Learning, Analytics, Blockchain, Databases, Developer tools, and Logging and monitoring. The search results list includes 'Node-RED App', 'Node.js', 'Node.js Express App', 'Natural Language Understanding Node.js App', and 'Content Delivery Network'. Below the search results, there are four service cards: 'Analytics Engine', 'AnonTech VizVault Platform', 'API Connect', and 'App Configuration'. Each card provides a brief description and a list of features. The bottom of the screen shows a Windows taskbar with various application icons and the system clock indicating 11:33 PM on 17-11-2022.

STEP:3

The screenshot shows the IBM Cloud Catalog page for the 'Node-RED' service. The top navigation bar includes 'IBM Cloud', 'Catalog', 'Manage', and 'Maha Lakshmi's Account'. The main content area displays the 'Node-RED' service details. On the left, a sidebar shows 'About' and 'Create' tabs. The 'About' tab is active, showing details about the service, including its author (IBM), updated date (11/02/2020), type (Starter kit), source code (GitHub), helpful links (Terms, Tutorial), and a 'Get started' button. The 'Overview' section describes the service as a pre-configured Node-RED application that includes a Cloudant service to store the application flow configuration. It also lists the benefits of the starter kit, such as generating an application with Node-RED, generating an application with files for deploying to Cloud Foundry or a DevOps Pipeline, and connecting to provisioned services. The 'What's included?' section lists the included services, including 'Cloudant' (Free to start) and 'View pricing'. The bottom of the screen shows a Windows taskbar with various application icons and the system clock indicating 11:34 PM on 17-11-2022.

STEP:4

The screenshot shows the IBM Cloud console interface. At the top, there's a navigation bar with 'IBM Cloud', a search bar, and links for 'Catalog', 'Manage', and 'Maha Lakshmi's Account'. Below this, the 'Resource group' is set to 'Default'. The 'Tags' section has a placeholder 'Examples: env:dev, version-1'. The 'Platform' is set to 'Node.js'. Under 'Service details', the 'Cloudant' service is selected. The 'Region' is 'London' and the 'Resource group' is 'Default'. The 'Pricing plan' is 'Lite'. There are links for 'Pricing details' and 'Terms'. At the bottom, there are 'Cancel' and 'Create' buttons. A 'Show all' button is also visible. The bottom of the screen shows a Windows taskbar with various application icons and system tray information including 'ENG IN', '11:35 PM', and '17-11-2022'.

STEP:5

The screenshot shows the IBM Cloud console interface for a service named 'SENSOR'. The top navigation bar is the same as in Step 4. Below the navigation bar, there's a breadcrumb 'Resource list / App details / SENSOR' and an 'Add tags' link. An 'Actions...' dropdown menu is visible. The main content area is divided into several sections: 'Details' showing 'App URL', 'Source' (with a 'Download code' button), 'Resource group' (set to 'Default'), 'Deployment target' (with a note 'You must deploy your app first'), and 'Created' (17/11/2022). The 'Services' section shows 'Cloudant' as the selected service with a 'Provisioning service credentials' button and 'Connect existing services' and 'Create service' buttons. The 'Deployment Automation' section has a 'Deploy your app' button. On the right, there's a 'Getting started quickly' sidebar with a list of steps for configuring the app and deploying it locally. The bottom of the screen shows the same Windows taskbar as in Step 4.

STEP:6

Resource list / App details /

SENSOR

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.

IBM Cloud Foundry Public is deprecated. [Learn more](#)

IBM Cloud API key

IBM Cloud API key

Show

Getting started with apps

Step 1. Select the deployment target

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

IBM Cloud Foundry

Cloud Foundry is the premier industry standard Platform-as-a-Service (PaaS) that ensures fast, easy, and reliable deployment of cloud-native apps. Cloud Foundry ensures that the build and deploy aspects of coding remain carefully coordinated with any attached services – resulting in quick, consistent and reliable iterating of applications. Cloud Foundry has a Lite plan that allows quick deployments for testing purposes.

Before you begin

- If your account doesn't have a Cloud Foundry org, you must create one. [Create org.](#)

Steps

- Select the number of instances, memory allocation, **region, org, and space.**
- Select the **domain** and provide a **host** name.

Show all

STEP:7

Resource list / App details /

SENSOR

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.

IBM Cloud Foundry Public is deprecated. [Learn more](#)

IBM Cloud API key

IBM Cloud API key

The value is required.

Number of instances

1

Memory allocation per instance

64 MB

2000 MB

256

Region

Organization

Space

Region

Organization

Space

Show

Create a new API key with full access

Warning: This will create a new API key that allows anyone who has it the ability to do anything you could do. You can improve your security posture by using the [IAM UI to create a service ID API key](#) that limits access to only what your pipeline requires, and then pasting that into the template UI instead. For more information on API keys and access see the [IAM documentation](#).

Name	Description
API Key for SENSOR	

☐ Save this key in a secrets store for reuse

Cancel OK

STEP:8

The screenshot shows the IBM Cloud console interface. At the top, there's a navigation bar with the IBM Cloud logo, a search bar, and user account information. Below the navigation bar, there are several promotional cards. A prominent message states 'IBM Cloud Foundry Public is deprecated.' with a 'Learn more' link. The main content area is titled 'New' and contains a form for creating a new application. The form includes fields for 'IBM Cloud API key', 'Number of instances' (set to 1), 'Memory allocation per instance' (set to 256 MB), 'Region' (set to London), 'Organization' (set to MAHA27022002), 'Space' (set to MAHA27022002), 'Host' (set to SENSOR1234), and 'Domain' (set to eu-gb.mybluemix.net). There are 'Cancel' and 'Next' buttons at the bottom of the form. A 'Show all' button is located at the bottom right of the console.

STEP:9

The screenshot shows the IBM Cloud console interface for the 'SENSOR' application. The page is titled 'SENSOR' and has a 'Details' tab selected. The 'Details' tab shows the application's configuration, including the App URL, Source, Resource group, Deployment target, and Created date. The 'Services' section shows the 'Cloudant' service connected to the application. The 'Deployment Automation' section shows the 'Configure Continuous Delivery' option. The 'Getting started quickly' section provides a list of steps for configuring the application, including connecting services, downloading code, and deploying the application. The 'Building, running, and deploying your app locally' section provides instructions for running the application locally. The 'Show all' button is located at the bottom right of the console.

STEP:10

The screenshot displays the IBM Cloud console interface for a resource named 'SENSOR'. The top navigation bar includes the IBM Cloud logo, a search bar, and user account information. The main content area is divided into three panels:

- Details:** Shows the App URL, Source (a GitHub repository link), Resource group (Default), Deployment target, and Created date (17/11/2022).
- Deployment Automation:** Lists the Name (SENSOR), Location (London), and Tool integrations. Below this, it shows Delivery Pipelines for 'ci-pipeline' and 'pr-pipeline', both with a status of 'No stages detected'.
- Getting started quickly:** A sidebar panel with a 'Getting started quickly' section, a 'Configuring your app' section with numbered steps, and a 'Building, running, and deploying your app locally' section with a command example.

At the bottom, there is a 'Connect existing services' button and a 'Create service' button. The Windows taskbar at the very bottom shows the time as 11:46 PM on 17-11-2022.

STEP:11

The screenshot shows the 'Resource list' page in the IBM Cloud console. A prominent black tooltip with white text reads: 'Resource list categories now match the IBM Cloud Catalog. We've updated the categories to be streamlined and accessible. Expand all categories (⌵) or filter by product to find any of your resources.' The main table lists various resource categories such as Compute, Containers, Networking, Storage, AI / Machine Learning, Analytics, Blockchain, Databases, Developer tools, Logging and monitoring, and Migration. Each category has a count in parentheses next to it. The table has columns for Name, Group, Location, Product, Status, and Tags. The Windows taskbar at the bottom shows the time as 11:46 PM on 17-11-2022.

STEP:12

The screenshot displays the IBM Cloud console interface for a resource named 'SENSOR'. The top navigation bar includes the IBM Cloud logo, a search bar, and links to 'Catalog', 'Manage', and 'Maha Lakshmi's Account'. The left sidebar shows navigation options: 'Getting started', 'Overview' (selected), 'Runtime', 'Connections', 'Logs', 'API Management', and 'Autoscaling'. The main content area shows the 'Overview' tab with a status of 'Running' and a 'Visit App URL' link. A notification banner at the top states: 'IBM Cloud Foundry Public is being deprecated. Please see full details.' The 'Instances' section shows a health status of '100%' and '1/1 instance(s) are running'. A slider for 'MB memory per instance' is set to '256' out of '2648'. The 'Runtime' section shows a 'Node.js' runtime with a circular progress indicator for 'Total MB allocation' at '256' and '1.75 GB still available'. The 'Runtime cost' section shows 'US\$ 0.00' for both 'Current charges for billine period' and 'Estimated total for billing period'. The 'Connections (1)' section shows a connection to 'sensor-cloudant-1668708343140-34977'. The bottom of the screen shows a Windows taskbar with the time '11:57 PM 17-11-2022'.

STEP:13

The screenshot shows a welcome message for a new Node-RED instance on IBM Cloud. The message is displayed in a white box with a black border. The text reads: 'Welcome to your new Node-RED instance on IBM Cloud'. Below this, it says: 'We know you're eager to start wiring up your flows, but first there are a couple of tasks you should do:'. A bulleted list follows: '• Secure your Node-RED editor' and '• Learn how to install additional nodes'. The bottom of the screen shows a Windows taskbar with the time '07:49 AM 18-11-2022'.

STEP:14

Secure your Node-RED editor

☒ Secure your editor so only authorised users can access it

Username

Password good

☐ Allow anyone to view the editor, but not make any changes

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

☒ ☐ ☐ ☐

Previous Next

0c657bd3-c36c-45...zip Show all

08:23 AM 18-11-2022

STEP:15

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](#).

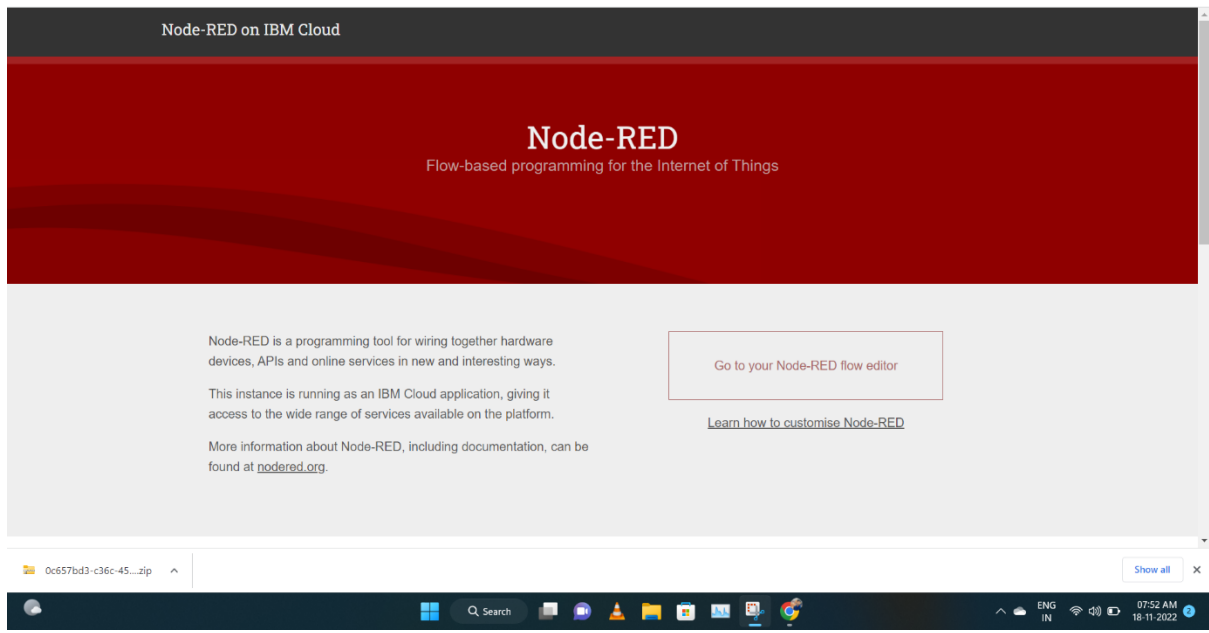
☒ ☐ ☐ ☐

Previous Next

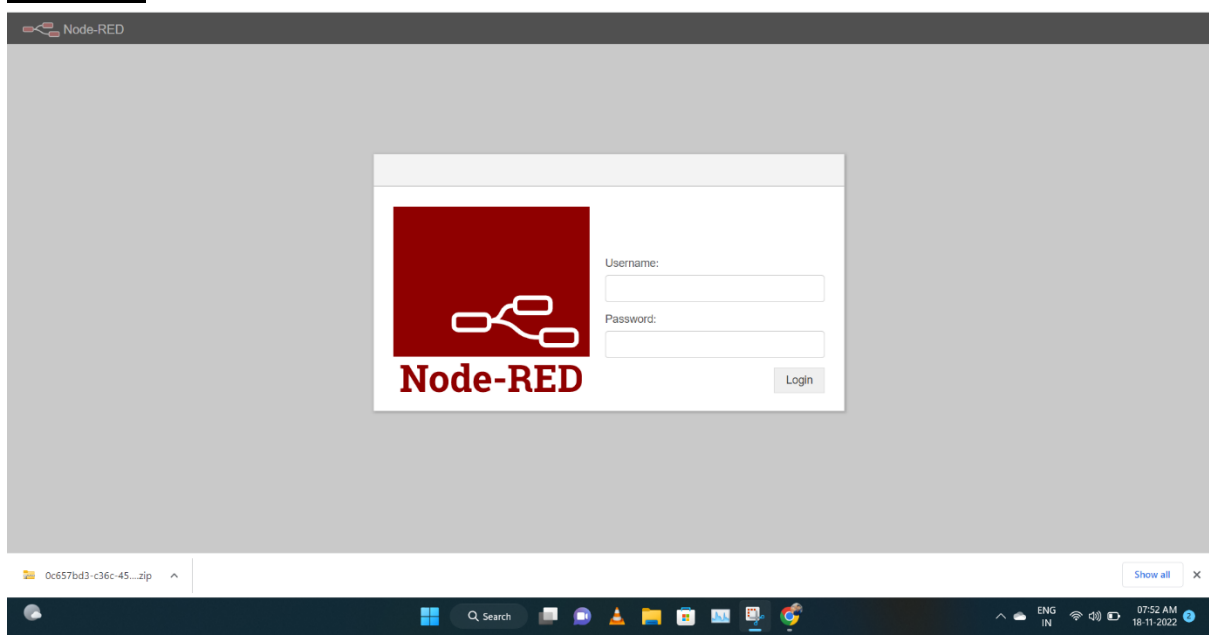
0c657bd3-c36c-45...zip Show all

07:51 AM 18-11-2022

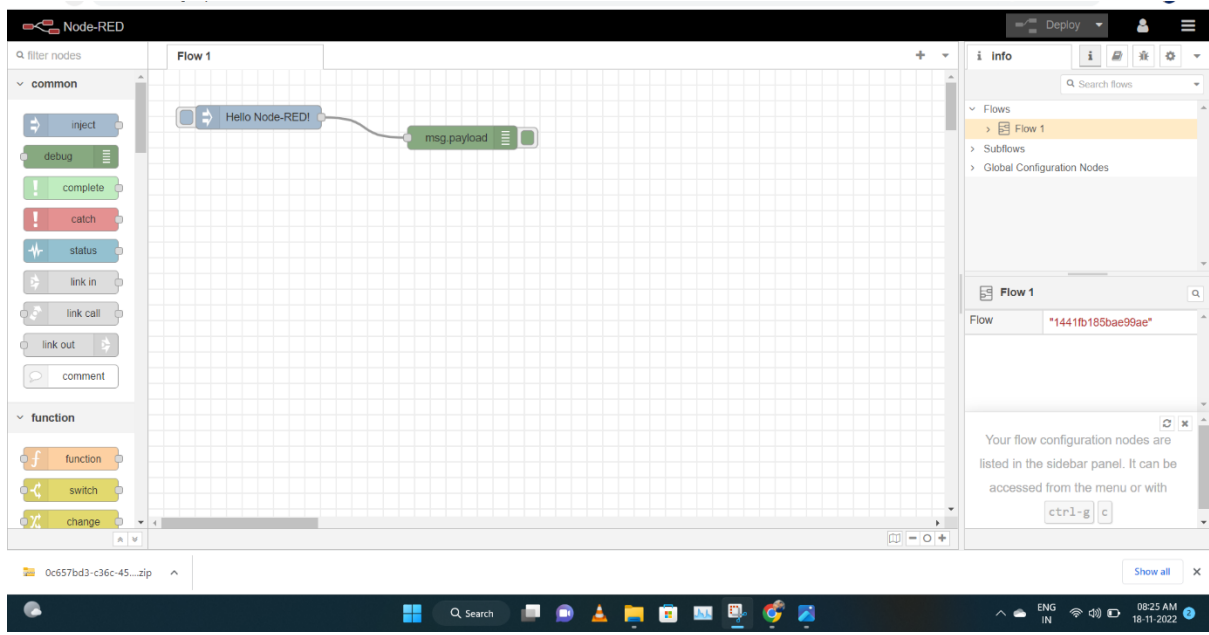
STEP:16



STEP:17



STEP:18



STEP:19

