

### **Create And Configure IBM Cloud Services**

<b>Project Title</b>	SmartFarmer – IoT Enabled Smart Farming Application
<b>Team ID</b>	PNT2022TMID17466
<b>Content</b>	IBM Cloud Service

**STEP 1:**

Type IBM Cloud in Google and click on the first link.



ibm cloud



All



Images



News



Videos



Goggles<sup>BETA</sup>



All regions

Safe search: Moderate

Any time



## IBM Cloud | IBM

ibm.com > cloud

1 August 2022 - **IBM Cloud** with Red Hat offers market-leading security, enterprise scalability and open innovation to unlock the full potential of **cloud** and AI.

### IBM Cloud Object Storage

IBM Cloud Object Storage is an unstructured data storage service designed for durability...

### What is Private Cloud?

Private **cloud** is a **cloud** computing environment dedicated to a single custome...

## IBM - United States

ibm.com > us-en

1 month ago - **IBM Consulting** teamed up with HEINEKEN NV on its mission to become the world's 'best-connected brewer' See how a multicloud strategy enables them to seamlessly process 24M message a month · So this leader in supply chain management transitioned to **cloud** to keep employees connected See ...



## Discussions

### IBM Cloud doesn't want you : IBM

r/IBM • Comments: 13 • 6 votes (64% Upvoted)

17 February 2022

## IBM Cloud

A set of cloud computing services offered by IBM



[ibm.com](https://ibm.com)

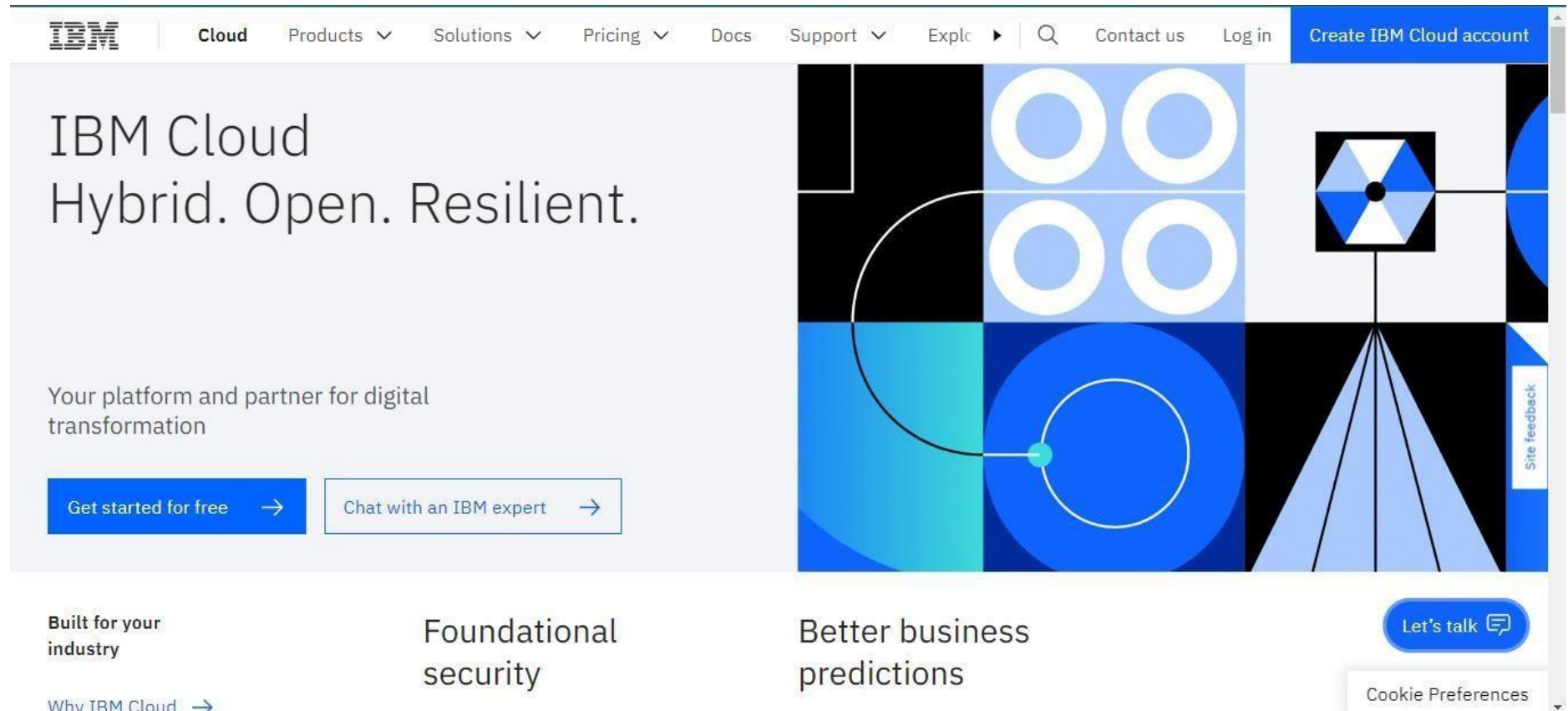
IBM Cloud, (formerly known as Bluemix) is a set of cloud computing services for business offered by the information technology company IBM. As of 2021, IBM Cloud contains more than 170 services including compute, storage, networking, database, analytics, machine learning, and developer tools. [Wikipedia](#)

### Type

[cloud computing](#), [IaaS](#), [PaaS](#), [cloud services](#)

## STEP 2:

Click on create IBM Cloud Account Now and enter the details.



### STEP 3:

You will get the email with your password. Type your mail Id and the password then click on the login button.



# Log in to IBM Cloud

Don't have an account? [Create an account](#)

Sign in with

IBMid



username@example.com

Continue



[Forgot ID?](#)



Remember ID

Cookie Preferences



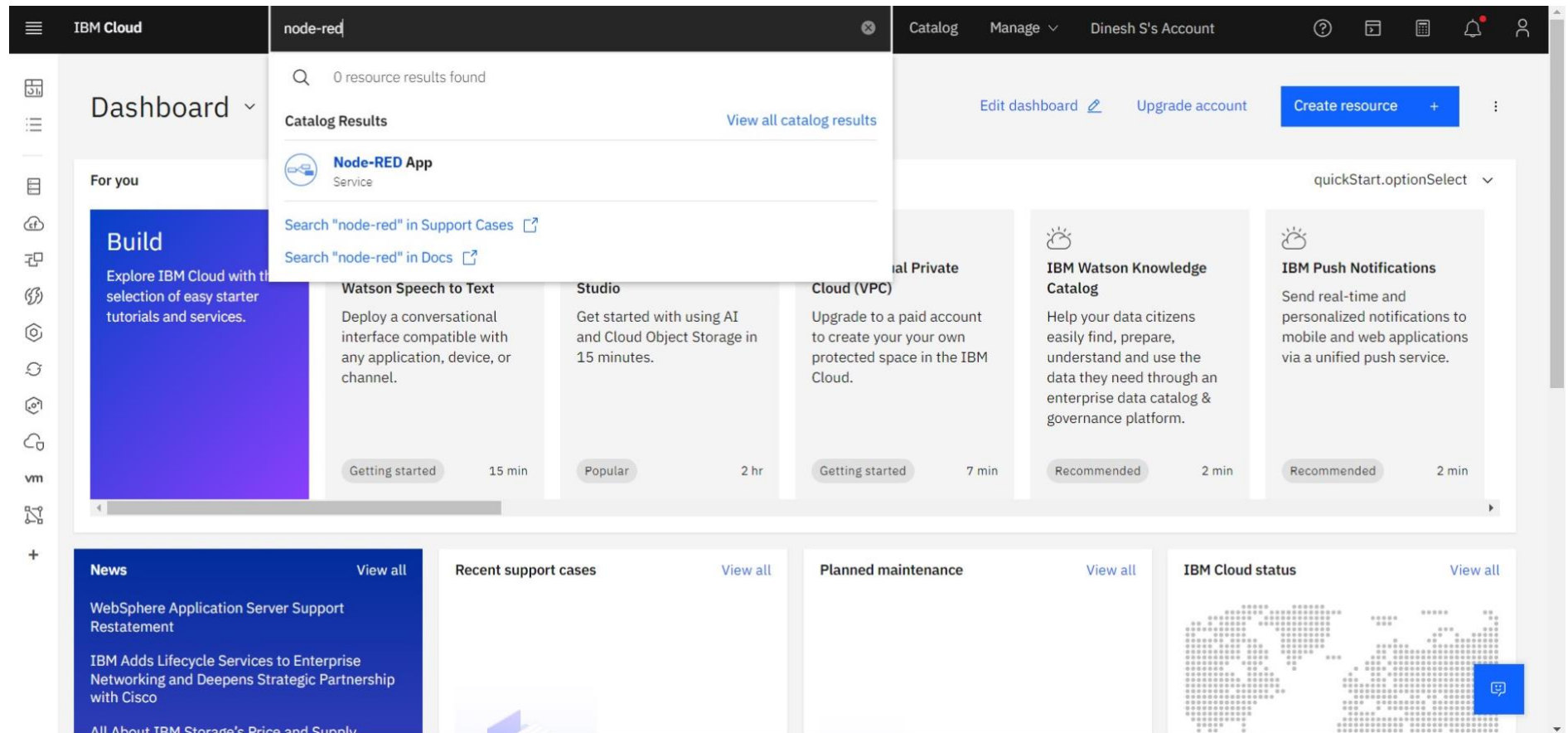
## STEP

4:

Now you are in Dashboard. Now search Node-Red and click on it.



## STEP 5:



Now click on Get Started. After choose node-red in pricing plan or you can choose Lite. Then click on create option.

## STEP 6:

The screenshot shows the IBM Cloud console interface for configuring a service. The top navigation bar includes the IBM Cloud logo, a search bar, and links for Catalog, Manage, and the user's account (Dinesh S's Account). The main content area is divided into sections for configuration:

- Default**: A dropdown menu showing the selected default environment.
- Tags**: A section with an information icon and a text input field containing "Examples: env:dev, version-1".
- Platform**: A section with a radio button selected for "Node.js".
- Service details**: A section header.
- Cloudant**: A section with a star icon and a note: "★ = You have existing instances of this service available to use in this kit. If you wish to use the existing service, select it from the pricing plan menu."
- Region**: A dropdown menu showing "Frankfurt".
- Resource group**: A dropdown menu showing "Default".
- Pricing plan**: A dropdown menu showing "node-red-oulkn-2022--cloudant-1668359803459".
- Pricing details** and **Terms**: Links to view more information.
- Buttons**: "Cancel" and "Create" buttons at the bottom.
- ASK A QUESTION**: A vertical button on the right side.

Now you will be redirected to your node-red app page.

## STEP 7:

The screenshot shows the IBM Cloud console interface for an application named "Node RED WWEDX 2022-11-13". The top navigation bar includes the IBM Cloud logo, a search bar, and user account information. The main content area is divided into several sections:

- Details:** A table showing app information. The "App URL" and "Source" fields indicate that the app has not been deployed yet. A "Download code" button is available.
- Services:** A section for managing services, currently showing "Cloudant". It includes links to the dashboard, documentation, and API reference, as well as buttons to connect existing services or create a new one.
- Deployment Automation:** A section explaining how to configure continuous delivery. It includes a "Deploy your app" button.
- Getting started quickly:** A sidebar with a list of steps to help users get started with their app.

The "Getting started quickly" sidebar contains the following steps:

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.

Now click Deploy your app option.

## STEP 8:

**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 API key

..... **New** +

**Note:** Your cluster status must be available before you can select it.

Container registry region: Container registry region

Container registry namespace: Container registry namespace

**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.
- Select the region where your Kubernetes

**ASK A QUESTION**

Now choose Kubernetes Service and below you will see IBM Cloud API Key there click on New and then click OK. Your API Key will be generated.

## STEP 9:

IBM Cloud

Search resources and products...

Catalog Manage Dinesh S's Account

IBM Cloud API key

.....

New +

**Note:** Your cluster status must be available before you can select it.

Container registry region: Dallas

Container registry namespace: Container registry namespace

Cluster region: Frankfurt

Cluster resource group: Default

Cluster namespace: default

Cluster name: mycluster-free (depo)

Deployment type: Helm

Cancel Next

**Steps**

1. Create an IBM Cloud API key, or select an existing one from a secrets store.
2. Select the container registry region.
3. Enter the container registry namespace if it is not already completed.
4. Select the region where your Kubernetes cluster is located.
5. Select the resource group, cluster namespace, and the cluster name.
6. The deployment type of **Helm** is selected for you.
7. Click **Next**.

ASK A QUESTION

Now click on Create New below the cluster name. You will be redirected to new page. In new page, choose pricing plan as Free and then click on Create.

# STEP 10:

IBM Cloud

Search resources and products...

Q

Catalog

Manage

Dinesh S's Account

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Catalog /

Kubernetes cluster

Author: IBM • Docs • API docs

Create

About

Deliver your apps quicker  
across clouds with  
Red Hat OpenShift

Plan details

Learn more about the differences between plans in our docs.

Pricing plan

Free

You have already created your one free cluster

Ready to create more clusters? Choose the Standard cluster type.

Summary

United States

Kubernetes cluster

1 Worker node

Free

Free - 2 vCPUs 4GB RAM  
Virtual - shared  
Ubuntu 18

Total estimated cost

Free/mo

Additional charges for networking and bandwidth might apply.  
Actual monthly total will vary with tiered pricing.  
Estimate does not include costs for integrations.

Create

Add to estimate

## STEP 11:

For cluster creation you need to wait for 20 minutes. After creation come back to node red app tab.

STEP 12

:



# STEP 13

The screenshot displays the IBM Cloud Clusters console for a cluster named 'mycluster-free'. The interface includes a top navigation bar with the IBM Cloud logo, a search bar, and user account information. The left sidebar shows navigation options: Overview (selected), Worker nodes, Worker pools, and DevOps (marked as 'New'). The main content area features a cluster status bar at the top indicating 'Normal' status and a 30-day expiration warning. Below this, four summary cards provide details on Node status (1 of 1, Normal), Add-on status (0 of 0, Normal), Master status (Normal), and Ingress status (Unknown). A 'Details' section follows, listing attributes such as Cluster ID, Version, Infrastructure, Zones, Created time, Resource group, and Image security enforcement (with an 'Enable' button). At the bottom, a 'Node health' section is partially visible, along with a link to 'Worker node details'.

IBM Cloud

Search resources and products...

Catalog Manage Dinesh S's Account

Clusters / mycluster-free Normal Expires in 30 days Add tags

Help Kubernetes dashboard Actions...

**Overview**

Worker nodes

Worker pools

DevOps **New**

**Expires in 30 days:**  
Be sure to back up your data, your cluster will be deleted in 30 days. To access the full capabilities of the service, try out a [standard cluster](#).

**Node status**  
1 of 1  
Normal  
[Details ↓](#)

**Add-on status**  
0 of 0  
Normal  
[Details ↓](#)

**Master status**  
Normal  
[Docs ↗](#)

**Ingress status**  
Unknown  
[Docs ↗](#)

**Details**

Cluster ID	Version	Infrastructure	Zones
cdo1pr9f07e084amd3a0	1.24.7_1542	Classic	Milan 01
Created	Resource group	Image security enforcement	
13/11/2022, 23:14	Default	<a href="#">Enable</a>	

**Node health** [Worker node details](#)

In cluster name, choose mycluster-free and click on Next.

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IBM Cloud

Search resources and products...

Q

Catalog

Manage

Dinesh S's Account

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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.

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.
- Select the region where your Kubernetes cluster is located.
- Select the resource group, cluster namespace, and the cluster name.
- The deployment type of **Helm** is selected for you.
- Click **Next**.

IBM Cloud API key

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🔑

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



## STEP 15

Then click on Create.

## STEP 12:

You need to wait until ci-pipeline status success.

IBM Cloud

Search resources and products...

Q

Catalog

Manage

Dinesh S's Account

?

Node RED WWEDX 2022-11-13

Add tags

Actions...

Details

App URL

http://169.51.204.212:31283

Source

https://us-south.git.cloud.ibm.com/dineshselvaraj80454/Node...

Resource group

Default

Deployment target

mycluster-free

Created

13/11/2022

Services

Cloudant

Open dashboard

Documentation

API reference

Credentials

Connect existing services

Create service

Deployment Automation

Name

NodeREDWWEDX2022-11-13

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

ASK A QUESTION

## STEP

13:

Now go to Dashboard, in sidebar menu choose Resource list > Developer Tools. Click on your Node-red (Cloud Application)

# STEP

IBM Cloud

Search resources and products...

Q

Catalog

Manage

Dinesh S's Account

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Resource list

Create resource +

Name	Group	Location	Product	Status	Tags
Filter by name or IP address...					
Filter by group or org...		Filter...	Filter...	Filter...	Filter...
Databases (1)					
node-red-wwedx-2022--cloudant-166836...	Default	London	Cloudant	Active	—
Developer tools (3)					
Continuous Delivery	Default	Dallas	Continuous Delivery	Active	—
Node RED WWEDX 2022-11-13	Default	Global	Cloud Application	—	—
NodeREDWWEDX2022-11-13	Default	Dallas	Toolchain	—	—
Logging and monitoring (0)					
Migration (0)					
Integration (0)					
Internet of Things (1)					
Internet of Things Platform-gw	Default	London	Internet of Things Platform	Active	—

14:

# STEP

Now you will be redirected your Node-red app there you can see your App url and Source. To open Node-red editor copy the app url and paste in new tab.

The screenshot displays the IBM Cloud console interface for a specific application. The top navigation bar includes the IBM Cloud logo, a search bar, and user account information. The main content area is titled "Node RED WWEDX 2022-11-13" and features several panels:

- Details:** A table showing key information about the application.

Field	Value
App URL	<a href="http://169.51.204.212:31283">http://169.51.204.212:31283</a>
Source	<a href="https://us-south.git.cloud.ibm.com/dineshselvaraj80454/Node...">https://us-south.git.cloud.ibm.com/dineshselvaraj80454/Node...</a>
Resource group	Default
Deployment target	mycluster-free
Created	13/11/2022
- Services:** A section for managing services, currently showing "Cloudant" with links to its dashboard, documentation, and API reference. It also includes buttons to "Connect existing services" and "Create service".
- Deployment Automation:** A section showing the status of deployment automation, including the name "NodeREDWWEDX2022-11-13", location "Dallas", and tool integrations.
- Delivery Pipelines:** A section showing the status of delivery pipelines, including the name "pr-pipeline" and "ci-pipeline", and their respective statuses.
- Getting started quickly:** A sidebar panel providing instructions on how to configure the app, connect services, and deploy it.

The right sidebar also features a vertical "ASK A QUESTION" button and a blue chat icon.

## STEP

15:

Click on Next and then choose Not Recommended and click on next and then click finish. Then click on go to Node-RED flow editor. Now start work on your flows.



# STEP

