Create And Configure IBM Cloud Services

Create Node-RED Service

Date	12 Nov. 22
Team Id	PNT2022TMID51073
Project Name	SmartFarmer - IoT Enabled Smart Farming Application

Created Node-RED Service and learn about the features

Here is the step by step process we done to create Node-Red Service
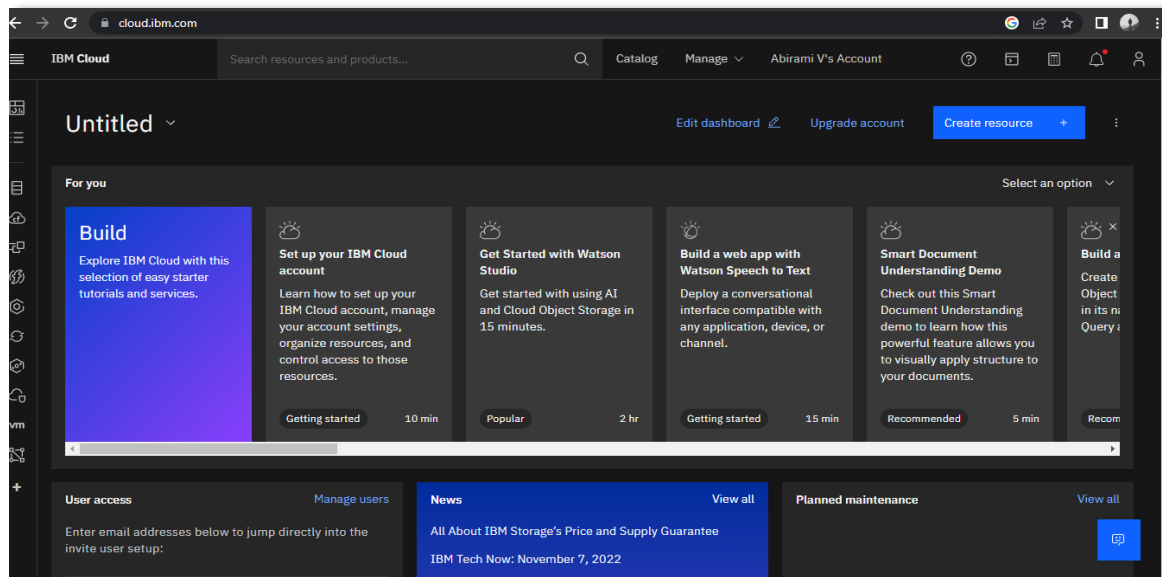
Search resources and products...

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Catalog /
App Configuration
Centralized, in-flight configuration for web and mobile applications and distributed environments.

Create | About

Type
Service

Provider
IBM

Last updated
11/08/2022

Category
Developer tools

Compliance
IAM-enabled
Service Endpoint Supported

Location
London
Dallas
Sydney
Washington DC

Related links
API docs
Docs
Terms

Select a location
London (eu-gb) ⌄

Select a pricing plan
Displayed prices do not include tax. Monthly prices shown are for country or location: United States

Plan	Features	Pricing
Lite	Includes all App Configuration capabilities for evaluation only. Not to be used for production. The monthly instance price includes 10 active entity IDs and 5,000 API calls Lite plan services are deleted after 30 days of inactivity.	Free ✓
Standard	This plan includes feature flags and property management capabilities.	$250.00 USD/Application instance $0.01 USD/Active Entity ID $10.00 USD/Hundred Thousand API Calls
Enterprise	This plan includes percentage rollout and segment targeting in addition to the property management and feature flags found in the Standard plan.	$500.00 USD/Application instance $0.01 USD/Active Entity ID $10.00 USD/Hundred Thousand API Calls

Configure your resource
Select a resource group ⓘ

Summary
App Configuration — Free
Location: London
Plan: Lite
Service name: App Configuration-ny
Resource group: Default

☐ I have read and agree to the following license agreements:
Terms

[Create]

[Add to estimate]

Waiting for cloud.ibm.com...

IBM Cloud

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Node-RED

About | Create

Details
Author   IBM
Updated   2/11/2020
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]

ASK A QUESTION

IBM Cloud

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About | **Create**

App details

App name
Node RED XJKHQ 2022-11-10
Accept the default name, or enter a value between 2 and 128 characters.

Resource group
Default ⌄

Tags ⓘ
Examples: env:dev, version-1

Platform
⦿ Node.js

Service details

Cloudant

Region
London ⌄

Resource group
Default ⌄

Pricing plan
Lite ⌄

Pricing details   Terms

[Cancel] [Create]

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ASK A QUESTION

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Resource list / App details /

Node RED IFVDY 2022-11-10   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	11/10/2022

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
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 <APPNAME>` 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`

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Account

Account resources ⌄
Resource groups
Cloud Foundry orgs
Licenses and entitlements
Tags
Dashboards
Account settings
IBM Cloud Shell settings
Notification distribution list
Classic infrastructure ⌄
Subscriptions
Audit log
Company information

Cloud Foundry Orgs

ⓘ IBM Cloud Foundry Public is being deprecated. Please see full details.   ✕

Create ⊕

Name	Date Created	Spaces	Roles	Actions
divyashree	11/9/2022	1	Manager	⋮

Search resources and products...

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Resource list / App details /

Node RED IFVDY 2022-11-10

● Select the deployment target   ○ Configure the DevOps toolchain

Getting started with apps

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	Red Hat OpenShift	Cloud Foundry ✓	Code Engine
IBM	IBM	IBM	IBM
Deploy, scale, and manage your containerized application workloads to highly available clusters.	Deploy your apps on highly available clusters that come installed with Red Hat OpenShift on IBM Cloud.	Deploy and run your applications without managing servers or clusters. A Lite plan is available for quick and easy deployment.	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
••••••••••••••••••••••••••••••••   👁 ⧉ ✎   New +

Number of instances
1 ⌄

Memory allocation per instance
64 MB ———●———————— 2560 MB   256

Region	Organization	Space
London ⌄	divyashree ⌄	divyashree ⌄

Host	Domain
node-red-ifvdy-2022-11-10	eu-gb.mybluemix.net ⌄

Cancel   Next
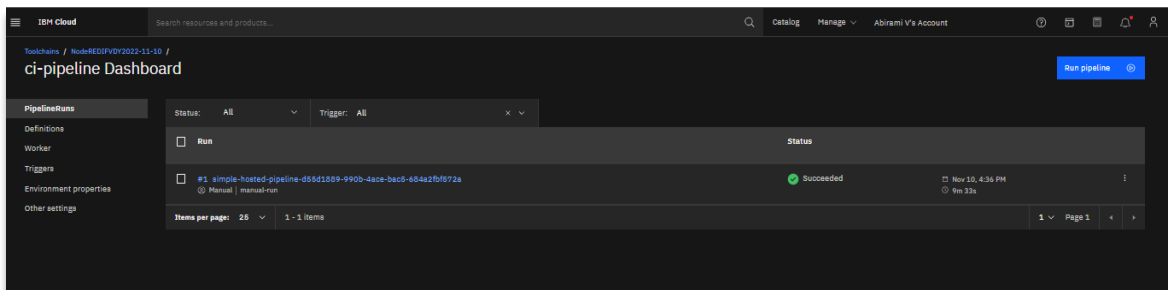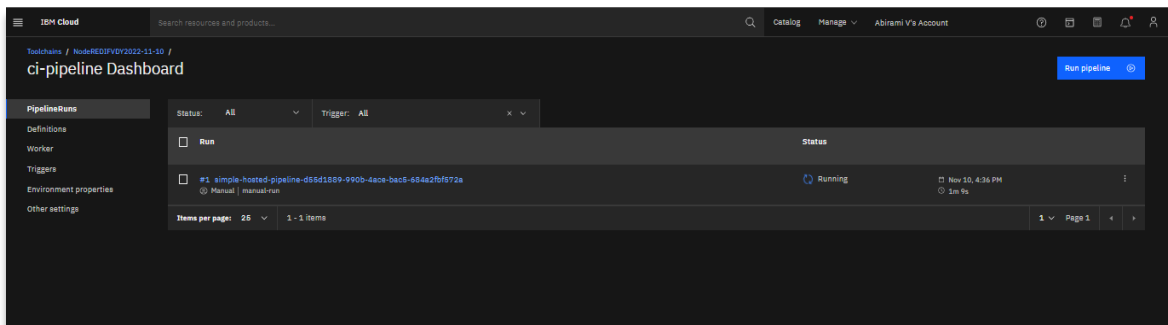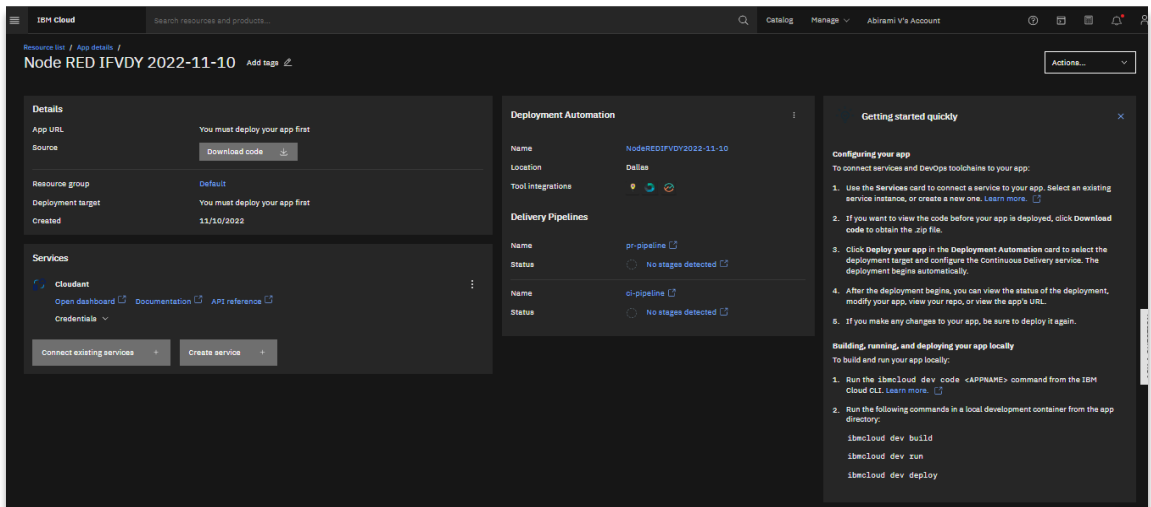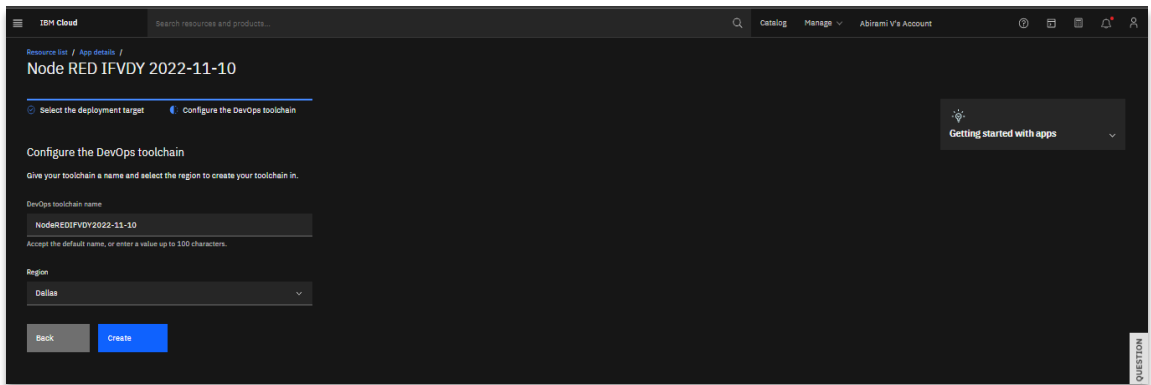
Screenshot 1

Resource list / App details /

Node RED IFVDY 2022-11-10

✓ Select the deployment target   ◔ Configure the DevOps toolchain

Configure the DevOps toolchain

Give your toolchain a name and select the region to create your toolchain in.

DevOps toolchain name

NodeREDIFVDY2022-11-10

Accept the default name, or enter a value up to 100 characters.

Region

Dallas

Back   Create

Getting started with apps

QUESTION

Screenshot 2

IBM Cloud   Search resources and products...   Catalog   Manage ∨   Abirami V's Account

Resource list / App details /

Node RED IFVDY 2022-11-10   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   11/10/2022

Services

Cloudant
Open dashboard ↗ Documentation ↗ API reference ↗
Credentials ∨

Connect existing services +   Create service +

Deployment Automation

Name   NodeREDIFVDY2022-11-10
Location   Dallas
Tool integrations

Delivery Pipelines

Name   pr-pipeline ↗
Status   No stages detected ↗

Name   ci-pipeline ↗
Status   No stages detected ↗

Getting started quickly

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   `ibmcloud dev deploy`

Screenshot 3

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Toolchains / NodeREDIFVDY2022-11-10 /

ci-pipeline Dashboard

Run pipeline ⟳

PipelineRuns
Definitions
Worker
Triggers
Environment properties
Other settings

Status: All ∨   Trigger: All   × ∨

☐ Run	Status
☐ #1 simple-hosted-pipeline-d55d1889-990b-4ace-bac5-684a2fbf572a ⊙ Manual | manual-run	🔄 Running 📅 Nov 10, 4:36 PM ⏱ 1m 9s

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

Screenshot 4

IBM Cloud   Search resources and products...   Catalog   Manage ∨   Abirami V's Account

Toolchains / NodeREDIFVDY2022-11-10 /

ci-pipeline Dashboard

Run pipeline ⟳

PipelineRuns
Definitions
Worker
Triggers
Environment properties
Other settings

Status: All ∨   Trigger: All   × ∨

☐ Run	Status
☐ #1 simple-hosted-pipeline-d55d1889-990b-4ace-bac5-684a2fbf572a ⊙ Manual | manual-run	✅ Succeeded 📅 Nov 10, 4:36 PM ⏱ 9m 33s

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

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

‖▬

Node-RED

Flow-based programming for the Internet of Things

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.

To start customising your instance of Node-RED, you can either download the application locally or use IBM DevOps Services to edit and deploy your changes directly.

- **+ Securing the editor**

  When you first ran this application you were presented with some options to secure the editor. To change those options, you can set some environment variables from either the Bluemix console or the cf command-line

  The environment variables you can set are:

  - NODE_RED_USERNAME - the username to secure the editor with
  - NODE_RED_PASSWORD - the password to secure the editor with
  - NODE_RED_GUEST_USER - set to true to allow anonymous users to have read-only access to the editor

  Bluemix console

  1. On the Bluemix console page for this application, go to the 'Runtime' page and then the 'Environment Variables' section
  2. Add the required user-defined variables
  3. Click Save and restart your application
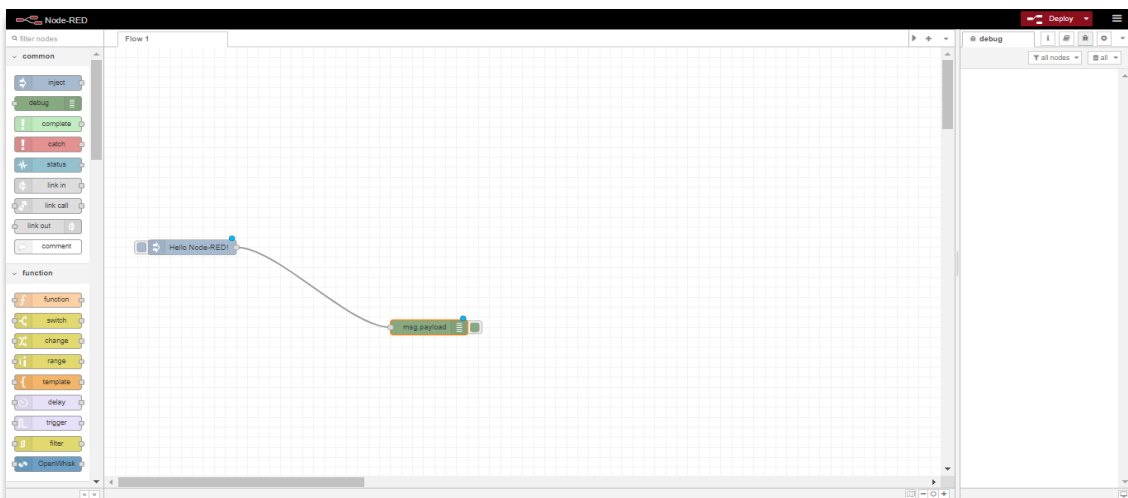
  cf command-line

  1. Run the command:

     `cf set-env [APPLICATION_NAME] [ENV_VAR_NAME] [ENV_VAR_VALUE]`

- **+ Enabling Application Metrics for Node.js monitoring**

  When you first ran this application you were presented with an option to enable monitoring of your Node-RED flows using the Application Metrics for Node.js dashboard. To change those options, you can set an environment variable from either the Bluemix console or the cf command-line

  When enabled, the Application Metrics for Node.js dashboard will be available at

  https://node-red-ifvdy-2022-11-10.eu-gb.mybluemix.net/appmetrics-dash

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