

Create And Configure IBM Cloud Services

Project Title	IoT Based Safety Gadget for Child Safety Monitoring and Notification
Team ID	PNT2022TMID2857 1
Content	IBM Cloud Service

STEP 1:

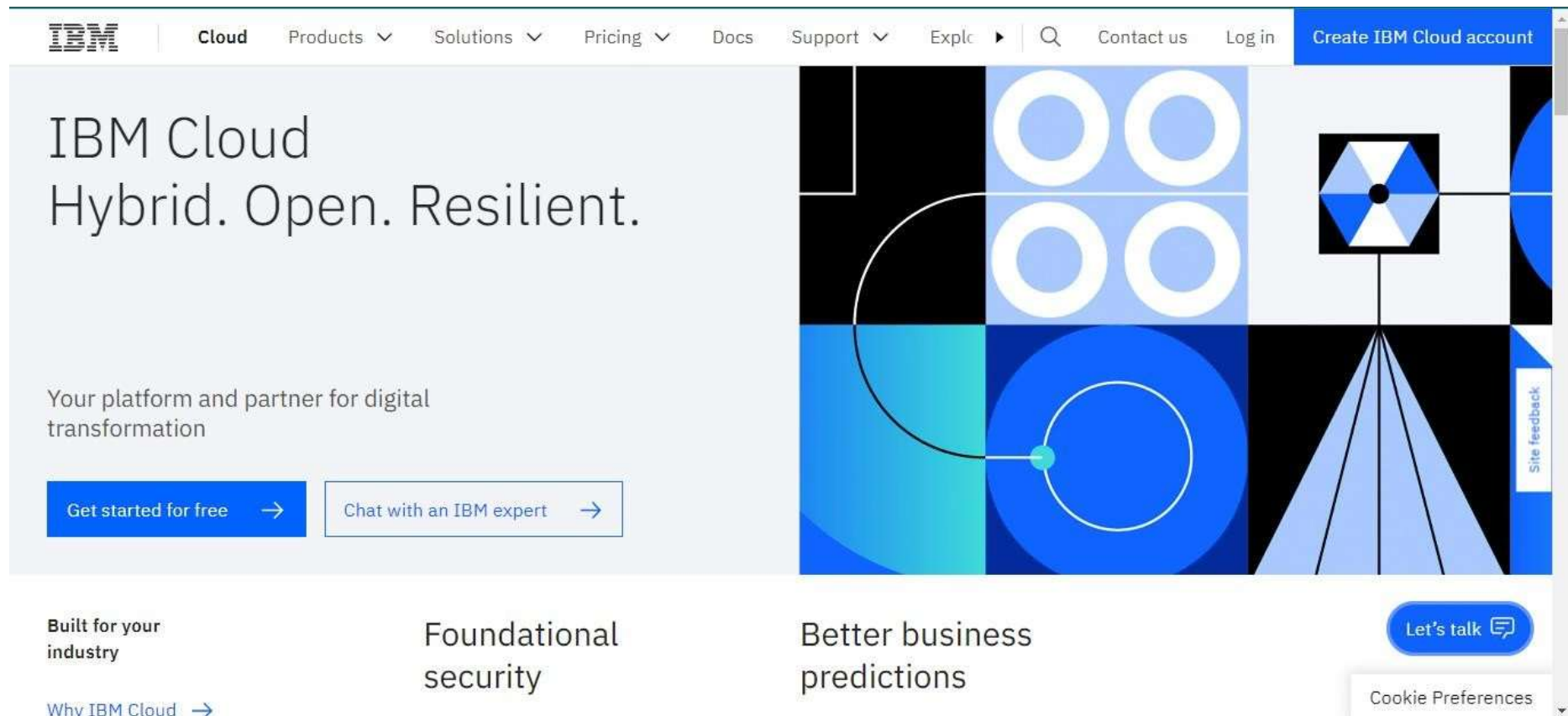
Type IBM Cloud in Google and click on the first link.

The screenshot shows a Google search interface with the query "ibm cloud" entered in the search bar. The search results page displays "About 20,70,00,000 results (0.48 seconds)". The first result is an advertisement for IBM Cloud, with the URL "https://www.ibm.com/cloud/computing". The ad text describes a robust suite of advanced data and AI tools, mentioning "Enterprise-Grade Cloud" and "Full Stack Cloud Platform, Hybrid Cloud, Developer Tools". Below the ad, there are four links: "Watson AI" (Bring AI Tools and Apps to Your Data Wherever It Resides), "IBM Let's Create" (Bringing Together the Technology & Expertise for a New Way to Create), "Chat with IBM Sales" (Chat, Call, or Email IBM To Discuss Your Business Needs Today), and "Modernise Hybrid Cloud" (Let's Create Cloud Management That Requires Less Management).

On the right side of the search results, there is a knowledge panel for "IBM cloud computing". The panel features the IBM Cloud logo and a diagram illustrating cloud computing concepts. Below the diagram, it states "IBM cloud computing" and "Computer software". At the bottom of the panel, it begins with "IBM cloud computing is a set of cloud computing services for business offered by the information".

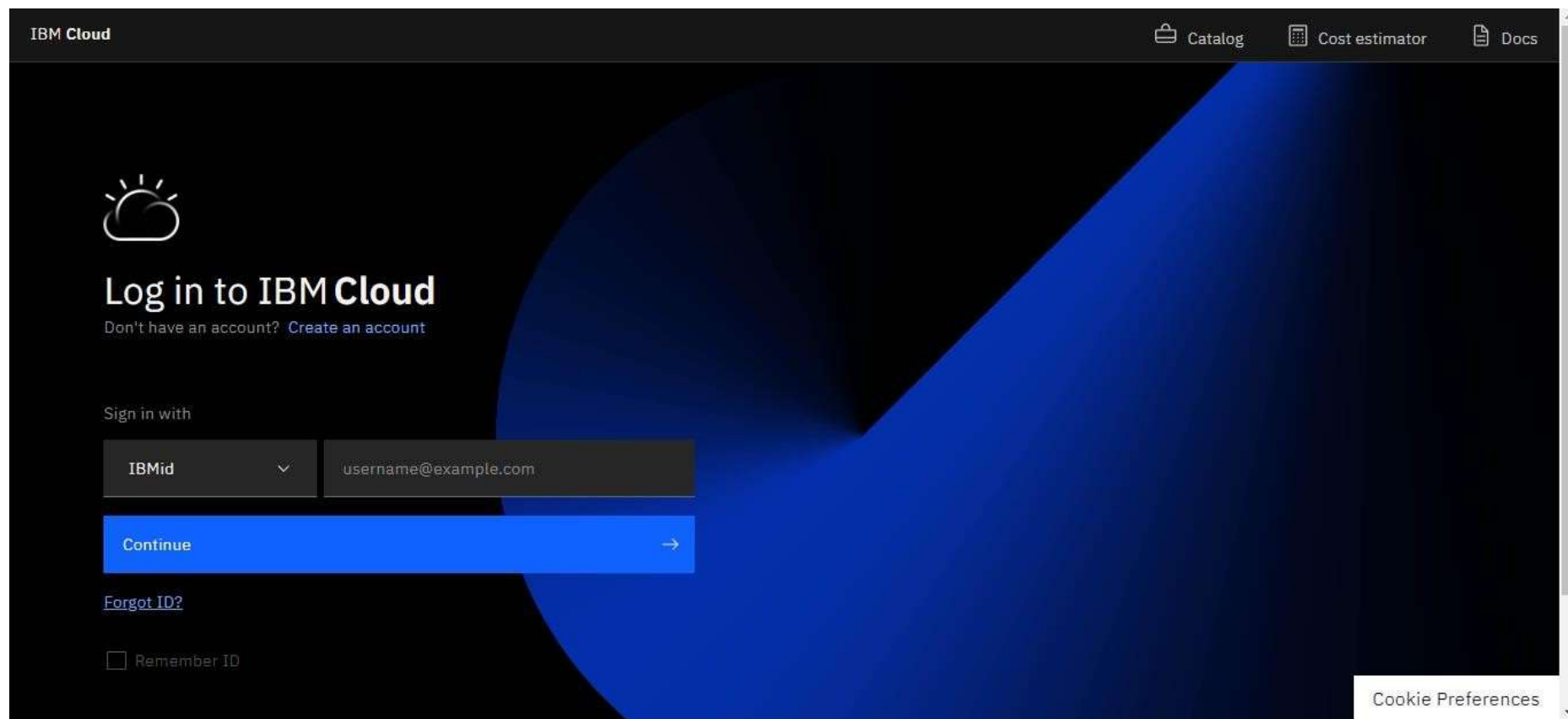
STEP 2:

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.



The screenshot shows the IBM Cloud login interface. At the top, there is a dark navigation bar with the 'IBM Cloud' logo on the left and links for 'Catalog', 'Cost estimator', and 'Docs' on the right. The main content area has a dark background with a large blue abstract shape. On the left, there is a cloud icon with sun rays, followed by the text 'Log in to IBM Cloud' and a link 'Don't have an account? Create an account'. Below this, the 'Sign in with' section shows a dropdown menu set to 'IBMid' and a text input field containing 'username@example.com'. A prominent blue 'Continue' button with a right-pointing arrow is positioned below the input field. At the bottom left, there is a link 'Forgot ID?' and a checkbox labeled 'Remember ID'. In the bottom right corner, a 'Cookie Preferences' button is visible.

IBM Cloud

Catalog Cost estimator Docs



Log in to IBM Cloud

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

Sign in with

IBMid

Continue →

[Forgot ID?](#)

☐ Remember ID

Cookie Preferences

STEP 4:

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

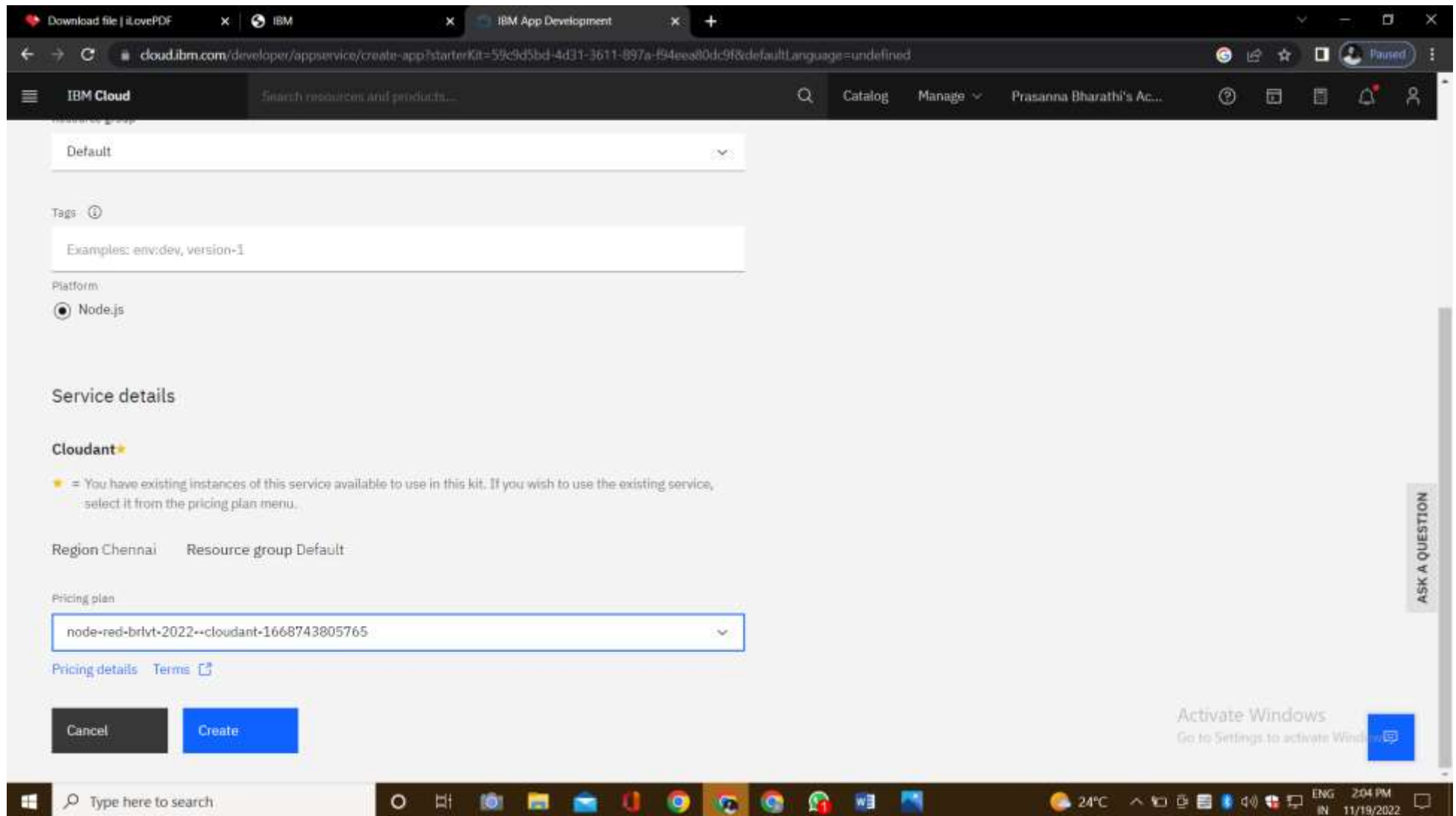
The screenshot displays the IBM Cloud dashboard interface. The browser's address bar shows 'cloud.ibm.com'. The dashboard header includes the 'IBM Cloud' logo, a search bar with the text 'node', and navigation links for 'Catalog', 'Manage', and the user profile 'Prasanna Bharathi's Ac...'. The main content area is divided into several sections:

- Resource Results:** A list of five Node-RED instances, each with a date: 'Node RED BRLVT 2022-11-18', 'Node RED CYBJD 2022-11-18', 'Node RED JQAKS 2022-11-19', 'Node RED NCNOL 2022-11-18', and 'Node RED PSHLE 2022-11-19'. A link 'View all resource results' is present.
- Catalog Results:** A list of services including 'Node-RED App', 'Node.js', 'Node.js Express App', 'Natural Language Understanding Node.js App', and 'Content Delivery Network'. A link 'View all catalog results' is present.
- For you:** A section with a 'Build' card and a 'News' section.
- Right sidebar:** Contains cards for 'Incorporate DevOps into your process' and 'Get started with Watson Discovery', along with a 'Create resource' button.
- Bottom right:** A map showing 'IBM Cloud status' with a link 'View all'.

The Windows taskbar at the bottom shows the system clock as 2:02 PM on 11/19/2022, with a temperature of 24°C and weather 'Mostly sunny'.

STEP 5:

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



STEP 6:

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

The screenshot shows the IBM Cloud Developer App Service interface for a Node RED application. The browser address bar shows the URL: `cloud.ibm.com/developer/appservice/apps/f1d552c3-c6f1-43a8-863c-b73b89eb2927`. The page title is "Node RED PSHLE 2022-11-19".

Details

App URL	You must deploy your app first
Source	Download code
Resource group	Default
Deployment target	You must deploy your app first
Created	11/19/2022

Services

Cloudant

Provisioning service 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. [Go to Settings to activate Windows](#)
5. If you make any changes to your app, be sure to deploy it again.

ASK A QUESTION

STEP 7:

Now click Deploy your app option.

cloud.ibm.com/developer/appservice/apps/993c15ba-0143-473f-b7a8-488e26ad82f4

IBM Cloud Search resources and products... Catalog Manage Shanmugam B's Account

Resource list / App details /

Node RED CBGMG 2022-11-11

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.

Getting started with apps

Step 1. Select the deployment target

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

IBM Cloud Kubernetes Service

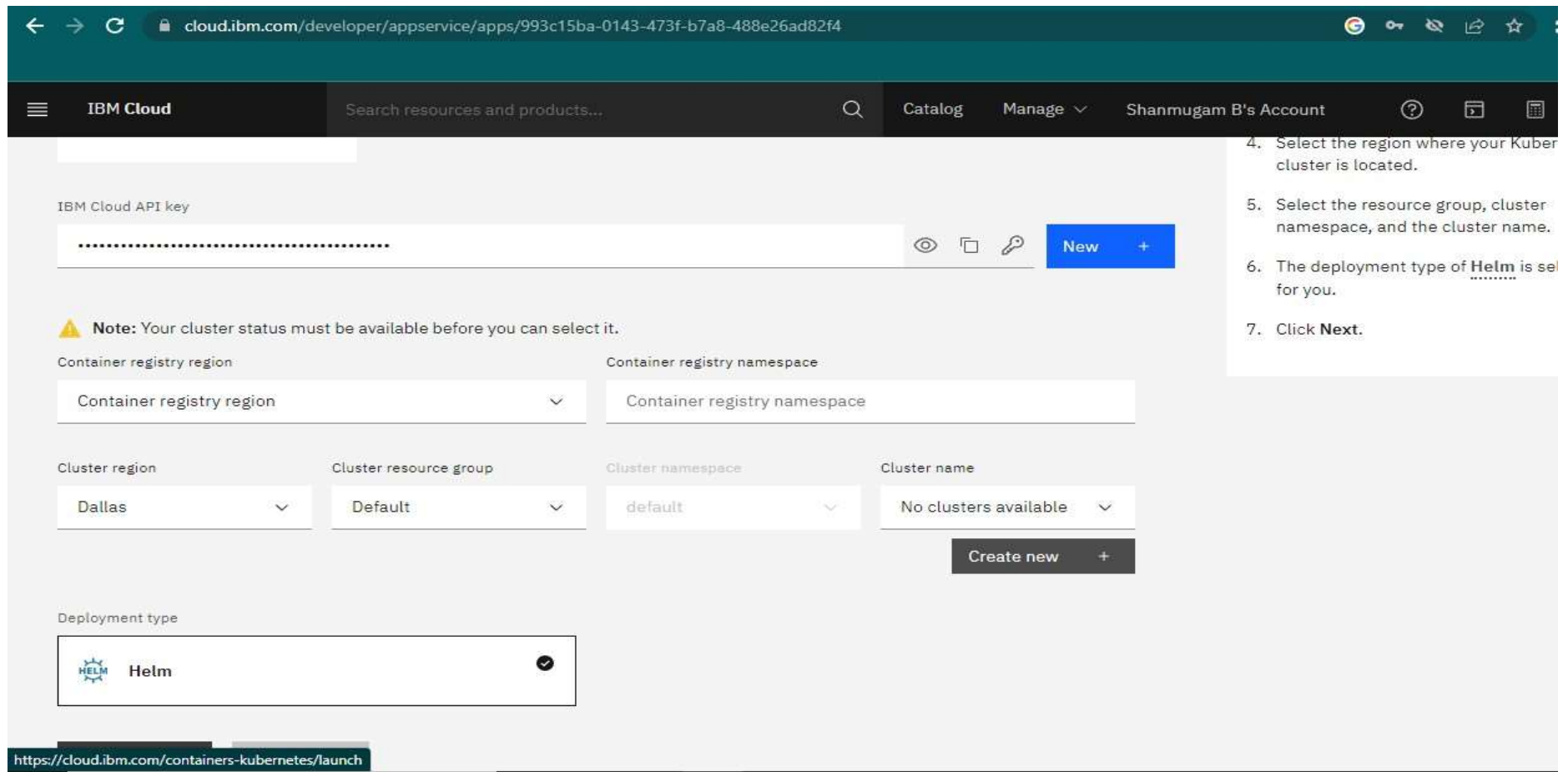
Kubernetes is an open source platform for managing containerized workloads and services across multiple hosts, and offers management tools for deploying, automating, monitoring and scaling containerized apps with minimal manual intervention. [Learn more.](#)

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 created.

STEP 8:

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.



The screenshot shows the IBM Cloud developer console interface. The top navigation bar includes the IBM Cloud logo, a search bar, and user account information. The main content area is titled 'IBM Cloud API key' and features a text input field with a masked API key, an eye icon, a copy icon, a key icon, and a blue 'New +' button. Below this is a note: 'Note: Your cluster status must be available before you can select it.' The configuration section includes dropdown menus for 'Container registry region', 'Container registry namespace', 'Cluster region' (set to Dallas), 'Cluster resource group' (set to Default), 'Cluster namespace' (set to default), and 'Cluster name' (set to No clusters available). A 'Create new +' button is located below the cluster name dropdown. The 'Deployment type' section shows 'Helm' selected with a checkmark. A list of instructions is visible on the right side of the screen:

4. Select the region where your Kuber cluster is located.
5. Select the resource group, cluster namespace, and the cluster name.
6. The deployment type of **Helm** is sel for you.
7. Click **Next**.

The URL bar at the bottom shows <https://cloud.ibm.com/containers-kubernetes/launch>.

STEP 9:

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.

The screenshot shows the IBM Cloud 'Kubernetes cluster' creation page. The browser address bar displays 'cloud.ibm.com/kubernetes/catalog/create'. The page header includes the IBM Cloud logo, a search bar, and navigation links for 'Catalog', 'Manage', and the user account 'Shanmugam B's Account'. The main content area is titled 'Kubernetes cluster' with links to 'Author: IBM', 'Docs', and 'API docs'. Below this, there are two tabs: 'Create' (active) and 'About'. A promotional banner for Red Hat OpenShift is visible. The 'Plan details' section includes a link to learn more about plan differences and a 'Pricing plan' dropdown menu currently set to 'Free'. The 'Kubernetes version' section has a link to select the platform version. On the right sidebar, the 'Summary' section shows the 'Kubernetes cluster' configuration: '1 Worker node' with 'Free - 2 vCPUs 4GB RAM', 'Virtual - shared', and 'Ubuntu 18'. Below this, the 'Total estimated cost' section includes a disclaimer about additional charges and a link to the pricing tier. At the bottom of the sidebar are two buttons: 'Create' (blue) and 'Add to estimate' (white).

cloud.ibm.com/kubernetes/catalog/create

IBM Cloud Search resources and products... Catalog Manage Shanmugam B's Account

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

Kubernetes version

Select the Kubernetes platform version for your cluster. For more information

Summary

United States

Kubernetes cluster

1 Worker node

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

Total estimated cost

Additional charges for networking and might apply.
Actual monthly total will vary with tier
Estimate does not include costs for int

Create

Add to estimate

STEP 10:

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

The screenshot shows the IBM Cloud Kubernetes cluster overview page for a cluster named 'mycluster-free'. The cluster is in a 'Normal' state and expires in 30 days. The page displays various status metrics and details.

Cluster Overview:

- Cluster Name: mycluster-free
- Status: Normal
- Expires in: 30 days
- Actions: Help, Kubernetes dashboard, Actions...

Overview Sidebar:

- Overview (Selected)
- Worker nodes
- Worker pools
- DevOps (New)

Status Metrics:

Node status	Add-on status	Master status	Ingress status
1 of 1 Normal	0 of 0 Normal	Normal	Healthy

Details:

Cluster ID	Version	Infrastructure	Zones
cdig944f08p8rb6ek8qg	1.24.8_1544	Classic	Milan 01

Additional Details:

Created	Resource group	Image security enforcement
	Default	

The bottom of the image shows a Windows taskbar with the time 10:02 AM on 11/18/2022 and a temperature of 28°C.

STEP 11:

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

The screenshot shows the IBM Cloud Developer console interface for creating a new cluster. The browser address bar displays the URL: `cloud.ibm.com/developer/appservice/apps/77e3a17a-6985-4791-97be-15a019fe1b27`. The page header includes the IBM Cloud logo, a search bar, and navigation links for Catalog, Manage, and the user profile (Prasanna Bharathi's Ac...). The main content area is divided into several sections:

- Deployment options:** Four cards describing different deployment methods: "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.", and "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:** A field with a masked key and a "Now" button.
- Container registry region:** A dropdown menu set to "Dallas".
- Container registry namespace:** A dropdown menu set to "ghgzsxadngtwzubbnnfovghpdglpu".
- Cluster region:** A dropdown menu set to "Frankfurt".
- Cluster resource group:** A dropdown menu set to "Default".
- Cluster namespace:** A dropdown menu set to "default".
- Cluster name:** A dropdown menu set to "mycluster-free".
- Deployment type:** A dropdown menu set to "Helm".

At the bottom, there are "Cancel" and "Next" buttons. The "Next" button is highlighted in blue. On the right side, there is a "Before you begin" section with a list of steps and a "Steps" section with a numbered list of instructions. The "Next" button is also highlighted in blue.

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**.

Activate Windows
Go to Settings to activate Windows.

Windows taskbar at the bottom shows the search bar, task view, and various application icons. The system tray on the right shows the temperature (24°C), time (2:10 PM), and date (11/19/2022).

STEP 12:

Then click on Create.

The screenshot displays the IBM Cloud Developer console for an application named "Node RED PSHLE 2022-11-19". The interface is divided into several sections:

- Details:** Contains fields for App URL, Source (with a "Download code" button), Resource group (set to "Default"), Deployment target, and Created date (11/19/2022).
- Services:** Shows "Cloudant" provisioning service credentials and buttons for "Connect existing services" and "Create service".
- Deployment Automation:** Includes a "Configure Continuous Delivery" section with a "Deploy your app" button.
- Getting started quickly:** A sidebar with a 5-step guide for configuring the app, connecting services, and deploying.

The Windows taskbar at the bottom shows the search bar, various application icons, and system information including the date (11/19/2022) and time (12:20 PM).

STEP 13:

You need to wait until ci-pipeline status success.

The screenshot displays the IBM Cloud Developer console interface. The top navigation bar includes the IBM Cloud logo, a search bar, and user account information. The main content area is divided into two columns. The left column contains a 'Details' section with fields for App URL, Source (with a 'Download code' button), Resource group (set to 'Default'), Deployment target, and Created date (11/11/2022). Below this is a 'Services' section featuring a 'Cloudant' service with links to its dashboard, documentation, and API reference, along with a 'Connect existing services' and 'Create service' button. The right column shows the 'Deployment Automation' section with details for a pipeline named 'NodeREDCBGMG2022-11-11' located in 'Dallas'. It lists tool integrations and a 'Delivery Pipelines' section. The 'Delivery Pipelines' section shows two pipelines: 'pr-pipeline' with a status of 'No stages detected' and 'ci-pipeline' with a status of 'Success'.

cloud.ibm.com/developer/appservice/apps/993c15ba-0143-473f-b7a8-488e26ad82f4

IBM Cloud Search resources and products... Catalog Manage Shanmugam B's Account

Details

App URL You must deploy your app first

Source [Download code](#)

Resource group [Default](#)

Deployment target You must deploy your app first

Created 11/11/2022

Services

Cloudant

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

Credentials

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

Deployment Automation

Name [NodeREDCBGMG2022-11-11](#)

Location Dallas

Tool integrations

Delivery Pipelines

Name [pr-pipeline](#)

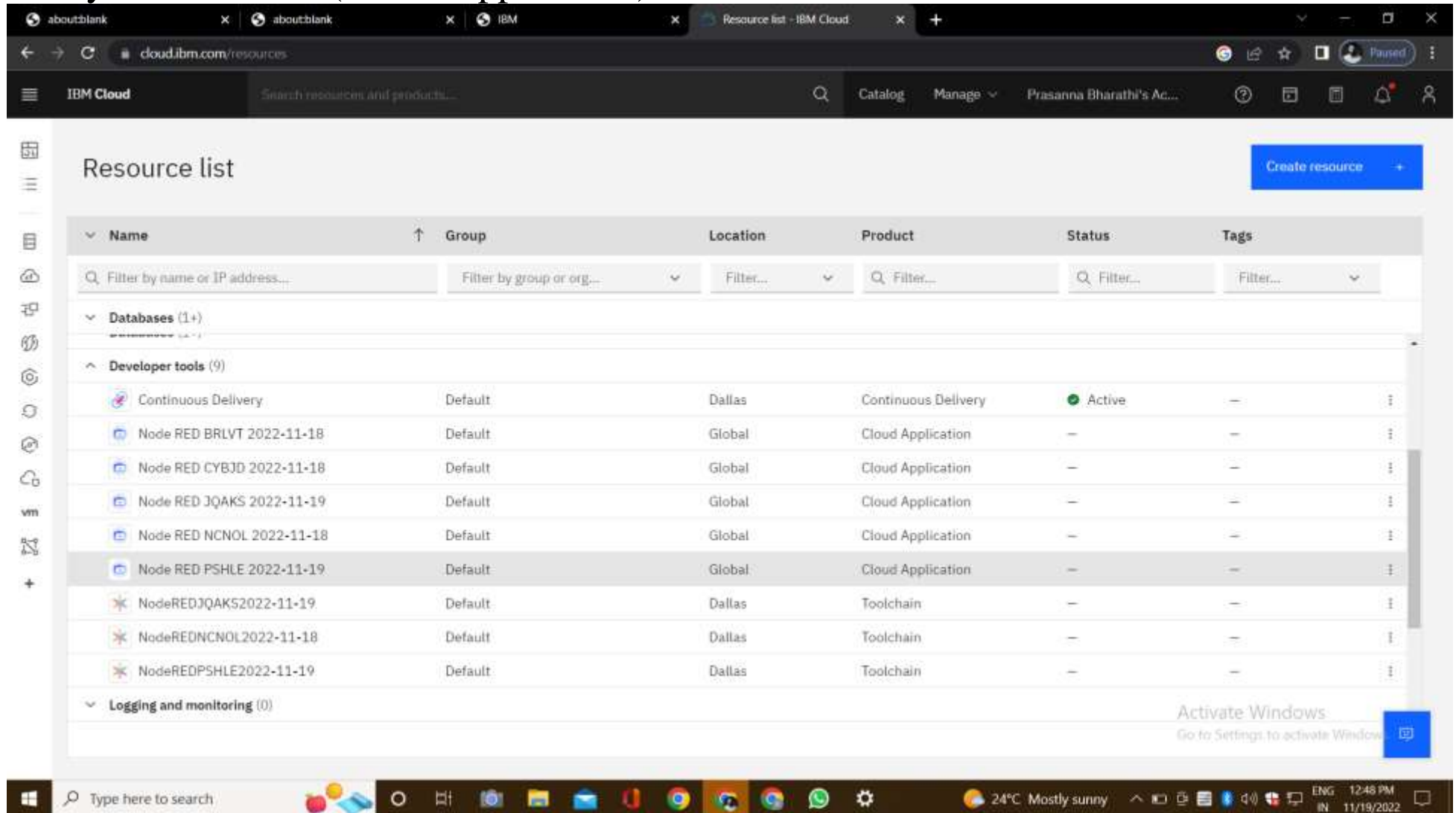
Status [No stages detected](#)

Name [ci-pipeline](#)

Status [Success](#)

STEP 14:

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



The screenshot shows the IBM Cloud Resource list page. The browser address bar displays `cloud.ibm.com/resources`. The page title is "Resource list". A sidebar on the left contains a menu with icons for various services. The main content area displays a table of resources under the "Developer tools" category. The table has columns for Name, Group, Location, Product, Status, and Tags. The "Node RED" resources are highlighted. A "Create resource" button is visible in the top right corner. An "Activate Windows" watermark is present in the bottom right corner of the page.

Name	Group	Location	Product	Status	Tags
Databases (1+)					
Developer tools (9)					
Continuous Delivery	Default	Dallas	Continuous Delivery	Active	—
Node RED BRLVT 2022-11-18	Default	Global	Cloud Application	—	—
Node RED CYBJD 2022-11-18	Default	Global	Cloud Application	—	—
Node RED JQAKS 2022-11-19	Default	Global	Cloud Application	—	—
Node RED NCNOL 2022-11-18	Default	Global	Cloud Application	—	—
Node RED PSHLE 2022-11-19	Default	Global	Cloud Application	—	—
NodeREDJQAKS2022-11-19	Default	Dallas	Toolchain	—	—
NodeREDNCNOL2022-11-18	Default	Dallas	Toolchain	—	—
NodeREDPSHLE2022-11-19	Default	Dallas	Toolchain	—	—
Logging and monitoring (0)					

STEP 15:

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 Developer console interface. The browser address bar shows the URL: `cloud.ibm.com/developer/appservice/apps/993c15ba-0143-473f-b7a8-488e26ad82f4`. The page title is "Node RED CBGMG 2022-11-11".

Details

App URL	http://169. [REDACTED]
Source	https://us-south.git.cloud.ibm.com/312819106035/NodeREDCBGM...
Resource group	Default
Deployment target	mycluster-free
Created	11/11/2022

Services

Cloudant

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

Credentials ▾

Deployment Automation

Name	NodeREDCBGMG2022-11-11
Location	Dallas
Tool integrations	

Delivery Pipelines

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

At the bottom, there are two buttons: "Connect existing services" and "Create service".

STEP 16:

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.

