

Create And Configure IBM Cloud Services

Project Title	SmartFarmer – IoT Enabled Smart Farming Application
Team ID	PNT2022TMID28579
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 approximately 20,700,000 results in 0.48 seconds. The first result is an advertisement for IBM Cloud, featuring a link to "https://www.ibm.com/cloud/computing" and a description of IBM Cloud as a robust suite of advanced data and AI tools. Below the ad, there are four links: "Watson AI", "IBM Let's Create", "Chat with IBM Sales", and "Modernise Hybrid Cloud". To the right of the search results, there is an image gallery titled "IBM Cloud" showing various cloud computing concepts, including a person interacting with a cloud, a server rack, and a cloud management interface. The gallery includes a "More images" button.

Google

ibm cloud

× | 🔊 📷 🔍

⚙️ ⋮ 👤

🔍 All 📰 News 🖼️ Images 📺 Videos 📖 Books ⋮ More Tools

About 20,70,00,000 results (0.48 seconds)

Ad · <https://www.ibm.com/cloud/computing> ▼

IBM Cloud® - Cloud Computing

A robust suite of advanced data and AI tools, and deep industry expertise. Discover a faster, more secure journey to **cloud** trusted by thousands of enterprises. Enterprise-Grade **Cloud**. Chat, Call, or Email **IBM**. Types: Full Stack **Cloud** Platform, Hybrid **Cloud**, Developer Tools.

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.

Modernise Hybrid Cloud
Let's Create Cloud Management That Requires Less Management.

IBM Cloud

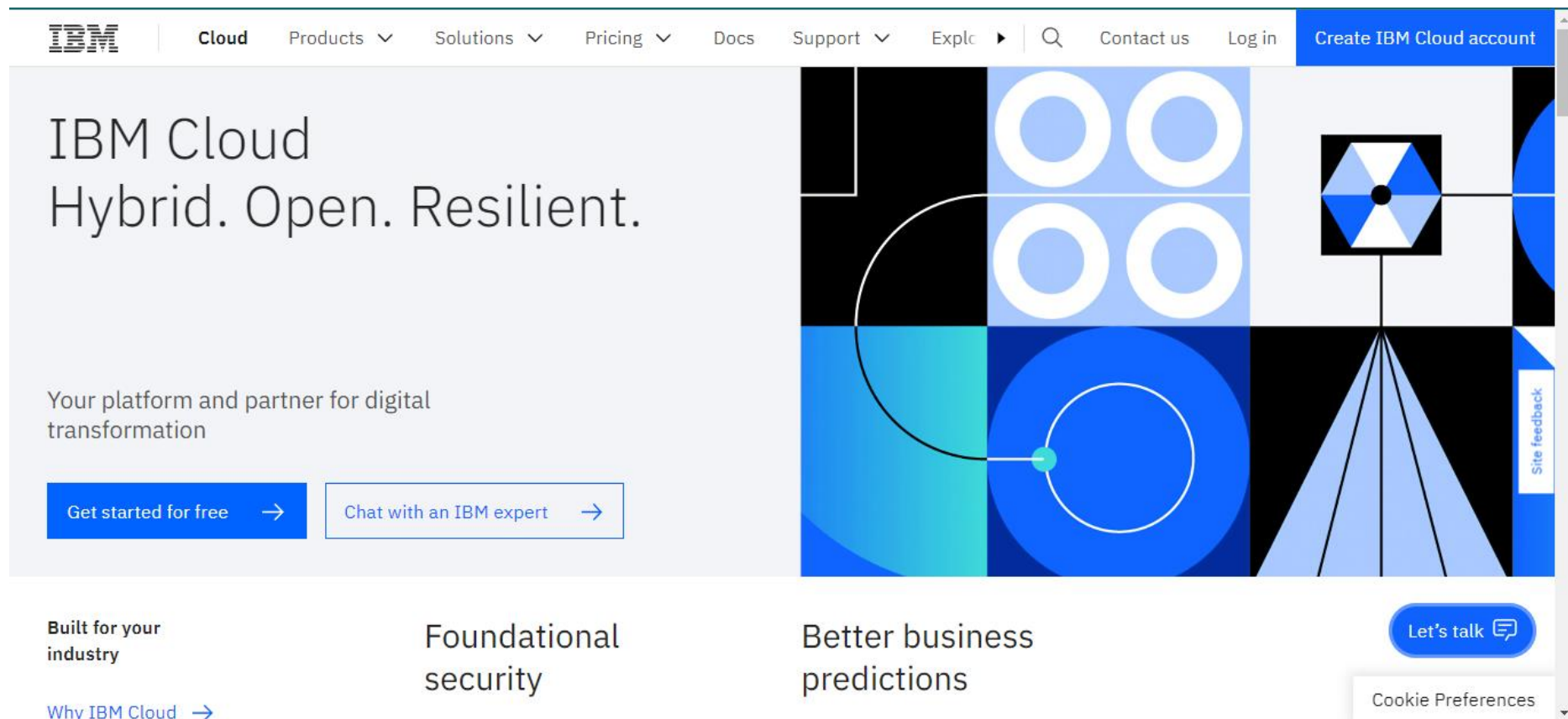
IBM Cloud computing

Computer software

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.



The screenshot shows the IBM Cloud website homepage. The top navigation bar includes the IBM logo, links for Cloud, Products, Solutions, Pricing, Docs, Support, Explore, a search icon, Contact us, Log in, and a prominent blue button labeled "Create IBM Cloud account". The main hero section features the text "IBM Cloud Hybrid. Open. Resilient." and "Your platform and partner for digital transformation". Below this are two buttons: "Get started for free" and "Chat with an IBM expert". To the right is a large abstract graphic with blue, black, and white geometric shapes. The bottom section highlights three key benefits: "Built for your industry" (with a link "Why IBM Cloud"), "Foundational security", and "Better business predictions". A "Let's talk" button and a "Cookie Preferences" link are also visible.

IBM Cloud
Hybrid. Open. Resilient.

Your platform and partner for digital transformation

Get started for free → Chat with an IBM expert →

Built for your industry
Why IBM Cloud →

Foundational security

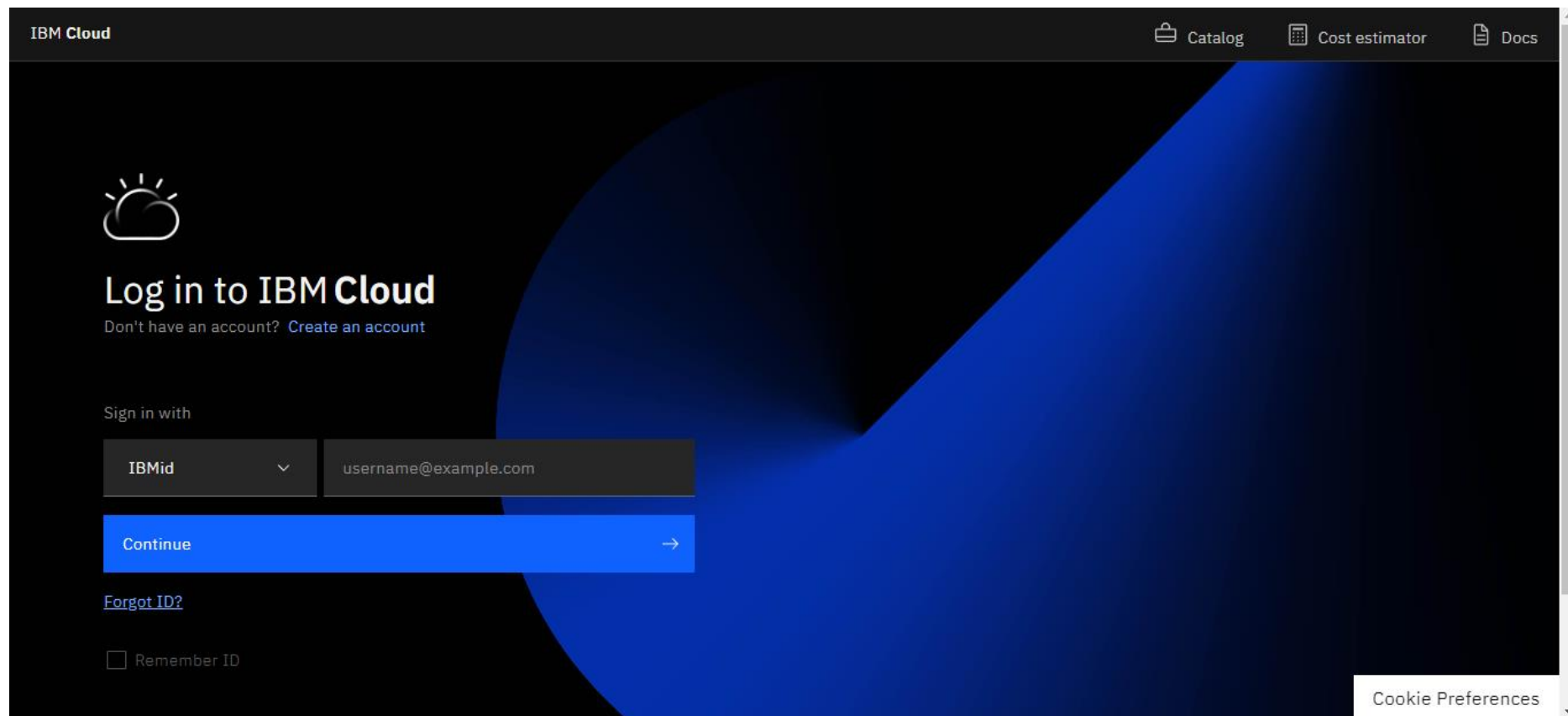
Better business predictions

Let's talk

Cookie Preferences

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'. Below this, a link says 'Don't have an account? [Create an account](#)'. The 'Sign in with' section features a dropdown menu currently 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 for 'Forgot ID?' and a checkbox labeled 'Remember ID'. In the bottom right corner, a 'Cookie Preferences' link is visible.

STEP 4:

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

The screenshot shows the IBM Cloud Dashboard interface. At the top, the browser address bar displays 'cloud.ibm.com'. The dashboard header includes the 'IBM Cloud' logo, a search bar containing 'node-red', and navigation links for 'Catalog', 'Manage', and 'Shanmugam B's Account'. A 'Create resource' button is visible on the right. The main content area features a 'Dashboard' section with a 'Build' card and a 'For you' section. A search overlay is displayed in the center, showing 'Resource Results' and 'Catalog Results' for 'node-red'. The 'Resource Results' section lists a service 'node-red-axqxl-2022--cloudant-1666259245758'. The 'Catalog Results' section lists the 'Node-RED App' service. Below the search overlay, there are several cards for getting started with various services, including 'IBM Cloud account', 'Watson Speech to Text', and 'Virtual Private Cloud (VPC)'. The bottom of the dashboard includes sections for 'User access', 'News', and 'Planned maintenance'.

cloud.ibm.com

IBM Cloud

node-red

Catalog Manage Shanmugam B's Account

Dashboard

Build

Explore IBM Cloud with the selection of easy starter tutorials and services.

For you

Resource Results

View all resource results

node-red-axqxl-2022--cloudant-1666259245758

Service

Catalog Results

View all catalog results

Node-RED App

Service

Search "node-red" in Support Cases

Search "node-red" in Docs

IBM Cloud account, manage your account settings, organize resources, and control access to those resources.

Getting started 10 min

Popular 2 hr

Build a web app with Watson Speech to Text

Deploy a conversational interface compatible with any application, device, or channel.

Getting started 15 min

Build a Virtual Private Cloud (VPC)

Upgrade to a paid account to create your own protected space in the IBM Cloud.

Getting started 7 min

User access

Manage users

News

View all

Planned maintenance

Enter email addresses below to jump directly into the invite user setup.

All About IBM Storage's Price and Supply Guarantee

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.

The screenshot shows the IBM Cloud developer console interface for creating a new application. The browser address bar displays the URL: `cloud.ibm.com/developer/appservice/create-app?starterKit=59c9d5bd-4d31-3611-897a-f94eea80dc9f&defaultLanguage=undefined`. The page header includes the IBM Cloud logo, a search bar, and navigation links for Catalog, Manage, and the user's account (Shanmugam B's Account). The main content area is titled "Examples: env:dev, version-1" and features a "Platform" section with a radio button selected for "Node.js". Below this is the "Service details" section, which includes the "Cloudant" service name and a star icon. A note explains that the star indicates existing instances of the service are available for use in this kit. The "Region" is set to "Frankfurt" and the "Resource group" is "Default". The "Pricing plan" section shows a dropdown menu with the selected plan: "node-red-axqxl-2022--cloudant-1666259245758". At the bottom, there are links for "Pricing details" and "Terms", and two buttons: "Cancel" and "Create".

STEP 6:

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

The screenshot shows the IBM Cloud Developer App Service interface. The browser address bar displays the URL: `cloud.ibm.com/developer/appservice/apps/993c15ba-0143-473f-b7a8-488e26ad82f4`. The page header includes the IBM Cloud logo, a search bar, and navigation links for Catalog, Manage, and the user's account (Shanmugam B's Account). The main content area is titled "Node RED CBGMG 2022-11-11" with an "Add tags" link and an "Actions..." button. The "Details" section on the left lists the App URL, Source (with a "Download code" button), Resource group (Default), Deployment target, and Created date (11/11/2022). The "Services" section on the left shows the Cloudant service with links to the Open dashboard, Documentation, and API reference, and a Credentials dropdown. The "Deployment Automation" section on the right features a "Configure Continuous Delivery" button and a message stating that Continuous Delivery is not enabled for this app. A blue "Deploy your app" button is also visible.

Resource list / App details /

Node RED CBGMG 2022-11-11

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: 11/11/2022

Services

[Cloudant](#)

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

Credentials

Deployment Automation

[Configure Continuous Delivery](#)

Continuous Delivery is not enabled for this app. Enable Continuous Delivery to automate builds, tests, and deployments through Deliver Pipeline, GitLab, and more.

[Deploy your app](#)

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 ready.

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.

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

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

IBM Cloud API key

..... New +

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

Container registry region Container registry namespace

Container registry region Container registry namespace

Cluster region Cluster resource group Cluster namespace Cluster name

Dallas Default default No clusters available

Create new +

Deployment type

Helm

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**.

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 interface. 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's account (Shanmugam B's Account). The main content area is titled "Kubernetes cluster" and includes links for Author (IBM), Docs, and API docs. Below the title, there are tabs for "Create" 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". The "Total estimated cost" section includes a disclaimer about additional charges and a "Create" button. Below the "Create" button is an "Add to estimate" button.

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 Clusters overview page for a free cluster named 'mycluster-free'. The page includes a navigation bar with 'IBM Cloud', a search bar, and user account information. The main content area displays the cluster status as 'Normal' with a 'Expires in 30 days' warning. A sidebar on the left lists navigation options: Overview, Worker nodes, Worker pools, and DevOps (marked as 'New'). The main content area shows four status cards: Node status (1 of 1, Normal), Add-on status (0 of 0, Normal), Master status (Normal), and Ingress status (Unknown). Below these is a 'Details' section with a table of cluster information.

Cluster ID	Version	Infrastructure	Zones
cdmth3gf0uv95es1i540	1.24.7_1542	Classic	Milan 01

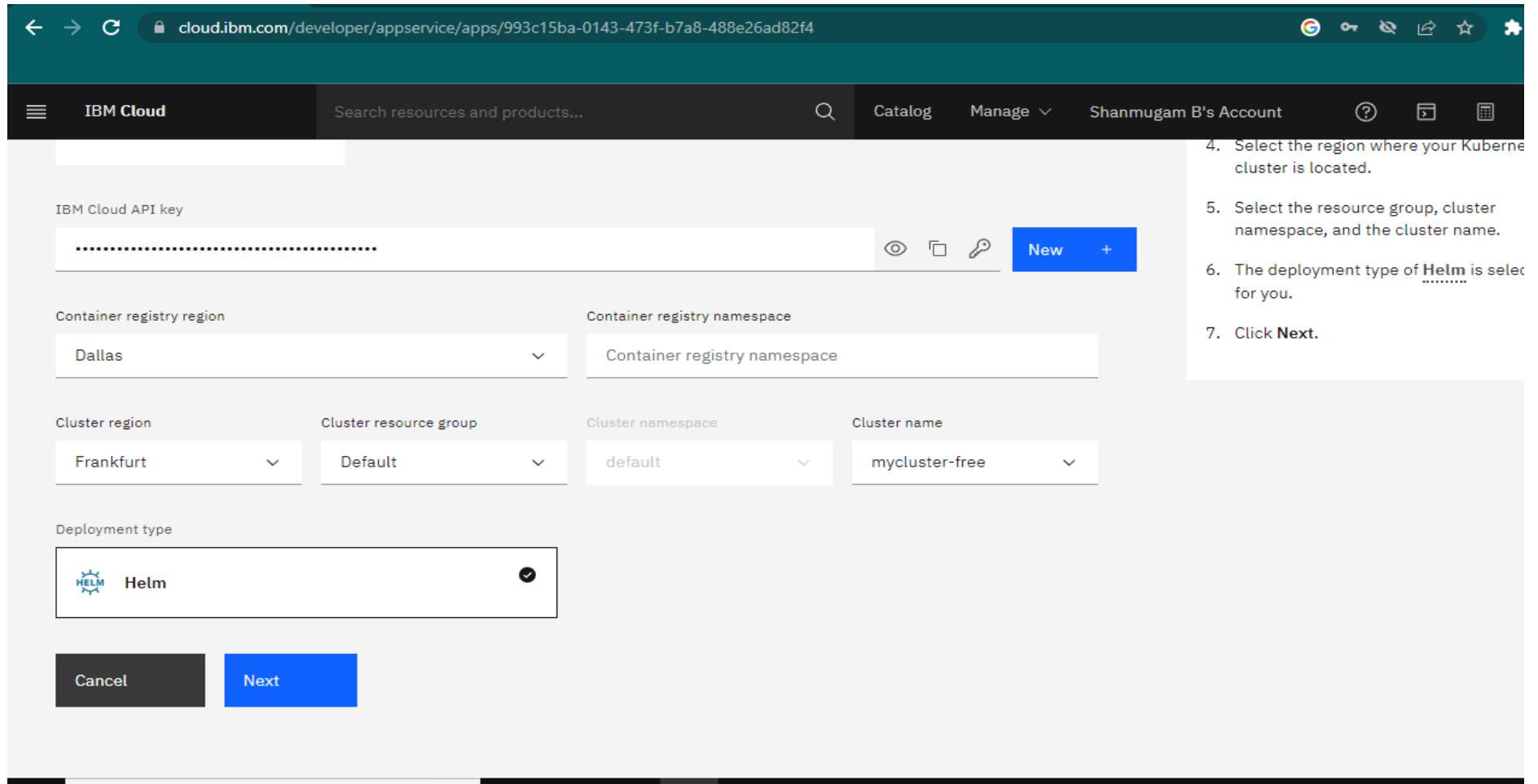
Created	Resource group	Image security enforcement

Help

- Log in to your cluster
- Deploy your app
- Expose your app
- Add storage to your app
- Connect integrations
- Install add-ons
- Troubleshoot

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/993c15ba-0143-473f-b7a8-488e26ad82f4`. The navigation bar includes the IBM Cloud logo, a search bar, and links for Catalog, Manage, and the user's account (Shanmugam B's Account).

The main form contains the following fields and options:

- IBM Cloud API key:** A text input field with a masked value (dots) and a "New +" button.
- Container registry region:** A dropdown menu with "Dallas" selected.
- Container registry namespace:** A text input field with the value "Container registry namespace".
- Cluster region:** A dropdown menu with "Frankfurt" selected.
- Cluster resource group:** A dropdown menu with "Default" selected.
- Cluster namespace:** A dropdown menu with "default" selected.
- Cluster name:** A dropdown menu with "mycluster-free" selected.
- Deployment type:** A dropdown menu with "Helm" selected and a checkmark icon.

At the bottom of the form are two buttons: "Cancel" and "Next".

On the right side of the screen, a list of instructions is displayed:

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**.

STEP 12:

Then click on Create.

The screenshot shows the IBM Cloud Developer console interface. The browser address bar displays the URL: `cloud.ibm.com/developer/appservice/apps/993c15ba-0143-473f-b7a8-488e26ad82f4`. The top navigation bar includes the IBM Cloud logo, a search bar, and links for Catalog, Manage, and the user account (Shanmugam B's Account). The main content area is titled 'Node RED CBGMG 2022-11-11' and shows a progress bar with two steps: 'Select the deployment target' (completed) and 'Configure the DevOps toolchain' (active). Below the progress bar, the 'Configure the DevOps toolchain' section provides instructions: 'Give your toolchain a name and select the region to create your toolchain in.' It includes a text input field for the 'DevOps toolchain name' with the value 'NodeREDCBGMG2022-11-11' and a dropdown menu for the 'Region' set to 'Dallas'. At the bottom, there are 'Back' and 'Create' buttons. A sidebar on the right titled 'Getting started with apps' contains a section for 'Step 2. Configure the DevOps tool' with a list of four steps: 1. Provide a name for your toolchain, 2. Select the region where your toolchain is created, 3. Select the resource group that you want to use for your new toolchain, and 4. After you're finished with your configuration, click **Create**.

Resource list / App details /

Node RED CBGMG 2022-11-11

✓ 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

NodeREDCBGMG2022-11-11

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

Region

Dallas

Back Create

Getting started with apps

Step 2. Configure the DevOps tool

The DevOps toolchain includes a Dev Pipeline tool where you can check the deployment status, start builds, manage deployment, and view logs and history.

1. Provide a name for your toolchain.
2. Select the region where your toolchain is created.
3. Select the resource group that you want to use for your new toolchain. [Learn more](#)
4. After you're finished with your configuration, click **Create**.

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 links for Catalog, Manage, and the user's account (Shanmugam B's Account). The main content area is divided into two columns. The left column contains the 'Details' section for an application, showing fields like App URL, Source (with a 'Download code' button), Resource group (Default), Deployment target, and Created date (11/11/2022). Below this is the 'Services' section, featuring a 'Cloudant' service with links to its dashboard, documentation, and API reference, along with buttons to 'Connect existing services' and 'Create service'. The right column shows the 'Deployment Automation' section with details for a pipeline named 'NodeREDCBGMG2022-11-11' located in Dallas, including tool integrations. Below this is the 'Delivery Pipelines' section, which lists two pipelines: 'pr-pipeline' (status: No stages detected) and 'ci-pipeline' (status: Success, indicated by a green checkmark).

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)

cloud.ibm.com/resources

Skip to content

Search resources and products...

Catalog

Manage

Shanmugam B's Account

Filter by name or IP address...

Filter by group or org...

Filter...

Filter...

Filter...

Name	Group	Location	Product	Status	Tags
AI / Machine Learning (0)					
AI / machine Learning (0)					
Analytics (0)					
Blockchain (0)					
Databases (1+)					
Developer tools (4)					
Continuous Delivery	Default	Dallas	Continuous Delivery	Active	
Node RED AXQXL 2022-10-20	Default	Global	Cloud Application		
Node RED CBGMG 2022-11-11	Default	Global	Cloud Application		
NodeREDCBGMG2022-11-11	Default	Dallas	Toolchain		
Logging and monitoring (0)					
Migration (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 shows the IBM Cloud Developer App Service interface. The browser address bar displays the URL: `cloud.ibm.com/developer/appservice/apps/993c15ba-0143-473f-b7a8-488e26ad82f4`. The page header includes the IBM Cloud logo, a search bar, and navigation links for Catalog, Manage, and the user's account (Shanmugam B's Account).

The main content area is titled "Node RED CBGMG 2022-11-11" with an "Add tags" link and an "Actions..." button. The page is divided into two main sections: "Details" and "Deployment Automation".

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.

