

## STEP 1:

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

The screenshot shows a Google search interface. The search bar contains the text "ibm cloud". Below the search bar, there are tabs for "All", "News", "Images", "Videos", "Books", and "More". The "All" tab is selected. Below the tabs, it says "About 20,70,00,000 results (0.48 seconds)".

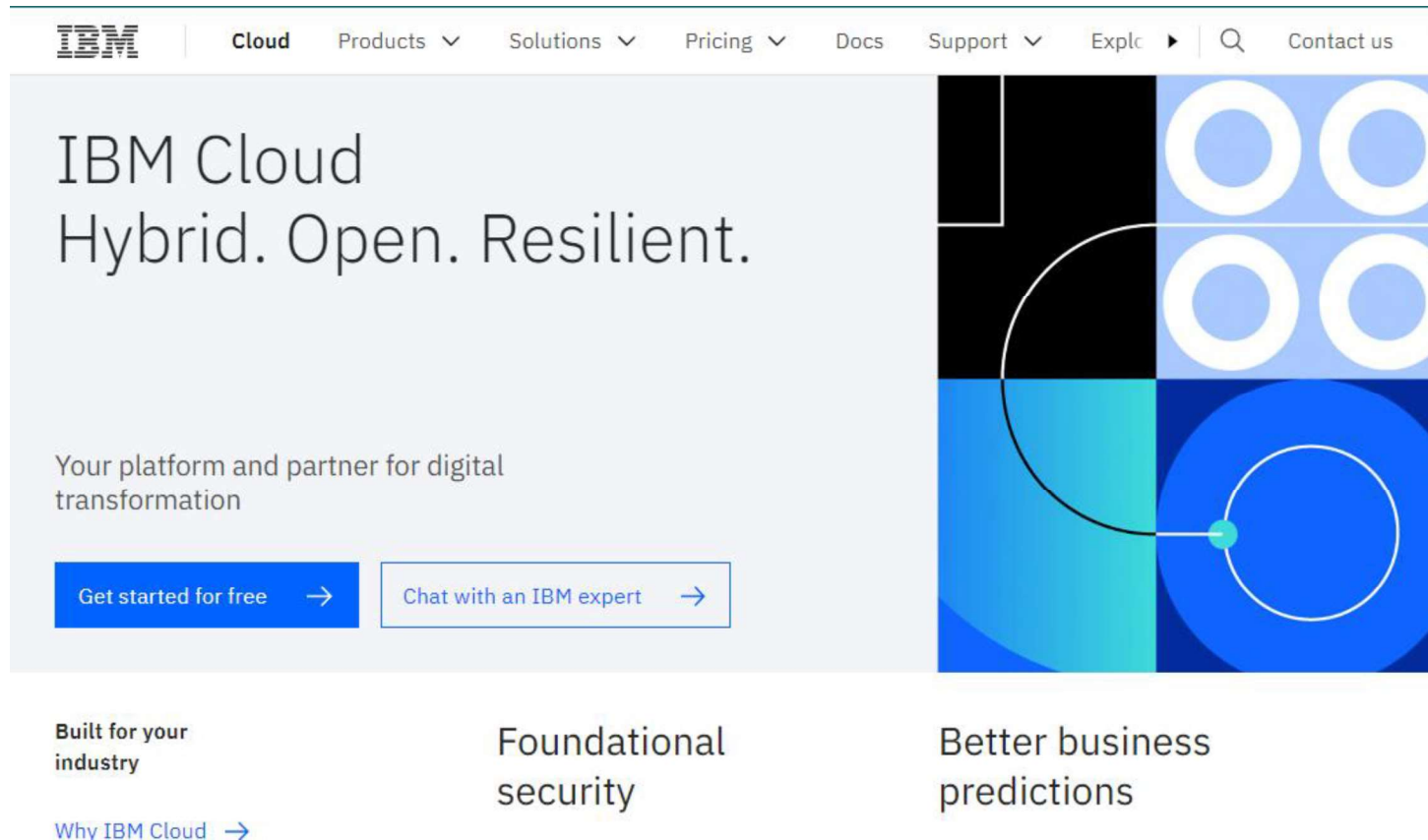
The search results are as follows:

- 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.

On the right side of the search results, there is a sidebar advertisement for IBM Cloud. It features the IBM Cloud logo and a graphic showing various cloud services. The text in the sidebar includes "IBM cloud", "Computer software", and "IBM cloud computing services for business".

## STEP 2:

Click on create IBM Cloud Account Now and enter the detail



The screenshot shows the IBM Cloud website homepage. The header features the IBM logo and navigation links: Cloud, Products, Solutions, Pricing, Docs, Support, Explore, a search icon, and Contact us. The main hero section has 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 and black geometric shapes. The footer contains three columns: "Built for your industry" with a link "Why IBM Cloud", "Foundational security", and "Better business predictions".

IBM Cloud  
Hybrid. Open. Resilient.

Your platform and partner for digital transformation

Get started for free → Chat with an IBM expert →

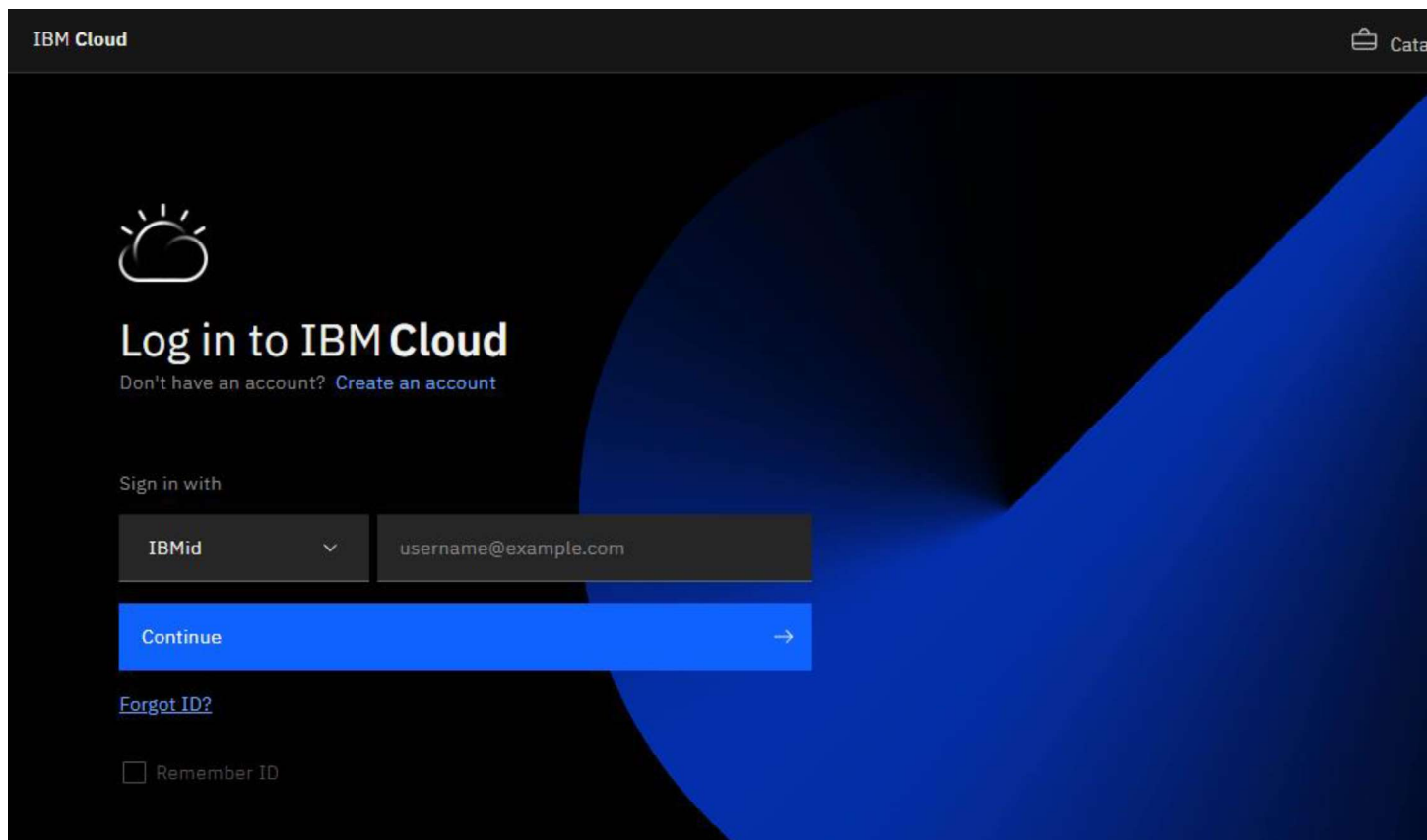
Built for your industry  
Why IBM Cloud →

Foundational security

Better business predictions

## STEP 3:

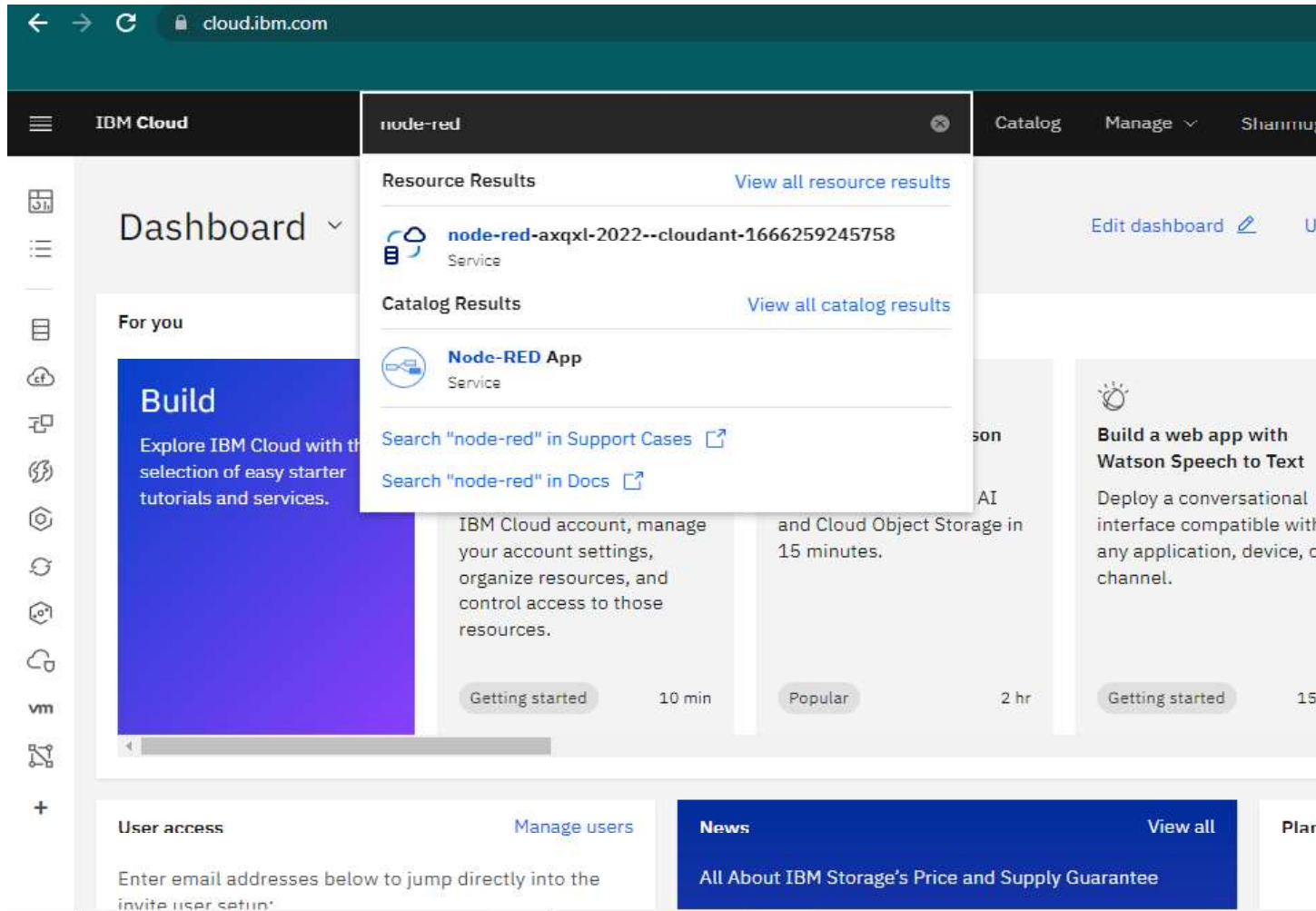
You will get the email with your password. Type your mail ID and password then click on the login button.



The screenshot shows the IBM Cloud login interface. At the top left, the text "IBM Cloud" is displayed. At the top right, there is a "Catalog" link with a shopping bag icon. The main heading is "Log in to IBM Cloud", with a sub-link "Don't have an account? Create an account". Below this, the "Sign in with" section features 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 fields. At the bottom left, there is a "Forgot ID?" link and a "Remember ID" checkbox.

## STEP 4:

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



## STEP 5:

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

The screenshot shows the IBM Cloud developer console interface for creating a new application. The URL in the browser is `cloud.ibm.com/developer/appservice/create-app?starterKit=59c9d5bd-4d31-3611-897a-f94eea80dc9f&defaultLanguage=undefined`. The page has a dark teal header with the IBM Cloud logo and a search bar. Below the header, there's a light gray sidebar with a menu icon. The main content area is white and contains the following elements:

- Platform:** A dropdown menu with `Node.js` selected.
- Service details:** A section titled **Cloudant** with a yellow star icon. Below it, a message states: "★ = 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 with `Frankfurt` selected.
- Resource group:** A dropdown menu with `Default` selected.
- Pricing plan:** A dropdown menu with `node-red-axqxl-2022--cloudant-1666259245758` selected.
- Links:** [Pricing details](#) and [Terms](#) with an external link icon.
- Buttons:** A dark gray **Cancel** button and a blue **Create** button.


## 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 top navigation bar includes the IBM Cloud logo, a search bar, and links for Catalog, Manage, and the user profile (Shanmuga).

The main content area shows the "App details" for "Node RED CBGMG 2022-11-11". The breadcrumb trail is "Resource list / App details /". The app name is followed by an "Add tags" link with an edit icon.

The "Details" section contains the following information:

Details	
App URL	You must deploy your app first
Source	<a href="#">Download code</a> 
Resource group	<a href="#">Default</a>
Deployment target	You must deploy your app first
Created	11/11/2022

The "Services" section lists the following services:

-  **Cloudant** 
  - [Open dashboard](#) 
  - [Documentation](#) 
  - [API reference](#) 
  - Credentials 

## STEP 7:

Now click Deploy your app option.

The screenshot shows the IBM Cloud Developer App Service console. The browser address bar displays `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 profile (Shanmugam). The main content area is titled "Node RED CBGMG 2022-11-11" and features a progress bar with two steps: "Select the deployment target" (active) and "Configure the DevOps toolchain". Below the progress bar, the "Deployment Automation" section explains that users should select a deployment target and configure their DevOps toolchain, with a "Create" button to initiate the process. The "Deployment target" section displays three options: "Kubernetes Service" (selected with a checkmark), "Red Hat OpenShift", and "Cloud Foundry". Each option includes an IBM logo and a brief description of its capabilities.

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.



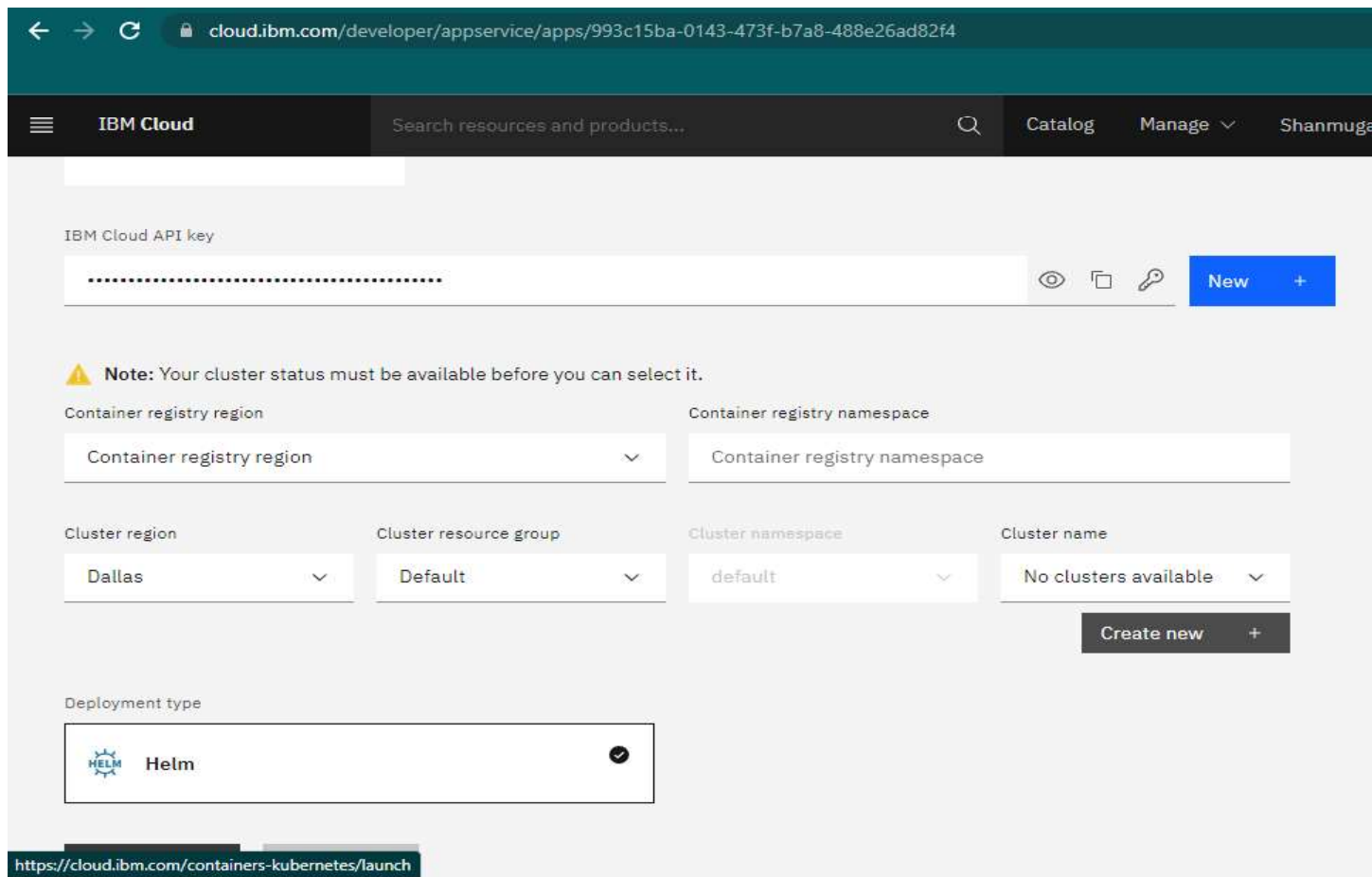
#### Cloud Foundry

IBM

Deploy and run your applications without managing servers or clusters. A Lite plan is available for quick and easy deployment.

## STEP 8:

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

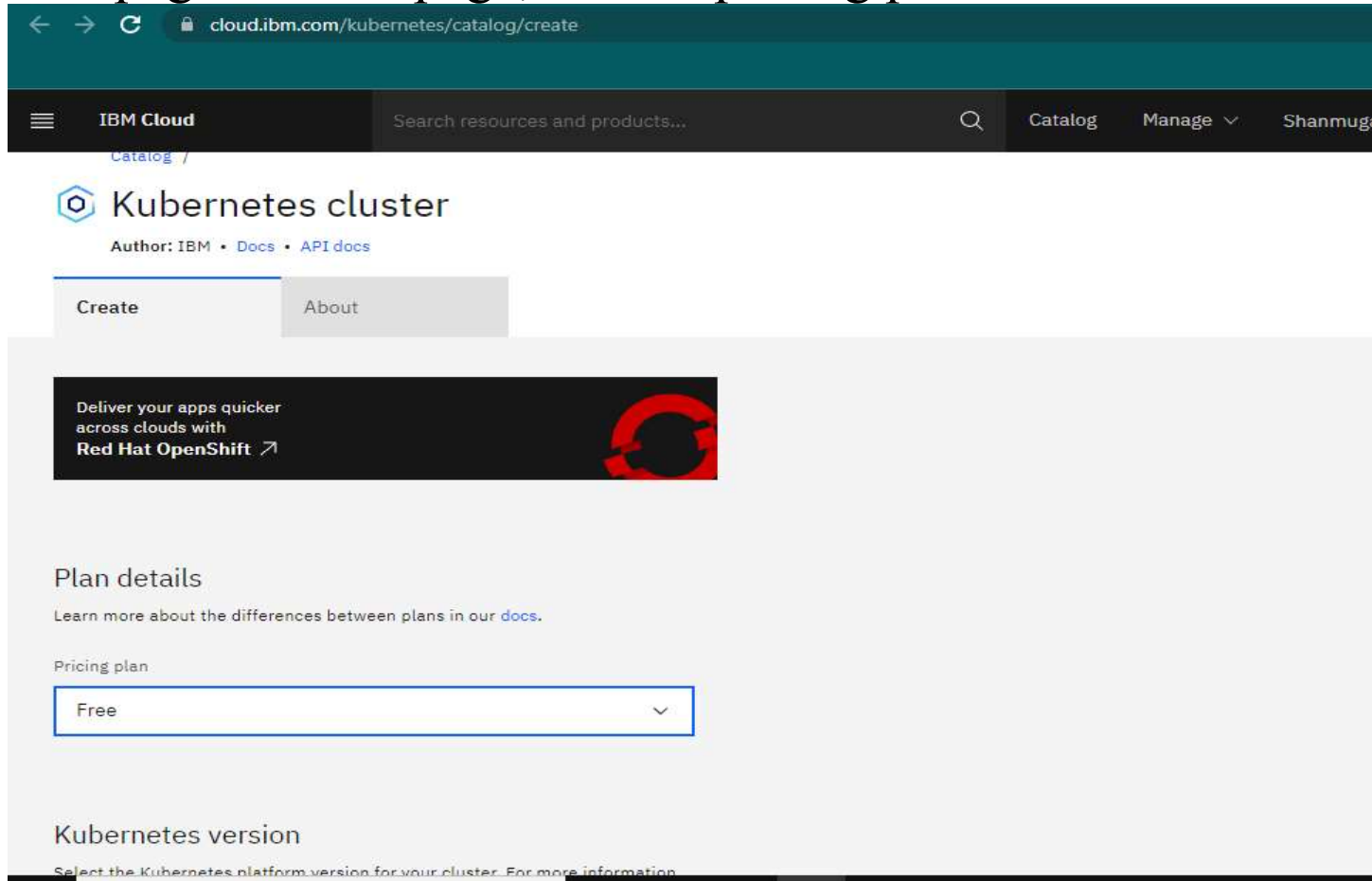


The screenshot shows the IBM Cloud Developer console interface. At the top, the browser address bar displays the URL: `cloud.ibm.com/developer/appservice/apps/993c15ba-0143-473f-b7a8-488e26ad82f4`. The navigation bar includes the IBM Cloud logo, a search bar, and links for Catalog, Manage, and a user profile (Shanmug). The main content area is titled "IBM Cloud API key" and features a masked input field with a "New" button. Below this, a note states: "Note: Your cluster status must be available before you can select it." The configuration section includes several dropdown menus: "Container registry region" (Dallas), "Container registry namespace" (Container registry namespace), "Cluster region" (Dallas), "Cluster resource group" (Default), "Cluster namespace" (default), and "Cluster name" (No clusters available). A "Create new" button is located next to the "Cluster name" dropdown. The "Deployment type" section shows "Helm" as the selected option. At the bottom, a URL bar displays `https://cloud.ibm.com/containers-kubernetes/launch`.



## STEP 9:

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



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 'Shanmug'. The main heading is 'Kubernetes cluster', with links for 'Author: IBM', 'Docs', and 'API docs'. Below the heading are two tabs: 'Create' (active) and 'About'. A promotional banner for Red Hat OpenShift is visible, stating 'Deliver your apps quicker across clouds with Red Hat OpenShift'. 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 is partially visible at the bottom, with a link to select the platform version.

cloud.ibm.com/kubernetes/catalog/create

IBM Cloud Search resources and products... Catalog Manage Shanmug

### 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

## STEP 10:

For cluster creation you need to wait for 20 minutes. After creation, click on the node red app tab.

The screenshot shows the IBM Cloud Kubernetes Clusters overview page for a free cluster named 'mycluster-free'. The URL in the browser is `cloud.ibm.com/kubernetes/clusters/cdmth3gf0uv95es1i540/overview`. The page features a sidebar with navigation options: Overview (selected), Worker nodes, Worker pools, and DevOps (with a 'New' button). The main content area displays the cluster status as 'Normal' with a warning that it 'Expires in 30 days'. A 'Kubernetes dashboard' button is visible. Below the status, there are four summary cards: Node status (1 of 1, Normal), Add-on status (0 of 0, Normal), Master status (Normal), and Ingress status (Unknown). A 'Details' section at the bottom provides further information: Cluster ID (cdmth3gf0uv95es1i540), Version (1.24.7\_1542), Infrastructure (Classic), Zones (Milan 01), Created (timestamp), Resource group, and Image security enforcement.

cloud.ibm.com/kubernetes/clusters/cdmth3gf0uv95es1i540/overview

IBM Cloud Search resources and products... Catalog Manage Shanmuga

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 ↗](#)

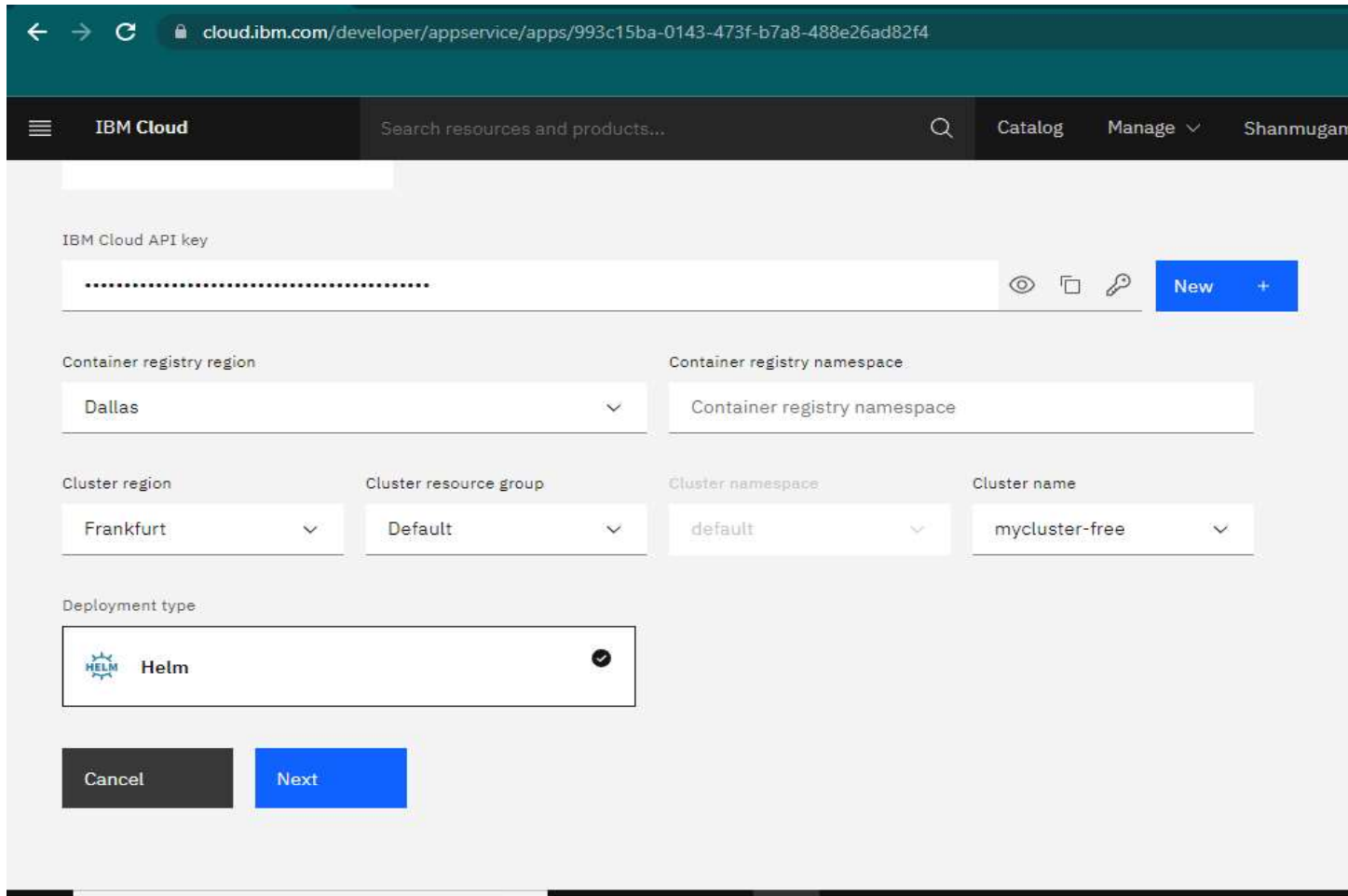
Ingress status  
**Unknown**  
[Docs ↗](#)

**Details**

Cluster ID	Version	Infrastructure	Zones
cdmth3gf0uv95es1i540	1.24.7_1542	Classic	Milan 01
Created	Resource group	Image security enforcement	

## 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 application service. 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 profile (Shanmugan).

The main configuration area includes the following fields:

- IBM Cloud API key:** A text input field with a masked value (dots) and a "New +" button.
- Container registry region:** A dropdown menu set to "Dallas".
- Container registry namespace:** A text input field with the value "Container registry namespace".
- 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 section with a "Helm" option selected, indicated by a checkmark.

At the bottom of the configuration area, there are two buttons: "Cancel" and "Next".

## STEP 12:

Then click on Create.

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

IBM Cloud Search resources and products... Catalog Manage ▼ Shann

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

## STEP 13:

You need to wait until ci-pipeline status success.

The screenshot displays the IBM Cloud Developer console interface. At the top, the browser address bar shows 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 profile (Shanmug).

The main content area is divided into two sections: **Details** and **Services**.

**Details** section:

- App URL:** You must deploy your app first
- Source:** Includes a **Download code** button and a download icon.
- Resource group:** Default
- Deployment target:** You must deploy your app first
- Created:** 11/11/2022

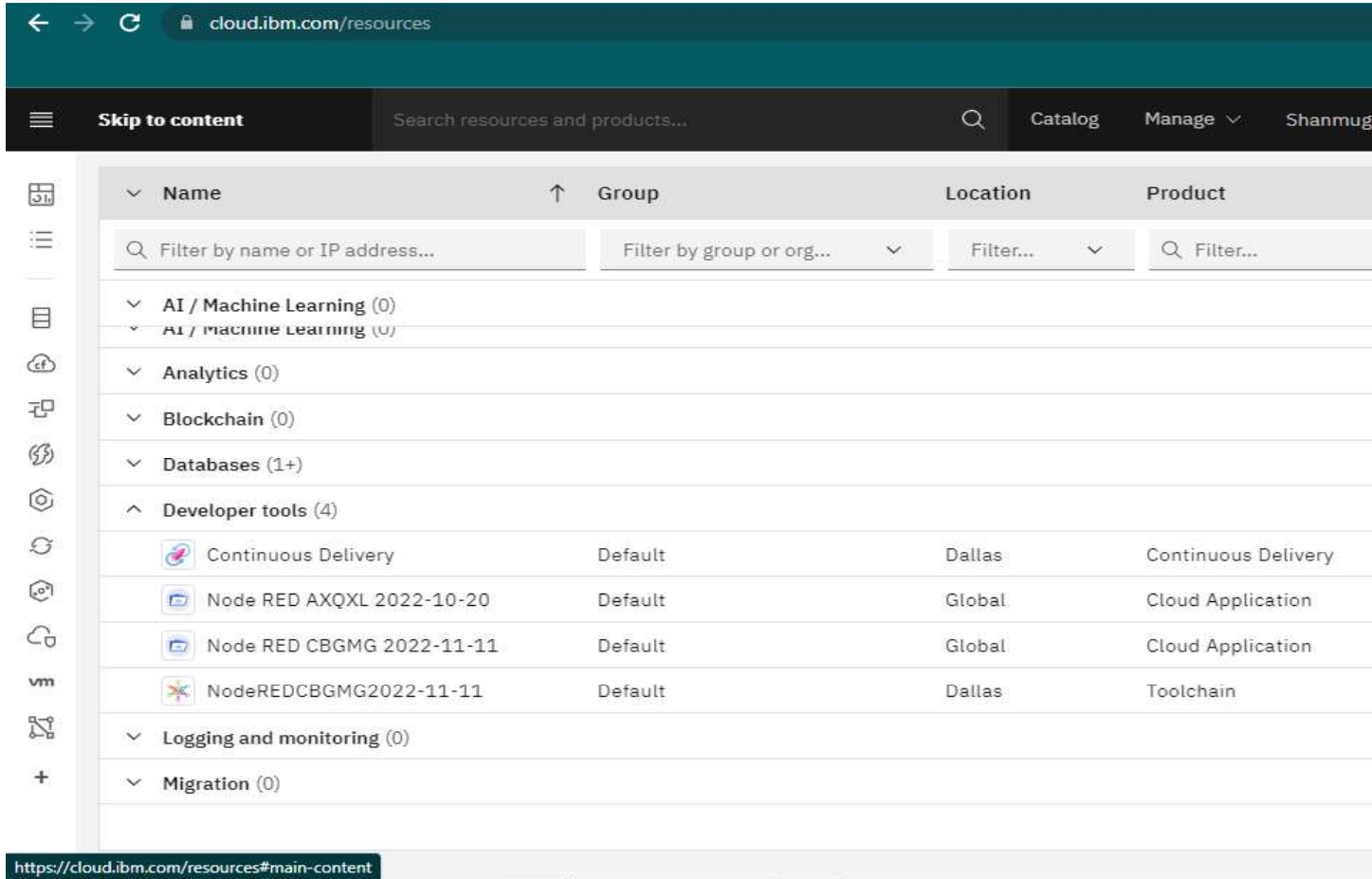
**Services** section:

- Cloudant:** Includes links for [Open dashboard](#), [Documentation](#), and [API reference](#). Below these links is a **Credentials** dropdown menu.
- At the bottom of the Services section are two buttons: **Connect existing services** and **Create service**, both with a plus icon.

On the right side of the console, there are two panels: **Deployment Automation** and **Delivery Pipelines**. The **Deployment Automation** panel lists **Name**, **Location**, and **Tool integrations**. The **Delivery Pipelines** panel lists **Name** and **Status**.

## STEP 14:

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



The screenshot shows the IBM Cloud Resources page. The browser address bar displays `cloud.ibm.com/resources`. The page header includes a "Skip to content" link, a search bar, and navigation links for "Catalog", "Manage", and a user profile "Shanmug". A left sidebar contains various service icons. The main content area is a table with columns: Name, Group, Location, and Product. The table lists several categories with expandable dropdowns, including "AI / Machine Learning", "Analytics", "Blockchain", "Databases", "Developer tools", "Logging and monitoring", and "Migration". Under "Developer tools", four items are listed: "Continuous Delivery", "Node RED AXQXL 2022-10-20", "Node RED CBGMG 2022-11-11", and "NodeREDCBGMG2022-11-11". The last item is highlighted. The URL at the bottom of the page is `https://cloud.ibm.com/resources#main-content`.

Name	Group	Location	Product
Filter by name or IP address...			
Filter by group or org...			
Filter...			
Filter...			
AI / Machine Learning (0)			
AI / Machine Learning (0)			
Analytics (0)			
Blockchain (0)			
Databases (1+)			
Developer tools (4)			
Continuous Delivery	Default	Dallas	Continuous Delivery
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 Source. To open Node-red editor copy the app url and paste in new

The screenshot shows the IBM Cloud Developer App Service interface. The browser address bar displays `cloud.ibm.com/developer/appservice/apps/993c15ba-0143-473f-b7a8-488e26ad82f4`. The page title is "Node RED CBGMG 2022-11-11" with an "Add tags" link. The "Details" section lists the following information:

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

The "Services" section shows a "Cloudant" service with links for "Open dashboard", "Documentation", and "API reference". Below these links is a "Credentials" dropdown menu. At the bottom, there are two buttons: "Connect existing services" and "Create service".

On the right side, there are sections for "Deployment Automation" and "Delivery Pipelines", each with a table containing "Name" and "Status" columns.

## STEP 16:

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

