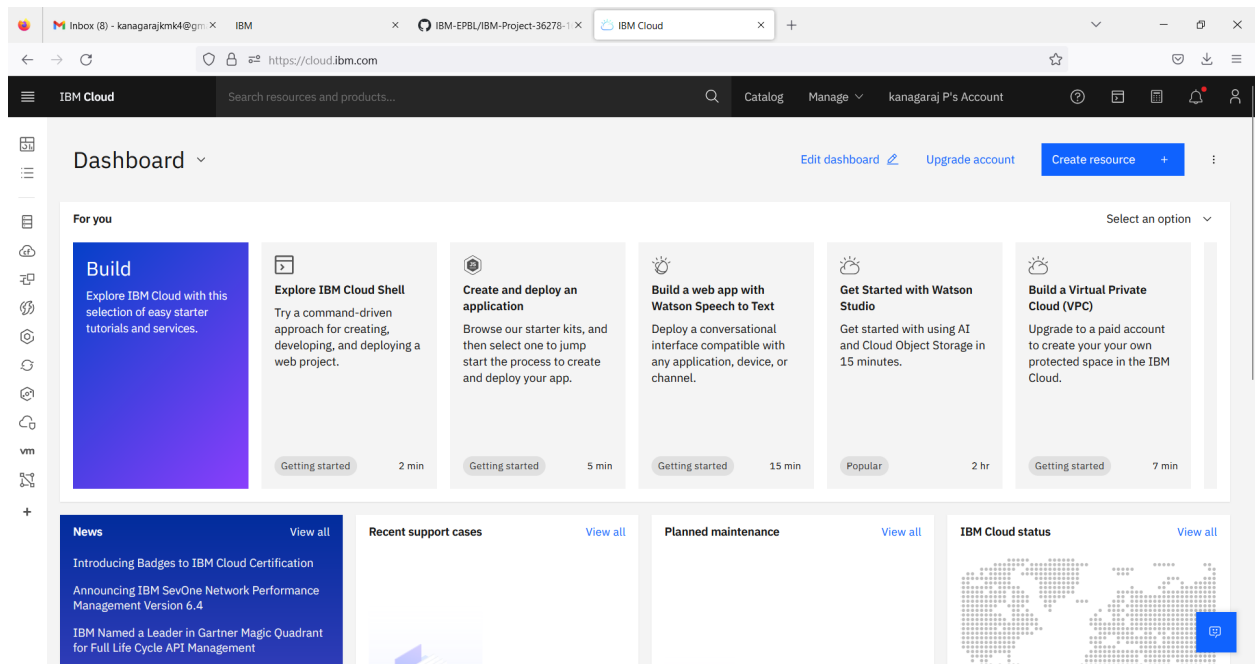


IBM IoT-Enabled Smart Farming Application

Create and Configure IBM watson device and Node-Red

DOMAIN	INTERNET OF THINGS
TOPIC	IoT-ENABLED SMART FARMING APPLICATION
TEAM ID	PNT2022TMID16477
TEAM MEMBERS	KANAGARAJ.P(TL) AKASH.R(™) MANOJKUMAR.R(™) MOUNIESH M.K(™)

Create the IBM Watson IoT platform and a device:



Open Resource List and Search Internet of Thing Platform and Open it:

The screenshot shows the IBM Cloud 'Resource list' page. The page has a dark header with the IBM Cloud logo, a search bar, and navigation links. The main content area is titled 'Resource list' and features a table with columns: Name, Group, Location, Product, Status, and Tags. The table lists various resources under different categories like Analytics, Blockchain, Databases, Developer tools, Logging and monitoring, Migration, Integration, and Internet of Things. The 'Internet of Things' category is expanded, showing a single resource: 'Internet of Things Platform-d6'. This resource is located in Frankfurt, is part of the 'Internet of Things Platform' product, and has a status of 'Active'. A blue 'Create resource' button is visible in the top right corner.

Name	Group	Location	Product	Status	Tags
Filter by name or IP address...	Filter by group or org...	Filter...	Filter...	Filter...	Filter...
Analytics (0)					
Blockchain (0)					
Databases (1+)					
Developer tools (5+)					
Logging and monitoring (0)					
Migration (0)					
Integration (0+)					
Internet of Things (1)					
Internet of Things Platform-d6	Default	Frankfurt	Internet of Things Platform	Active	—
Security (0)					
Mobile (0)					
Other (0+)					

This screenshot is identical to the one above, but with a tooltip visible over the 'Internet of Things Platform-d6' resource. The tooltip displays the full name of the resource: 'Internet of Things Platform-d6'. The URL at the bottom of the page is: <https://cloud.ibm.com/services/iotf-service/cmv1:bluemixpubliciotf-service:eu-dea/a41bc2102b2f4216882fbffad5bc844b36dc2adc-5344-4f21-a55d-af6bc9fe680d>

Name	Group	Location	Product	Status	Tags
Filter by name or IP address...	Filter by group or org...	Filter...	Filter...	Filter...	Filter...
Analytics (0)					
Blockchain (0)					
Databases (1+)					
Developer tools (5+)					
Logging and monitoring (0)					
Migration (0)					
Integration (0+)					
Internet of Things (1)					
Internet of Things Platform-d6	Default	Frankfurt	Internet of Things Platform	Active	—
Internet of Things Platform-d6					
Security (0)					
Mobile (0)					
Other (0+)					

Select the Launch button and open it:

Resource list / Internet of Things Platform-d6 Active Add tags Details Actions...

Manage

- Plan
- Connections

Let's get started with IBM Watson IoT Platform

Securely connect, control, and manage devices. Quickly build IoT applications that analyze data from the physical world.

[Launch](#) [Docs](#)

Ready for the next level?

IBM Watson IoT Platform Journey

- Lite**
The Lite service plan provides a lightweight development environment to get you started with the connectivity capabilities of Watson IoT Platform.
 - Free
- Non-Production**
The Non-Production service plan is a full-featured, fully-integrated offering that enables you to explore Watson IoT Platform to see how the service can fit into your IoT environment.
 - Starts at \$500 per month
- Production**
The Production service is a fully managed SaaS offering that enables you to manage and analyze enterprise IoT data.
 - Includes IBM Service & Support

IBM Watson IoT Platform

[Browse](#) [Action](#) [Device Types](#) [Interfaces](#) [Add Device](#)

Browse Devices

[All Devices](#) [Diagnose](#)

This table shows a summary of all devices that have been added. It can be filtered, organized, and searched on using different criteria. To get started, you can add devices by using the Add Device button, or by using API.

Search by Device ID Device Simulator 101 Filter

<input type="checkbox"/>	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
> <input type="checkbox"/>	1234	Disconnected	abcd	Device	Nov 18, 2022 12:03 AM	
> <input type="checkbox"/>	12345	Disconnected	abcd	Device	Nov 17, 2022 11:43 PM	

Items per page 50 | 1-2 of 2 items 1 of 1 page < 1 >

Click the Add device button and Open it:

The screenshot shows the IBM Watson IoT Platform interface. At the top, there's a browser window with multiple tabs, including 'Inbox (8) - kanagarajkmk4@gmail.com', 'IBM', 'IBM-EPBL/IBM-Project-36278-1', 'Service Details - IBM Cloud', and 'IBM Watson IoT Platform'. The address bar shows the URL: <https://mwjyar.internetofthings.ibmcloud.com/dashboard/devices/browse/add>. The main header of the application is 'IBM Watson IoT Platform' with a user profile 'kanagarajkmk4@gmail.com' and ID 'mwjyar'. The left sidebar contains navigation icons. The main content area has tabs for 'Browse', 'Action', 'Device Types', and 'Interfaces'. A modal window titled 'Add Device' is open, showing a progress bar with four steps: 'Identity' (selected), 'Device Information', 'Security', and 'Summary'. Below the progress bar, it says 'Select a device type for the device that you are adding and give the device a unique ID.' There are two input fields: 'Device Type' with a dropdown menu showing 'Select or create a device type...' and 'Device ID' with a text input containing 'abcd'. At the bottom right of the modal are 'Cancel' and 'Next' buttons. Below the modal, the 'Browse Devices' section is visible with 'All Devices' and 'Diagnose' buttons.

IBM Watson IoT Platform

kanagarajkmk4@gmail.com
ID: mwjyar

Browse Action Device Types Interfaces

Add Device

Identity Device Information Security Summary

Select a device type for the device that you are adding and give the device a unique ID.

Device Type Select or create a device type...

Device ID abcd

Cancel Next

Browse Devices

All Devices Diagnose

In device creation give the correct credentials and create the device:

The screenshot shows the 'Add Device' wizard in the IBM Watson IoT Platform. The 'Identity' step is active, showing a progress bar with four steps: Identity, Device Information, Security, and Summary. Below the progress bar, there is a form with two fields: 'Device Type' with the value 'abcd' and 'Device ID' with the value '123456'. At the bottom right of the form are 'Cancel' and 'Next' buttons.

IBM Watson IoT Platform

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Browse Action Device Types Interfaces

Add Device

Identity Device Information Security Summary

Select a device type for the device that you are adding and give the device a unique ID.

Device Type abcd

Device ID 123456

Cancel Next

Browse Devices

All Devices Diagnose

The screenshot shows the 'Add Device' wizard in the IBM Watson IoT Platform, now at the 'Security' step. The progress bar shows 'Identity' and 'Device Information' as completed steps. The 'Security' step has two options: 'Auto-generated authentication token (default)' and 'Self-provided authentication token'. The 'Auto-generated' option is selected. Below the options, there is a text area for the 'Authentication Token' with the value '12345678'. At the bottom right are 'Back' and 'Next' buttons.

IBM Watson IoT Platform

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Browse Action Device Types Interfaces

Add Device

Identity Device Information Security Summary

There are two options for selecting a device authentication token.

Auto-generated authentication token (default)

Allow the service to generate an authentication token for you. Tokens are 18 characters and contain a mix of alphanumeric characters and symbols. The token is returned to you at the end of the device registration process.

Self-provided authentication token

Provide your own authentication token for this device. The token must be between 8 and 36 characters and contain a mix of lowercase and uppercase letters, numbers, and symbols, which can include hyphens, underscores, and periods. Do not use repeated characters, dictionary words, user names, or other predefined sequences.

Authentication Token 12345678

Make a note of the generated token. Lost authentication tokens cannot be recovered. Tokens are encrypted before being stored.

Authentication token are encrypted before we store them.

Back Next

Save the details like Authentication tokens in your notepad for future use:

The screenshot shows the 'Add Device' wizard in the IBM Watson IoT Platform. The wizard consists of four steps: Identity, Device Information, Security, and Summary. The 'Identity' step is currently active, showing fields for Device Type, Device ID, and Security Token. A 'View Metadata' button is present below the Device ID field. The 'Back' and 'Finish' buttons are located at the bottom right of the wizard.

IBM Watson IoT Platform

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Browse Action Device Types Interfaces

Add Device

Identity Device Information Security Summary

Verify that the following information is correct then select Finish

Device Type
abcd

Device ID
123456

[View Metadata](#)

Security Token
12345678

[Back](#) [Finish](#)

Create Node-RED service:

Go to Resource list and Search for developer tools and open it

Resource list

Name	Group	Location	Product	Status	Tags
Filter by name or IP address... Filter by group or org... Filter... Filter... Filter...					
Analytics (0)					
Blockchain (0)					
Databases (1+)					
Developer tools (5)					
Continuous Delivery	Default	Dallas	Continuous Delivery	Active	—
Node RED UMSUS 2022-11-11	Default	Global	Cloud Application	—	—
Node RED UMSUS 2022-11-11	Default	Dallas	Toolchain	—	—
Node REDSDJBN2022-11-11	Default	Dallas	Toolchain	—	—
Node REDUMSUS2022-11-11	Default	Dallas	Toolchain	—	—
Logging and monitoring (0)					
Migration (0)					
Integration (0+)					

Click the App Url in the top of the Details:

Node RED UMSUS 2022-11-11

Details

App URL	http://159.122.178.67:31997
Source	https://us-south.git.cloud.ibm.com/kanagarajkmk4/NodeREDU...
Resource group	Default
Deployment target	Kube/Helm
Created	11/11/2022

Services

Cloudant

Open dashboard Documentation API reference

Credentials

Connect existing services Create service

Deployment Automation

Name	Location	Tool integrations
NodeREDUMSUS2022-11-11	Dallas	

Delivery Pipelines

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

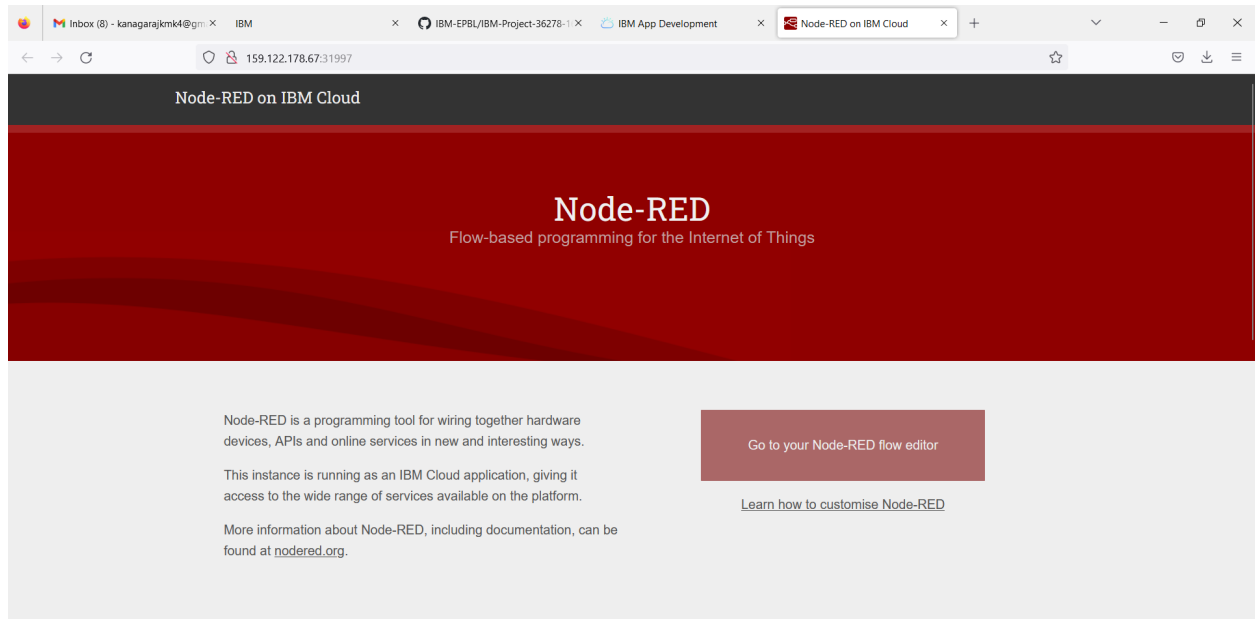
Getting started quickly

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 sure to deploy it again.

Open the Node-Red Flow Editor:



159.122.178.67:31997/red/

Create a flow for your application:

