

SmartFarmer - IoT Enabled Smart Farming Application

Team ID : PNT2022TMID41134

PREREQUISITES

○ IBM Watson IOT platform

IBM Watson IoT Platform is a managed, cloud-hosted service designed to make it simple to derive value from your Internet of Things devices. STMicroelectronics is an IBM Partner and provides development platforms allowing users to develop applications with direct connection to the IBM Watson IoT platform.

By using Watson IoT Platform, you can collect connected device data and perform analytics on real-time data. The IBM Watson IoT Platform is a fully managed, Cloud-hosted service that provides device management capabilities as well as data collection and management in a time series format.

The Lite service plan provides a free, lightweight development environment to get you started with the connectivity capabilities of Watson IoT Platform.

○ NODE-RED SERVICE

Node-RED is a programming tool for wiring together hardware devices, APIs and online services in new and interesting ways. It provides a browser-based editor that makes it easy to wire together flows using the wide range of nodes in the palette that can be deployed to its runtime in a single-click.

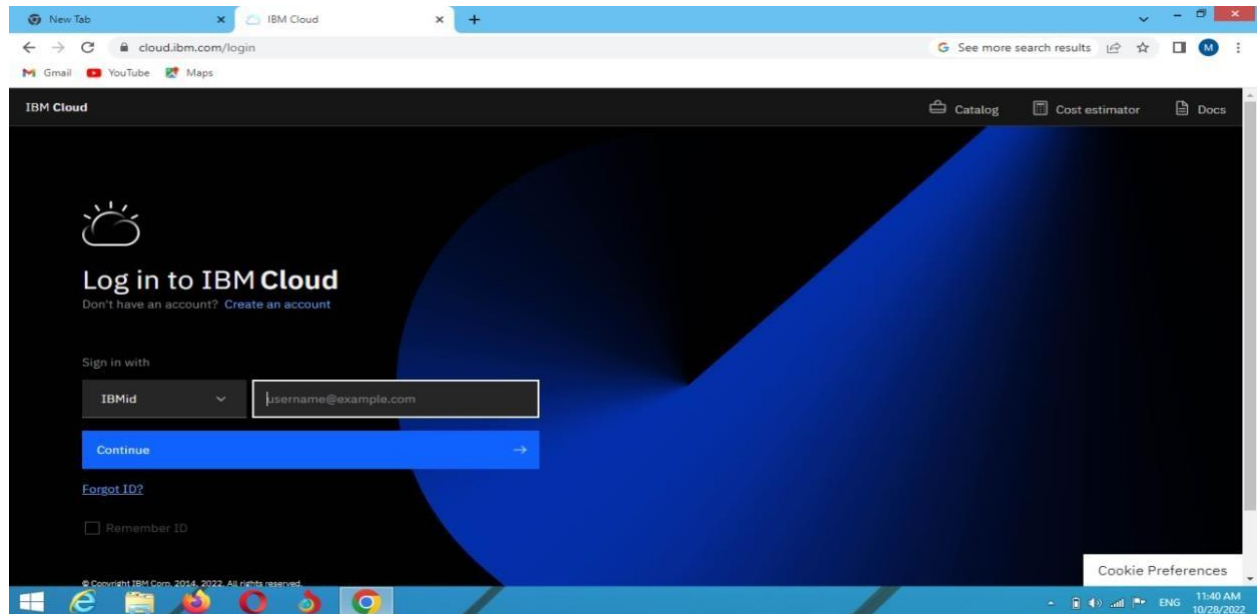
Node-RED is an open-source programming tool, for connecting hardware devices, APIs and online services creatively and easily.

Basic commands one should know to start using Node-Red

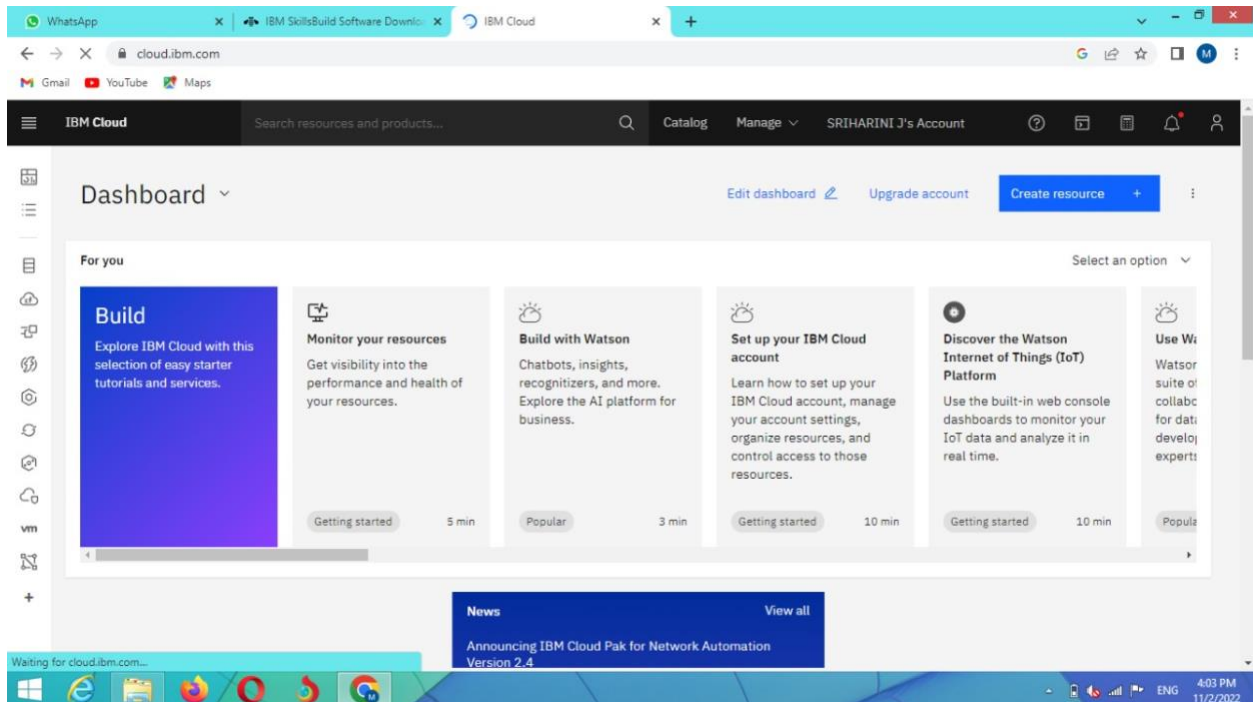
- ✚ target - Set or view the target URL and port like `http://localhost:1880`
- ✚ login - Log user in to the target of the Node-RED admin API
- ✚ list - List all of the installed nodes
- ✚ info - Display more information about the module or node
- ✚ enable - Enable the specified module or node set
- ✚ disable - Disable the specified module or node set
- ✚ search - Search for Node-RED modules to install
- ✚ install - Install the module from NPM to Node-RED
- ✚ remove - Remove the NPM module from Node-RED
- ✚ hash-pw - Create a password hash that can be used with the adminAuth and httpNodeAuth settings

STEPS:

1. First log-in to IBM cloud account with IBM ID and Password.



2. Home page of IBM cloud.



3. Click on the catalog and search Internet of Things.

The screenshot shows the IBM Cloud Catalog interface. The top navigation bar includes the IBM Cloud logo, a search bar, and links to Catalog, Manage, and the user's account (SRIHARINI J's Account). Below the navigation bar, there's a large banner with the word "Catalog" and a search input field. To the left, a sidebar lists categories: Recommended products (6), Compute (29), Containers (9), Networking (30), Storage (20), AI / Machine Learning (17), Analytics (10), Blockchain (1), and Databases (28). The main content area displays three product cards: "Analytics Engine" by IBM, "AnonTech VizVault Platform" by Anon Technology, Inc., and "API Connect" by IBM. Each card includes a brief description and a list of features or pricing options.

The screenshot shows the configuration page for the "Internet of Things Platform" service in the IBM Cloud Catalog. The page is divided into several sections: "Summary" on the right, "Select a pricing plan" in the center, and "Configure your resource" at the bottom. The "Summary" section lists the service name, location, and pricing. The "Select a pricing plan" section shows a table with two plans: "Lite" and "Free". The "Configure your resource" section includes fields for "Service name", "Access management tags", and "Tags".

Plan	Features	Pricing
Lite	Includes up to 500 registered devices, and a maximum of 200 MB of each data metric. Maximum of 500 registered devices Maximum of 500 application bindings Maximum of 200 MB of each of data exchanged, data analyzed and edge data analyzed	Free
Free		

Configure your resource

Service name:

Access management tags:

Tags:

(1) WhatsApp

IBM SkillsBuild Software Downlo...

Service Details - IBM Cloud

+

cloud.ibm.com/services/iotf-service/cm%3Av1%3Abluemix%3Apublic%3Aiotf-service%3Aeu-gb%3Aa%2F90353c36152942fd8d853b97a21c66bc%3A8067c01...

GmailYouTubeMaps

IBM Cloud

Search resources and products...

CatalogManageSRIHARINI J's Account

Resource list /

Internet of Things Platform-4s

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.

LaunchDocs

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
- 200 MB data-transfer limit
- 500 application bindings limit

○

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
- Capacity limit based on device type
- Optional Analytics Service and Blockchain

○

Production

The Production service is a fully managed SaaS offering that enables you to manage and analyze enterprise IoT data.

- Includes IBM Service & Support
- Pricing based on number of devices per device type



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