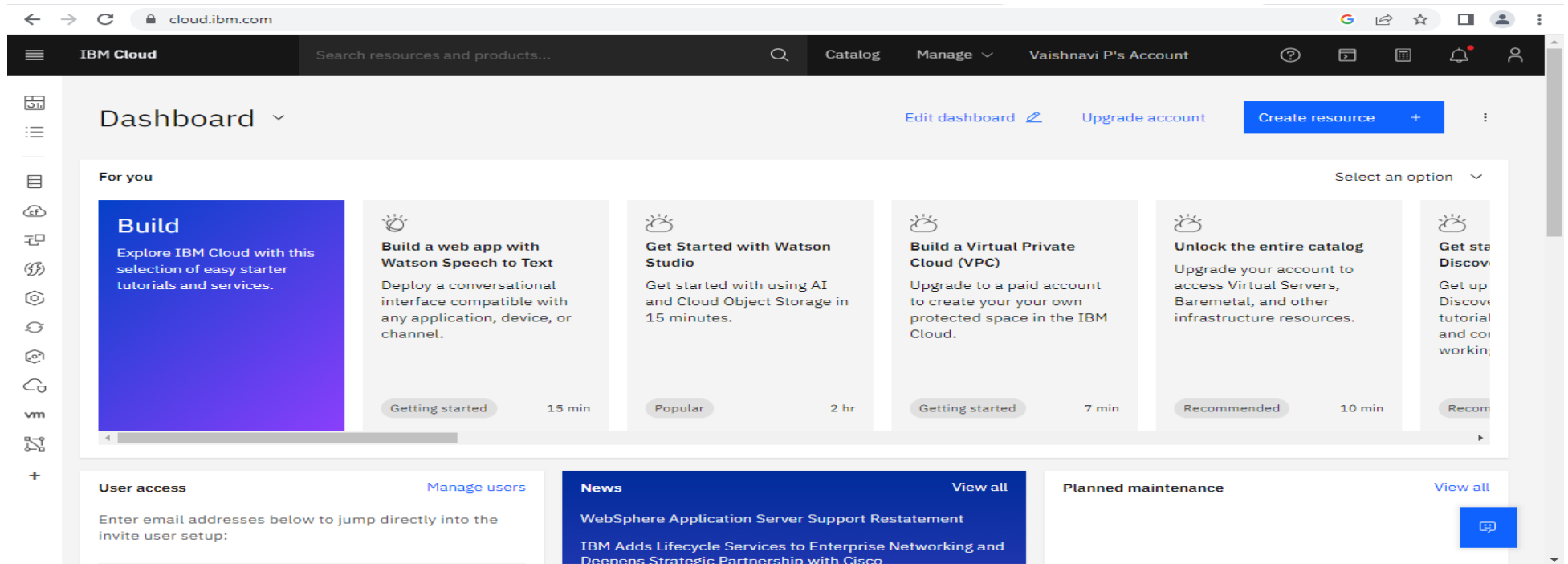


Create and Configure IBM Cloud Services

Team ID	PNT2022TMID14459
Project Name	SmartFarmer – IoT Enabled Smart Farming Application

Create The IBM Watson IoT Platform And A Device

1. Log in to IBM Cloud



The screenshot displays the IBM Cloud Dashboard interface. At the top, a navigation bar includes the IBM Cloud logo, a search bar, and links for Catalog, Manage, and the user's account (Vaishnavi P's Account). The main content area is titled "Dashboard" and features a "For you" section with several recommended actions:

- Build**: Explore IBM Cloud with this selection of easy starter tutorials and services.
- Build a web app with Watson Speech to Text**: Deploy a conversational interface compatible with any application, device, or channel. (Getting started, 15 min)
- Get Started with Watson Studio**: Get started with using AI and Cloud Object Storage in 15 minutes. (Popular, 2 hr)
- 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)
- Unlock the entire catalog**: Upgrade your account to access Virtual Servers, Baremetal, and other infrastructure resources. (Recommended, 10 min)
- Get started with IBM Cloud**: Get up and running with IBM Cloud. (Recommended, 10 min)

Below the "For you" section, there are three main categories:

- User access**: Manage users. Enter email addresses below to jump directly into the invite user setup.
- News**: View all. Includes a link to "WebSphere Application Server Support Restatement" and "IBM Adds Lifecycle Services to Enterprise Networking and Deepens Strategic Partnership with Cisco".
- Planned maintenance**: View all.

2. Click catalog where you find the services and select Internet of Things

The screenshot shows a web browser window with multiple tabs. The active tab is 'Catalog - IBM Cloud'. The address bar shows the URL 'cloud.ibm.com/catalog?category=iot'. The page header includes the IBM Cloud logo, a search bar, and navigation links for 'Catalog', 'Manage', and 'Vaishnavi P's Account'. The main content area is titled 'Catalog' and features a search bar. Below this, the 'Internet of Things' category is selected, showing 'Viewing 1 product'. The product listed is 'Internet of Things Platform' by IBM. The left sidebar contains filters for 'Type' (All, Services, Software, Professional services) and 'Provider'. The bottom of the image shows a Windows taskbar with various application icons and system information like '29°C Cloudy' and '11:43 AM 13-Nov-22'.

IBM Cloud

Search resources and products...

Catalog Manage Vaishnavi P's Account

Sell on IBM Cloud Catalog settings

Catalog

Search the catalog...

Internet of Things

Alphabetically

Type ⓘ

- All
- Services
- Software
- Professional services

Provider

Viewing 1 product

Filters: Internet of Things Clear all

Internet of Things Platform
By IBM

Type here to search

29°C Cloudy 11:43 AM 13-Nov-22

3. Click create and launch

IBM Cloud

Search resources and products...

Catalog Manage Vaishnavi P's Account

Resource list /

Internet of Things Platform-2z

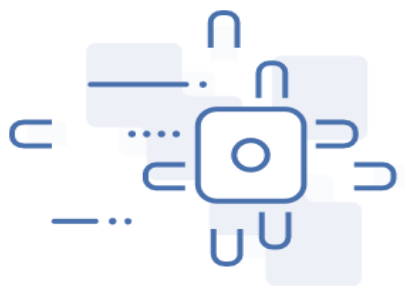
Active Add tags

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

○

Non-Production

The Non-Production service plan is a full-featured, fully-integrated offering that enables

○

Production

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

29°C Cloudy 11:43 AM 13-Nov-22

4. Sign in to IBM Watson Platform

The screenshot shows a web browser window with multiple tabs. The active tab is titled "internetofthings.ibmcloud.com". The browser's address bar shows the URL. The page header includes the "IBM Watson IoT Platform" logo and a "Sign in" button. The main content area features a dark blue background with a central graphic. The graphic consists of white lines forming a network-like structure. In the center, the word "Buildings" is written in large white font. To the left of "Buildings", the text "Collect data from" is displayed above icons of a cloud, a factory, and an airplane. To the right of "Buildings", the text "and make value from it" is displayed above icons of a person, a smartphone, and a server rack. Below the central graphic, there is a "Learn More" link. At the bottom of the page, there is a "Cookie Preferences" button. The Windows taskbar is visible at the bottom of the screen, showing the search bar, task view button, and several application icons. The system tray on the right shows the date and time as "11:44 AM 13-Nov-22" and the language as "ENG IN".

IBM Watson IoT Platform

Sign in

Buildings

Collect data from

and make value from it

Learn More

Cookie Preferences

Type here to search

29°C Cloudy

ENG IN 11:44 AM 13-Nov-22

5. A tab appears to add devices

IBM Watson IoT Platform

vaish.vaishnavi79@gmail.com
ID: 62bxw0

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 ☐

<input type="checkbox"/>	Device ID	Status	Device Type	Class ID	Date Added
 You don't have any devices.					

Type here to search

29°C Cloudy 11:48 AM 13-Nov-22

6. Device type and ID is entered

The screenshot shows the IBM Watson IoT Platform interface. The top navigation bar includes the IBM logo, user profile 'vaish.vaishnavi79@gmail.com' with ID '62bxw0', and a help icon. The left sidebar contains various icons for navigation. The main content area is titled 'Add Device' and shows a progress bar with four steps: Identity (selected), Device Information, Security, and Summary. Below the progress bar, a message states: '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 field containing 'Enter Device ID'. At the bottom right of the form are 'Cancel' and 'Next' buttons. The browser's address bar shows the URL '62bxw0.internetofthings.ibmcloud.com/dashboard/devices/browse/add'. The Windows taskbar at the bottom displays the search bar, task view, and several application icons, along with system information: 29°C Cloudy, ENG IN, and 11:50 AM 13-Nov-22.

IBM Watson IoT Platform

vaish.vaishnavi79@gmail.com
ID: 62bxw0

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 Enter Device ID

Cancel Next

Type here to search

29°C Cloudy ENG IN 11:50 AM 13-Nov-22

7. Additional information about the device is added

The screenshot displays the IBM Watson IoT Platform interface. The browser's address bar shows the URL: `62bxw0.internetofthings.ibmcloud.com/dashboard/devices/browse/add`. The page header includes the IBM Watson IoT Platform logo and the user's email address, `vaish.vaishnavi79@gmail.com`, along with the ID `62bxw0`.

The main content area is titled "Add Device" and features a progress bar with four steps: Identity, Device Information, Security, and Summary. The "Device Information" step is currently active, indicated by a blue circle. Below the progress bar, a message states: "You can modify the default device information and enter more information about the device for identification purposes."

The form contains several input fields for device information:

- Serial Number: Enter Serial Number
- Model: Enter Model
- Description: Enter Description
- Hardware Version: Enter Hardware Version
- Manufacturer: Enter Manufacturer
- Device Class: Enter Device Class
- Firmware Version: Enter Firmware Version
- Descriptive Location: Enter Descriptive Location

At the bottom of the form, there is a button labeled "Add Metadata" with a plus icon.

The Windows taskbar at the bottom shows the search bar, several application icons, and the system tray displaying the temperature (29°C), weather (Cloudy), and the date/time (11:54 AM, 13-Nov-22).

8. An authentication token is created for security

The screenshot shows the 'Add Device' wizard in the IBM Watson IoT Platform. The wizard has four steps: Identity, Device Information, Security (current), and Summary. The 'Security' step presents two options for selecting a device authentication token: 'Auto-generated authentication token (default)' and 'Self-provided authentication token'. The 'Auto-generated' option is selected, and a text box shows the generated token '1234567890'. A note at the bottom says 'Make a note of the generated token. Lost authentication'.

IBM Watson IoT Platform

vaish.vaishnavi79@gmail.com
ID: 62bxw0

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 1234567890 ⓘ

Make a note of the generated token. Lost authentication

9. The overall device information is viewed

The screenshot displays the IBM Watson IoT Platform interface. At the top, a browser window shows the URL `62bxw0.internetofthings.ibmcloud.com/dashboard/devices/browse/add`. The platform header includes the IBM logo and navigation tabs: **Browse**, **Action**, **Device Types**, and **Interfaces**. A vertical sidebar on the left contains icons for various IoT management functions.

The main content area features a modal window titled **Add Device** with a progress bar indicating four steps: **Identity** (completed), **Device Information** (current step), **Security** (pending), and **Summary** (pending). Below the progress bar, a message states: "Verify that the following information is correct then select Finish". The displayed information includes:

- Device Type:** ultrasonic
- Device ID:** 1027
- Security Token:** 1234567890

A **View Metadata** button is located below the device ID. At the bottom right of the modal are **Back** and **Finish** buttons.

Below the modal, the **Browse Devices** section is visible, featuring **All Devices** and **Diagnose** buttons. A descriptive text states: "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."

The Windows taskbar at the bottom shows the search bar, system tray with weather (29°C Cloudy), and the date/time (11:55 AM, 13-Nov-22).

10. IBM Watson IoT Platform is created and a device is added

The screenshot displays the IBM Watson IoT Platform interface. The browser's address bar shows the URL: `62bxw0.internetofthings.ibmcloud.com/dashboard/devices/drilldown/ultrasonic:1027?returnTo=/devices/browse`. The page title is "Device Drilldown - 1027".

The left sidebar contains a navigation menu with the following items: "Device Credentials", "Connection Information", "Recent Events", "State", "Device Information", "Metadata", "Diagnostics", "Connection Logs", and "Device Actions".

The main content area is divided into two sections:

- Device Credentials**: This section provides instructions on adding credentials to the device. It includes a table with the following details:

Organization ID	62bxw0
Device Type	ultrasonic
Device ID	1027
Authentication Method	use-token-auth
Authentication Token	1234567890

A warning message states: "Authentication tokens are non-recoverable. If you misplace this token, you will need to re-register the device to generate a new authentication token." A link is provided to "Find out how to add these credentials to your device".
- Connection Information**: This section provides basic connection information about the device. It includes a table with the following details:

Device ID	1027
Device Type	ultrasonic
Date Added	Nov 13, 2022 11:55 AM
Added By	vaish.vaisnavi79@gmail.com
Connection Status	Disconnected

The Windows taskbar at the bottom shows the system clock as 11:55 AM on 13-Nov-22, with a temperature of 29°C and a cloudy weather forecast.