

## SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES

**STUDENT NAME : R.HEMALATHA - TEAMLEAD**  
P.ABIRAMI - team member

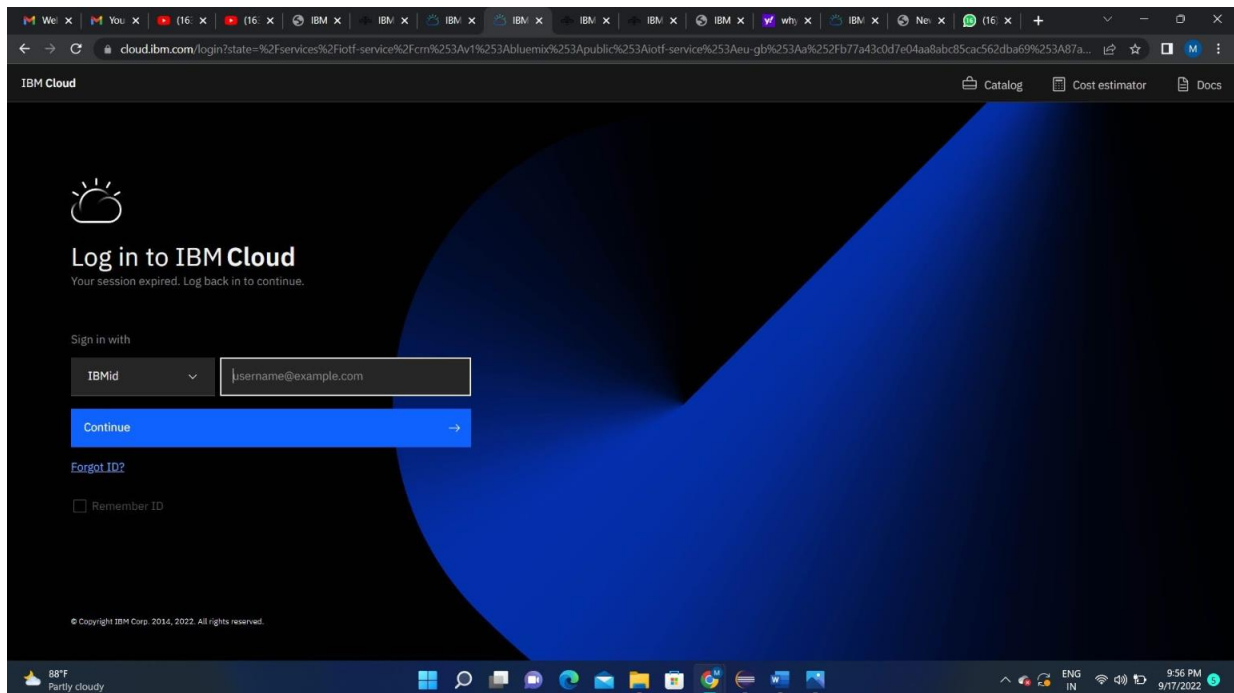
### CREATE IBM WATSON IOT PLATFORM AND DEVICE

#### AIM:

To create the IBM Watson IoT platform and device

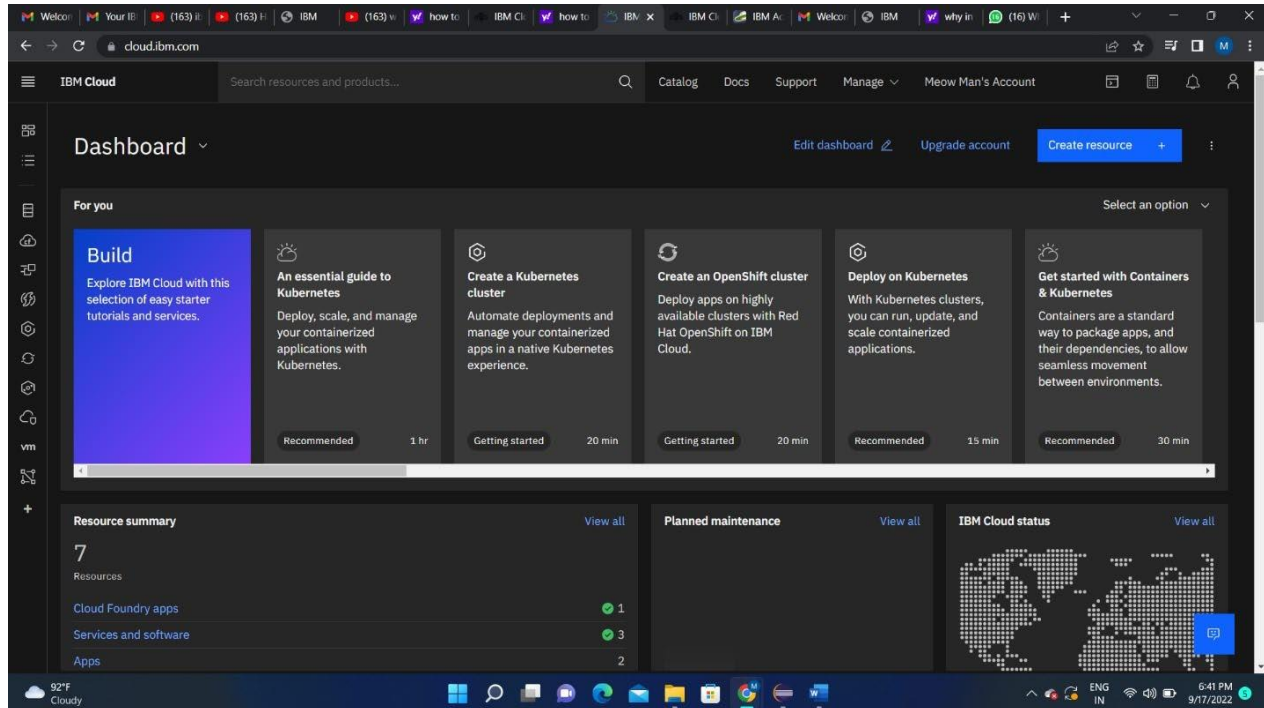
#### STEPS:

1. Firstly create an IBM cloud account with IBMid and password

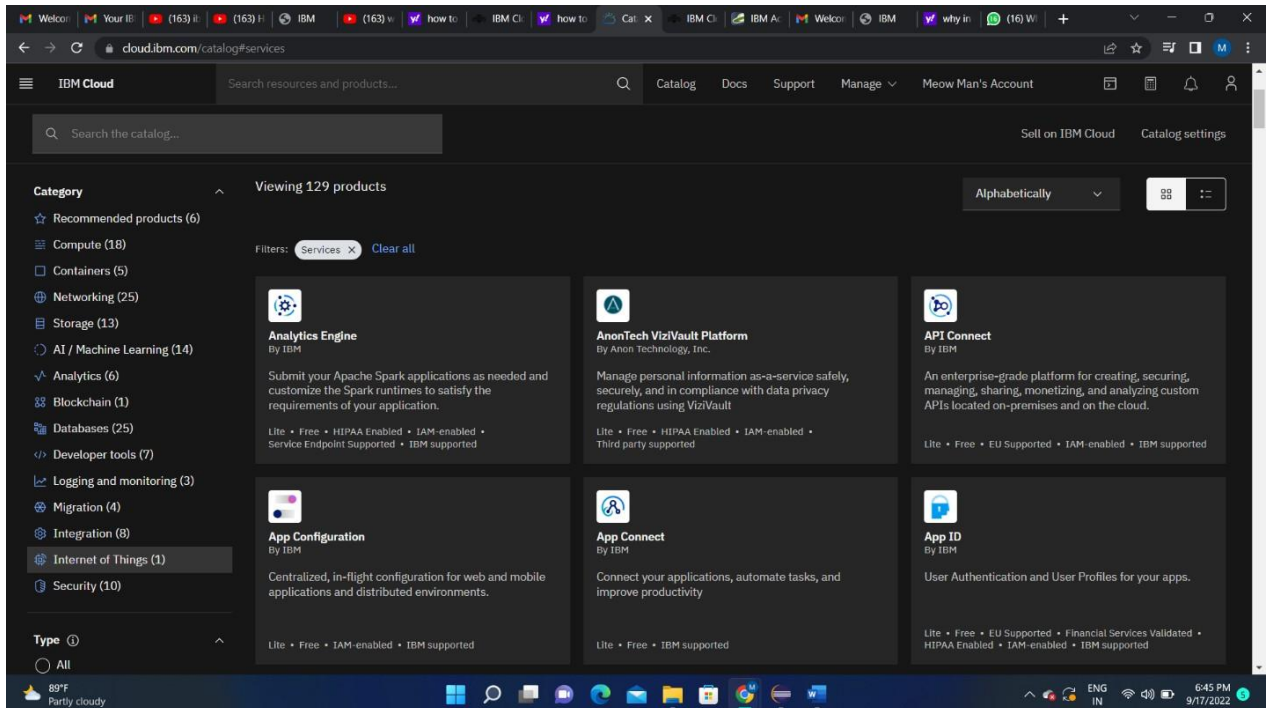


2. Home page of IBM cloud

## SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES



### 3. Click on the catalog on the top



### 4. Click on IoT in the category mentioned

## SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES

The screenshot shows the IBM Cloud catalog page for the Internet of Things Platform. The 'Create' tab is active. The location is set to 'Dallas (us-south)'. The 'Lite' plan is selected, which is free. A warning message states: 'Existing Lite plan instance. You can have only 1 Lite plan instance of this service per resource group. Delete your current Lite plan instance in Default resource group to create a new one, or view the existing instance.' The 'Create' button is disabled.

**Internet of Things Platform**

This service is the hub of all things IBM IoT, it is where you can set up and manage your connected devices so that your apps can access their live and historical data.

**Create** | About

Type: Service

Provider: IBM

Updated on: 08/15/2022

Category: Internet of Things

Compliance: IAM-enabled

Location: Frankfurt, London, Dallas, Washington DC

Related links: Docs, Terms

Select a location: Dallas (us-south)

Select a pricing plan: Displayed prices do not include tax. Monthly prices shown are for country or location: [United States](#)

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

The Lite service plan for Internet of Things Platform includes up to 500 registered devices, and a maximum of 200 MB each of data exchanged, data analyzed, and edge data analyzed per month.

**Summary**

**Internet of Things Platform** Free

Location: Dallas

Plan: Lite

Service name: Internet of Things Platform-bb

Resource group: Default

**Existing Lite plan instance**

You can have only 1 Lite plan instance of this service per resource group. [Delete](#) your current Lite plan instance in Default resource group to create a new one, or [view the existing instance](#).

☐ I have read and agree to the following license agreements: [Terms](#)

Create

Add to estimate

5. If already a lite is present delete it else u can't create another

The screenshot shows the IBM Cloud catalog page for the Internet of Things Platform. The 'Create' tab is active. The location is set to 'London'. The 'Lite' plan is selected, which is free. A warning message states: 'Existing Lite plan instance. You can have only 1 Lite plan instance of this service per resource group. Delete your current Lite plan instance in Default resource group to create a new one, or view the existing instance.' The 'Create' button is disabled.

**Internet of Things Platform**

This service is the hub of all things IBM IoT, it is where you can set up and manage your connected devices so that your apps can access their live and historical data.

**Create** | About

Type: Service

Provider: IBM

Updated on: 08/15/2022

Category: Internet of Things

Compliance: IAM-enabled

Location: Frankfurt, London, Dallas, Washington DC

Related links: Docs, Terms

Select a location: London

Select a pricing plan: Displayed prices do not include tax. Monthly prices shown are for country or location: [United States](#)

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

The Lite service plan for Internet of Things Platform includes up to 500 registered devices, and a maximum of 200 MB each of data exchanged, data analyzed, and edge data analyzed per month.

Lite plan services are deleted after 30 days of inactivity.

**Summary**

**Internet of Things Platform** Free

Location: London

Plan: Lite

Service name: Internet of Things Platform-bb

Resource group: Default

**Existing Lite plan instance**

You can have only 1 Lite plan instance of this service per resource group. [Delete](#) your current Lite plan instance in Default resource group to create a new one, or [view the existing instance](#).

☐ I have read and agree to the following license agreements: [Terms](#)

Create

Add to estimate

**Configure your resource**

Service name: Internet of Things Platform-bb

Select a resource group: Default

Tags: Examples: env:dev, version:1

Access management tags: Examples: access:dev, proj:version-1

## SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES

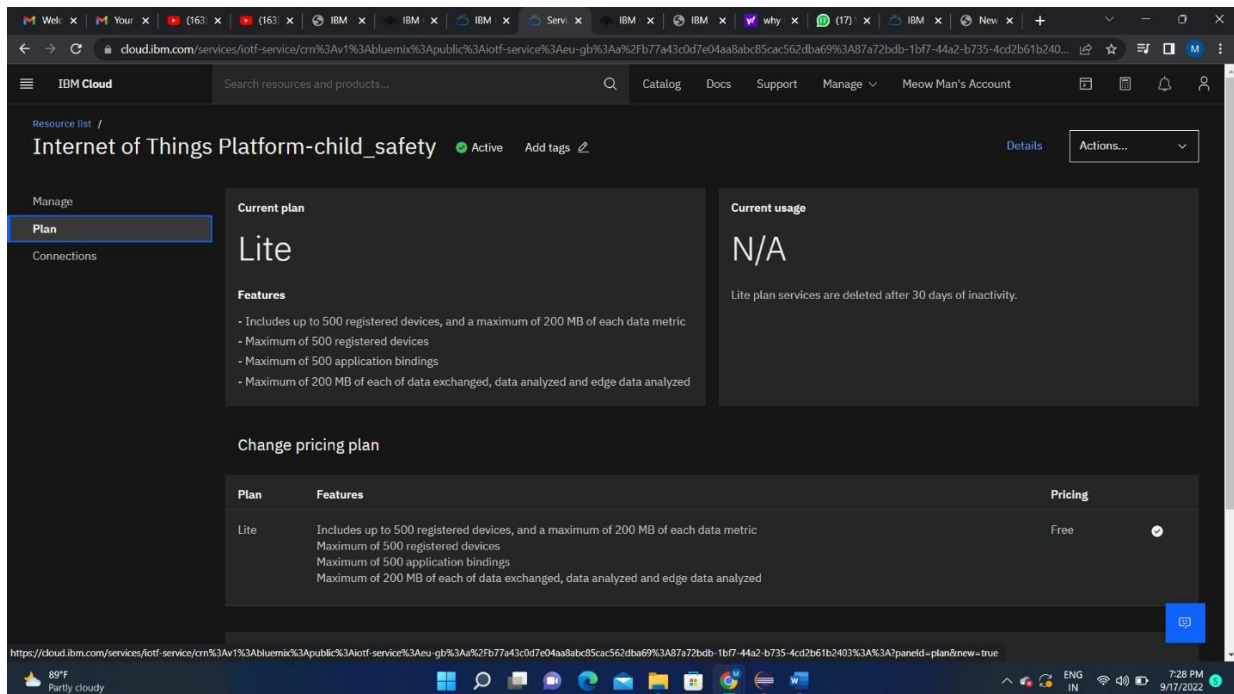
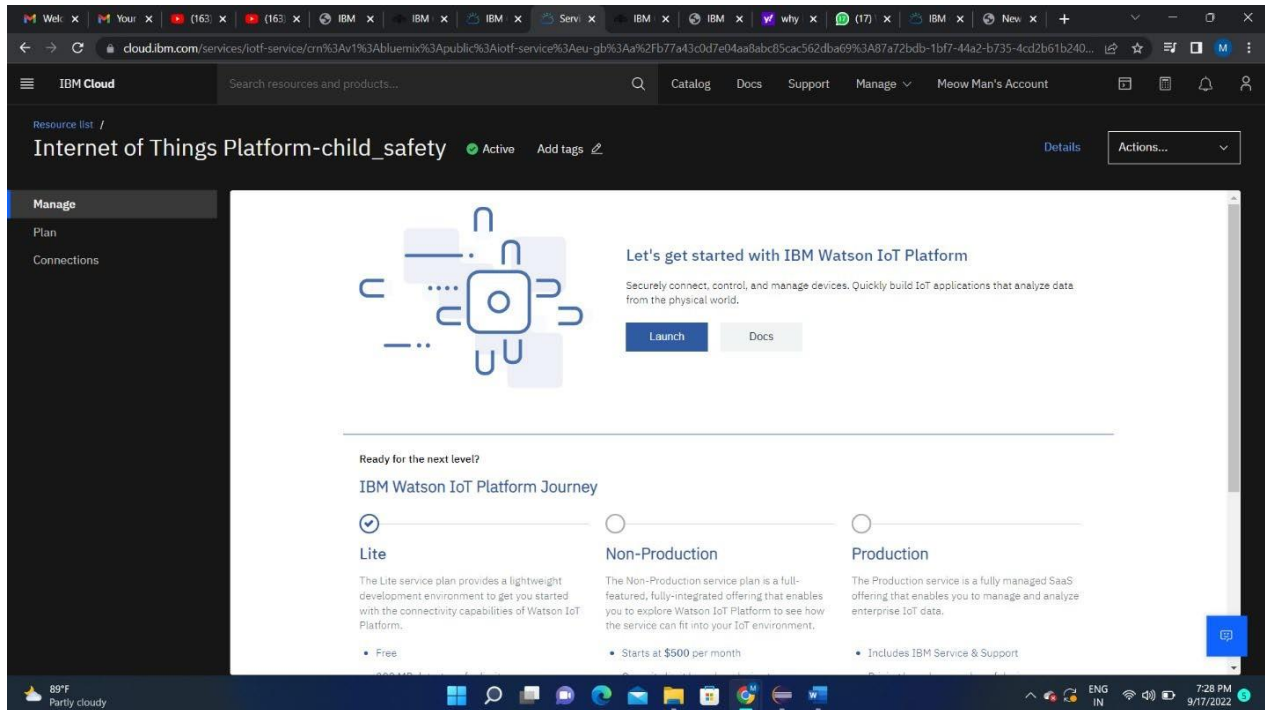
6. Enter the location and in the configure your resource type the service name and choose the plan, tick the agree with agreements and then click on create

The screenshot shows the IBM Cloud 'Internet of Things Platform' service page. The 'Create' tab is active, displaying a 'Select a location' dropdown menu with 'Dallas (us-south)' selected. Below this, a 'Select a pricing plan' section shows the 'Lite' plan selected, which includes up to 500 registered devices and a maximum of 200 MB of each data metric. The pricing is listed as 'Free'. A warning message states: 'Existing Lite plan instance: You can have only 1 Lite plan instance of this service per resource group. Delete your current Lite plan instance in Default resource group to create a new one, or view the existing instance.' The 'Summary' panel on the right shows the service name as 'Internet of Things Platform-2w' and the resource group as 'Default'. The 'Create' button is visible at the bottom right.

The screenshot shows the IBM Cloud 'Internet of Things Platform' service page, now in the 'Configure your resource' section. The 'Lite' plan is still selected. The 'Service name' field is filled with 'Internet of Things Platform-child\_safety'. The 'Select a resource group' dropdown shows 'Default'. The 'Tags' field has the example 'env:dev, version-1'. The 'Access management tags' field has the example 'access:dev, proj:version-1'. The 'Summary' panel on the right shows the service name as 'Internet of Things Platform-child\_safety' and the resource group as 'Default'. The 'Create' button is now blue and prominent at the bottom right.

## SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES

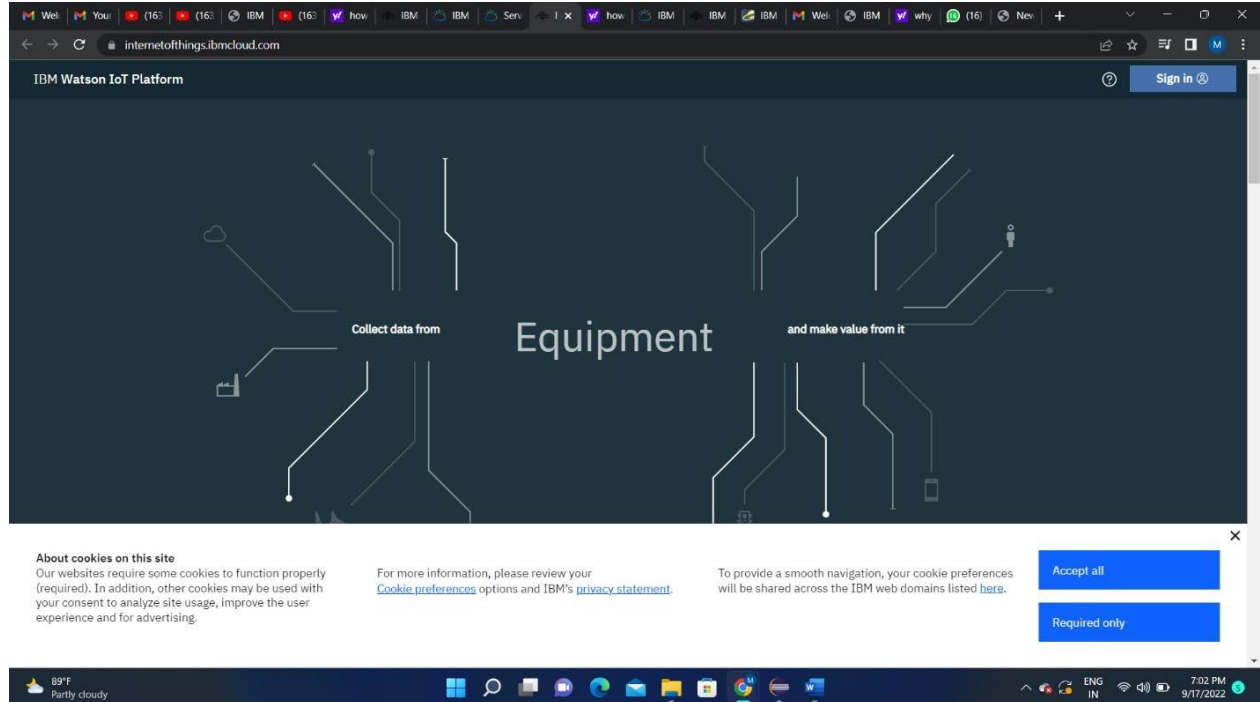
- Internet of Things Platform Child\_safety will be created, where there are different options like manage, plan, and connection (manage is for launch, Plan gives us the idea about the payment package and its upgrades, and lastly the connection is for to connect IoT with other services)



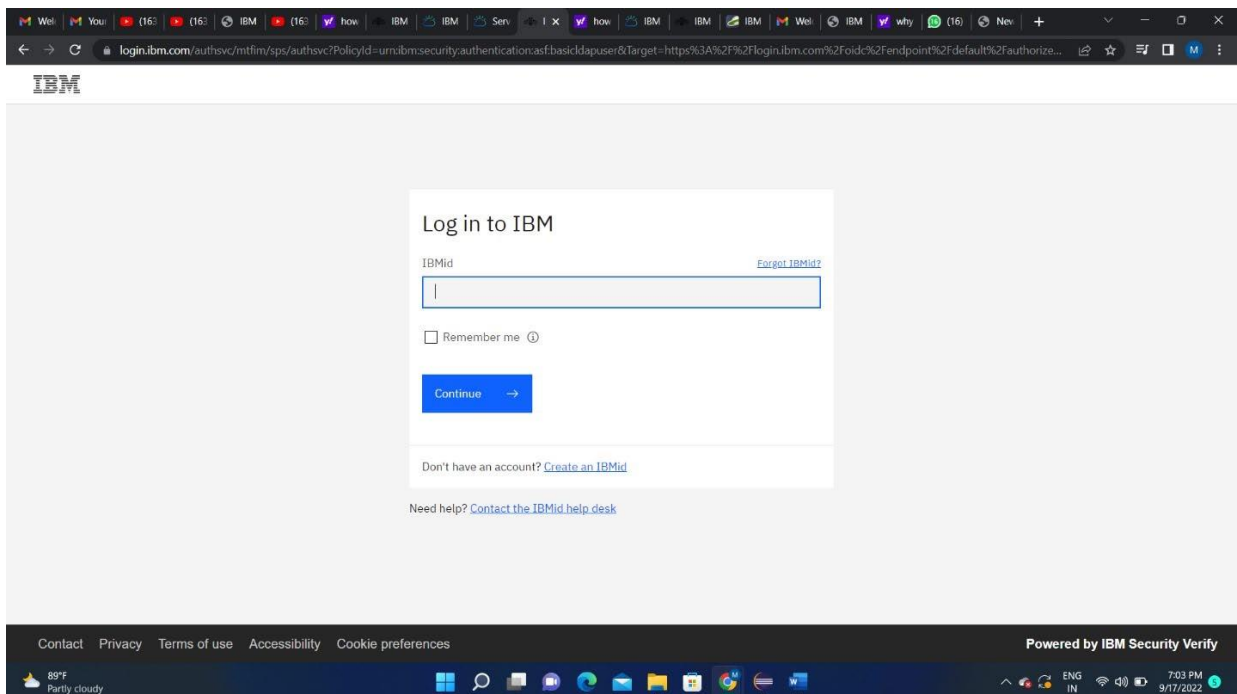


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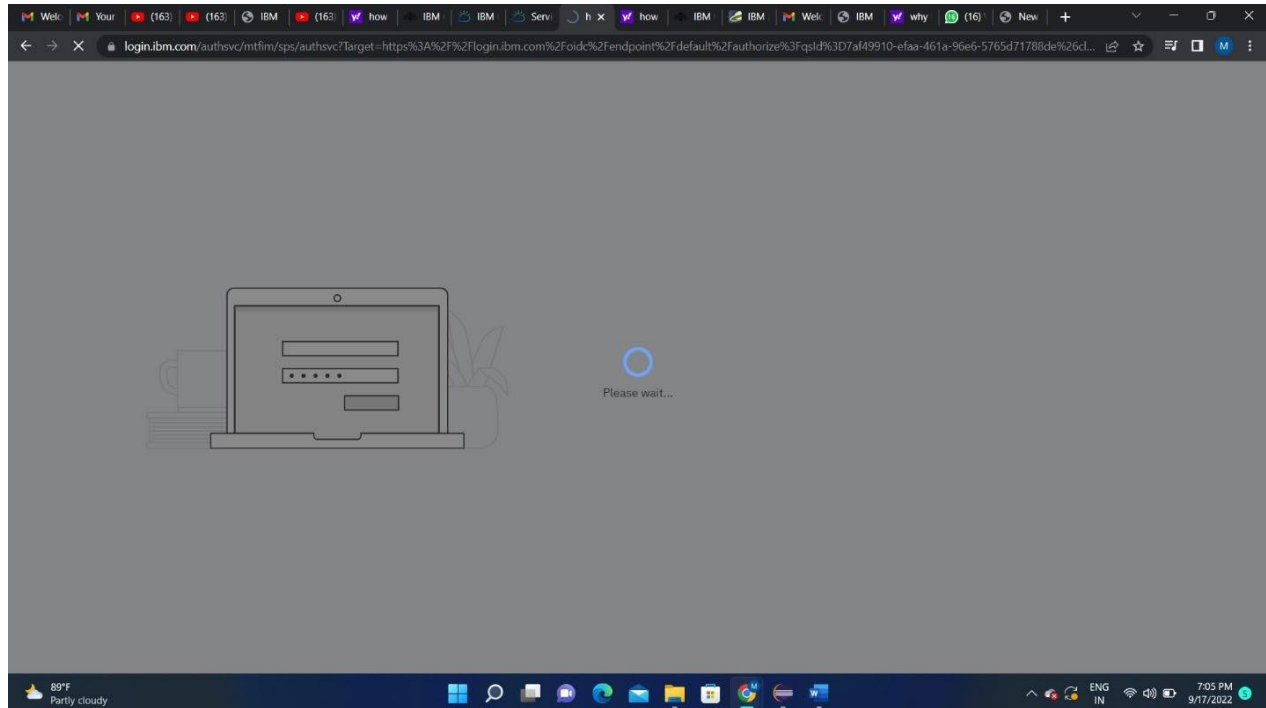
8. Clicking on the launch button in the manage tab, it will open to this



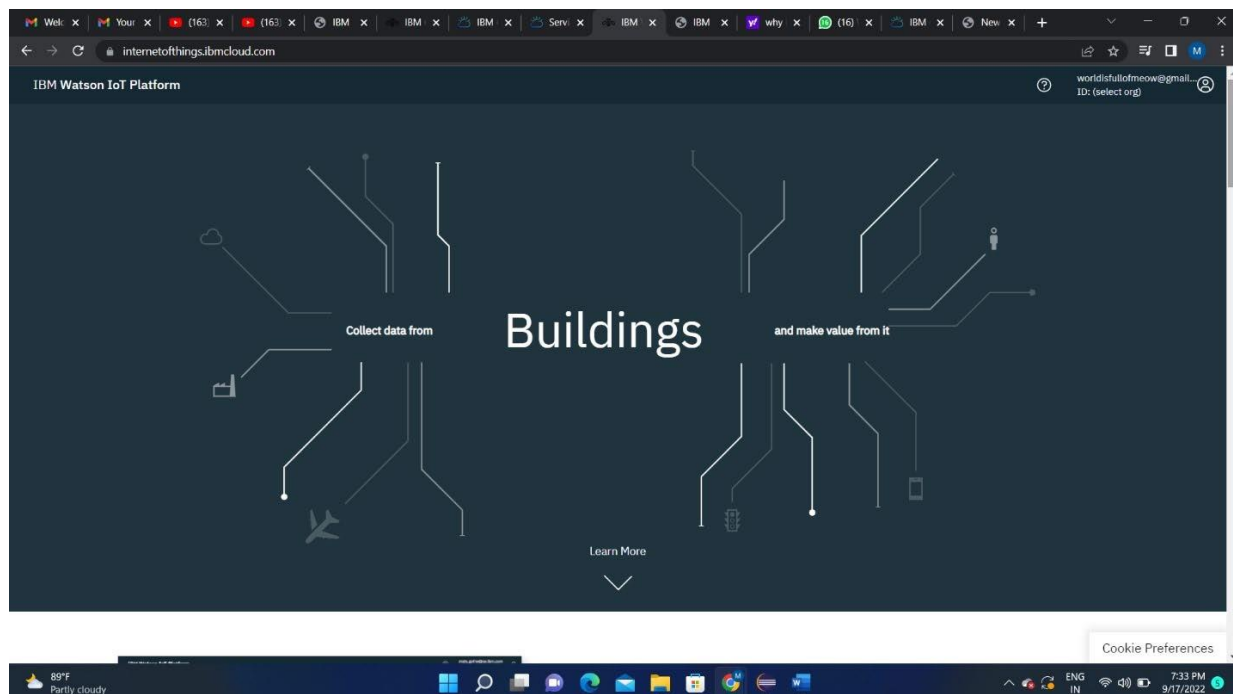
9. Enter the details to sign in to the Watson Cloud to create a device



## SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES

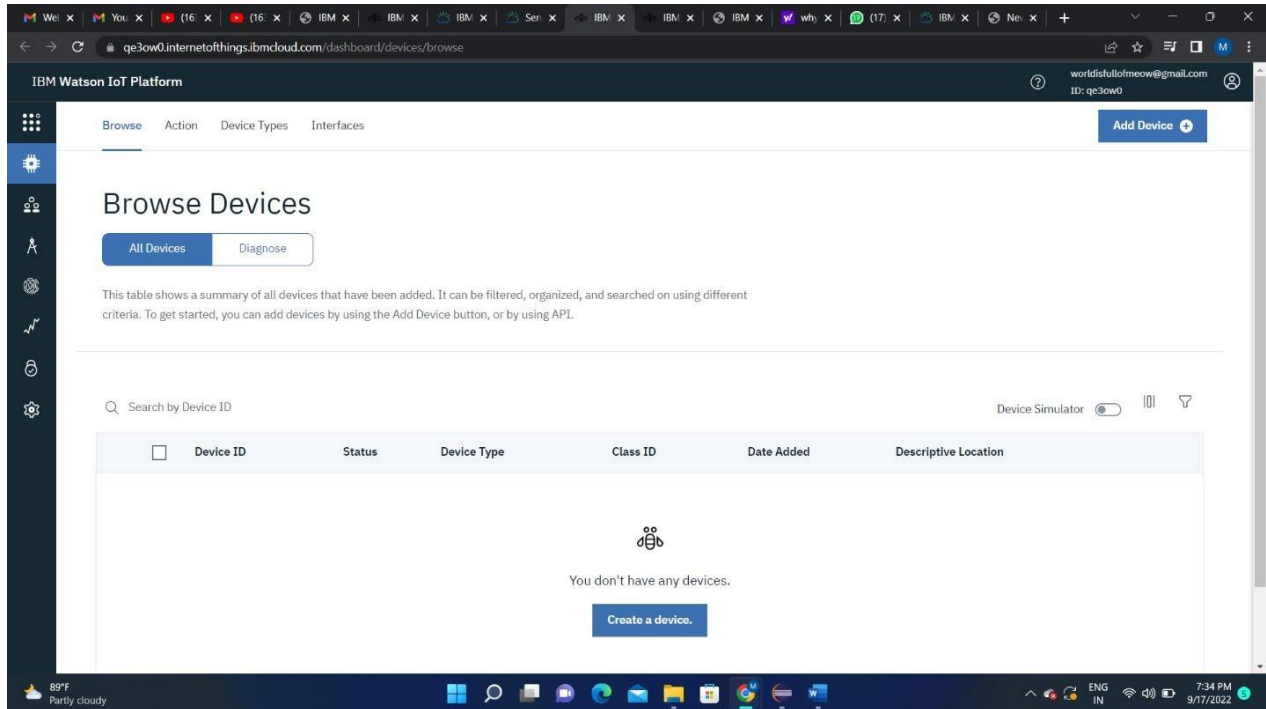


10. Once logged in the name will be displayed and it goes back to the first page

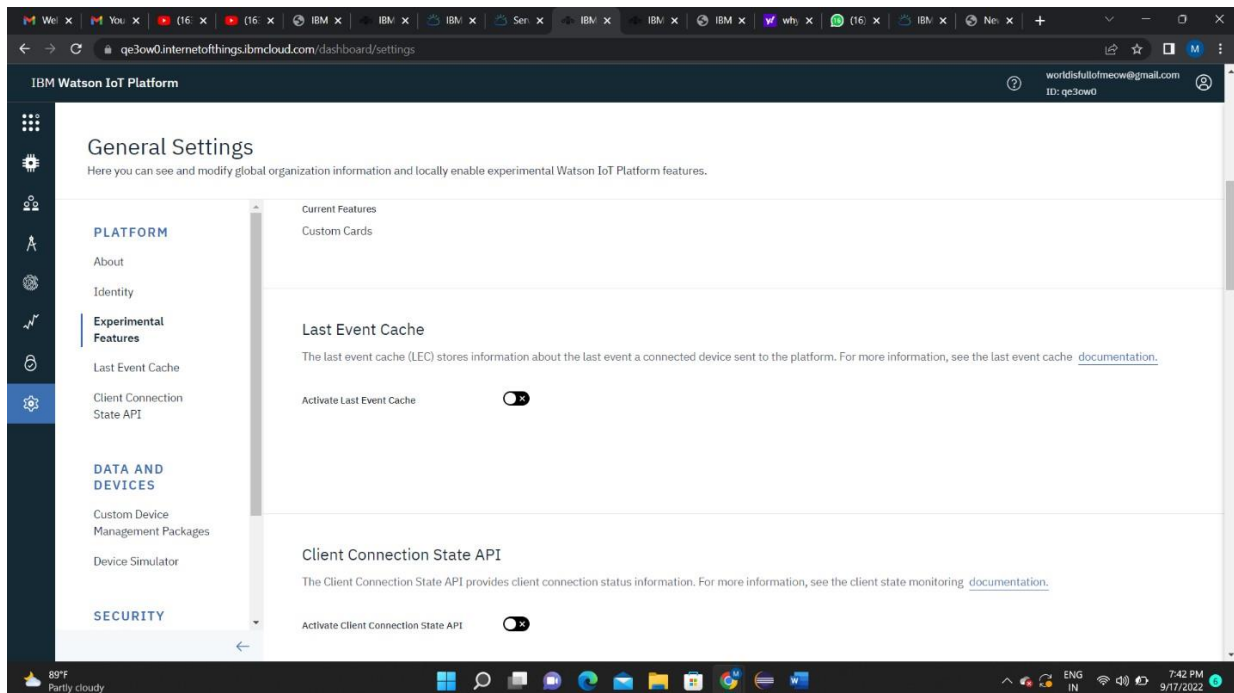


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11. And again clicking on the launch button will open this tab, the device will help in the creation of the devices, the addition of devices, and the display of details of the devices.



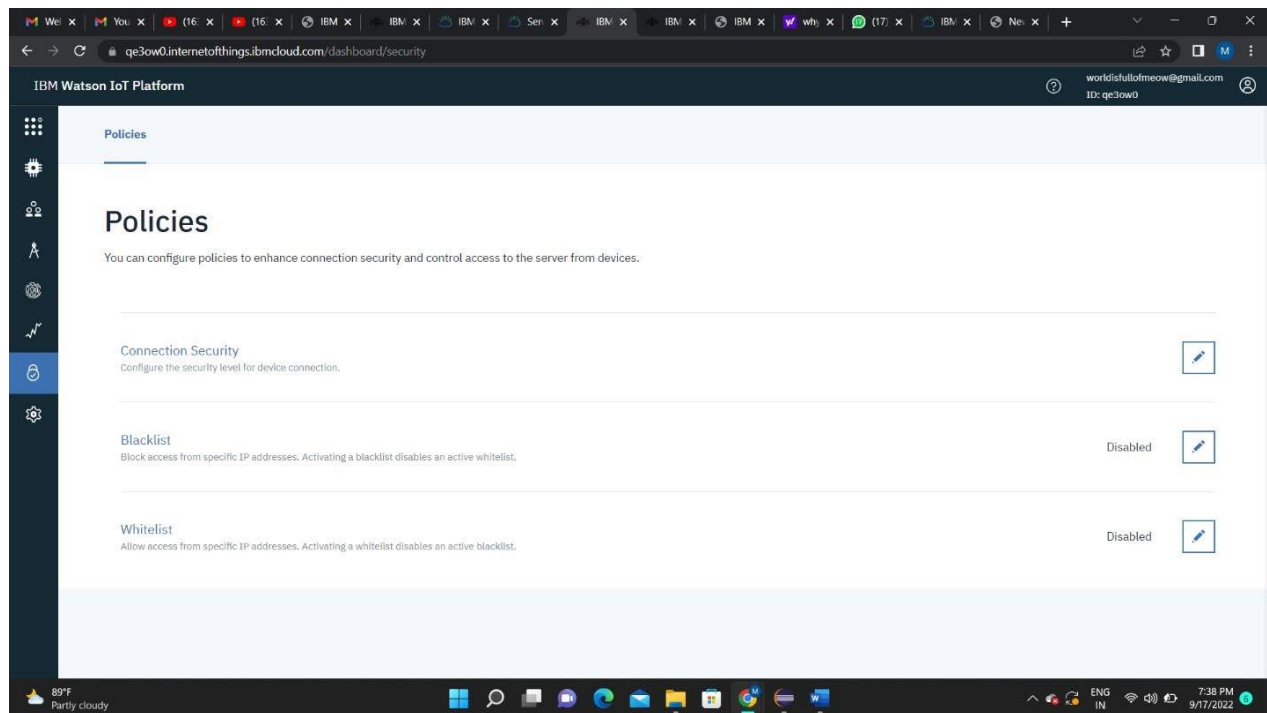
12. The setting tab is used to change the general setting if needed for the project.



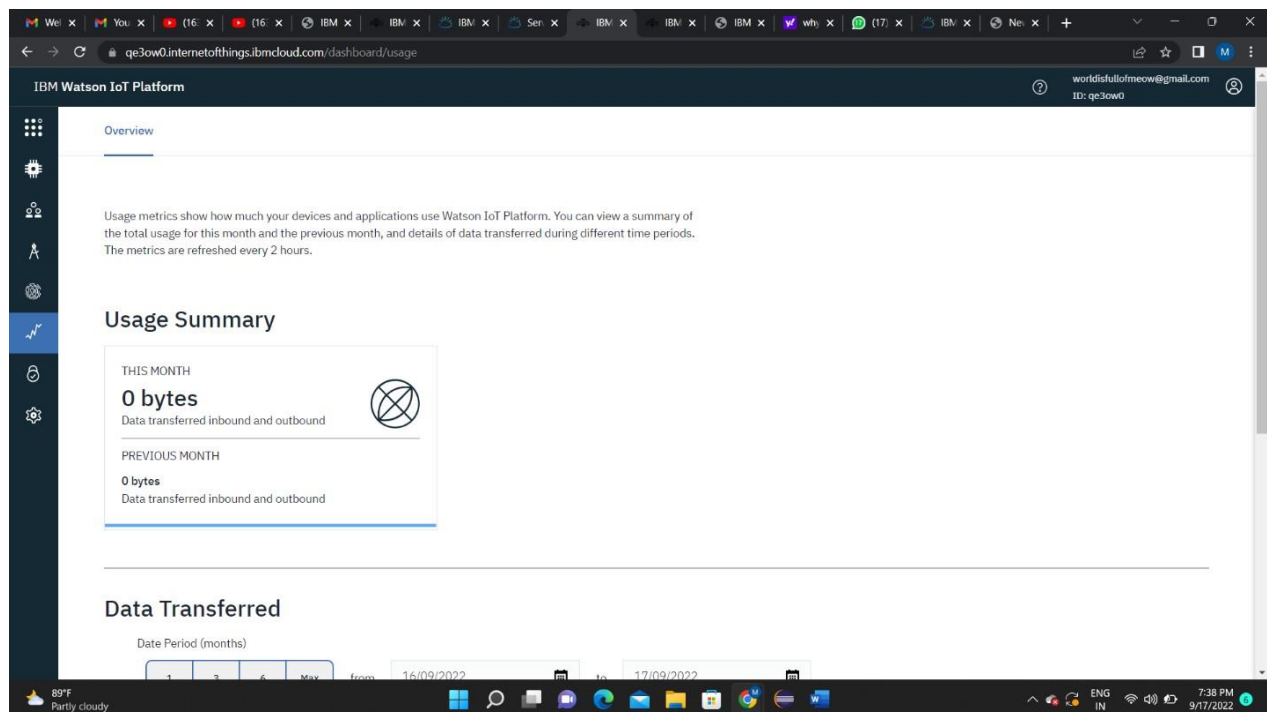


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13. In the security tab we can choose the type of security connection and can change according to specification

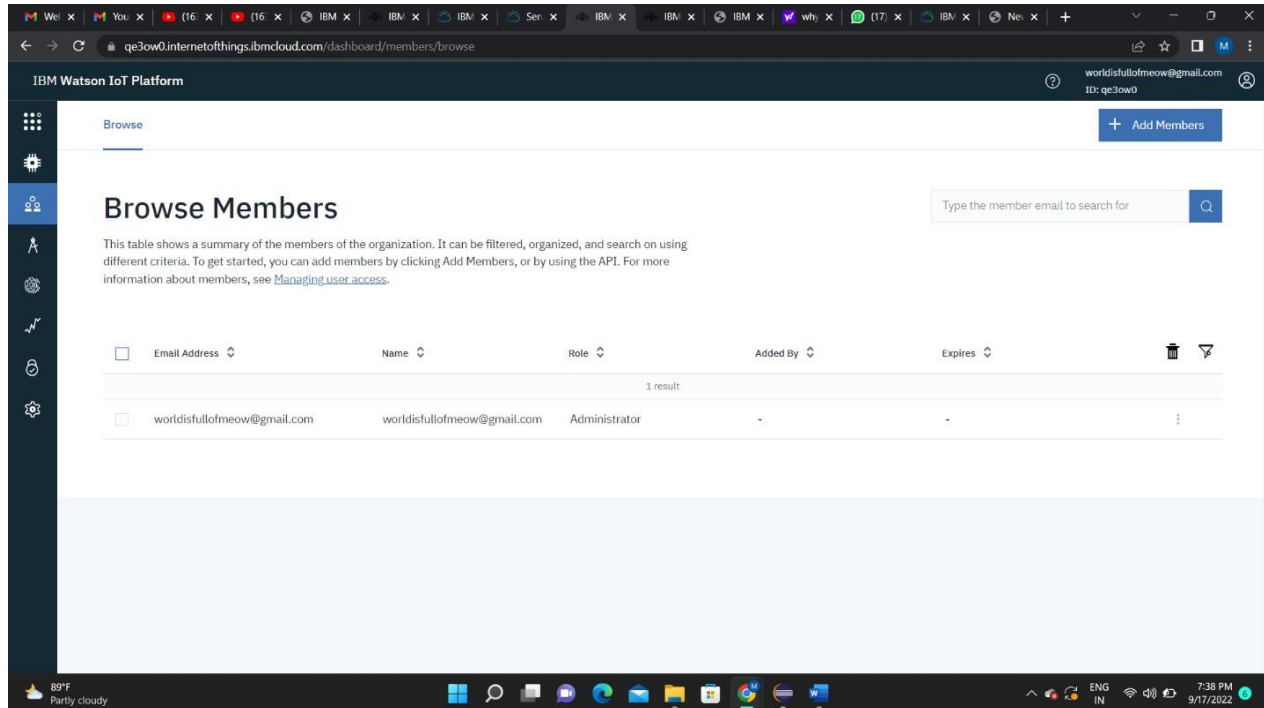


14. Usage gives the summary of how many bytes are used between the devices and the IBM cloud.

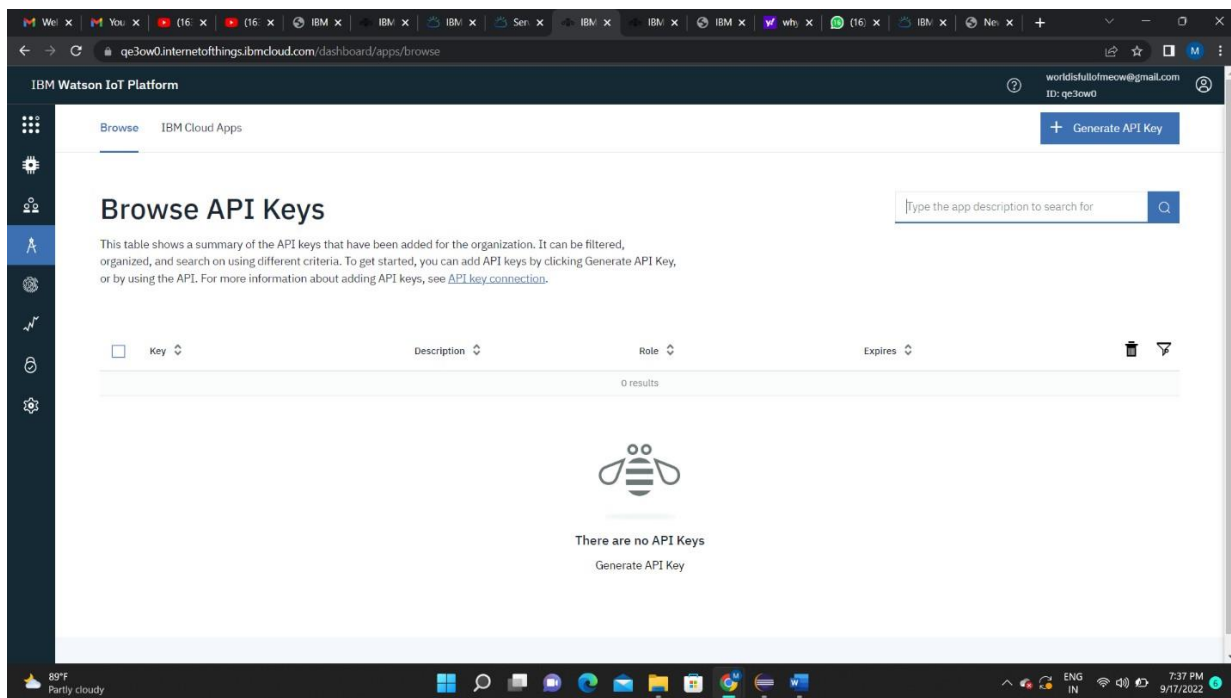


15. The member tab is add the teams members to work in the platform

## SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES

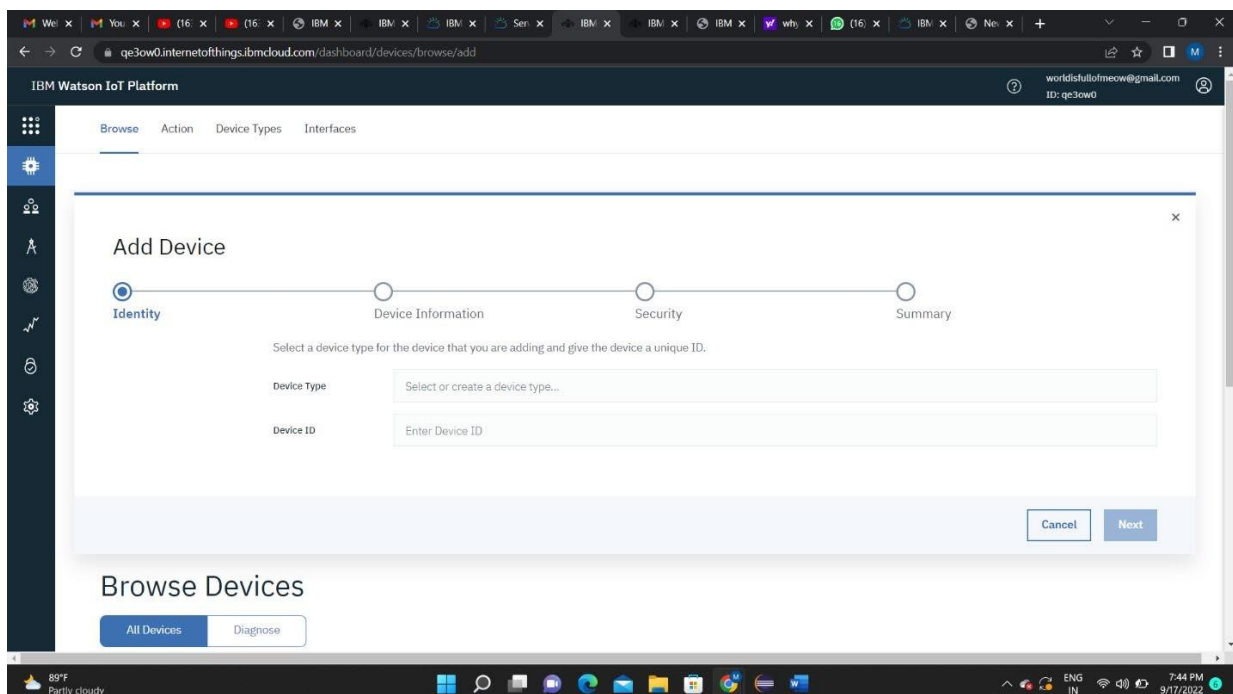
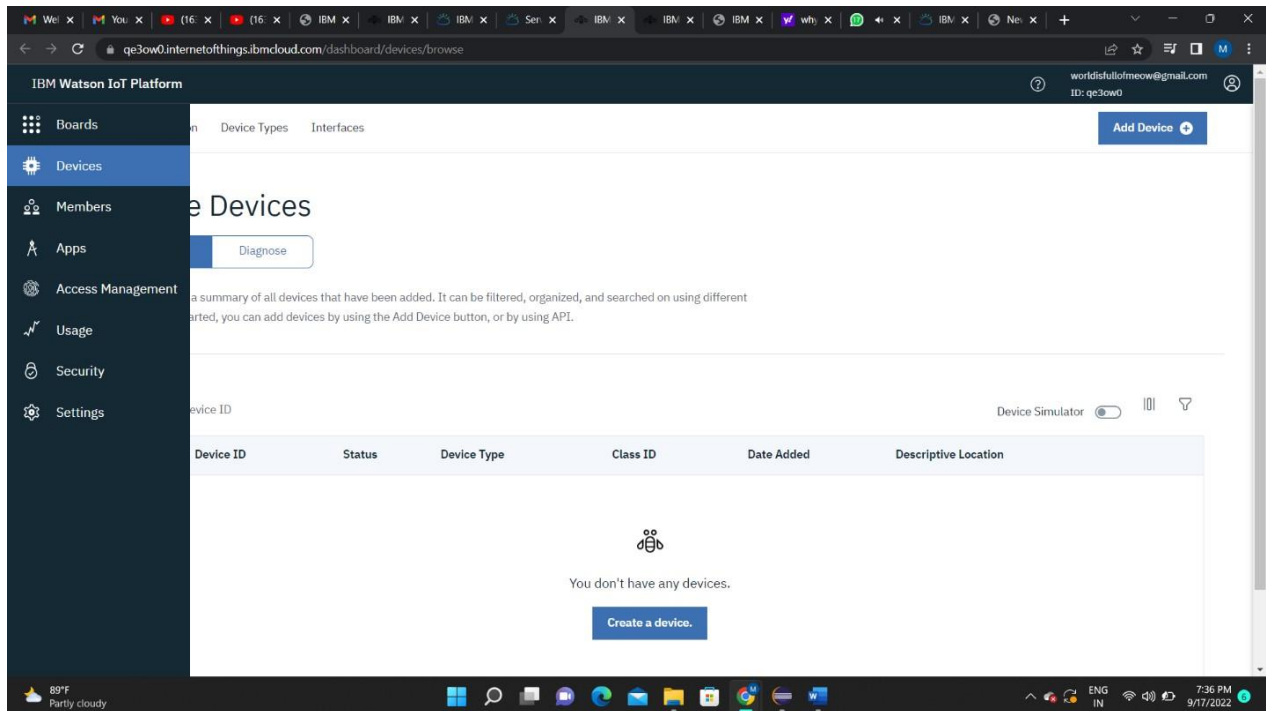


16. This tab is used when you want to connect to some other platform and to integrate with other services.



## SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES

17. Click on the device tab and click on the add device button, then give the device type and device id and click next



## SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES

The screenshot shows the 'Add Device' form in the IBM Watson IoT Platform. The form is titled 'Add Device' and has a progress bar with four steps: Identity, Device Information, Security, and Summary. The 'Identity' step is currently active. Below the progress bar, there is a text prompt: '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 the value 'Nodemcu' and 'Device ID' with the value '199795'. At the bottom right of the form, there are 'Cancel' and 'Next' buttons. Below the form, there is a 'Browse Devices' section with 'All Devices' and 'Diagnose' buttons.

IBM Watson IoT Platform

worldisfullofmeow@gmail.com  
ID: qe3ow0

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 Nodemcu

Device ID 199795

Cancel Next

Browse Devices

All Devices Diagnose

18. This page to enter extra details and of the hardware

The screenshot shows the 'Add Device' form in the IBM Watson IoT Platform, now at the 'Device Information' step. The progress bar shows 'Identity' as completed and 'Device Information' as the current step. Below the progress bar, there is a text prompt: 'You can modify the default device information and enter more information about the device for identification purposes.' There are several input fields for device details: 'Serial Number' (placeholder: Enter Serial Number), 'Manufacturer' (placeholder: Enter Manufacturer), 'Model' (placeholder: Enter Model), 'Device Class' (placeholder: Enter Device Class), 'Description' (placeholder: Enter Description), 'Firmware Version' (placeholder: Enter Firmware Version), 'Hardware Version' (placeholder: Enter Hardware Version), and 'Descriptive Location' (placeholder: Enter Descriptive Location). There is also an 'Add Metadata' button with a plus icon. At the bottom right of the form, there are 'Back' and 'Next' buttons.

IBM Watson IoT Platform

worldisfullofmeow@gmail.com  
ID: qe3ow0

Browse Action Device Types Interfaces

Add Device

Identity Device Information Security Summary

You can modify the default device information and enter more information about the device for identification purposes.

Serial Number Enter Serial Number

Manufacturer Enter Manufacturer

Model Enter Model

Device Class Enter Device Class

Description Enter Description

Firmware Version Enter Firmware Version

Hardware Version Enter Hardware Version

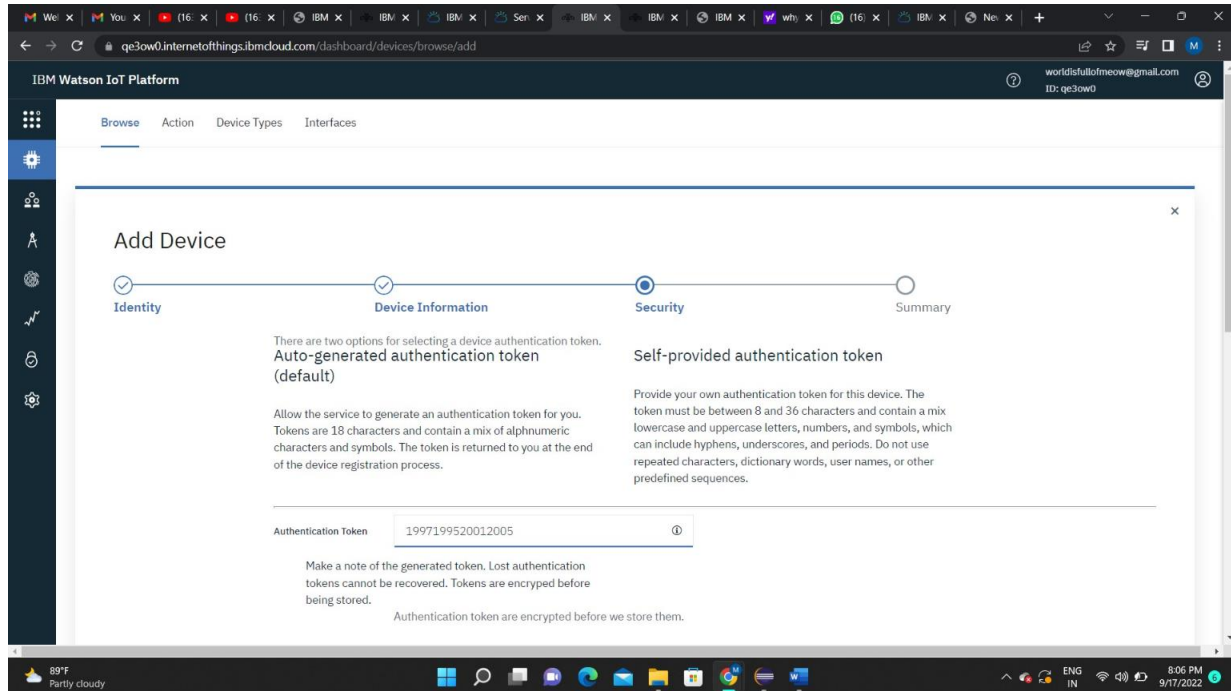
Descriptive Location Enter Descriptive Location

Add Metadata +

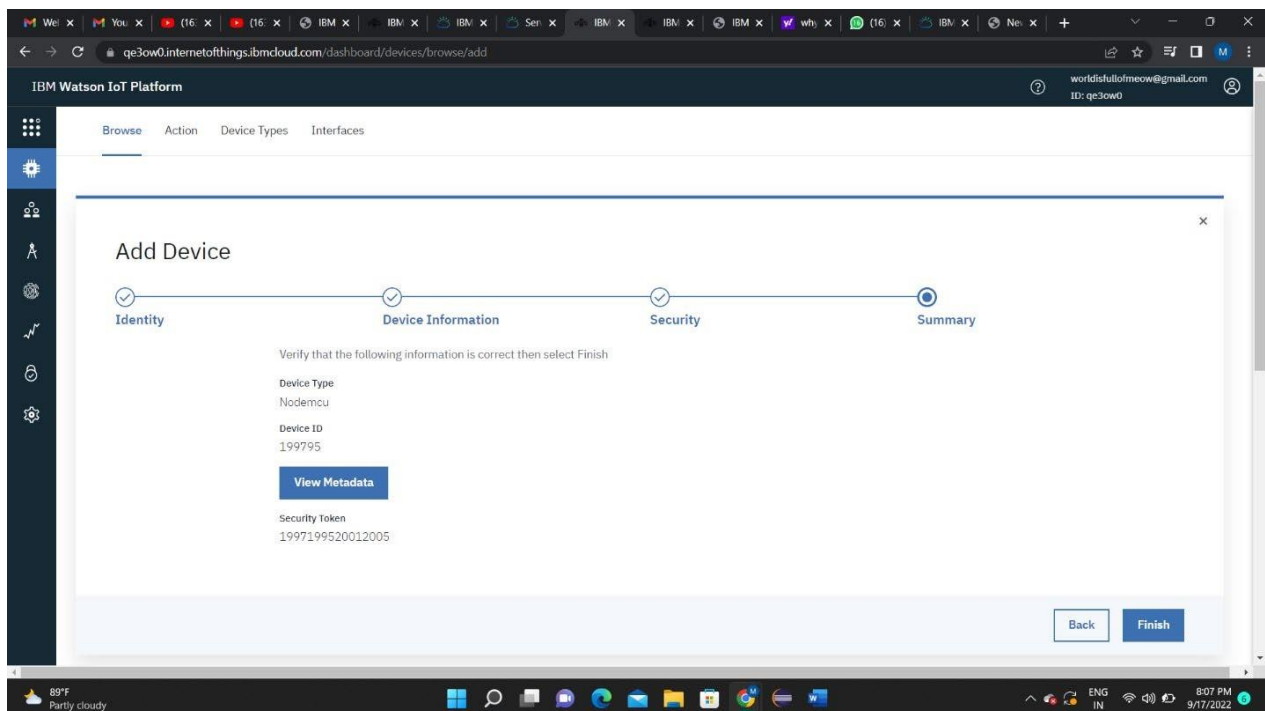
Back Next

19. Clicking next it goes to the security where we do authentication token id.

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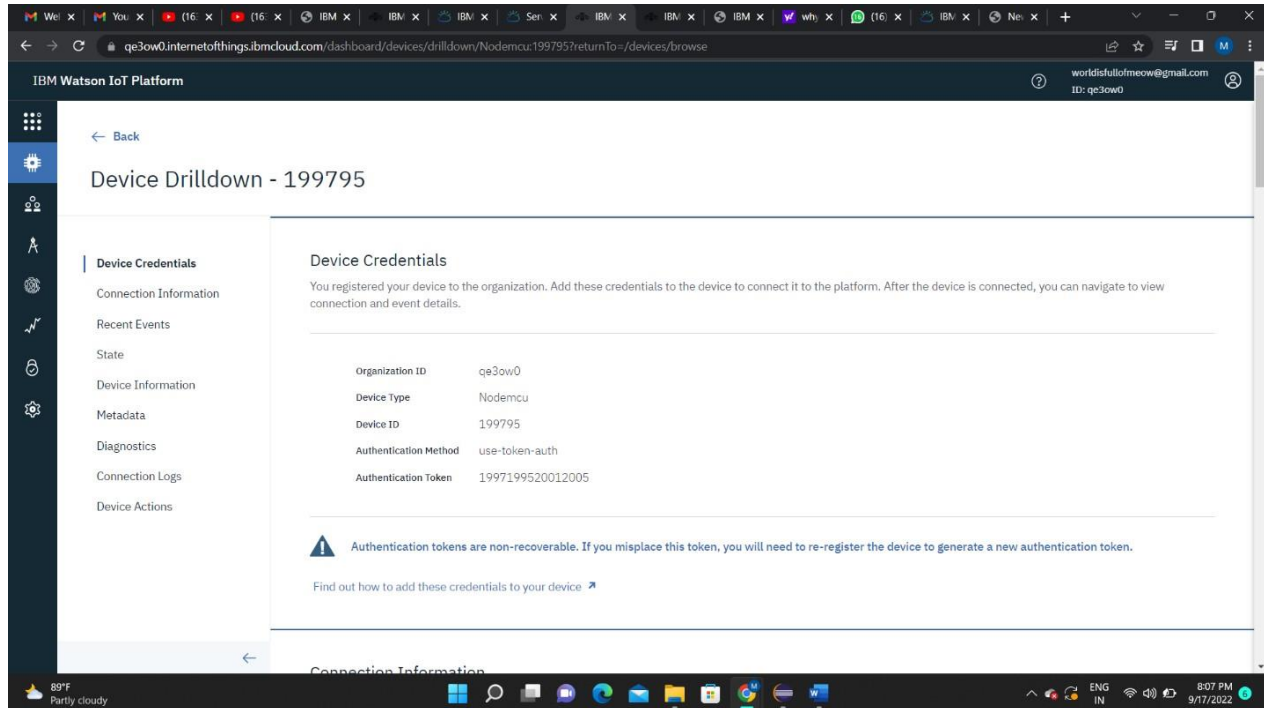
20. Clicking on next it goes to the summary of the device then click finish



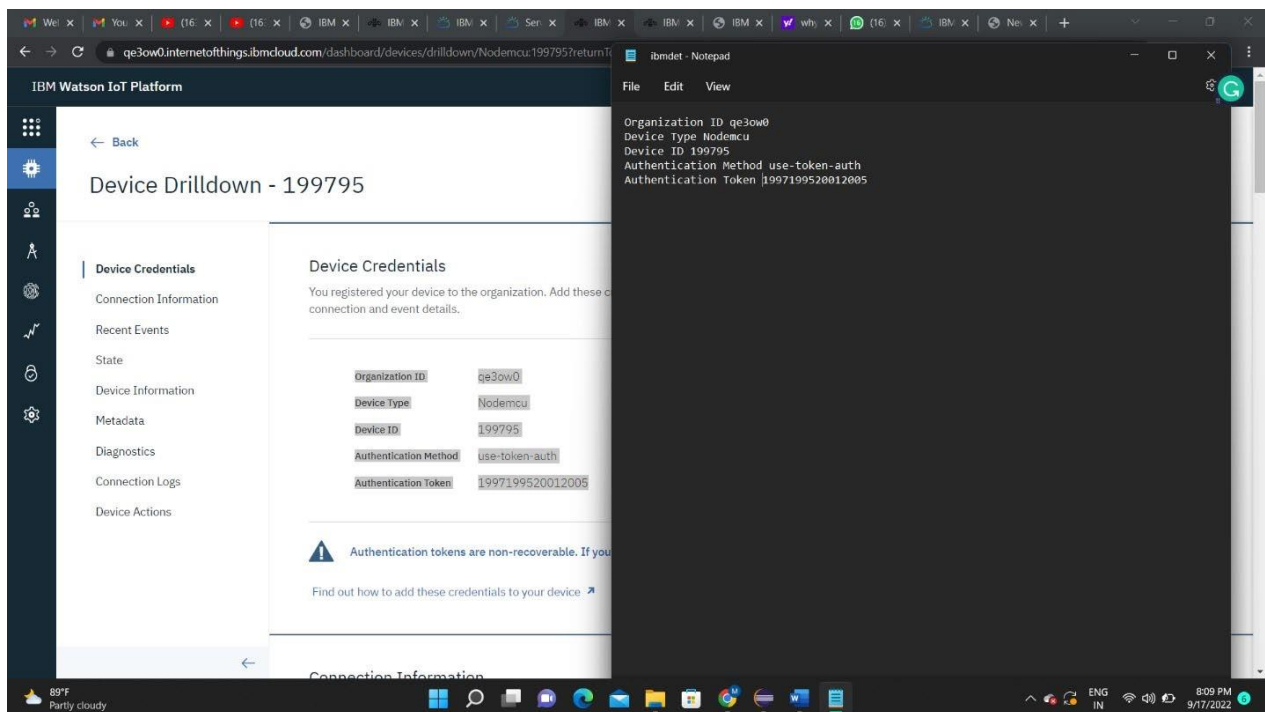
21. The device credentials will be displayed with all the details



## SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES



22. Safe the details of the device as the authentication tokens are non-recoverable and if misplaced then we have to create a new one.



23. Clicking on the device tab we can now see the added device. Clicking on it will display the other details.

## SMART WASTE MANAGEMENT SYSTEM FOR METROPOLITAN CITIES

It has different tabs like Identity, Device Information, State and login.

The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes tabs for Browse, Action, Device Types, and Interfaces. A search bar is present, and a 'Device Simulator' toggle is visible. The main content area displays a table of devices. The first device is highlighted, and its details are shown in a sub-view below the table.

| Device ID | Status       | Device Type | Class ID | Date Added        | Descriptive Location |
|-----------|--------------|-------------|----------|-------------------|----------------------|
| 199795    | Disconnected | Nodemcu     | Device   | 17 Sep 2022 20:07 |                      |

The recent events listed show the live stream of data that is coming and going from this device.

| Event | Value | Format | Last Received |
|-------|-------|--------|---------------|
|-------|-------|--------|---------------|

Waiting for device events...

The screenshot shows the IBM Watson IoT Platform dashboard with the 'Device Information' tab selected for the device with ID 199795. The tab displays various details about the device, including its ID, type, date added, and connection status.

|                   |                             |
|-------------------|-----------------------------|
| Device ID         | 199795                      |
| Device Type       | Nodemcu                     |
| Date Added        | 17 Sep 2022 20:07           |
| Added By          | worldisfullofmeow@gmail.com |
| Connection Status | Disconnected                |

Items per page: 50 | 1-1 of 1 item

1 of 1 page

In a similar way, we can create n number of devices with a 50 per page limit as per the requirement of our project.

24. The Boards will display card for the project.

**RESULT:**

An IBM Watson cloud for IoT and a device is created