

## CREATE IBM WATSON IOT PLATFORM AND DEVICE

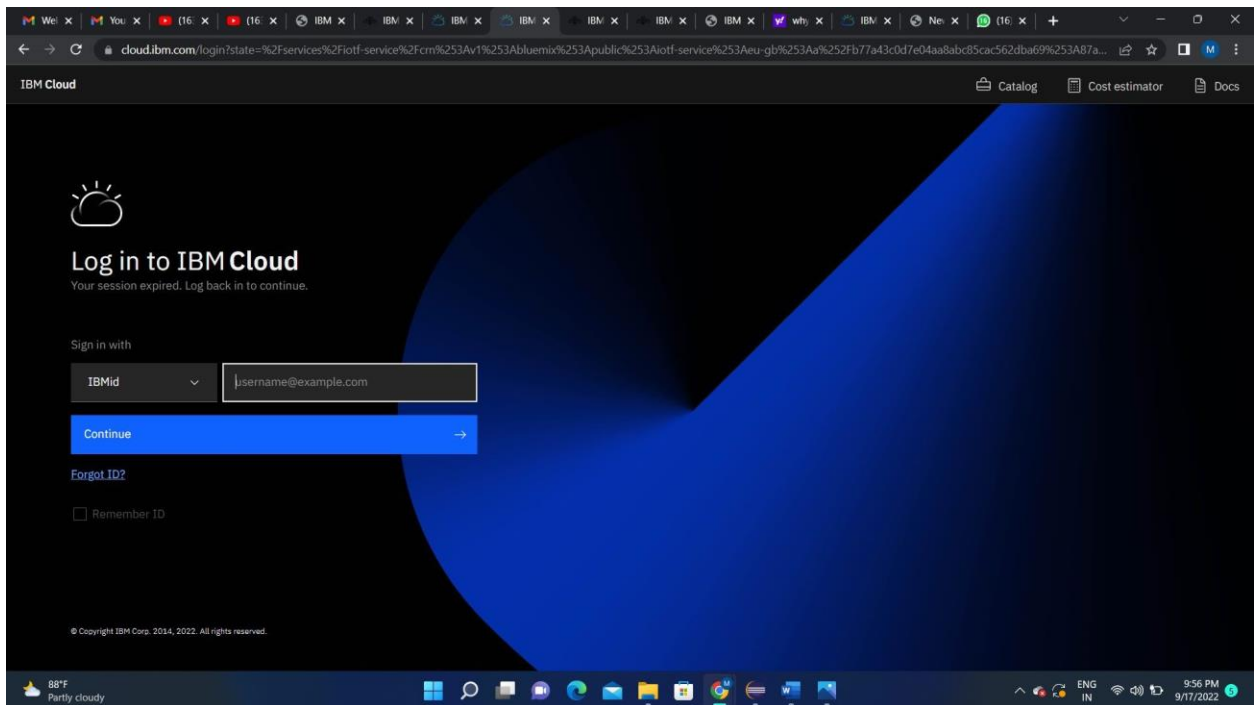
<b>TEAM ID</b>	PNT2022TMID09639
<b>Project Name</b>	IOT based safety gadget for child safety monitoring and notification

### AIM:

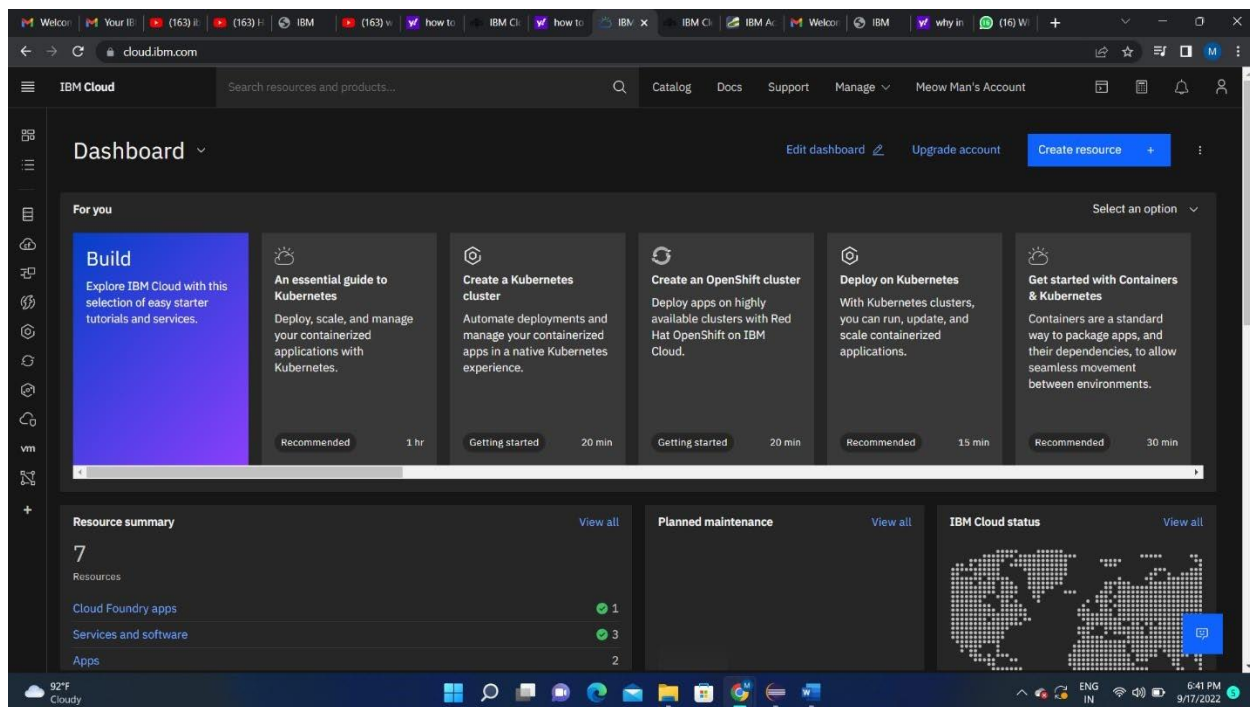
To create the IBM Watson IoT platform and device

### STEPS:

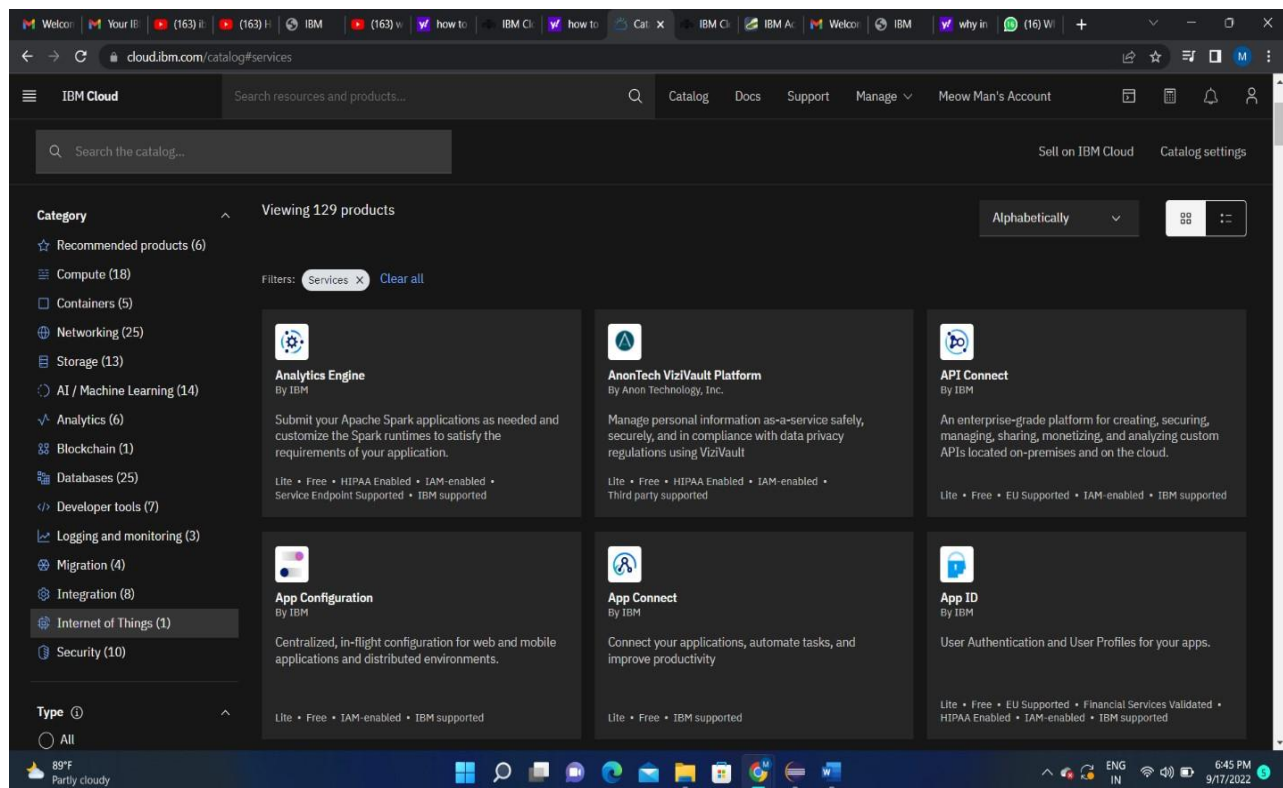
1. Firstly create an IBM cloud account with IBMid and password



## 2. Home page of IBM cloud



## 3. Click on the catalog on the top



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

The screenshot shows the IBM Cloud catalog page for the Internet of Things Platform. 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 as the selected option. The 'Lite' plan includes up to 500 registered devices and a maximum of 200 MB of each data metric. The pricing is listed as 'Free'. A summary panel on the right shows the service details: 'Internet of Things Platform', 'Free', 'Location: Dallas', 'Plan: Lite', 'Service name: Internet of Things Platform-bb', and 'Resource group: Default'. 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 bottom of the page shows a weather widget for 89°F and a taskbar with various application icons.

#### 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, now in the 'Configure your resource' tab. The 'Lite' plan is still selected. The 'Configure your resource' section shows the 'Service name' as 'Internet of Things Platform-bb' and the 'Select a resource group' as 'Default'. The 'Tags' field contains 'Examples: env:dev, version-1' and the 'Access management tags' field contains 'Examples: access:dev, proj:version-1'. The summary panel on the right is identical to the previous screenshot, showing the 'Existing Lite plan instance' warning. The bottom of the page shows a weather widget for 89°F and a taskbar with various application icons.

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 catalog page for the Internet of Things Platform. The 'Create' tab is active, and the location is set to Dallas (us-south). The pricing plan is 'Lite', which is free. A warning message indicates that only one Lite plan instance can exist per resource group. The 'Create' button is visible.

**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: 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

**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

The screenshot shows the IBM Cloud catalog page for the Internet of Things Platform, specifically the 'Configure your resource' tab. The service name is 'Internet of Things Platform-child\_safety'. The resource group is 'Default'. The 'Create' button is highlighted in blue.

**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.

**Configure your resource**

Service name: Internet of Things Platform-child\_safety

Select a resource group: Default

Tags: Examples: env:dev, version-1

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

**Summary**

**Internet of Things Platform** Free

Location: London

Plan: Lite

Service name: Internet of Things Platform-child\_safety

Resource group: Default

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

Create

Add to estimate

7. 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)

The screenshot shows the IBM Cloud IoT Platform console. The left sidebar has a 'Manage' tab selected. The main content area displays a 'Let's get started with IBM Watson IoT Platform' section with a 'Launch' button. Below this is a 'Ready for the next level?' section titled 'IBM Watson IoT Platform Journey' with three stages: 'Lite', 'Non-Production', and 'Production'. The 'Lite' stage is currently selected and shows a 'Free' pricing option.

Internet of Things Platform-child\_safety 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 plan is a fully managed SaaS offering that enables you to manage and analyze enterprise IoT data.

• Includes IBM Service & Support

The screenshot shows the IBM Cloud IoT Platform console with the 'Plan' tab selected. The main content area displays the 'Current plan' as 'Lite' and 'Current usage' as 'N/A'. Below this is a 'Change pricing plan' section with a table showing the 'Lite' plan details and pricing.

Internet of Things Platform-child\_safety Active Add tags Details Actions...

**Manage**

**Plan**

Connections

**Current plan**

Lite

**Features**

- 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

**Current usage**

N/A

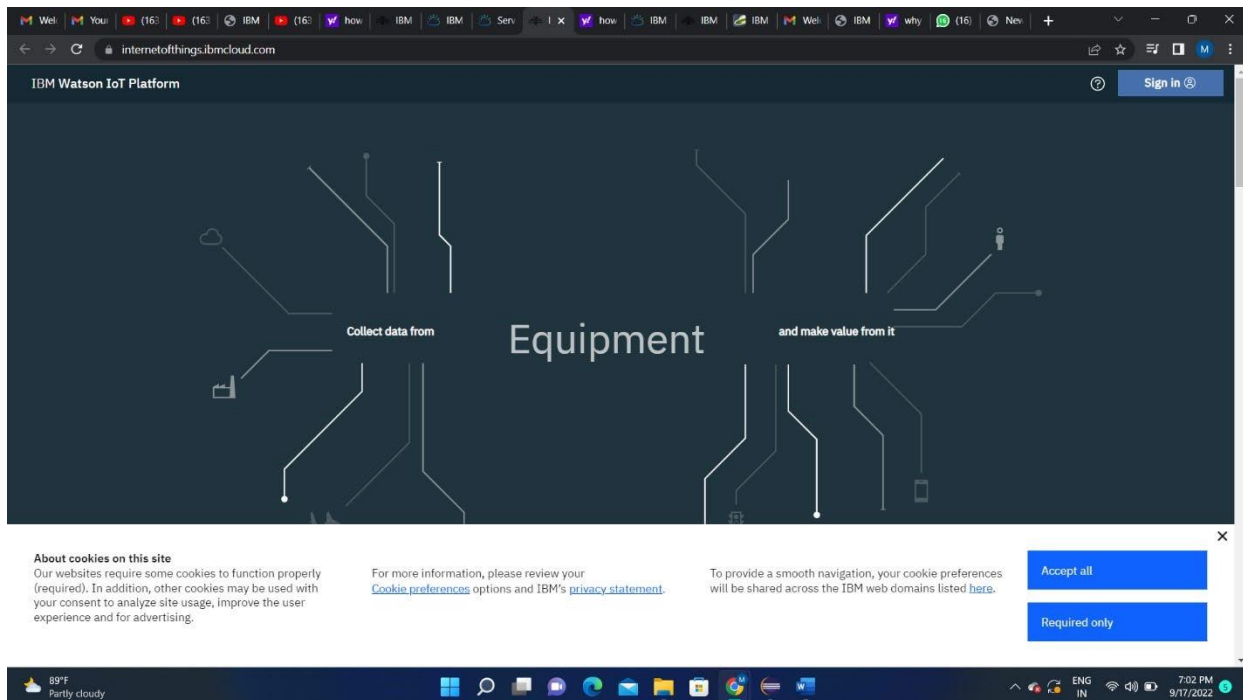
Lite plan services are deleted after 30 days of inactivity.

**Change pricing plan**

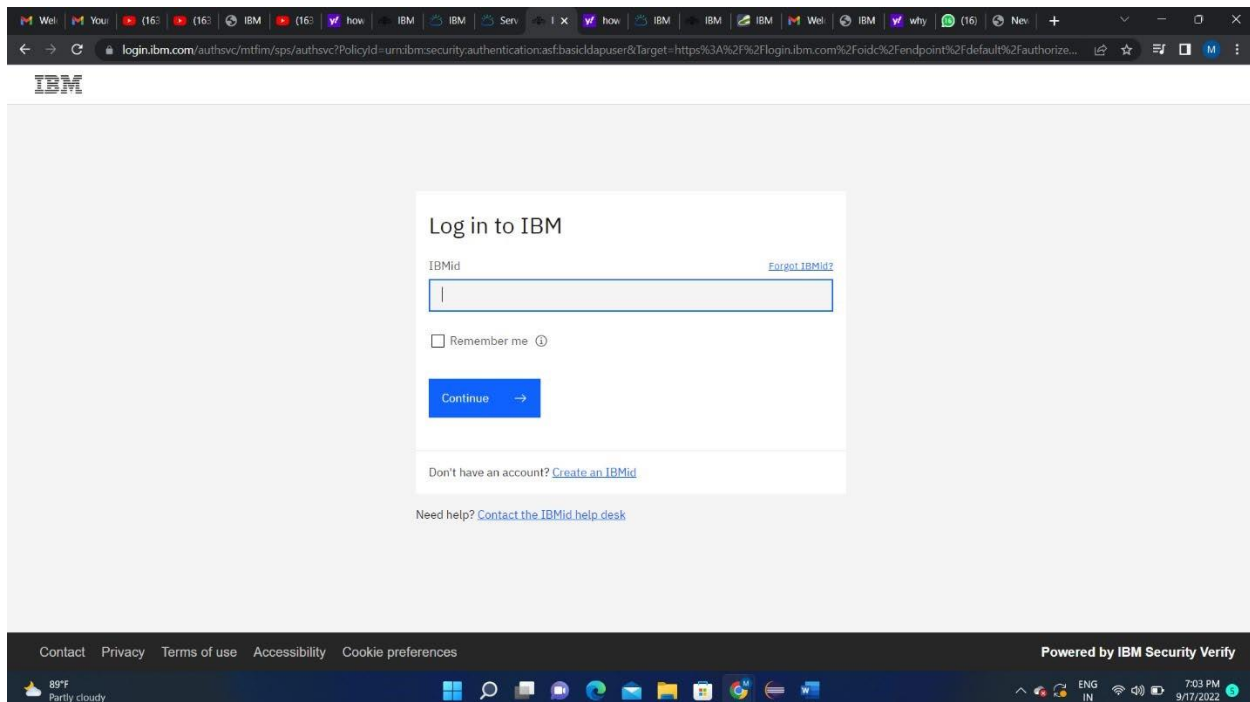
Plan	Features	Pricing
Lite	Includes up to 500 registered devices, and a maximum of 200 MB of each data metric Maximum of 500 registered devices Maximum of 500 application bindings Maximum of 200 MB of each of data exchanged, data analyzed and edge data analyzed	Free <span>✓</span>

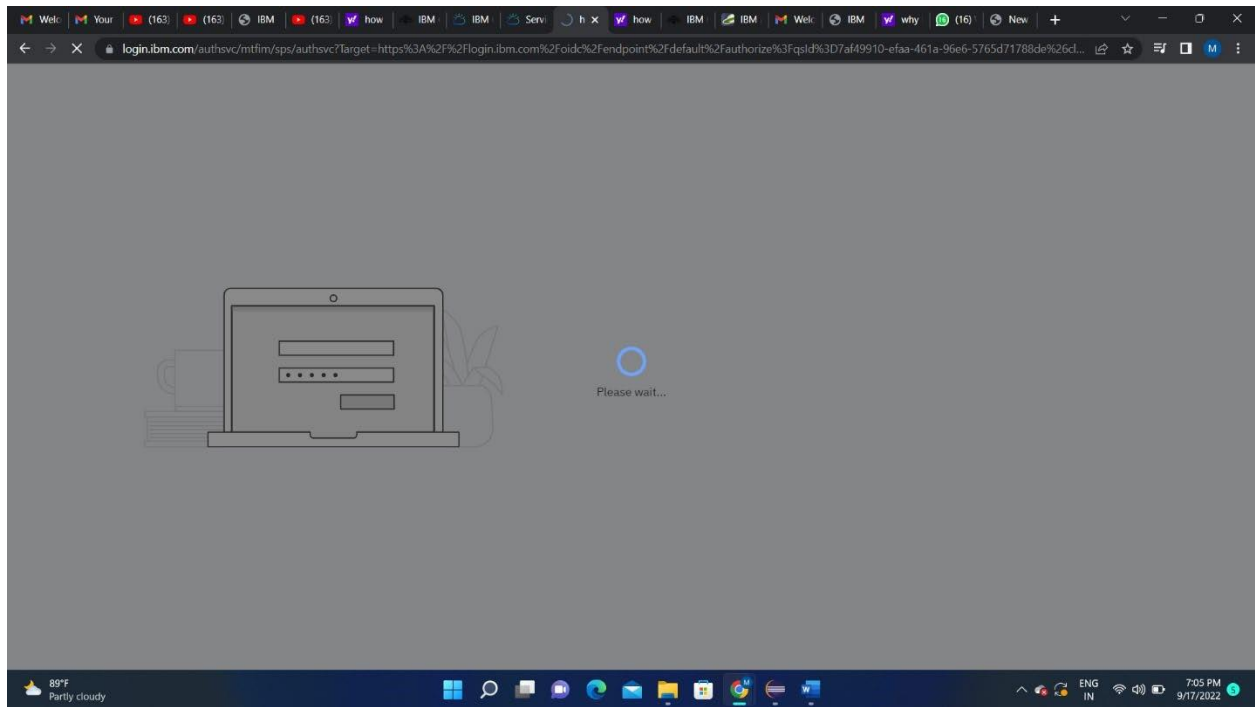


8. Clicking on the launch button in the manage tab, it will open to this

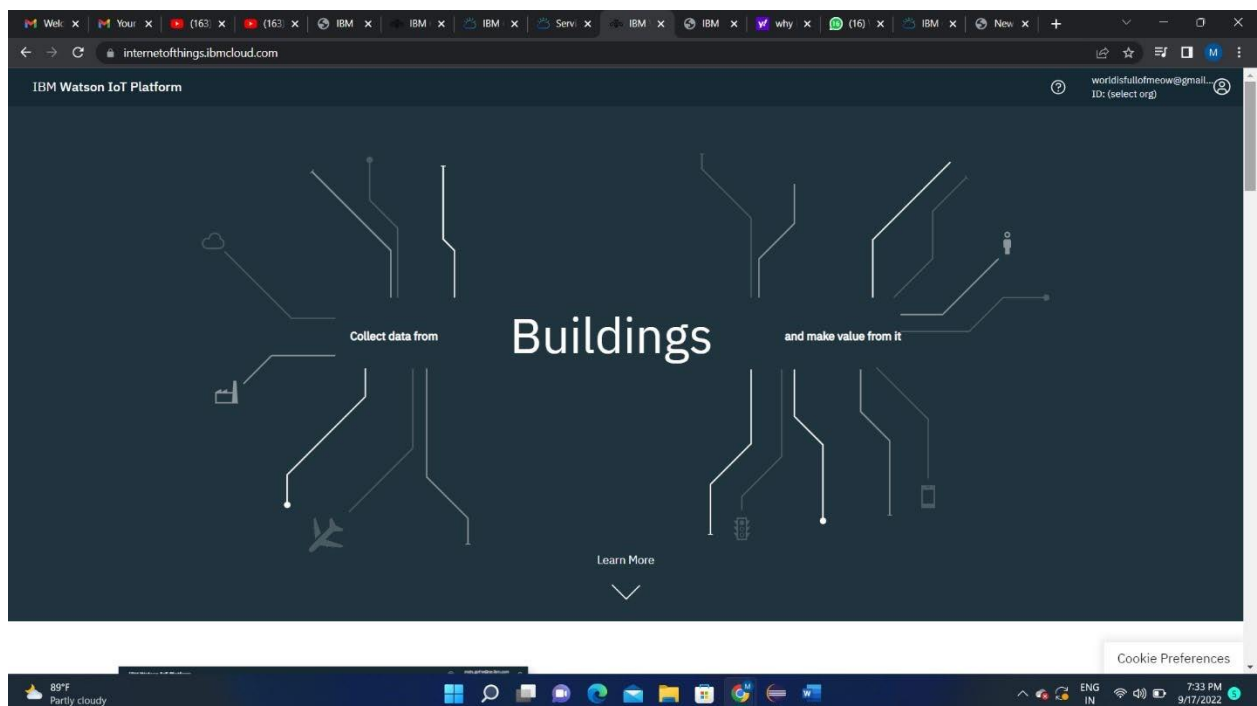


9. Enter the details to sign in to the Watson Cloud to create a device

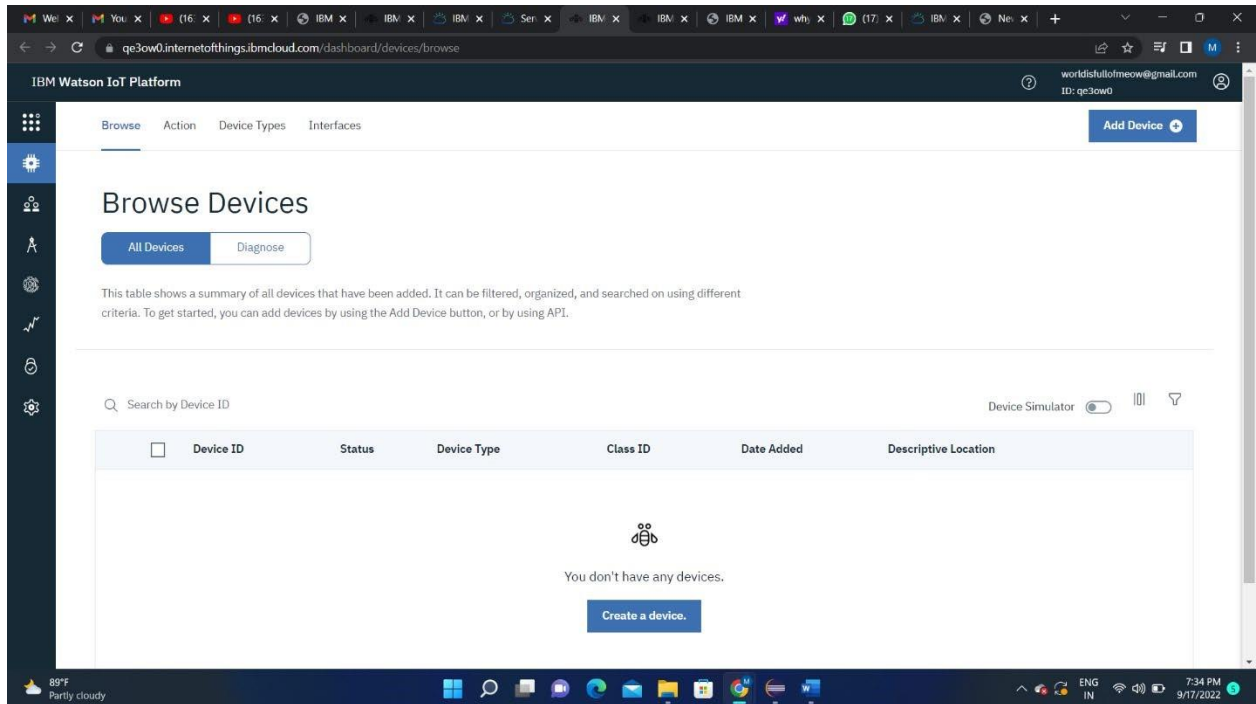




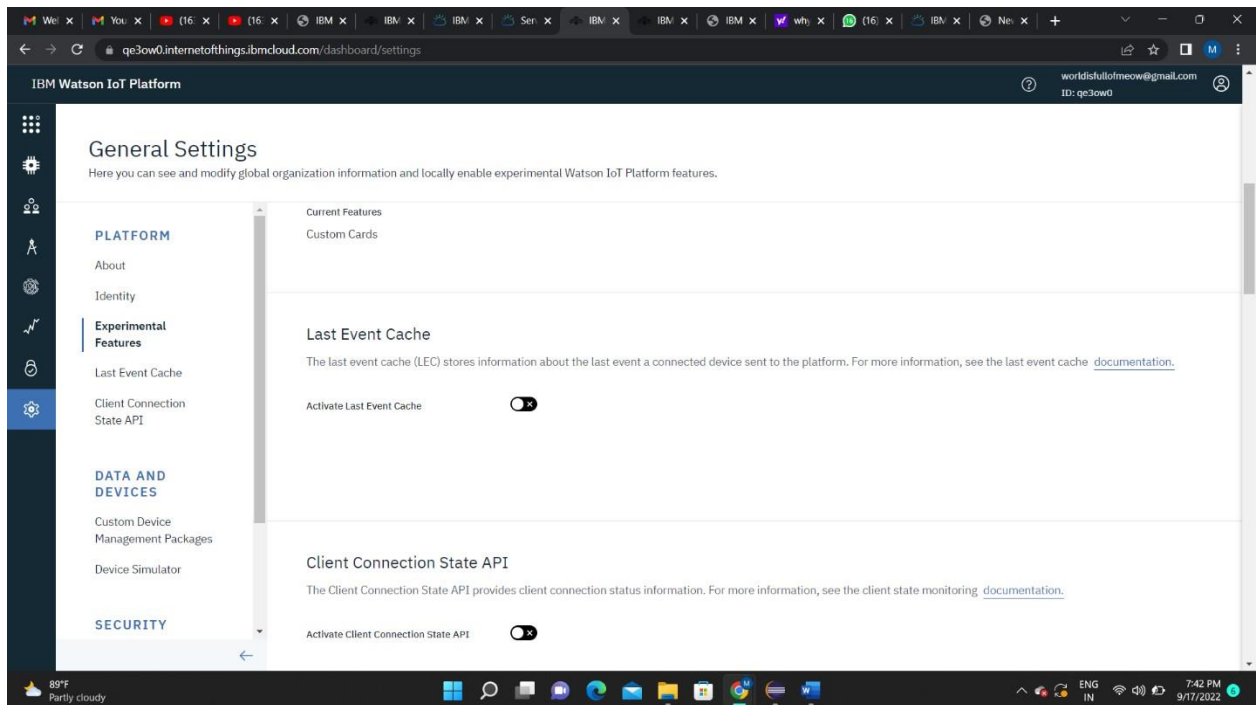
10. Once logged in the name will be displayed and it goes back to the first page



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.

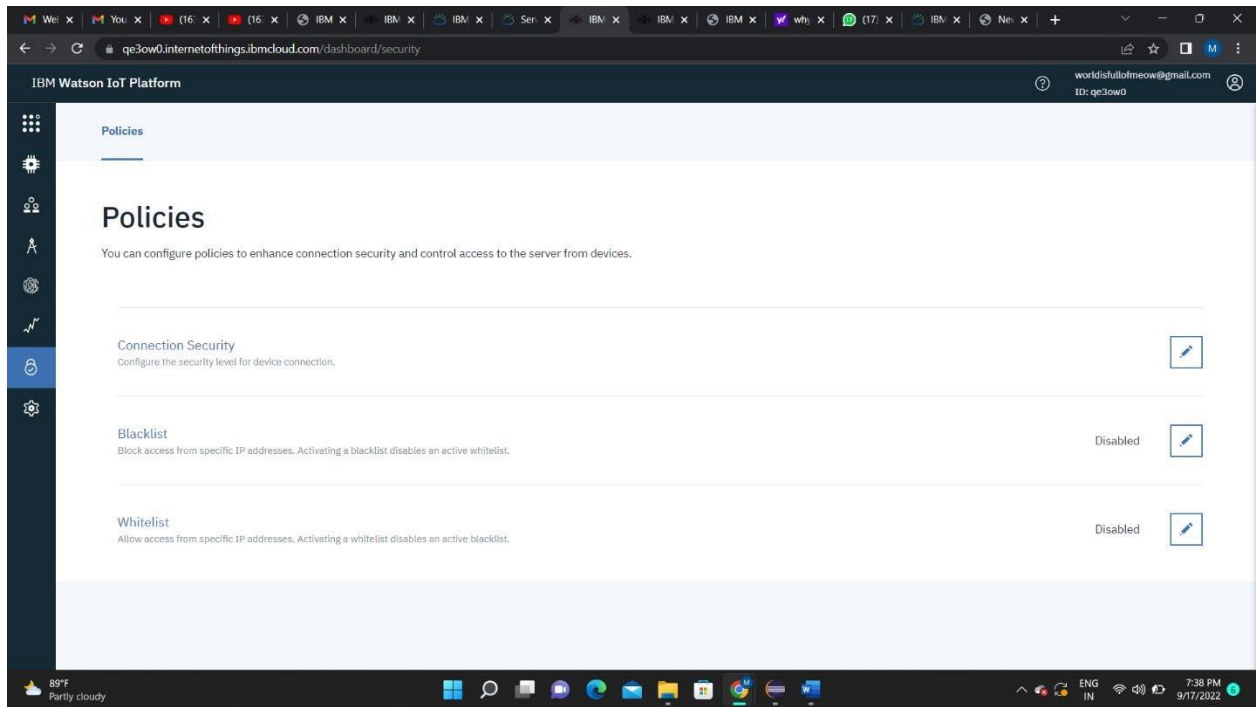


12. The setting tab is used to change the general setting if needed for the project.

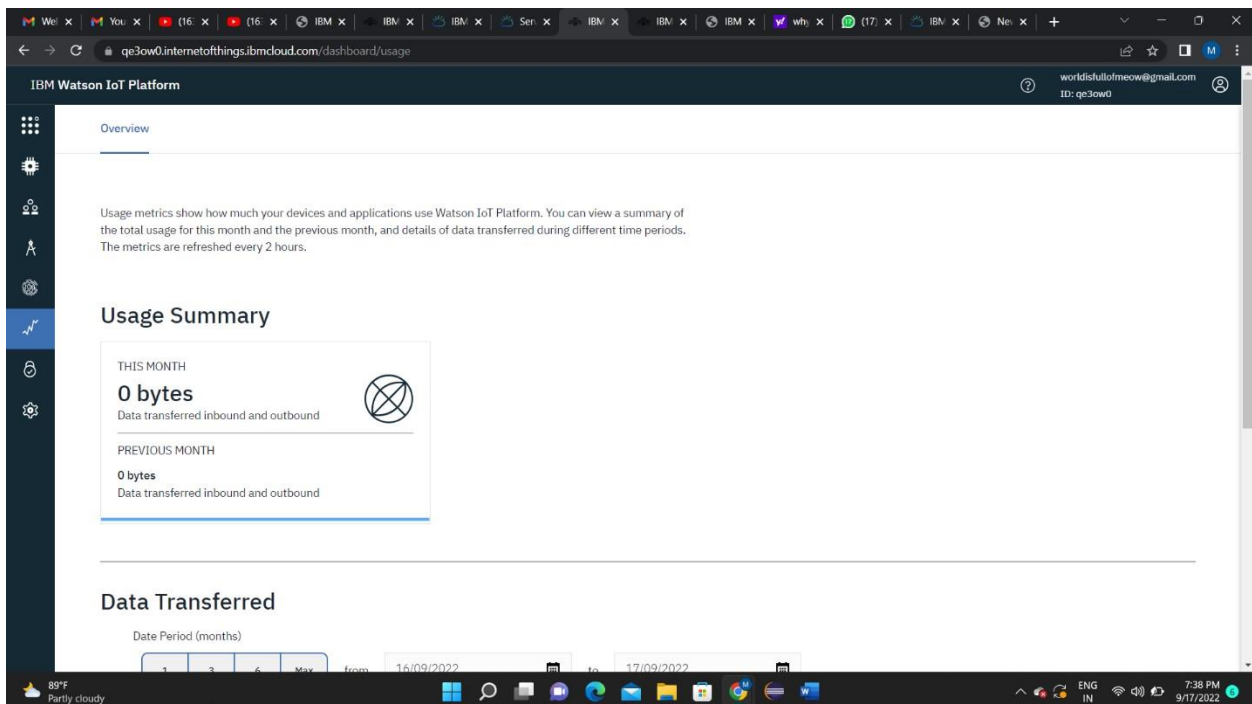




13. In the security tab we can choose the type of security connection and can change according to specification



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

The screenshot shows the 'Browse Members' page in the IBM Watson IoT Platform. The page has a dark header with the IBM Watson IoT Platform logo and a user profile. A sidebar on the left contains navigation icons. The main content area has a 'Browse' tab and an 'Add Members' button. Below the header, there is a search bar and a table with columns: Email Address, Name, Role, Added By, and Expires. The table shows one member: worldisfullofmeow@gmail.com, worldisfullofmeow@gmail.com, Administrator, -, and -. A message at the bottom of the table states '1 result'.

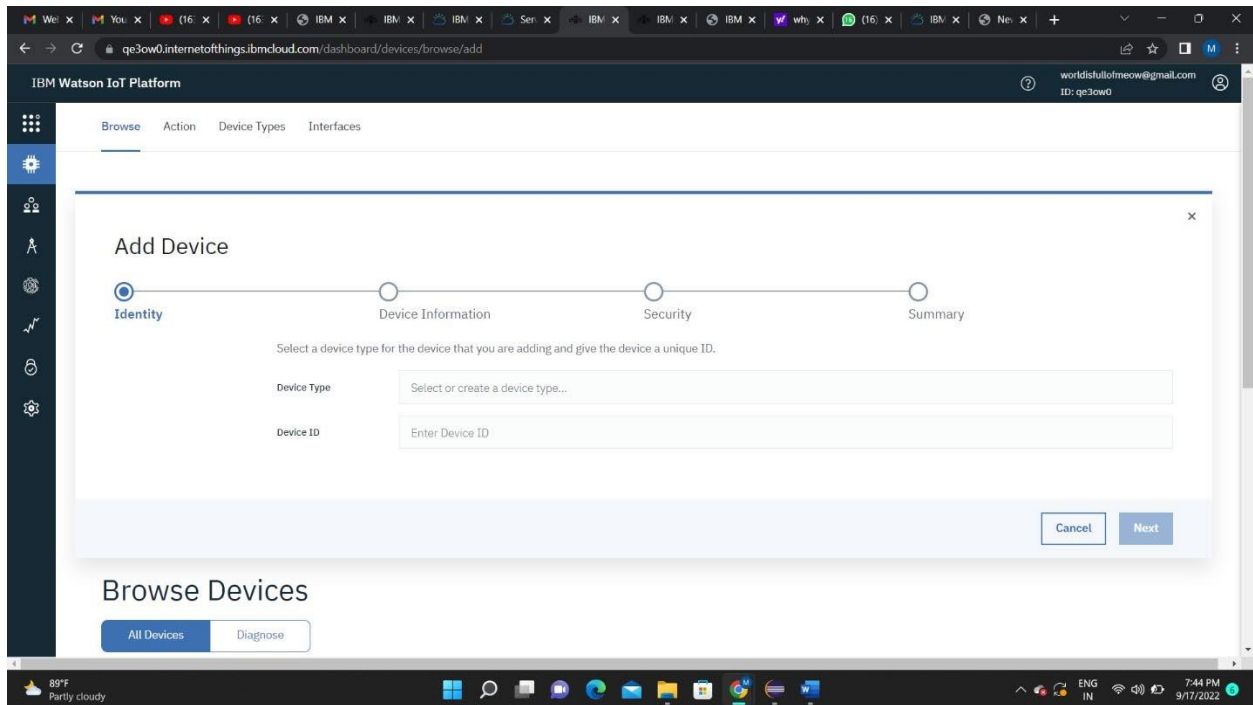
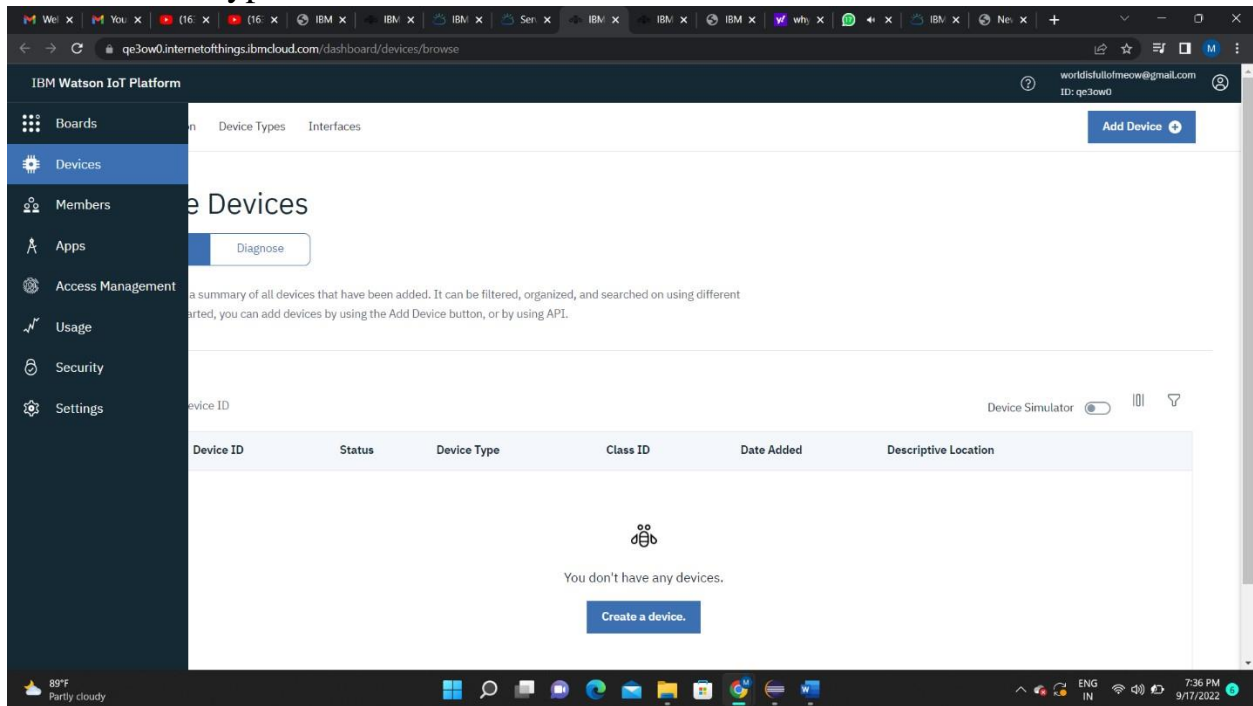
Email Address	Name	Role	Added By	Expires
worldisfullofmeow@gmail.com	worldisfullofmeow@gmail.com	Administrator	-	-

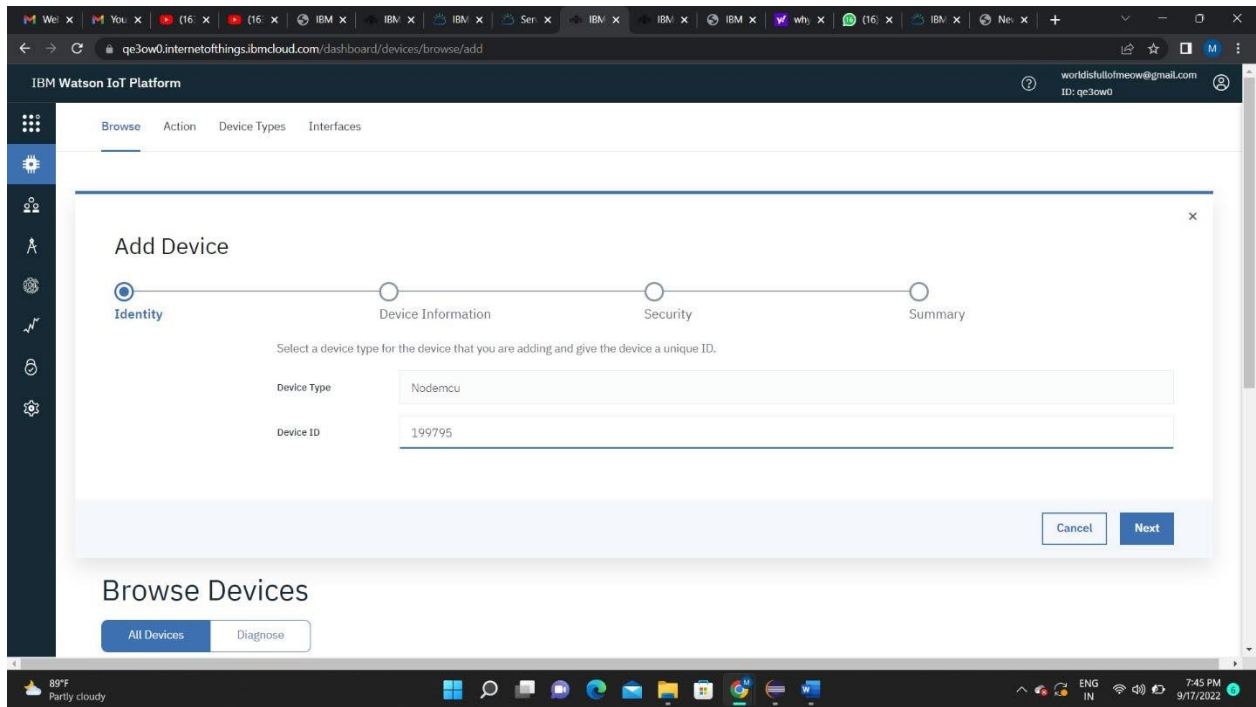
## 16. This tab is used when you want to connect to some other platform and to integrate with other services.

The screenshot shows the 'Browse API Keys' page in the IBM Watson IoT Platform. The page has a dark header with the IBM Watson IoT Platform logo and a user profile. A sidebar on the left contains navigation icons. The main content area has a 'Browse' tab and a 'Generate API Key' button. Below the header, there is a search bar and a table with columns: Key, Description, Role, and Expires. The table shows 0 results. Below the table, there is a message: 'There are no API Keys' and a 'Generate API Key' button.

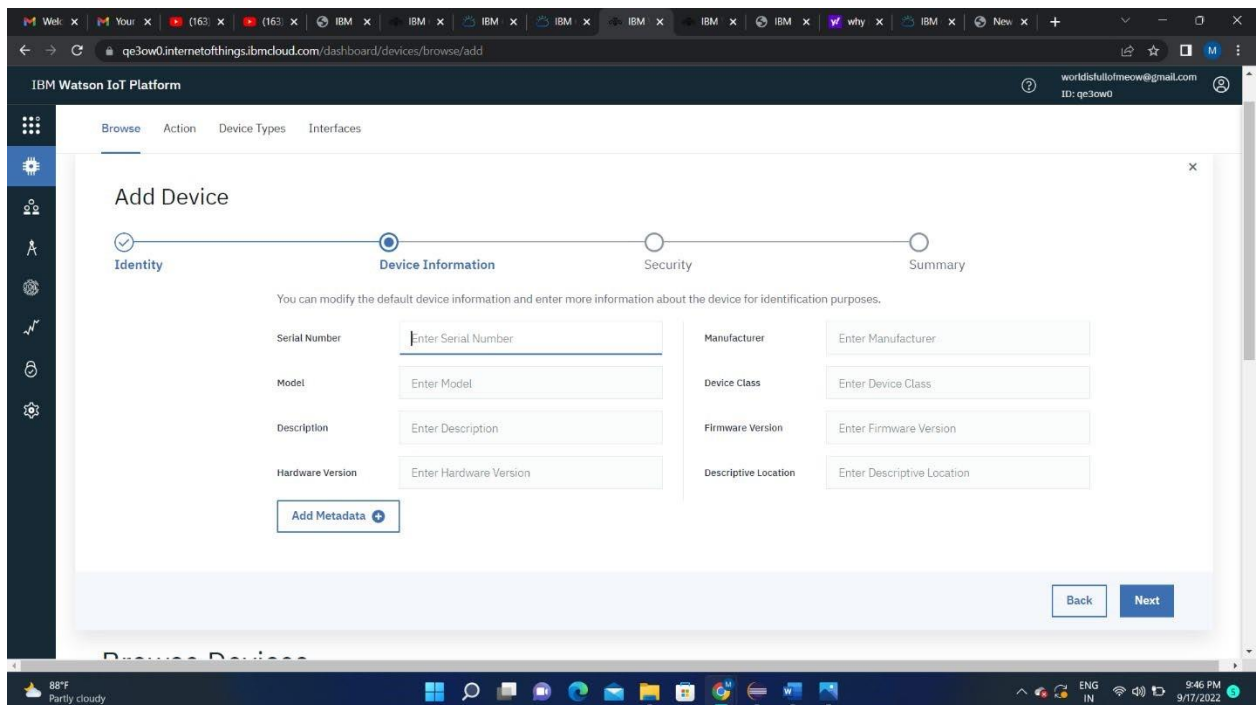
Key	Description	Role	Expires
-----	-------------	------	---------

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





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



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

The screenshot shows the 'Add Device' wizard in the IBM Watson IoT Platform. The 'Security' step is active, showing 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 displays the generated token: '1997199520012005'. Below the token, a note states: '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.'

IBM Watson IoT Platform

worldisfullofmeow@gmail.com  
ID: qe3ow0

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.

Authentication Token: 1997199520012005

**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.

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.

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

The screenshot shows the 'Add Device' wizard in the IBM Watson IoT Platform, now at the 'Summary' step. The 'Summary' step is active, displaying the device information: 'Device Type: NodeMCU', 'Device ID: 199795', and 'Security Token: 1997199520012005'. A 'View Metadata' button is visible below the device ID. At the bottom right, there are 'Back' and 'Finish' buttons.

IBM Watson IoT Platform

worldisfullofmeow@gmail.com  
ID: qe3ow0

Browse Action Device Types Interfaces

Add Device

Identity Device Information Security Summary

Verify that the following information is correct then select Finish

Device Type  
NodeMCU

Device ID  
199795

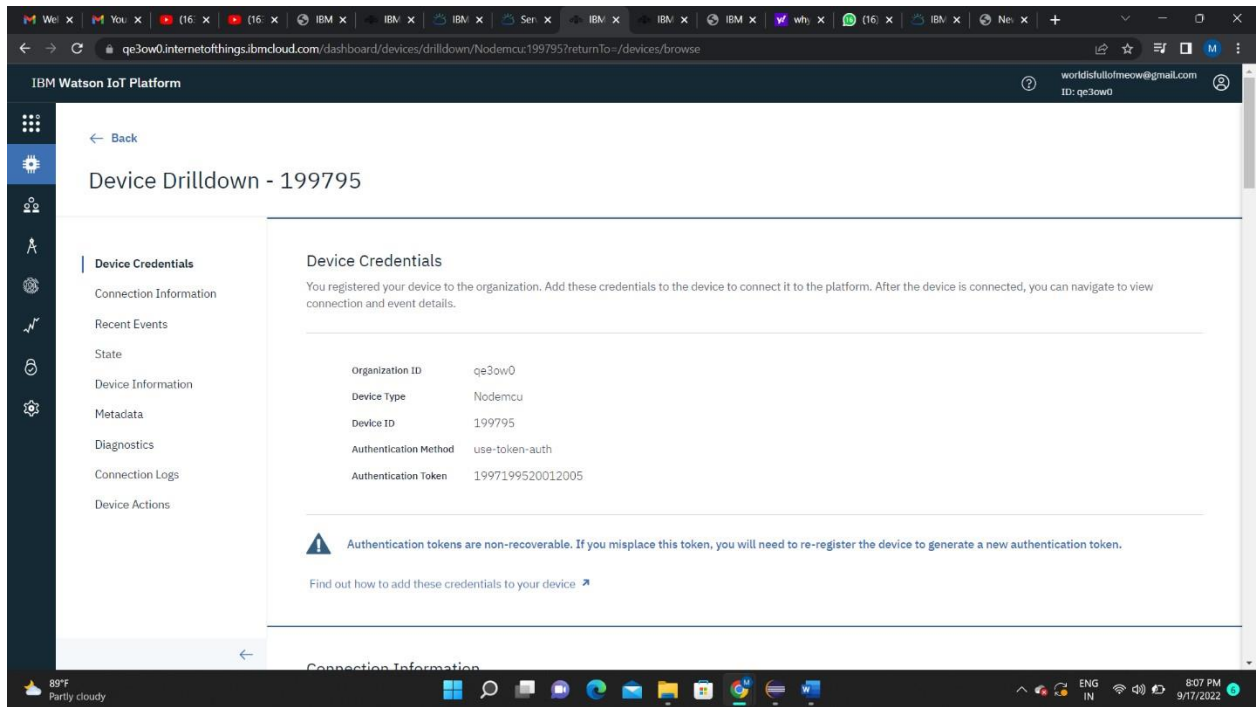
View Metadata

Security Token  
1997199520012005

Back Finish



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

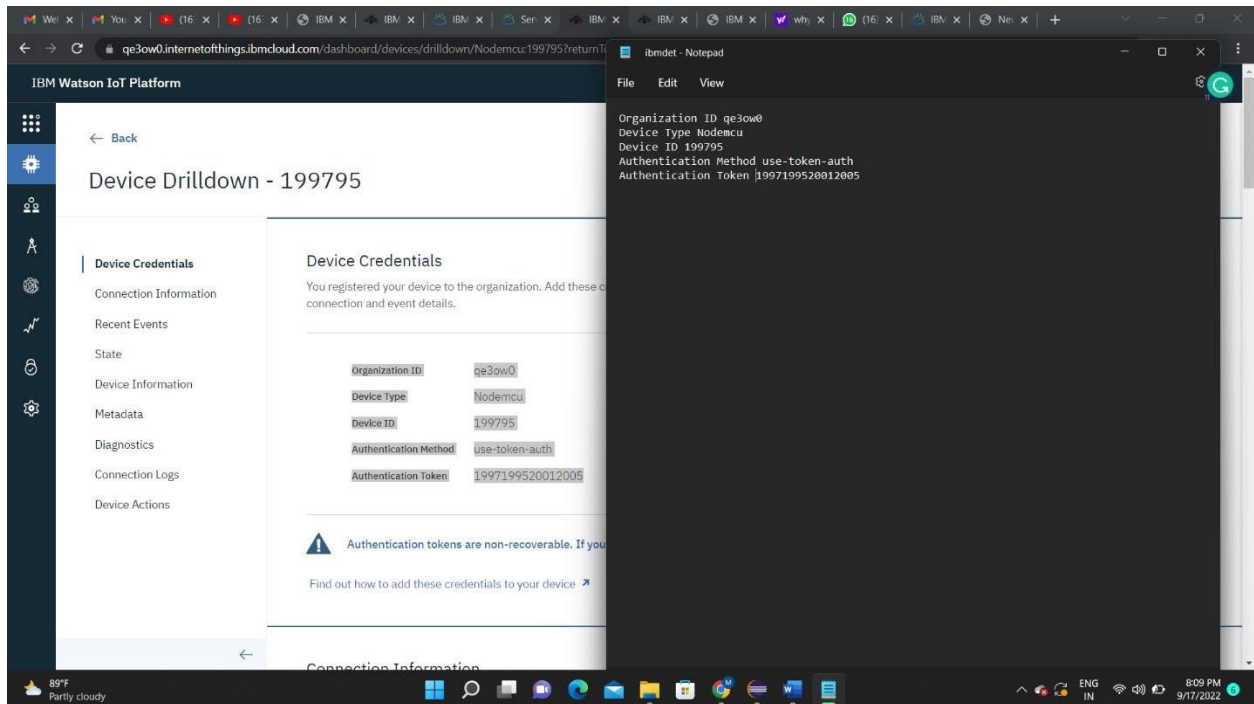


The screenshot shows the IBM Watson IoT Platform interface. The left sidebar contains navigation icons. The main content area is titled 'Device Drilldown - 199795'. Under the 'Device Credentials' tab, a table displays the following information:

Organization ID	Device Type	Device ID	Authentication Method	Authentication Token
qe3ow0	NodeMCU	199795	use-token-auth	1997199520012005

Below the table, 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 'Find out how to add these credentials to your device' is provided.

## 22. Save the details of the device as the authentication tokens are nonrecoverable and if misplaced then we have to create a new one.



The screenshot shows the same IBM Watson IoT Platform interface as in the previous image. A Notepad window titled 'ibmdet - Notepad' is open, displaying the device credentials copied from the table:

```
Organization ID qe3ow0
Device Type NodeMCU
Device ID 199795
Authentication Method use-token-auth
Authentication Token 1997199520012005
```

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

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

IBM Watson IoT Platform

Search by Device ID

Device Simulator

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

Identity | Device Information | Recent Events | State | Logs

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

Event	Value	Format	Last Received
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Waiting for device events...

IBM Watson IoT Platform

Search by Device ID

Device Simulator

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

Identity | Device Information | Recent Events | State | Logs

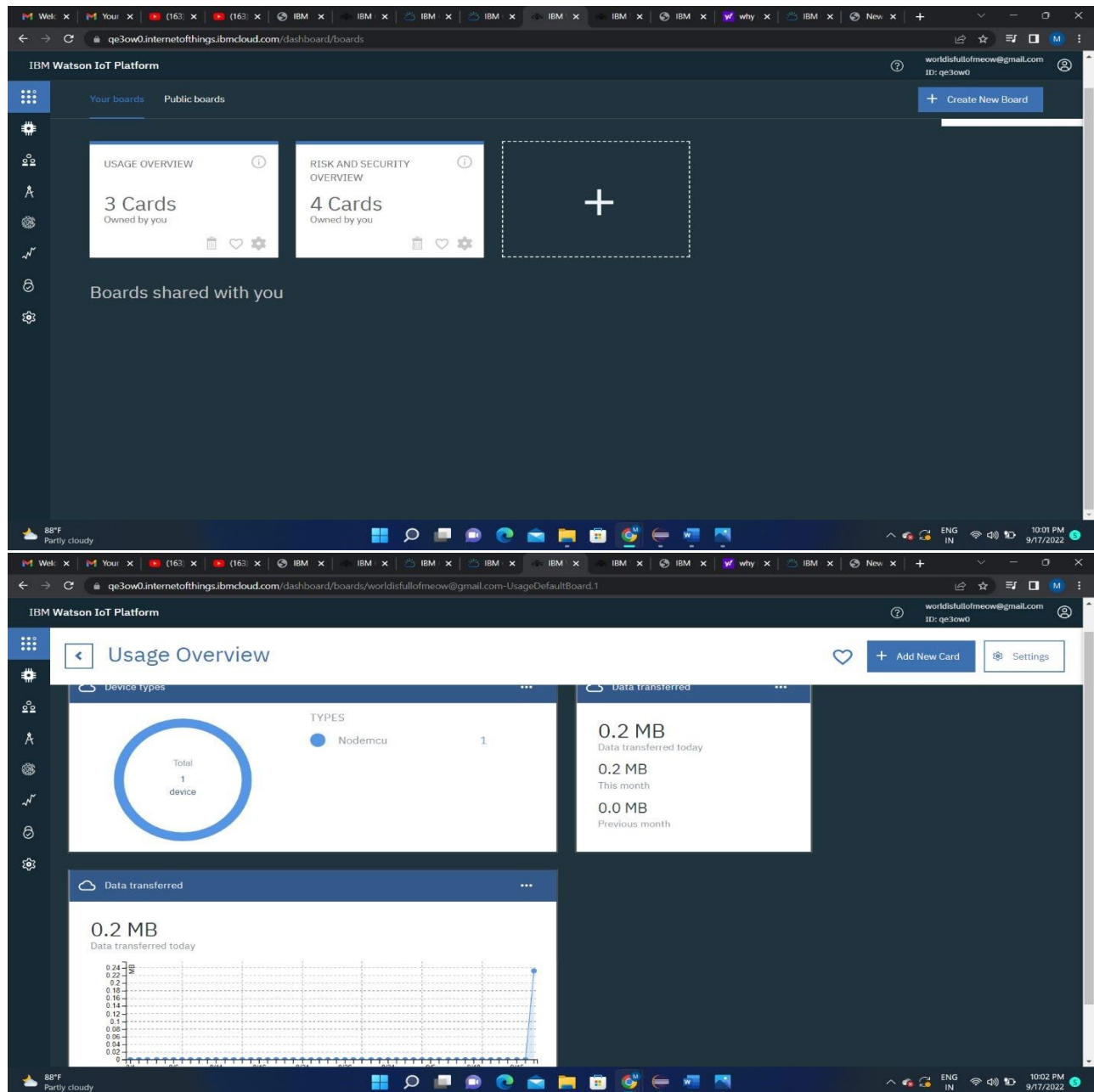
Device ID: 199795  
Device Type: Nodemcu  
Date Added: 17 Sep 2022 20:07  
Added By: worldisfullofmeow@gmail.com  
Connection Status: Disconnected

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 .