

# CREATE IBM WATSON IOT PLATFORM AND DEVICE

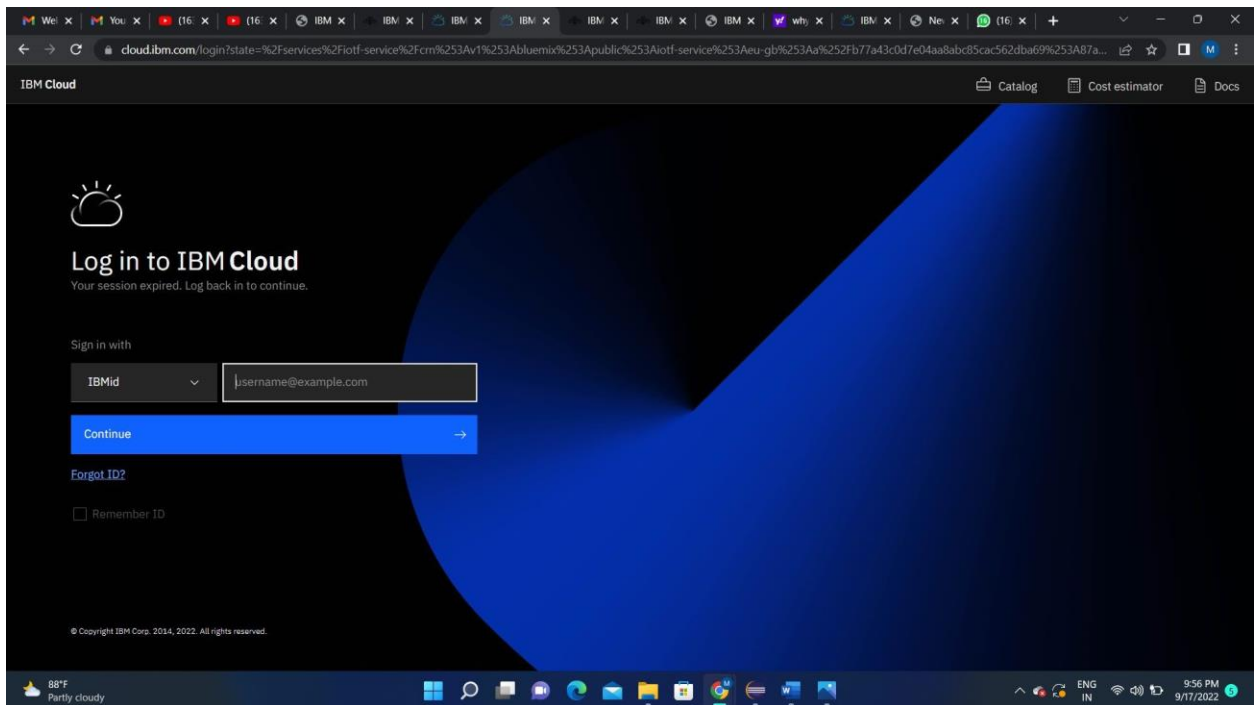
<b>TEAM ID</b>	PNT2022TMID00709
<b>Project Name</b>	IOT based safety gadget for child safety monitoring and notification

## AIM:

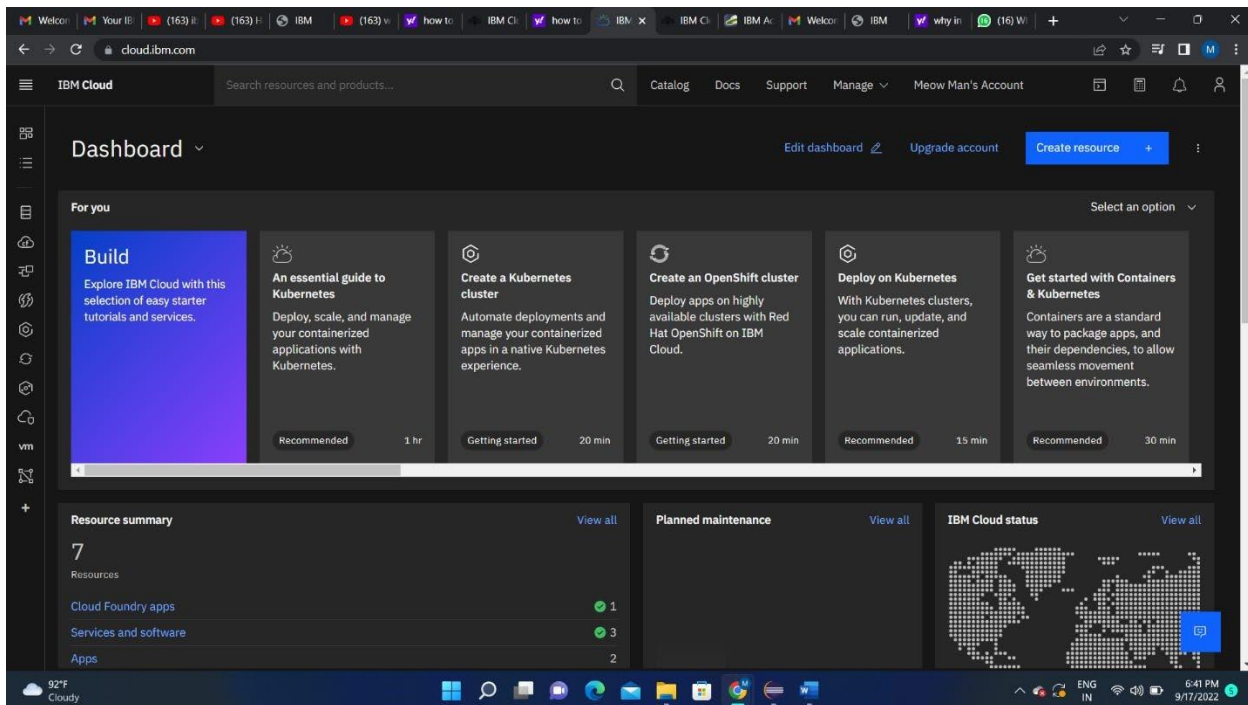
To create the IBM Watson IoT platform and device

## STEPS:

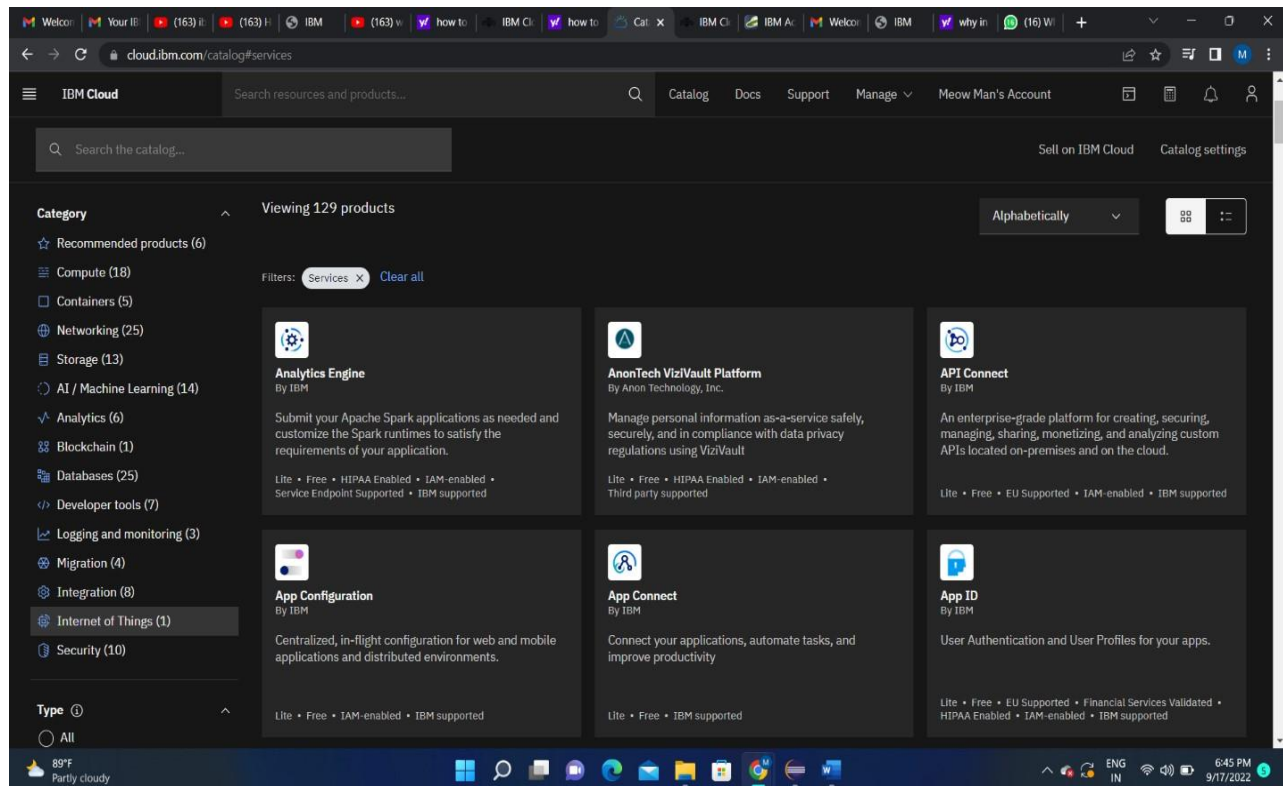
1. Firstly create an IBM cloud account with IBMid and password



## 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 Windows taskbar with the date 9/17/2022 and time 6:46 PM.

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

#### 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, specifically the 'Configure your resource' section. The 'Lite' plan is still selected. The 'Configure your resource' section includes fields for 'Service name' (Internet of Things Platform-bb), 'Select a resource group' (Default), 'Tags' (Examples: env:dev, version-1), and 'Access management tags' (Examples: access:dev, proj:version-1). A summary panel on the right shows the service details: 'Internet of Things Platform', 'Free', 'Location: London', '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 Windows taskbar with the date 9/17/2022 and time 6:47 PM.

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

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 set to 'Dallas (us-south)' and a 'Select a pricing plan' section. The 'Lite' plan is 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.' Below the warning, there is a checkbox for 'I have read and agree to the following license agreements:' with a 'Terms' link. At the bottom, there are 'Create' and 'Add to estimate' buttons.

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

The screenshot shows the 'Configure your resource' section of the IBM Cloud 'Internet of Things Platform' service page. The 'Service name' field is set to 'Internet of Things Platform-child\_safety'. The 'Select a resource group' dropdown is set to '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 'Create' button is highlighted in blue. The 'Summary' section on the right shows the service name as 'Internet of Things Platform', location as 'London', plan as 'Lite', and service name as 'Internet of Things Platform-child\_safety'. The 'Create' button is also present in the summary section.

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

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)

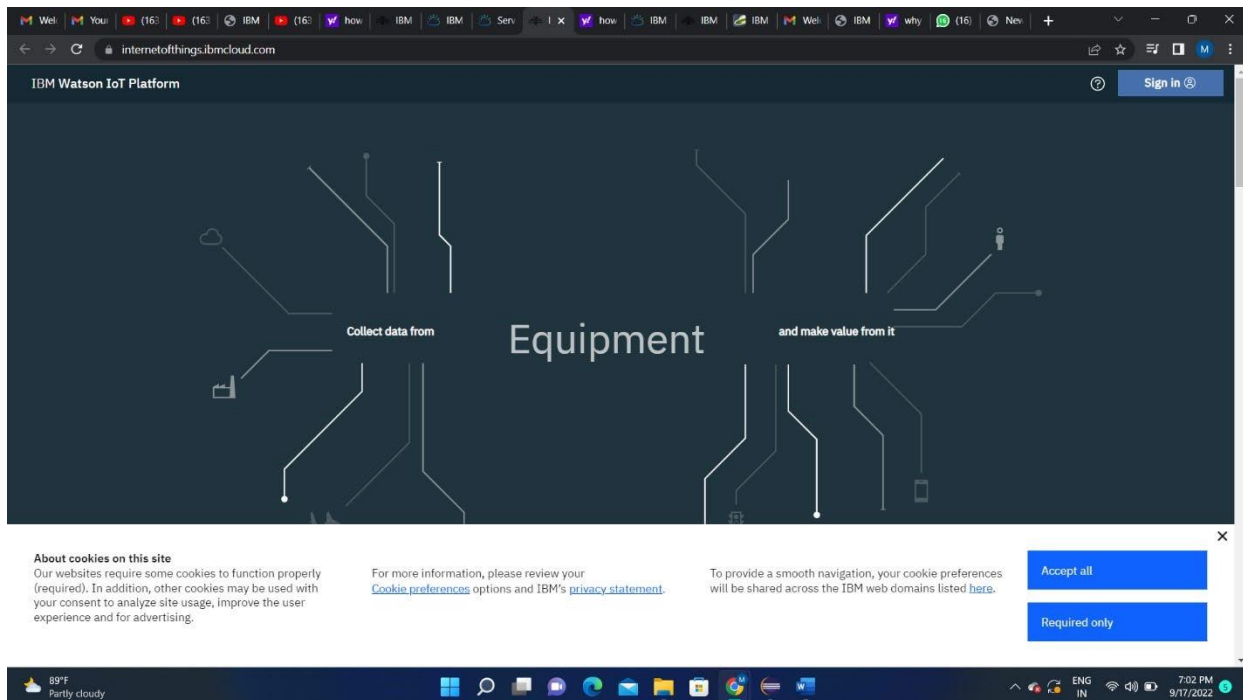
The screenshot shows the IBM Cloud IoT Platform console. The top navigation bar includes the IBM Cloud logo, a search bar, and links to Catalog, Docs, Support, Manage, and Meow Man's Account. The main header displays 'Internet of Things Platform-child\_safety' with a green 'Active' status and an 'Add tags' link. The left sidebar has a 'Manage' tab selected, with sub-tabs for 'Plan' and 'Connections'. The main content area features a 'Let's get started with IBM Watson IoT Platform' section with a 'Launch' button and a 'Docs' 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. The 'Non-Production' stage shows a 'Starts at \$500 per month' pricing option. The 'Production' stage shows an 'Includes IBM Service & Support' pricing option.

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.

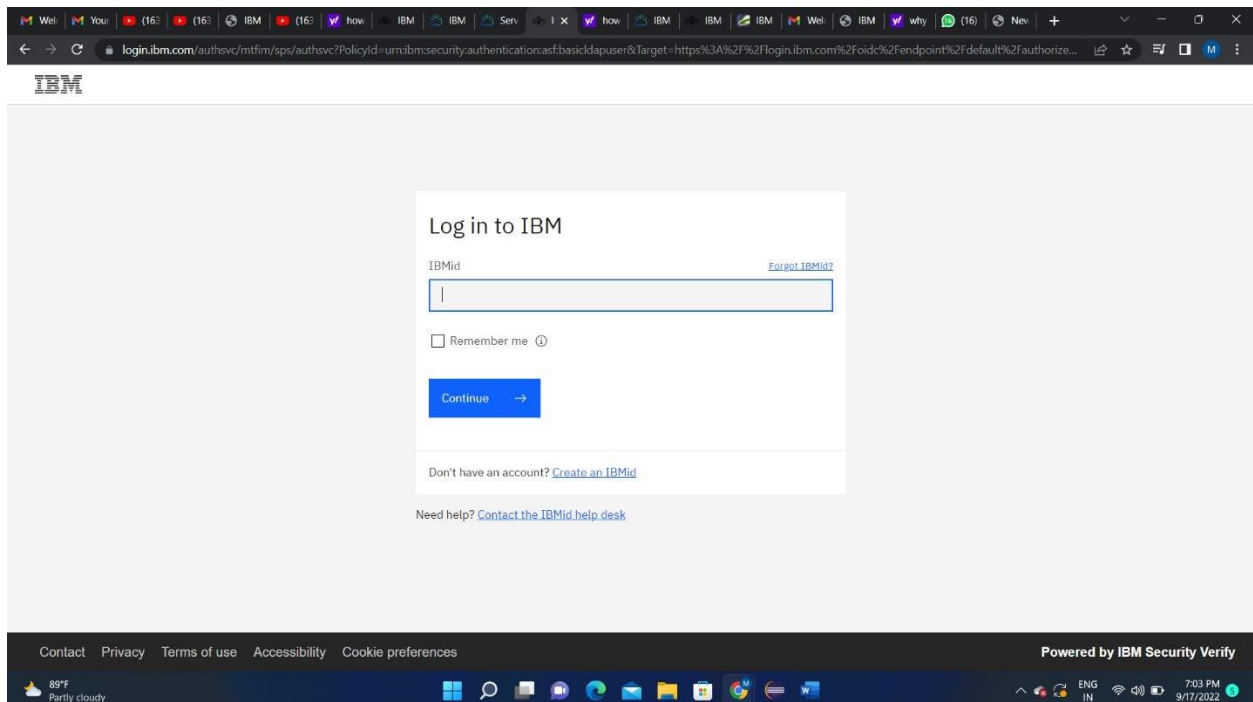
Plan	Features	Pricing
Lite	Includes up to 500 registered devices, and a maximum of 200 MB of each data metric Maximum of 500 registered devices Maximum of 500 application bindings Maximum of 200 MB of each of data exchanged, data analyzed and edge data analyzed	Free

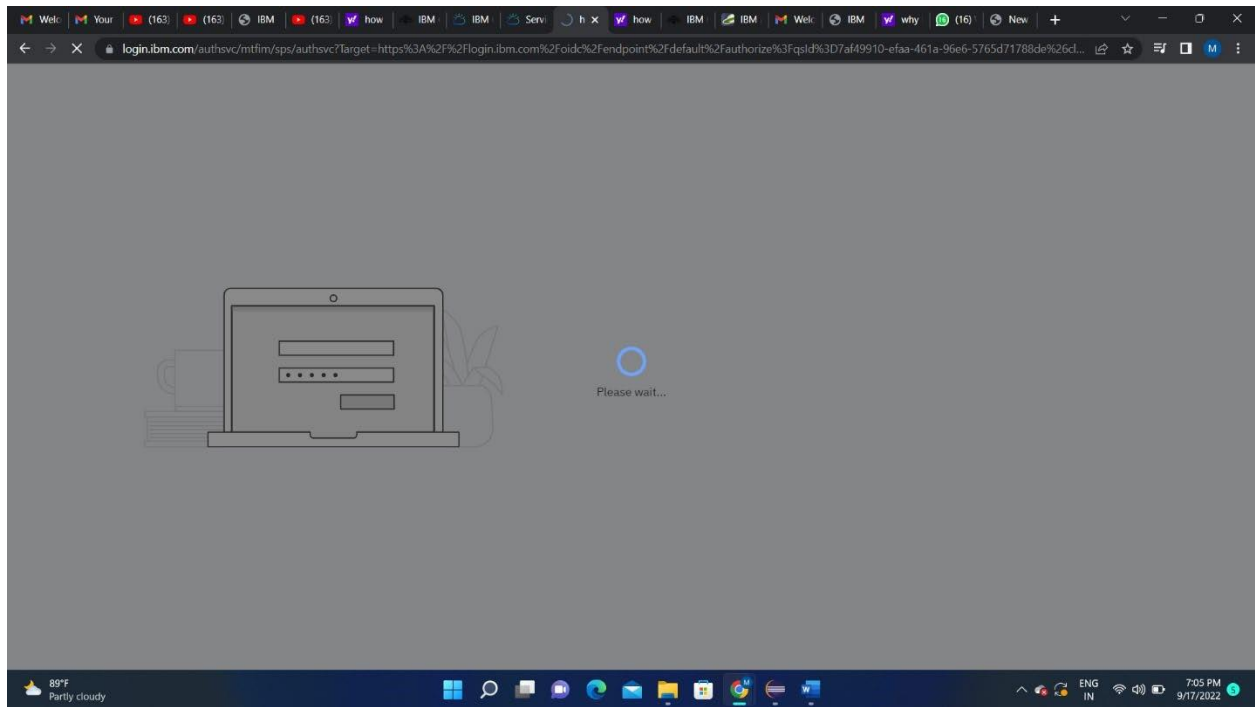


8. Clicking on the launch button in the manage tab, it will open to this

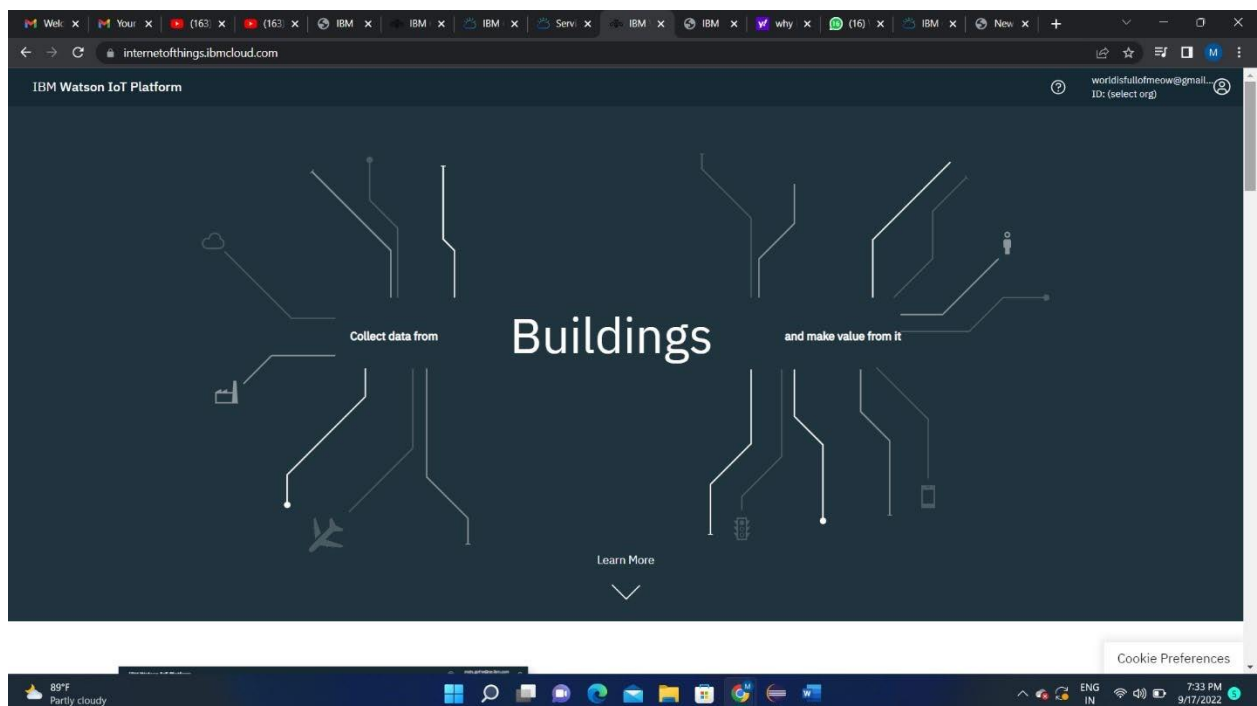


9. Enter the details to sign in to the Watson Cloud to create a device

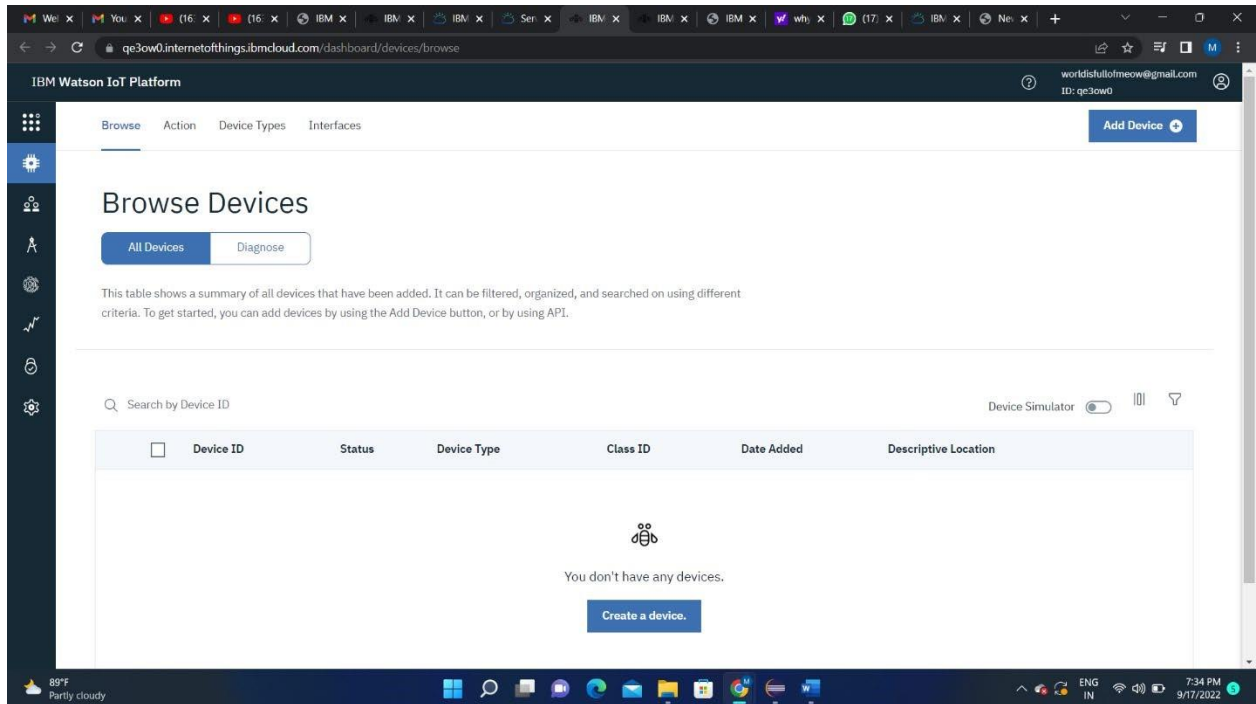




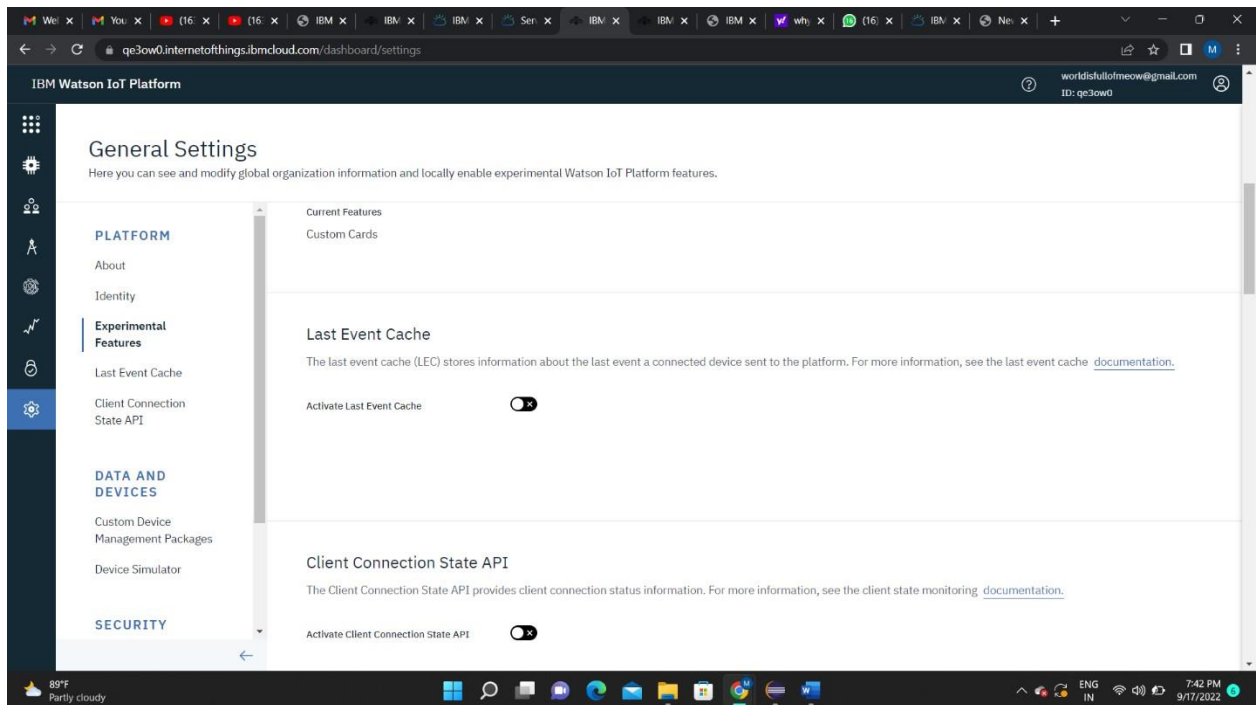
10. Once logged in the name will be displayed and it goes back to the first page



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.

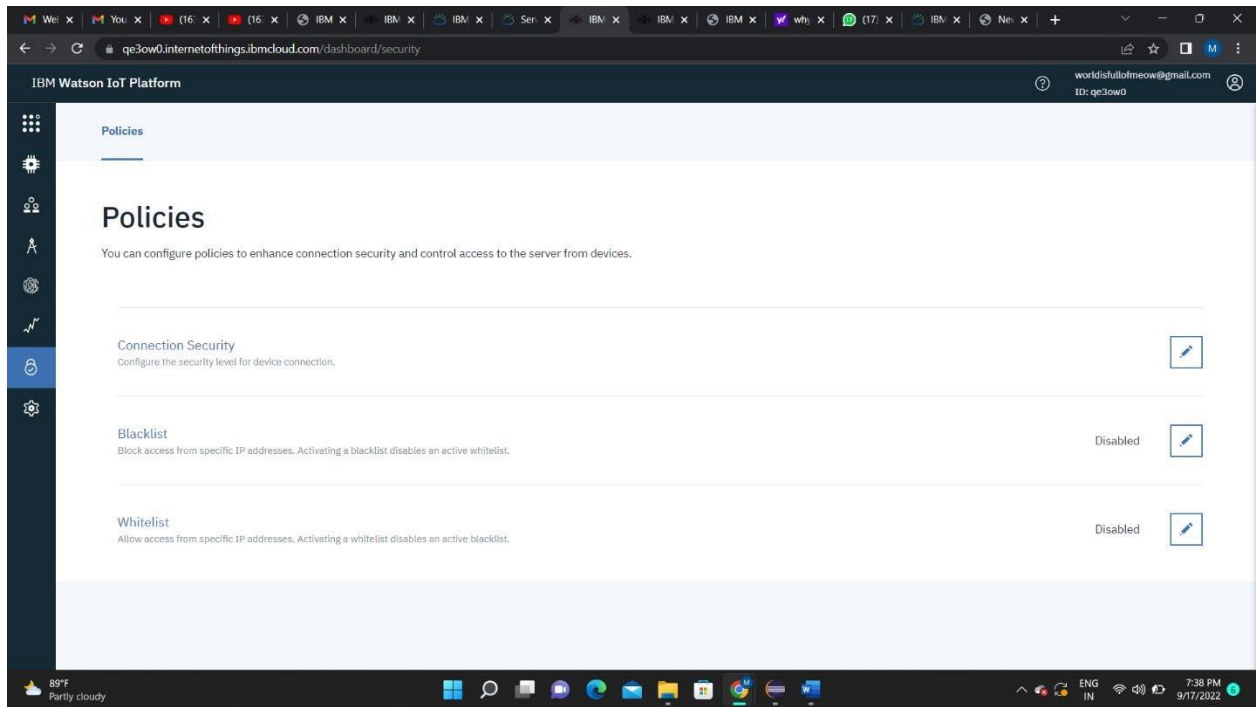


12. The setting tab is used to change the general setting if needed for the project.

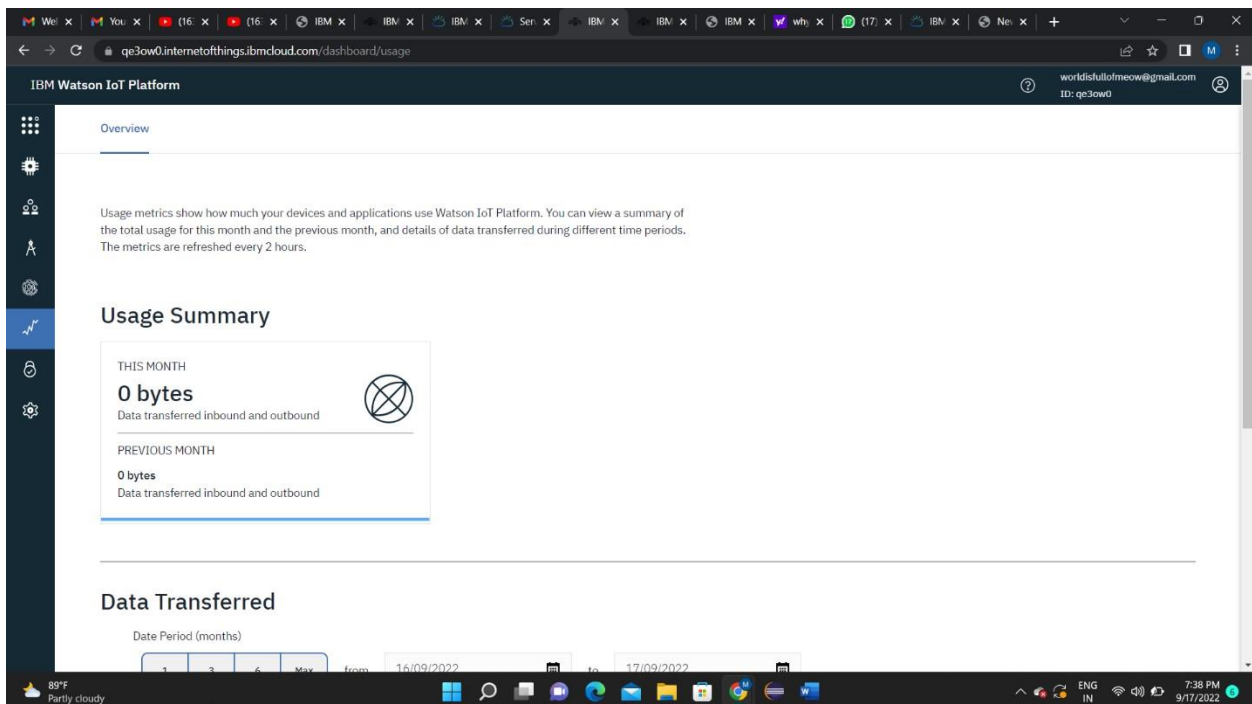




13. In the security tab we can choose the type of security connection and can change according to specification



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 blue 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 'There are no API Keys' and includes a 'Generate API Key' button.

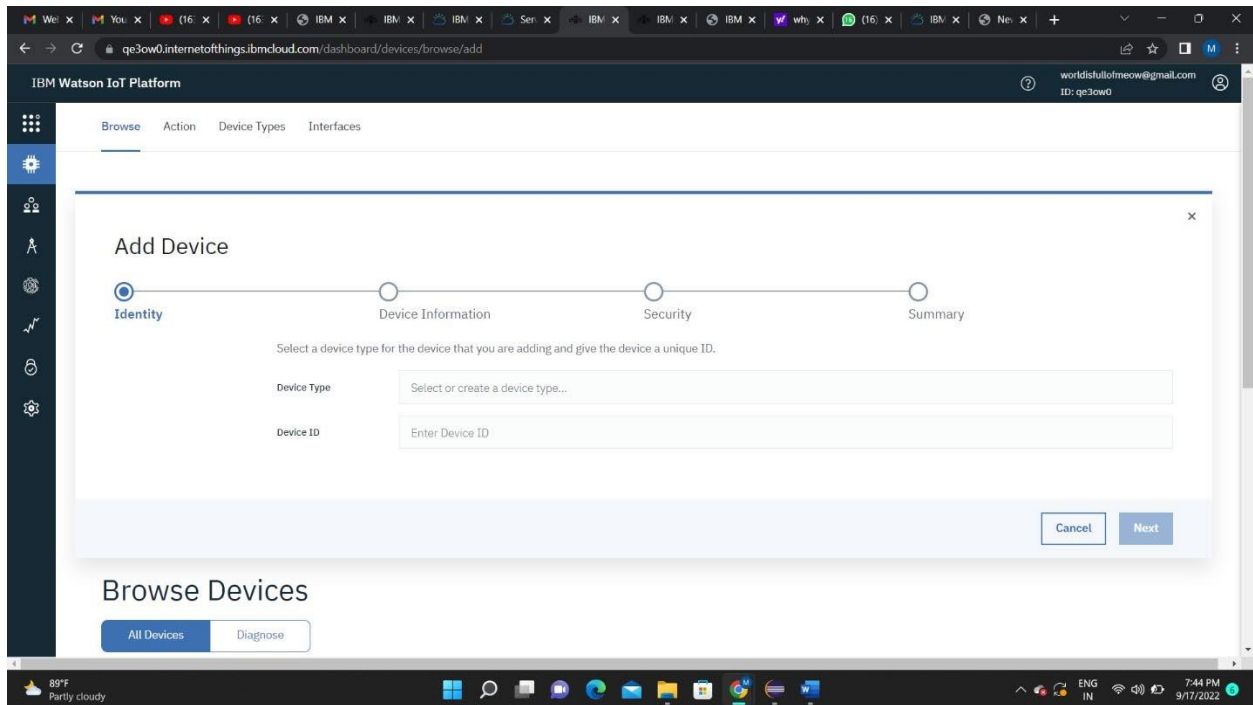
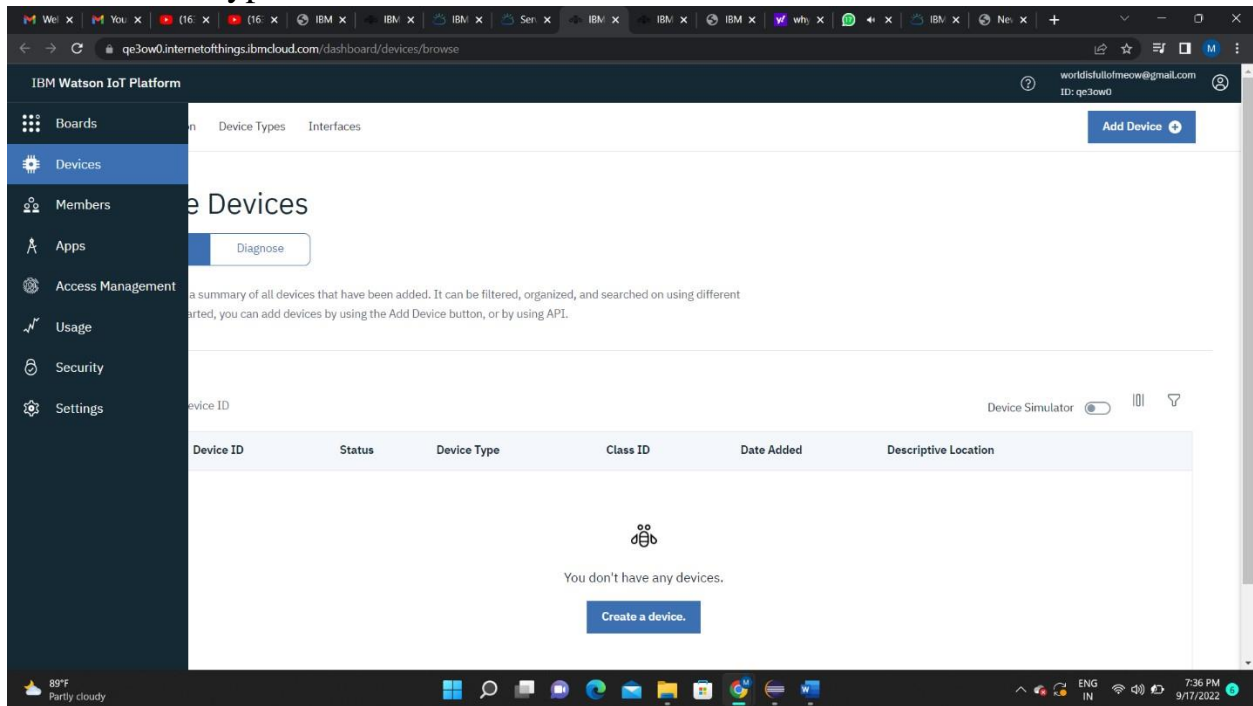
Email Address	Name	Role	Added By	Expires
worldisfullofmeow@gmail.com	worldisfullofmeow@gmail.com	Administrator	-	-

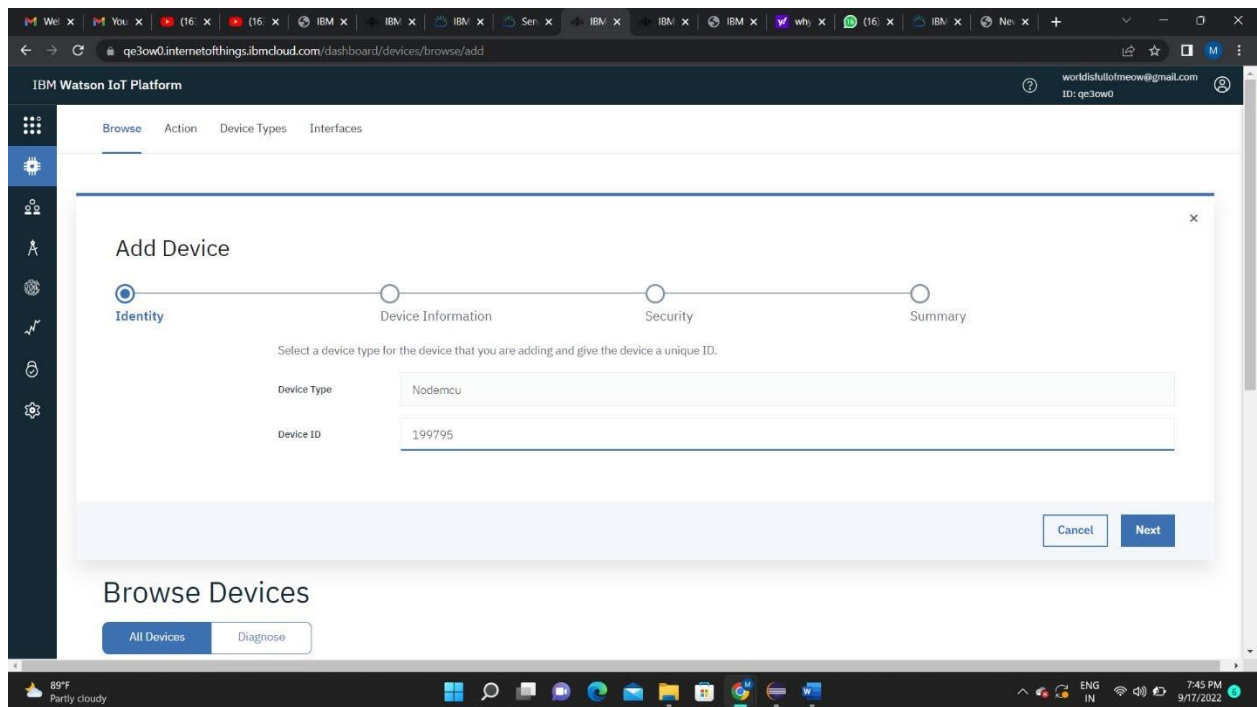
## 16. This tab is used when you want to connect to some other platform and to integrate with other services.

The screenshot shows the 'Browse API Keys' page in the IBM Watson IoT Platform. The page has a dark blue 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. A message at the bottom of the table states 'There are no API Keys' and includes a 'Generate API Key' button.

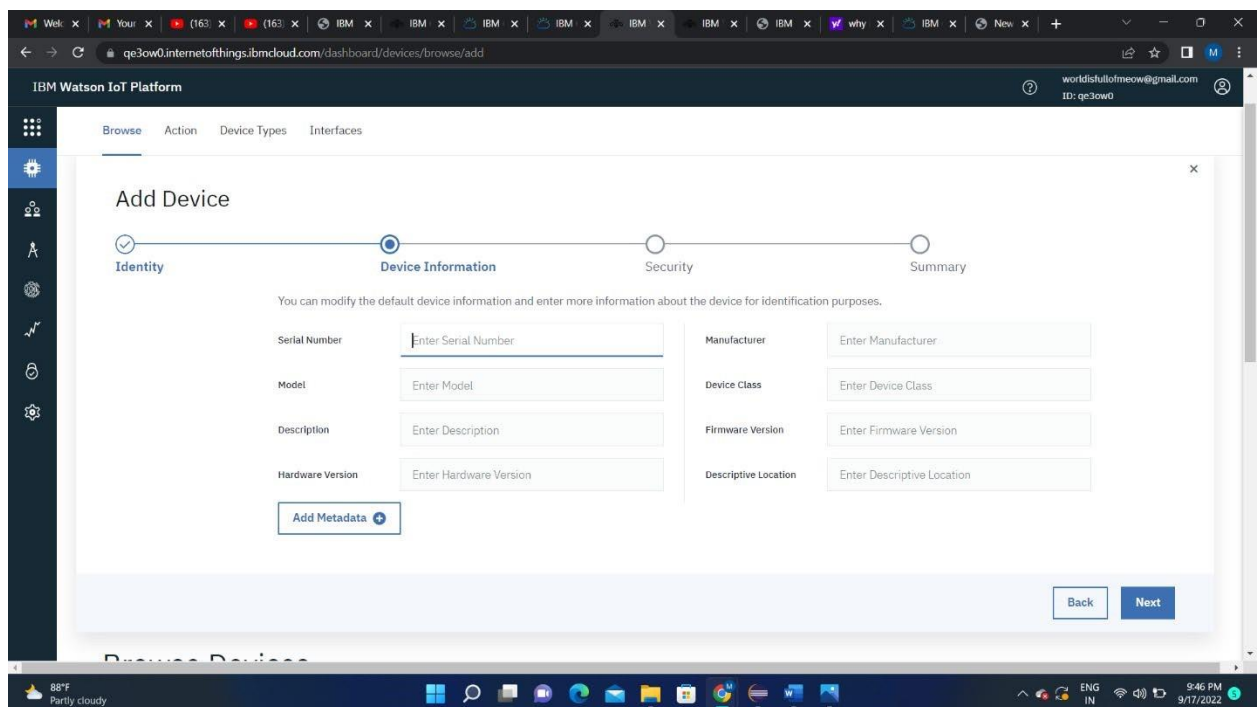
Key	Description	Role	Expires
0 results			

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.' and '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

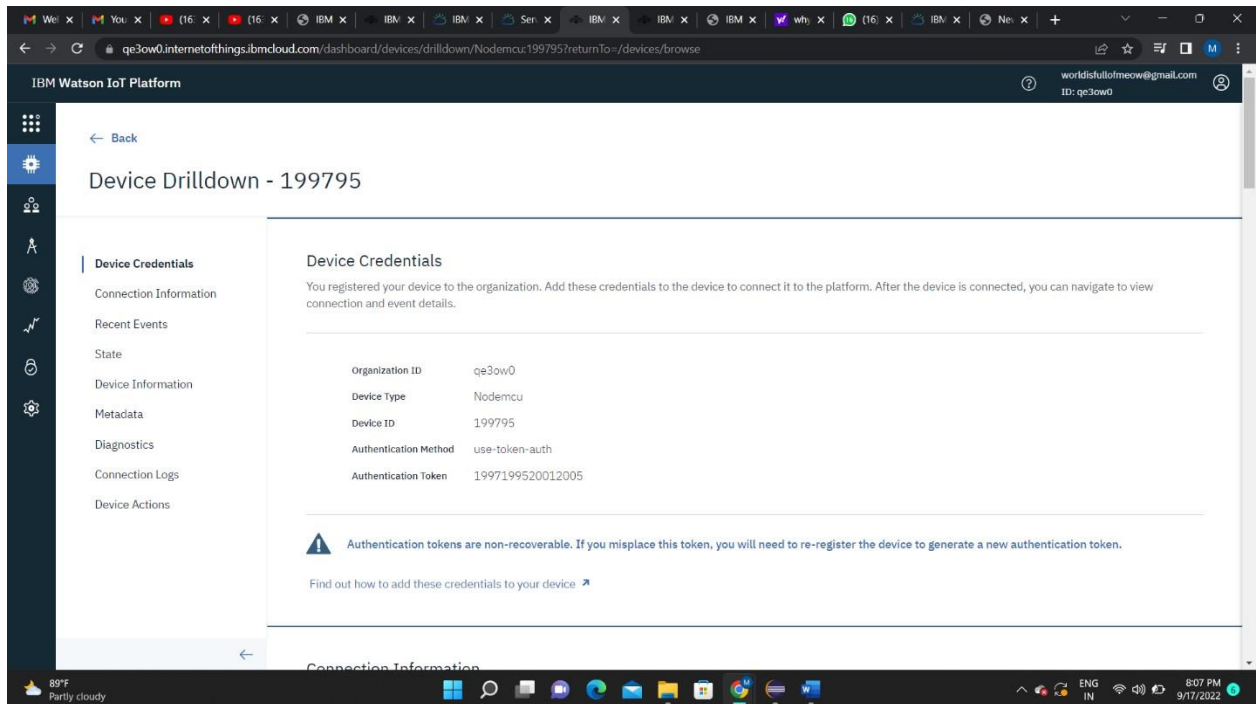
Device ID  
199795

View Metadata

Security Token  
1997199520012005

Back Finish

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

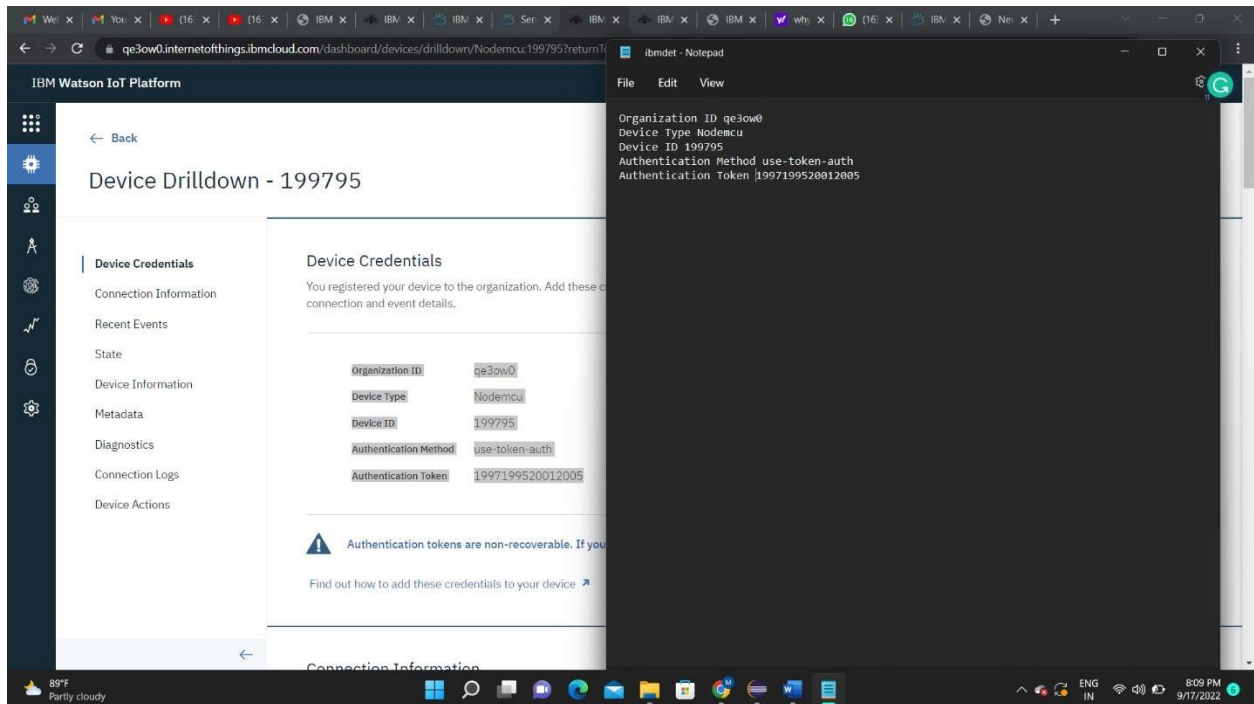


The screenshot shows the IBM Watson IoT Platform interface. The left sidebar contains navigation icons. The main content area is titled 'Device Drilldown - 199795'. Under the 'Device Credentials' tab, a table displays the following information:

Property	Value
Organization ID	qe3ow0
Device Type	NodeMCU
Device ID	199795
Authentication Method	use-token-auth
Authentication Token	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 in the foreground, containing the following text:

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

The Notepad window is positioned over the 'Device Credentials' section of the IBM Watson IoT Platform page, indicating that the credentials are being saved for future use.



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.

The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar is present with the text 'Search by Device ID'. A table lists devices with columns: Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location. The device '199795' is highlighted. Below the table, the 'Recent Events' tab is selected, displaying a message: 'The recent events listed show the live stream of data that is coming and going from this device.' Below this message is a table with columns: Event, Value, Format, and Last Received. The bottom of the screen shows a Windows taskbar with the date 9/17/2022 and time 8:11 PM.

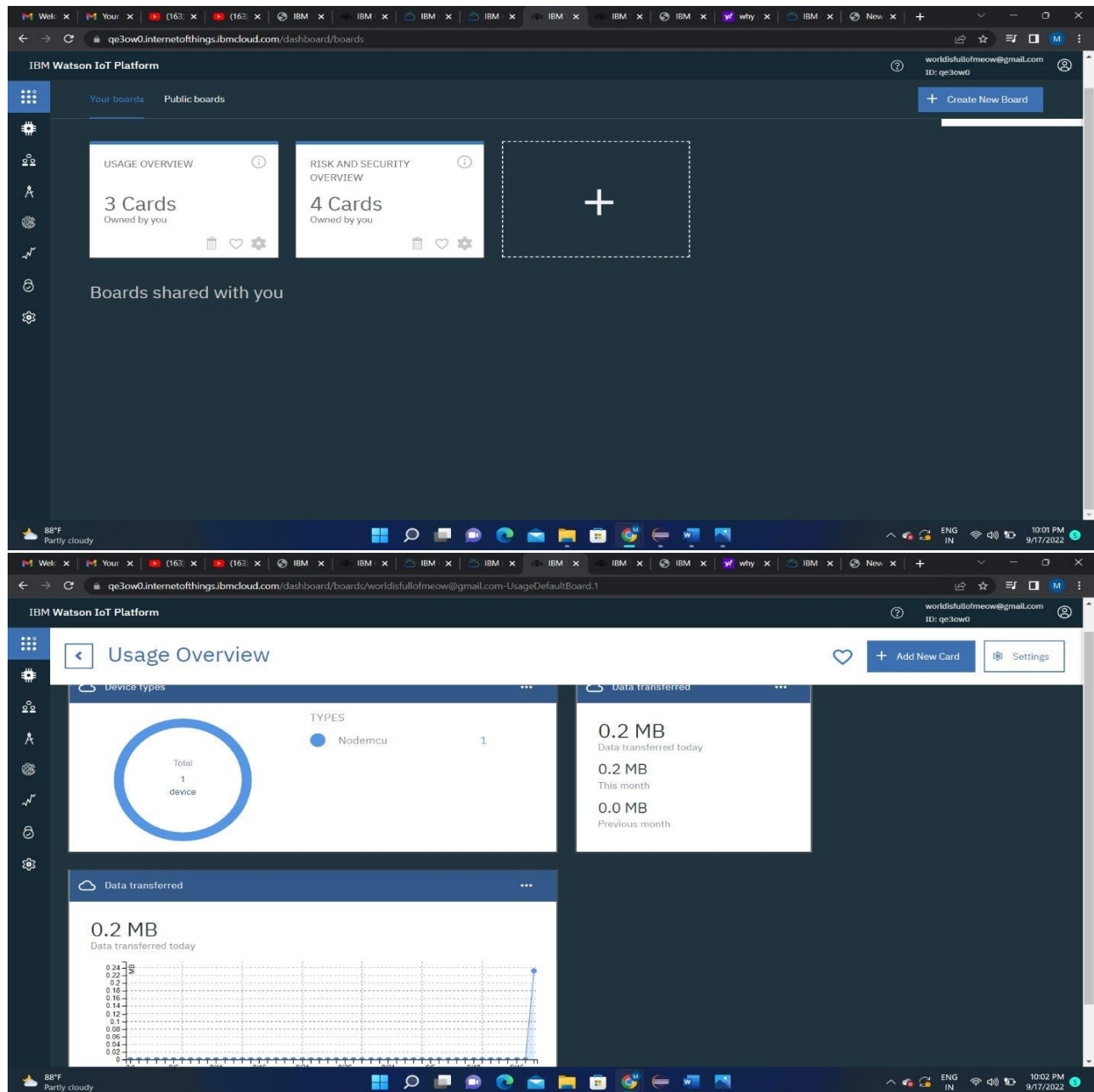
The screenshot shows the IBM Watson IoT Platform dashboard with the 'Device Information' tab selected for device '199795'. The tab displays the following details:

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

At the bottom of the details panel, it shows 'Items per page 50' and '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 .