

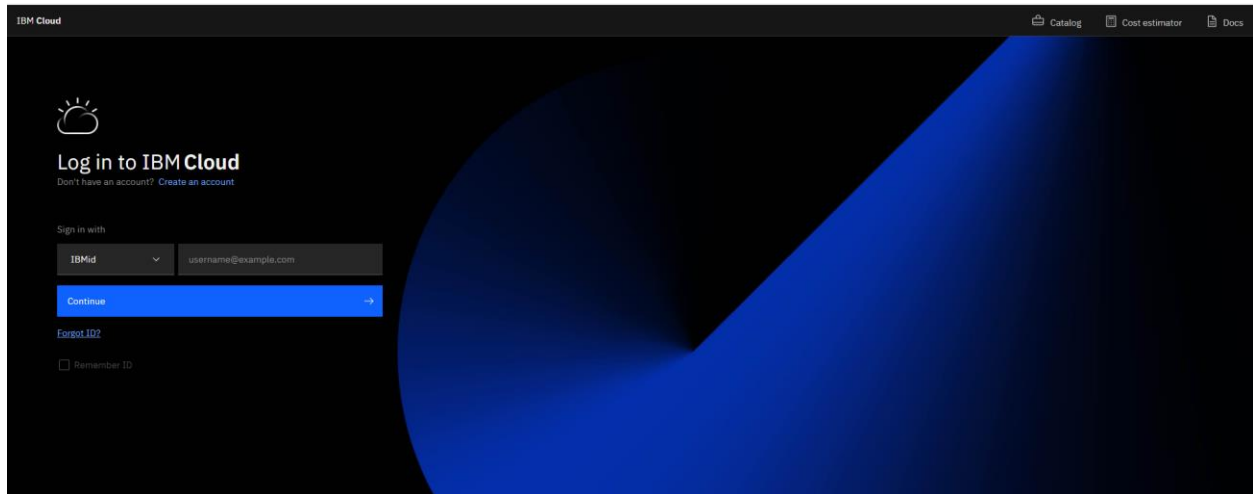
## CREATE IBM WATSON IOT PLATFORM AND DEVICE

### AIM:

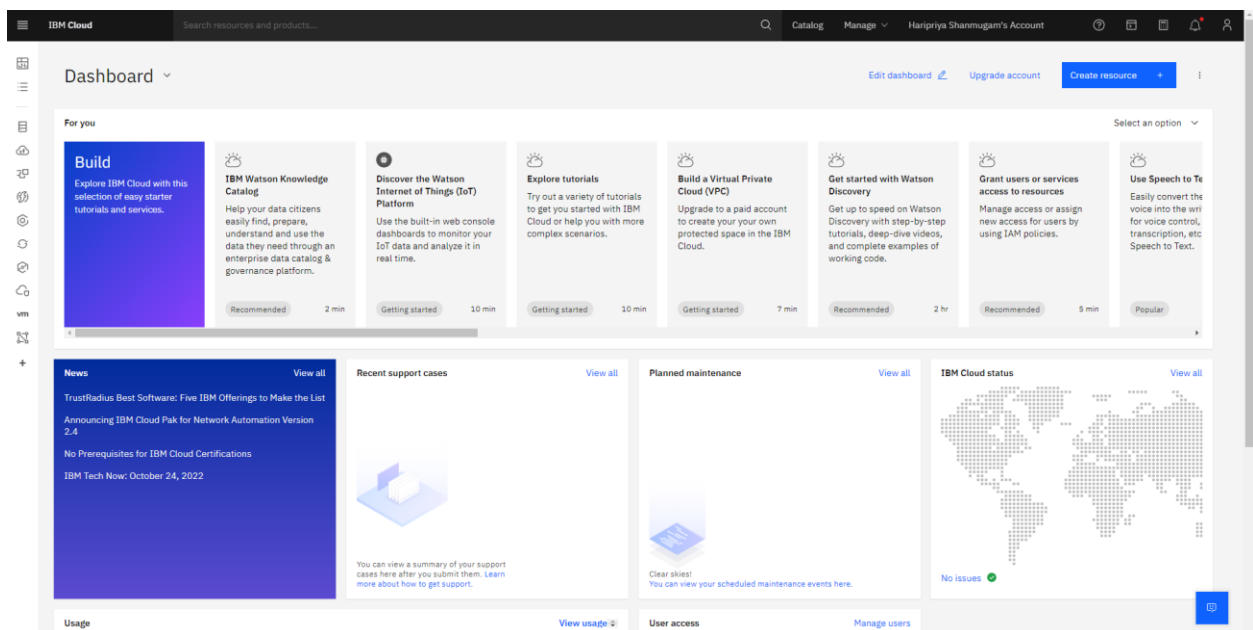
To create the IBM Watson IoT platform and device

### STEPS:

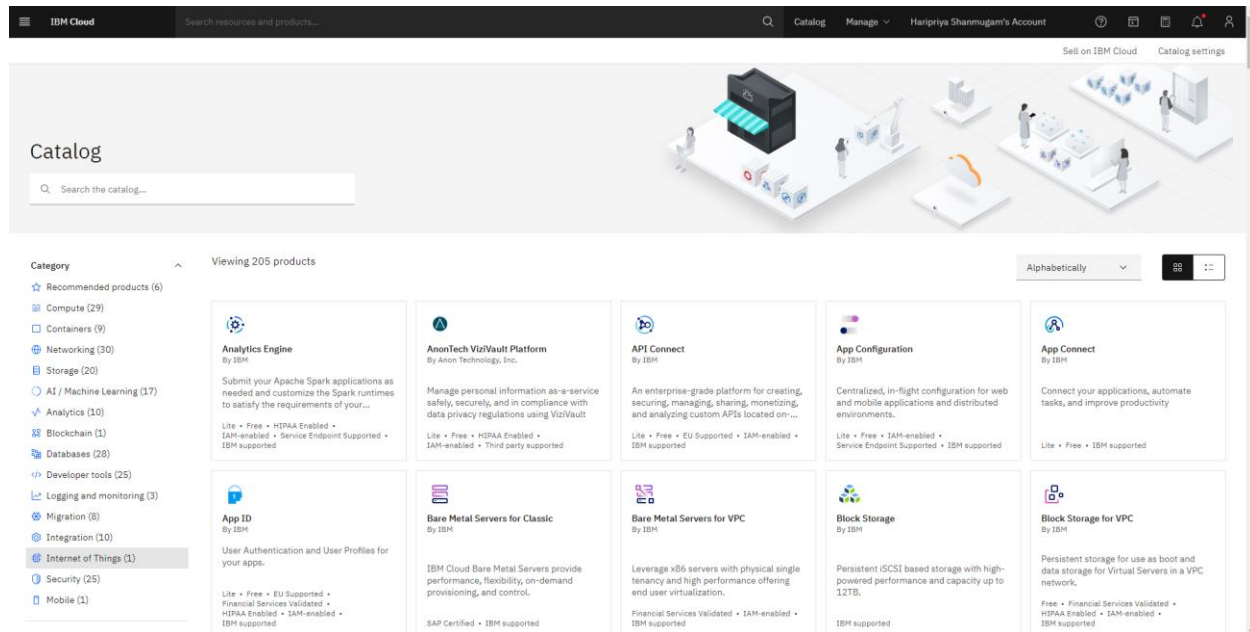
1. Firstly create an IBM cloud account with IBMid and password.



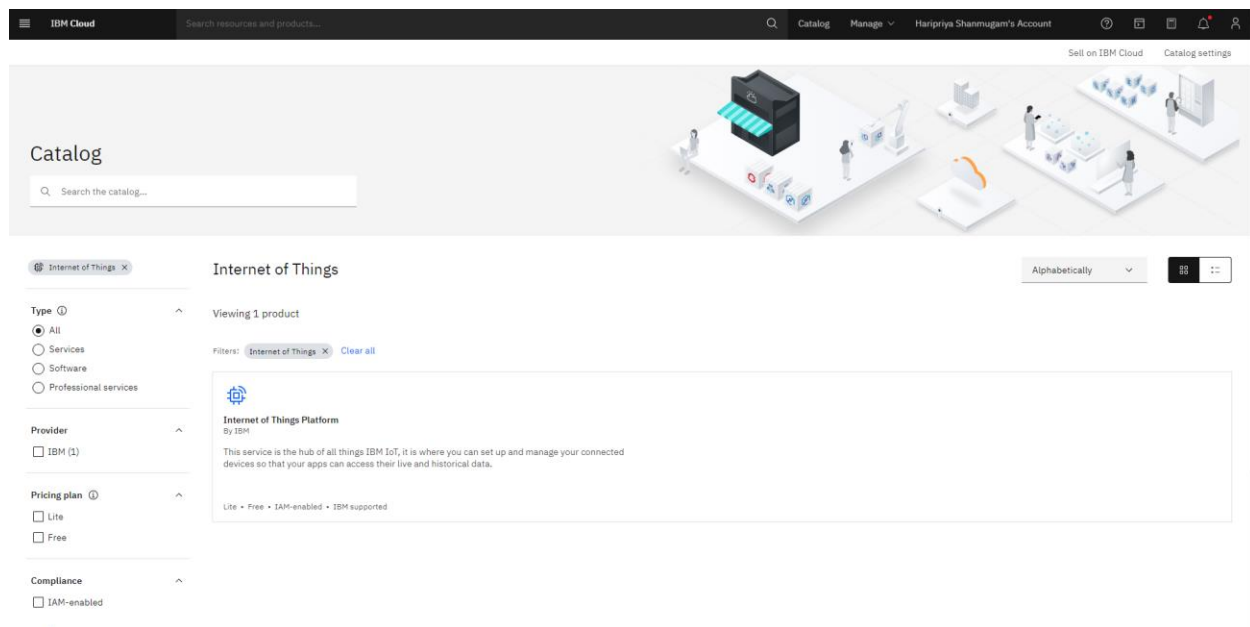
2. Home page of IBM cloud.



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



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



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

IBM Cloud

Search resources and products...

Catalog Manage Haripriya Shanmugam's Account

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

Last updated: 08/15/2022

Category: Internet of Things

Compliance: IAM-enabled

Location: Frankfurt, London, Dallas, Washington DC

Related links: Docs, Terms

Select a location

Frankfurt (eu-de)

Select a pricing plan

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

Plan	Features	Pricing
Lite	<ul style="list-style-type: none"><li>Includes up to 500 registered devices, and a maximum of 200 MB of each data metric</li><li>Maximum of 500 registered devices</li><li>Maximum of 500 application bindings</li><li>Maximum of 200 MB of each of data exchanged, data analyzed and edge data analyzed</li></ul> <p>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.</p> <p>Lite plan services are deleted after 30 days of inactivity.</p>	Free

Configure your resource

Service name: Internet of Things Platform-ua

Select a resource group: Default

Summary

Internet of Things Platform Free

Location: Frankfurt

Plan: Lite

Service name: Internet of Things Platform-ua

Resource group: Default

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

Create

Add to estimate

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.

IBM Cloud

Search resources and products...

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Internet of Things Platform

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Select a resource group: Default

Summary

Internet of Things Platform Free

Location: Frankfurt

Plan: Lite

Service name: Internet of Things Platform-ua

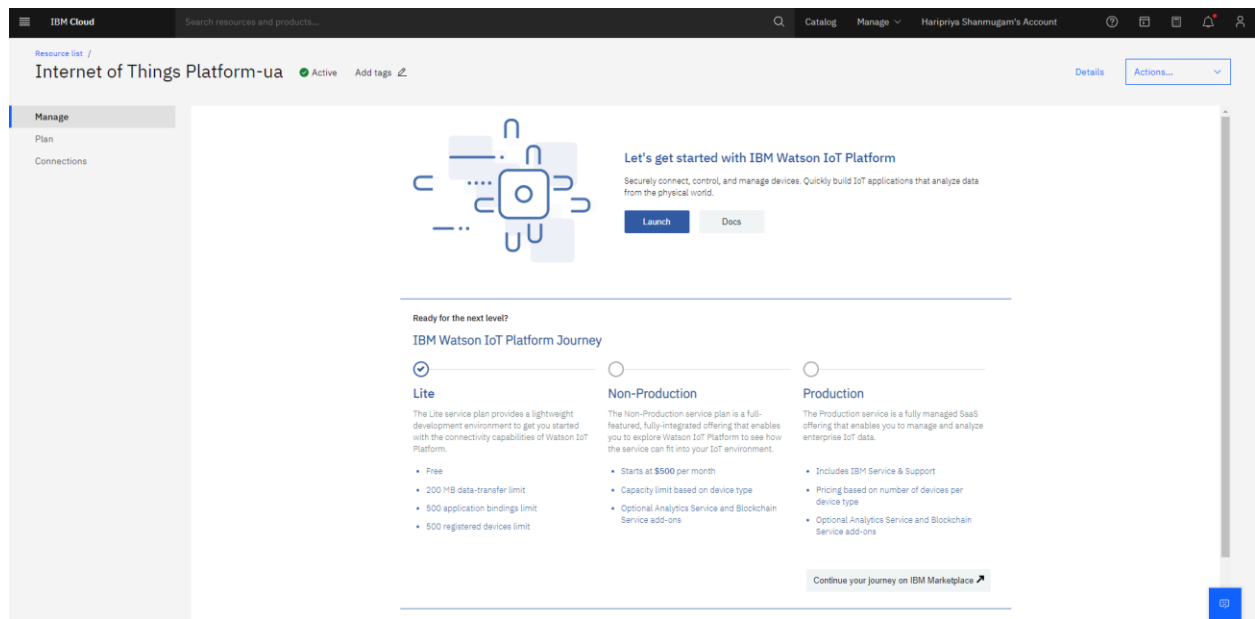
Resource group: Default

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

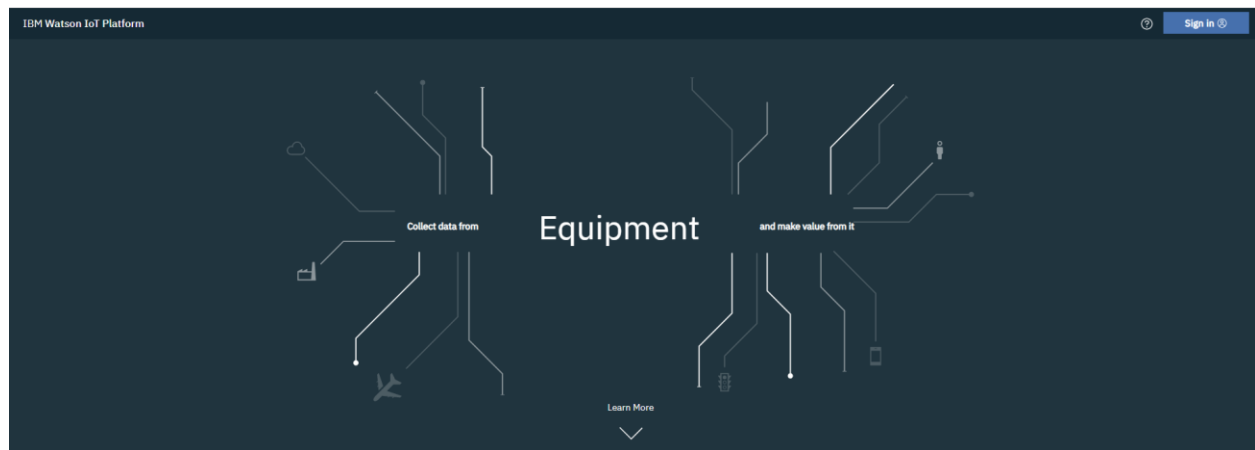
Create

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 servies)



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



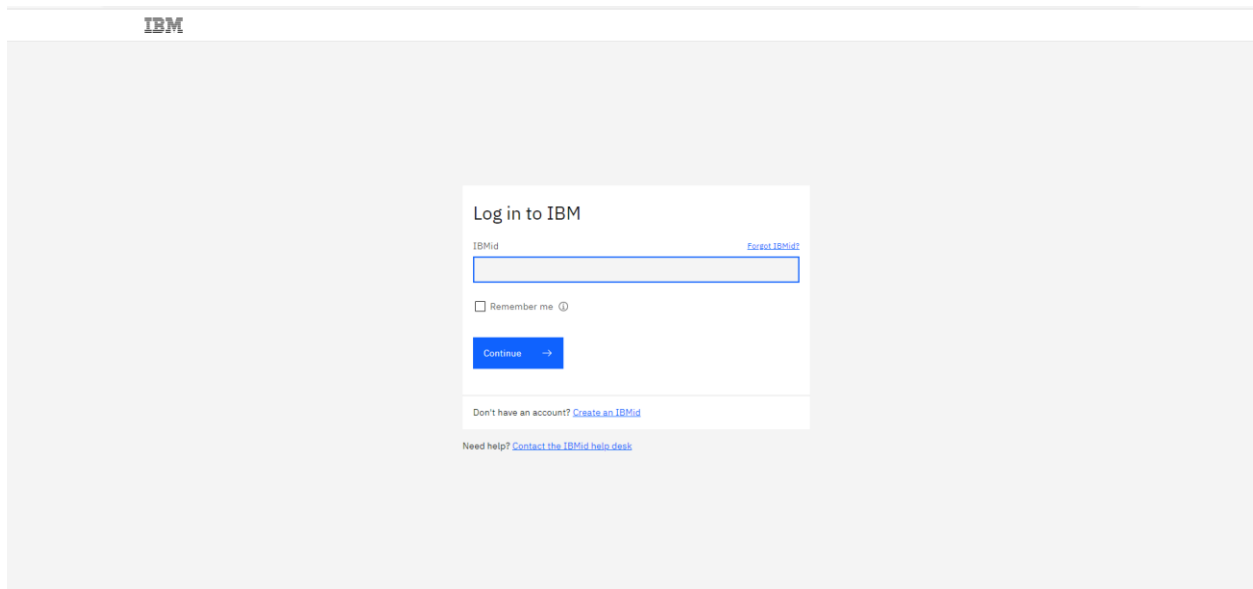
## Powerful web dashboard

Flexible, scalable and easy to use

We provide a clean and simple UI where you can simply and easily add and manage your devices, control access to your IoT service, and monitor your usage. See at a glance the things you are interested in.

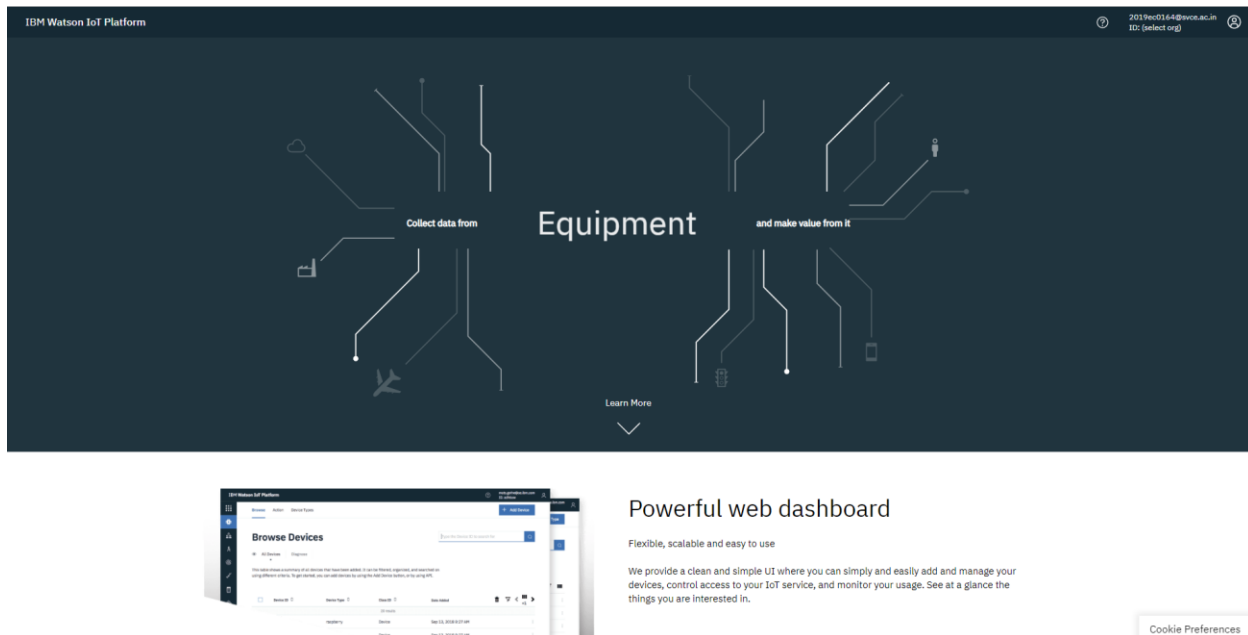
Cookie Preferences

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



The image shows the IBM Watson IoT Platform login page. At the top left is the IBM logo. The main heading is "Log in to IBM". Below it is a text input field for the IBMid, with a "Forgot IBMid?" link to its right. Under the input field is a checkbox labeled "Remember me" with an information icon. Below the checkbox is a blue "Continue" button with a right-pointing arrow. At the bottom of the login box, there is a link: "Don't have an account? [Create an IBMid](#)". Below the login box, there is a link: "Need help? [Contact the IBMid help desk](#)".

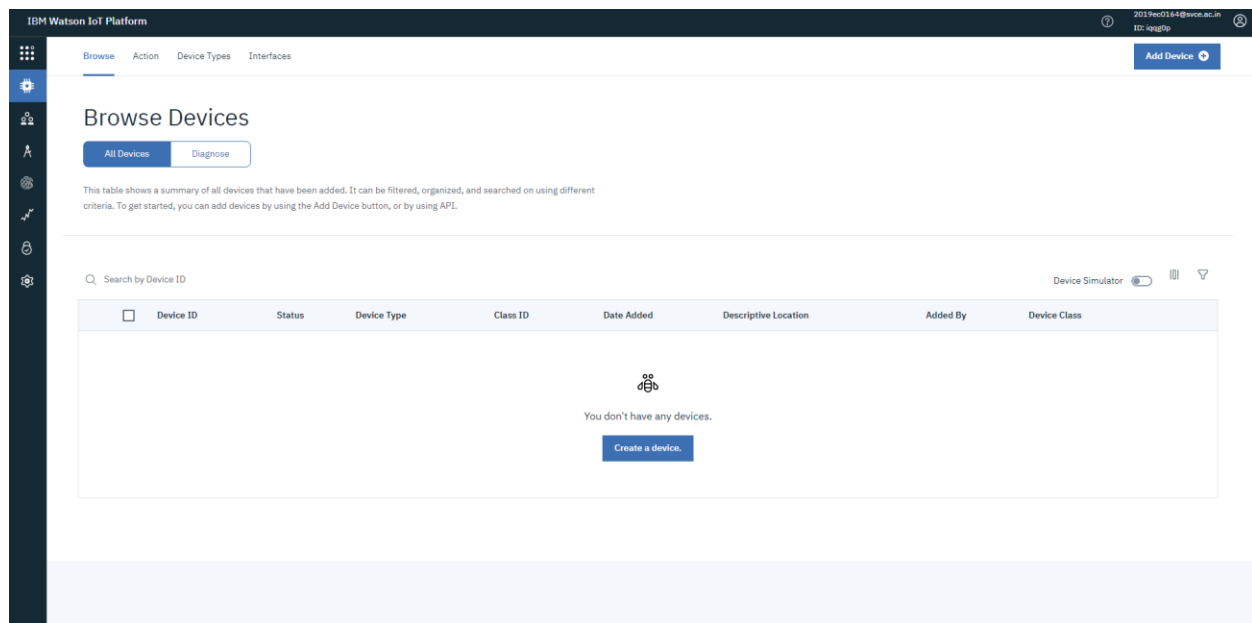
10. Once logged in the name will be displayed and it goes back to the first page.



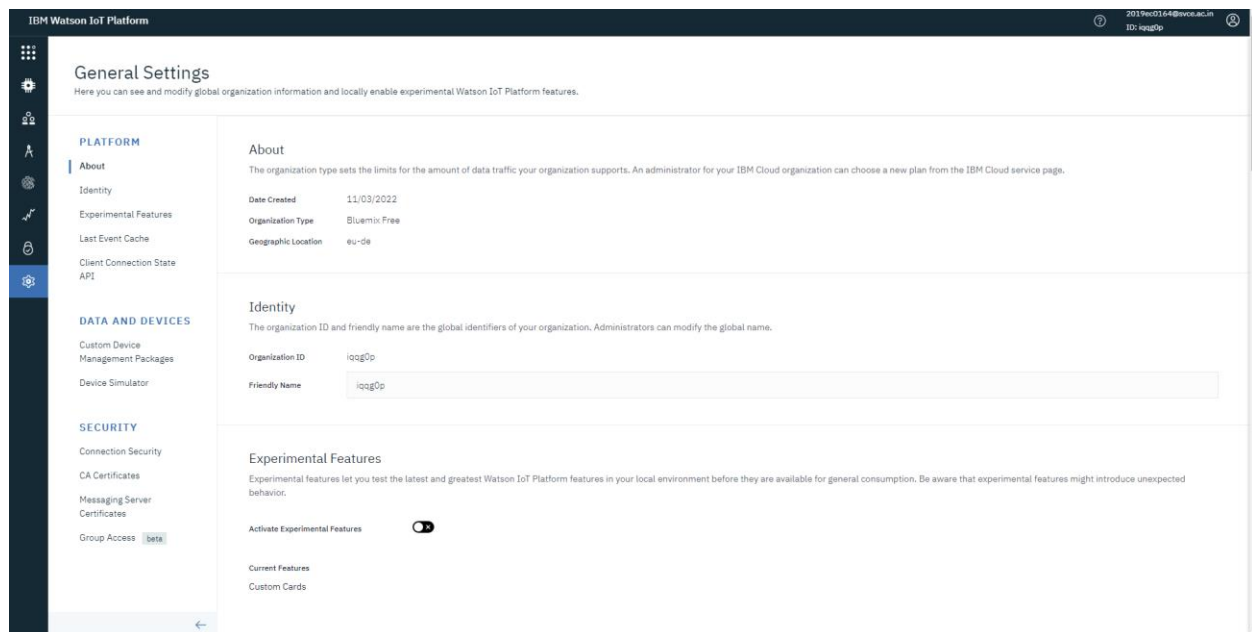
The image shows the IBM Watson IoT Platform dashboard. The top header bar is dark blue with the text "IBM Watson IoT Platform" on the left, and on the right, a user profile icon, a clock icon, and the text "2018/03/14 14:44@vivo.ac.in ID: (select org)". The main content area has a dark blue background with a circuit-like pattern. In the center, the word "Equipment" is displayed in large white text. To the left of "Equipment" is the text "Collect data from" with a small icon of a factory. To the right is the text "and make value from it" with a small icon of a person. Below "Equipment" is a "Learn More" link with a downward arrow. At the bottom left, there is a screenshot of the "Browse Devices" page, which shows a table of devices. To the right of the screenshot is the text "Powerful web dashboard" followed by "Flexible, scalable and easy to use". Below this is a paragraph: "We provide a clean and simple UI where you can simply and easily add and manage your devices, control access to your IoT service, and monitor your usage. See at a glance the things you are interested in." At the bottom right, there is a "Cookie Preferences" button.

Device ID	Device Type	Device ID	When Added
12345678	Device	12345678	2018/03/14 14:44
12345678	Device	12345678	2018/03/14 14:44

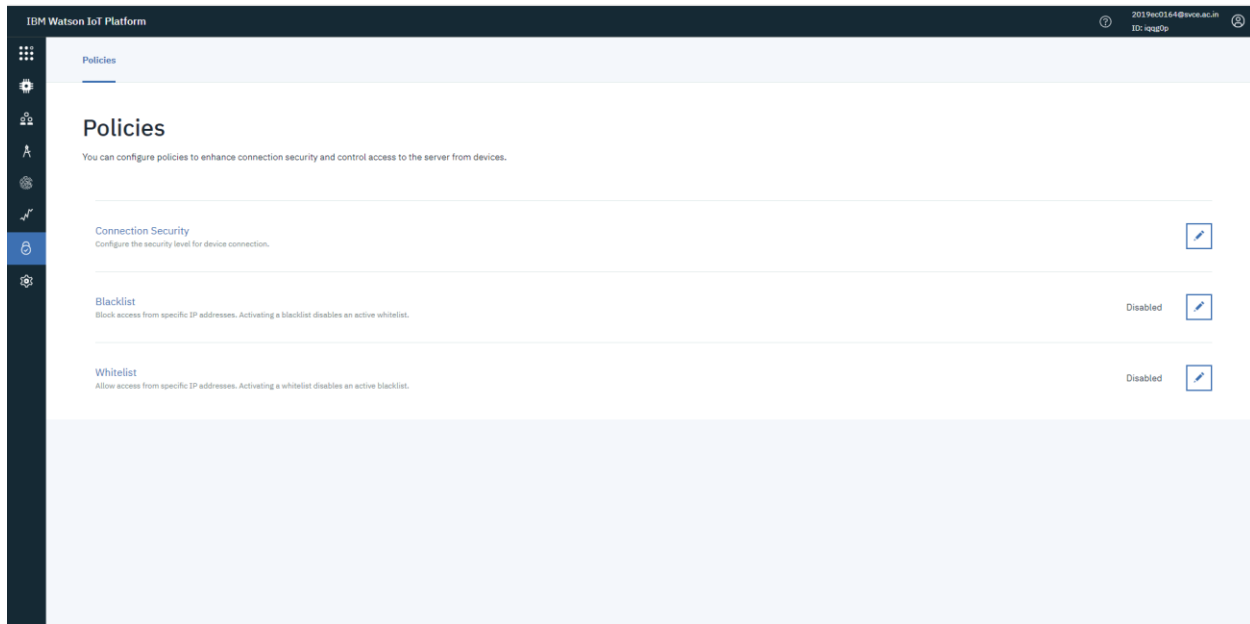
11. And again clicking on the launch button will open this tab, the device will help in the creation of the devices, the addition of devices, and the display of details of the devices.



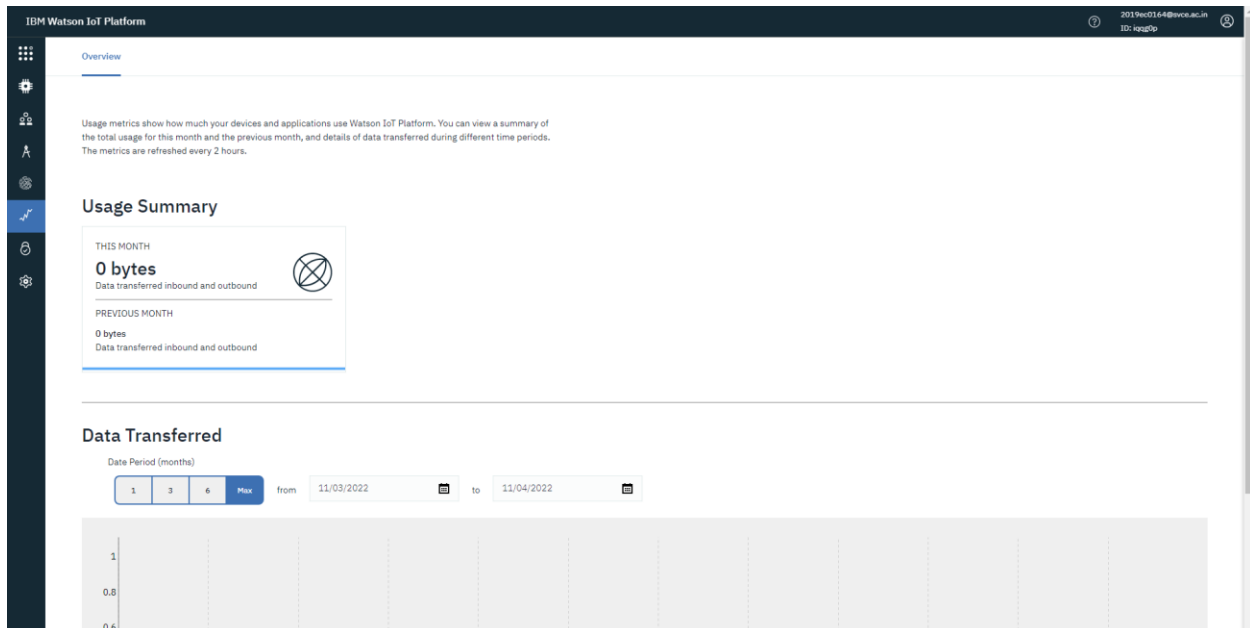
12. The setting tab is used to change the general setting if needed for the project.



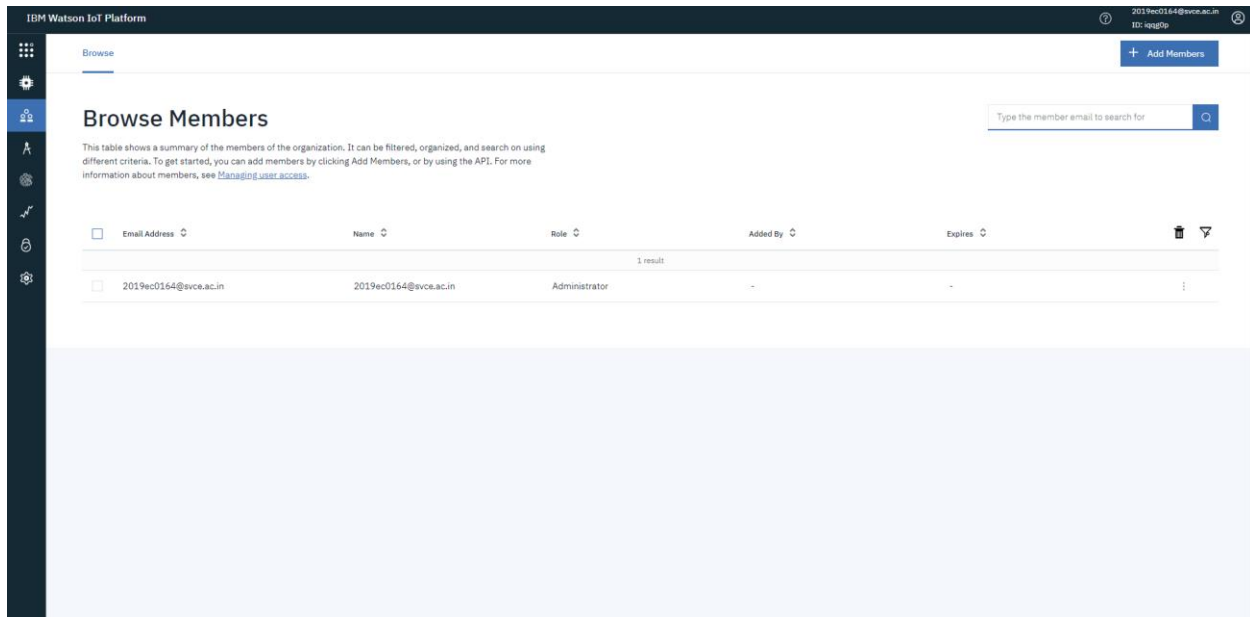
13. In the security tab we can choose the type of security connection and can change according to specification.



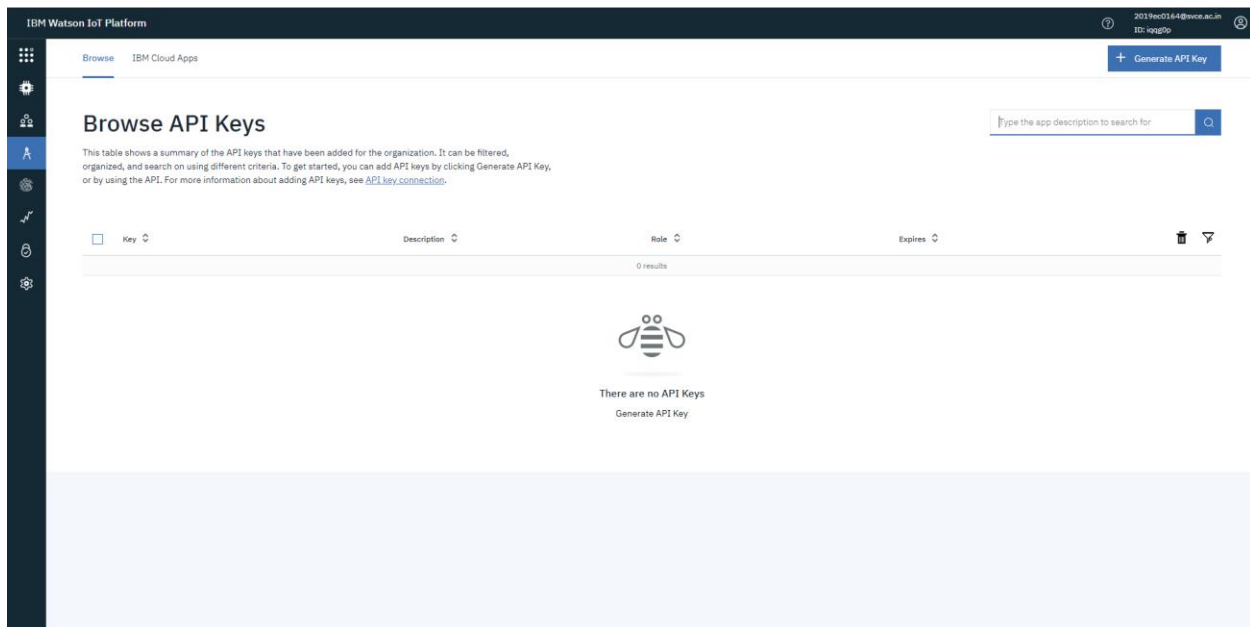
14. Usage gives the summary of how many bytes are used between the devices and the IBM cloud.



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

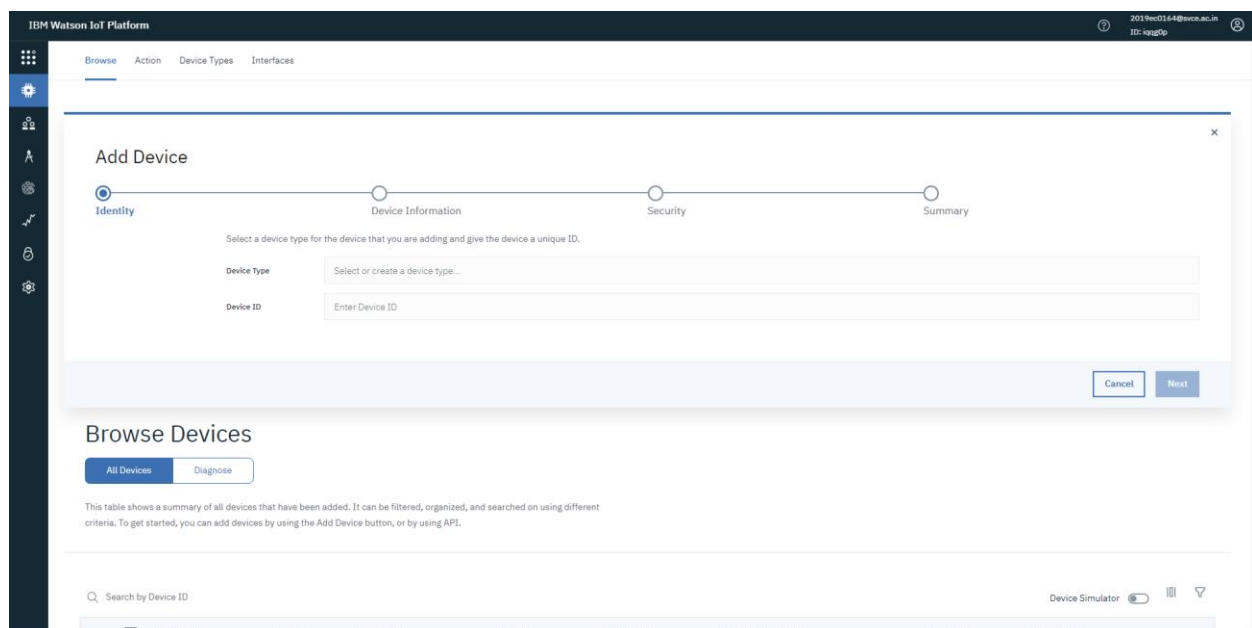
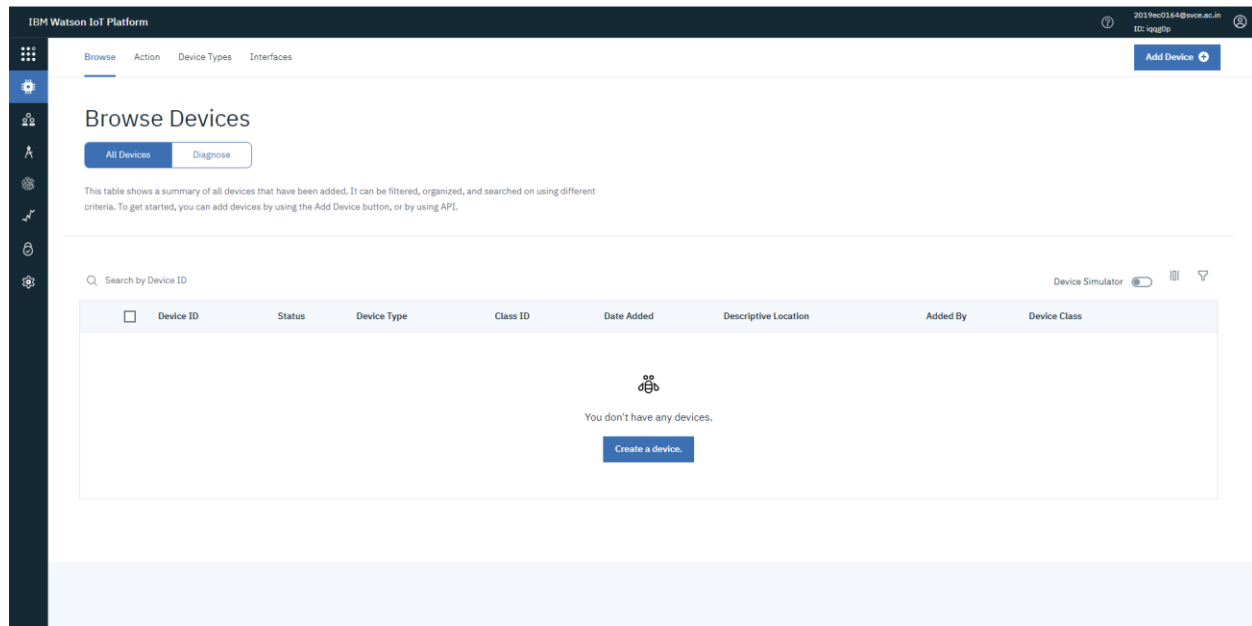


16. This tab is used when you want to connect to some other platform and to integrate with other services.





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





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 wizard has four steps: Identity, Device Information, Security, and Summary. The 'Security' step is currently active, indicated by a blue circle. The 'Identity' step is also marked with a checkmark. The 'Device Information' and 'Summary' steps are marked with circles. The 'Security' step contains two options for selecting a device authentication token: 'Auto-generated authentication token (default)' and 'Self-provided authentication token'. The 'Self-provided authentication token' option is selected. Below the options, there is a text input field labeled 'Enter an optional token'. Below the input field, there is a note: 'Make a note of the generated token. Lost authentication tokens cannot be recovered. Tokens are encrypted before being stored.' and a sub-note: 'Authentication token are encrypted before we store them.' At the bottom right of the wizard, there are 'Back' and 'Next' buttons. Below the wizard, there is a 'Browse Devices' section with a 'All Devices' button and a 'Diagnose' button.

IBM Watson IoT Platform

2019ec0164@ovce.ac.in  
ID: rpgg9p

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

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.

Back Next

Browse Devices

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. The wizard has four steps: Identity, Device Information, Security, and Summary. The 'Summary' step is currently active, indicated by a blue circle. The 'Identity' step is marked with a checkmark. The 'Device Information' and 'Security' steps are marked with circles. The 'Summary' step contains a summary of the device information: 'Device Type: NodeMCU', 'Device ID: 199795', and 'Security Token: To be generated'. Below the summary, there is a 'View Metadata' button. At the bottom right of the wizard, there are 'Back' and 'Finish' buttons. Below the wizard, there is a 'Browse Devices' section with a 'All Devices' button and a 'Diagnose' button. Below the buttons, there is a note: '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.'

IBM Watson IoT Platform

2019ec0164@ovce.ac.in  
ID: rpgg9p

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  
To be generated

Back Finish

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.

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 links: Home, Devices, Recent Events, State, Device Information, Metadata, Diagnostics, Connection Logs, and Device Actions. The main content area is titled "Device Drilldown - 199795". It features two sections: "Device Credentials" and "Connection Information".

**Device Credentials**

You registered your device to the organization. Add these credentials to the device to connect it to the platform. After the device is connected, you can navigate to view connection and event details.

Organization ID	iqagOp
Device Type	Nodemcu
Device ID	199795
Authentication Method	use-token-auth
Authentication Token	6-gf-Rmrv@g3qSGGX

⚠ Authentication tokens are non-recoverable. If you misplace this token, you will need to re-register the device to generate a new authentication token.  
Find out how to add these credentials to your device ➤

**Connection Information**

Basic connection information about this device.

Device ID	199795
Device Type	Nodemcu
Date Added	Nov 3, 2022 10:46 PM
Added By	2019ec0164@svce.ac.in
Connection Status	Disconnected

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

This screenshot shows the same IBM Watson IoT Platform interface as in the previous image, but with a Notepad window open in the foreground. The Notepad window, titled "Untitled - Notepad", contains the following text:

```
File Edit Format View Help
Organization ID iqagOp
Device Type Nodemcu
Device ID 199795
Authentication Method use-token-auth
Authentication Token 6-gf-Rmrv@g3qSGGX
```

The background interface remains the same, showing the "Device Drilldown - 199795" page with the "Device Credentials" and "Connection Information" sections.

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 'Browse Devices' page in the IBM Watson IoT Platform. The page has a sidebar with navigation icons and a top navigation bar with 'Browse', 'Action', 'Device Types', and 'Interfaces'. The main content area has a 'Browse Devices' title, a search bar, and a table of devices. The table has columns: Device ID, Status, Device Type, Class ID, Date Added, Descriptive Location, Added By, and Device Class. There is one device listed with ID 199795, status 'Disconnected', and type 'Nodemcu'. The page also includes a 'Device Simulator' toggle and a '1 of 1 page' indicator.

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By	Device Class
199795	Disconnected	Nodemcu	Device	Nov 3, 2022 10:46 PM		2019ec0164@evco.ac.in	

This screenshot shows the 'Identity' tab for the device with ID 199795. The page layout is the same as the previous one, but the table now displays detailed information about the selected device. The 'Identity' tab is active, showing fields like Device ID, Device Type, Date Added, Added By, and Connection Status.

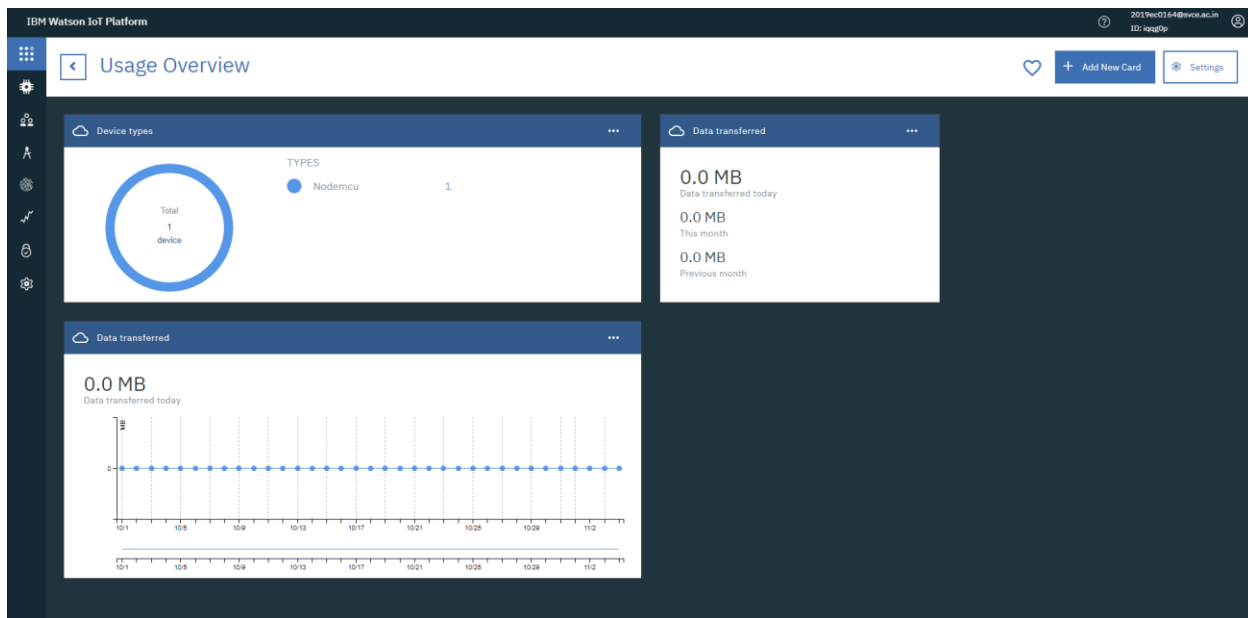
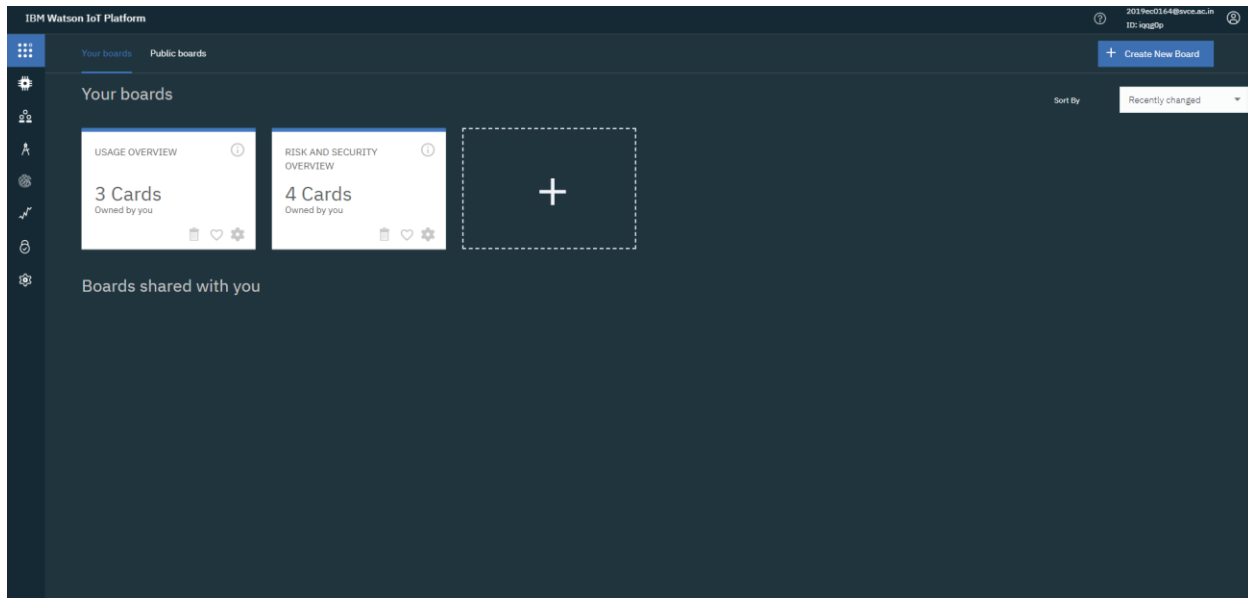
Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location	Added By	Device Class
199795	Disconnected	Nodemcu	Device	Nov 3, 2022 10:46 PM		2019ec0164@evco.ac.in	

Identity	Device Information	Recent Events	State	Logs
Device ID	199795			
Device Type	Nodemcu			
Date Added	Nov 3, 2022 10:46 PM			
Added By	2019ec0164@evco.ac.in			
Connection Status	Disconnected			

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 create