

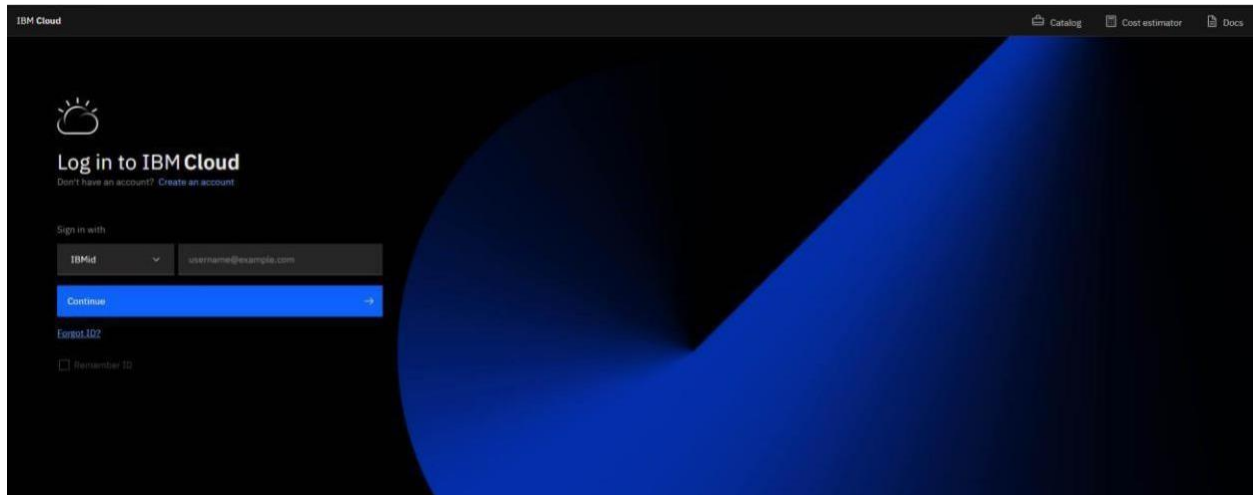
## CREATE IBM WATSON IOT PLATFORM AND DEVICE

### AIM:

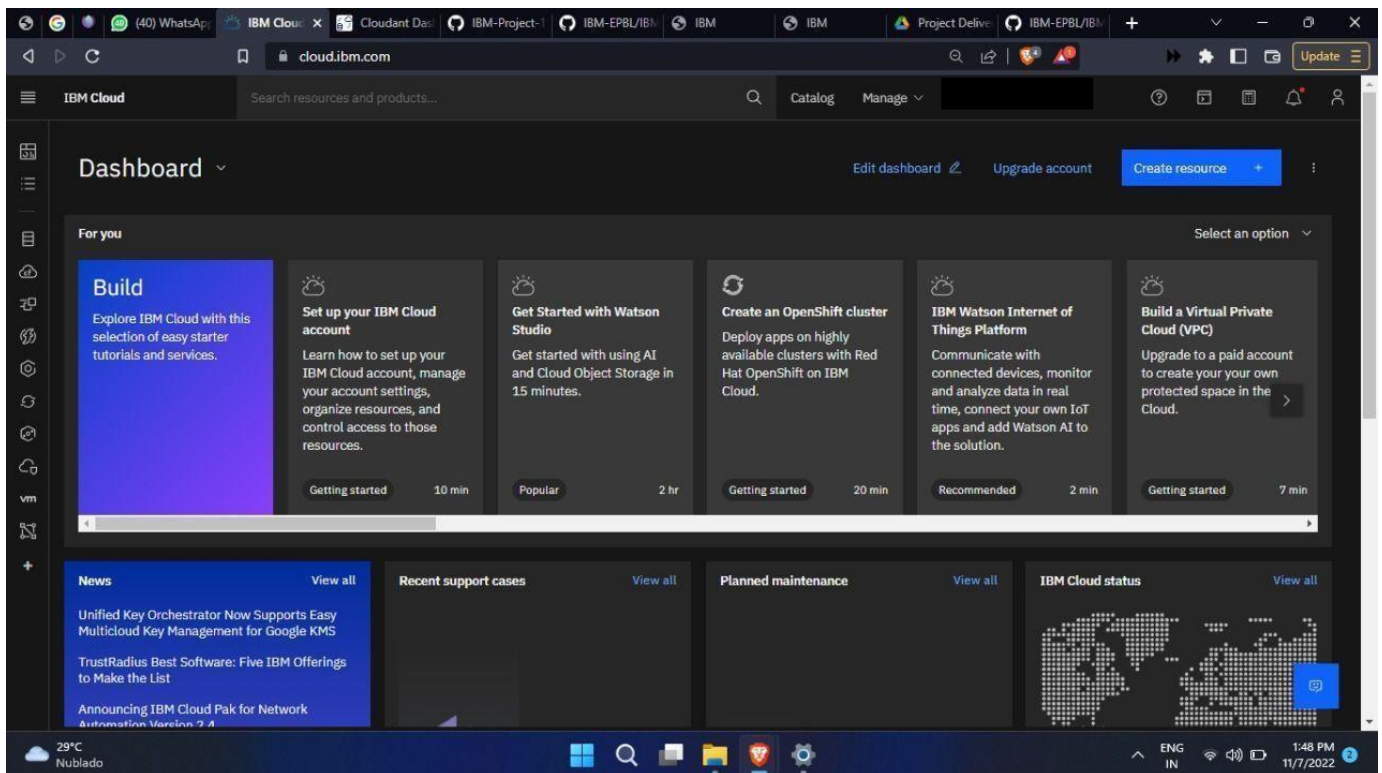
To create the IBM Watson IoT platform and device

### STEPS:

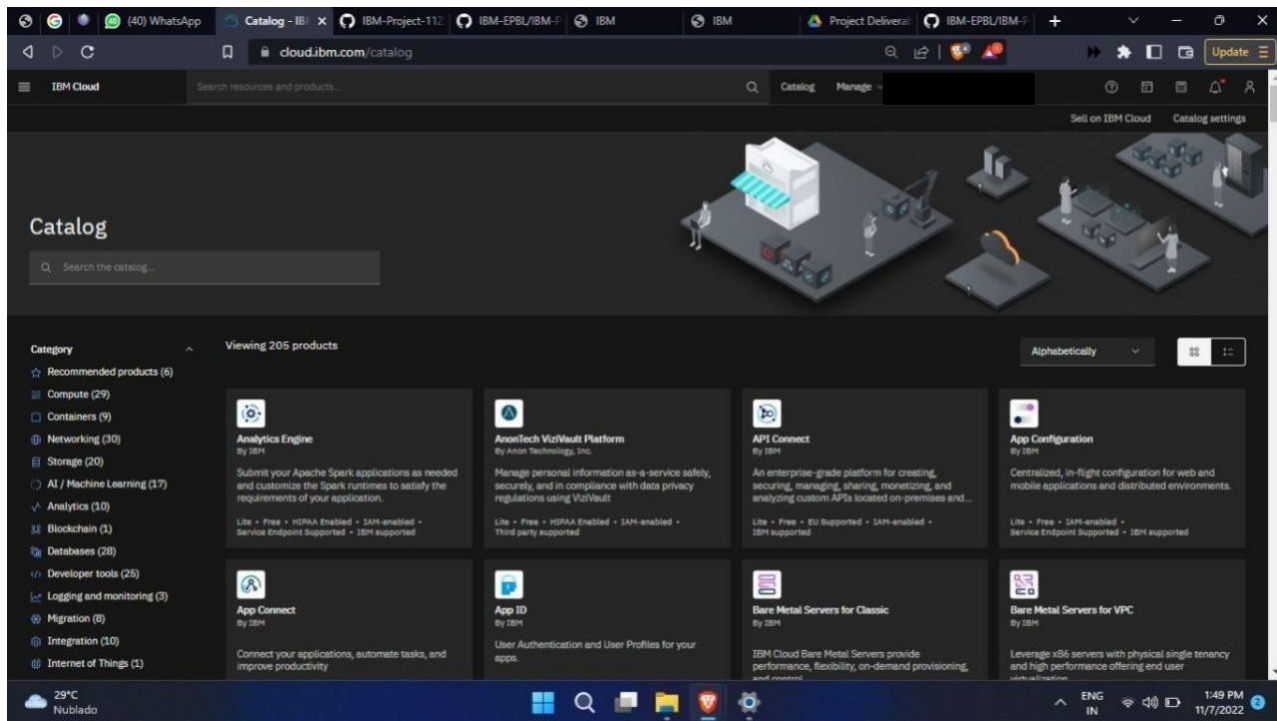
1. Firstly, create an IBM cloud account with IBM id and password.



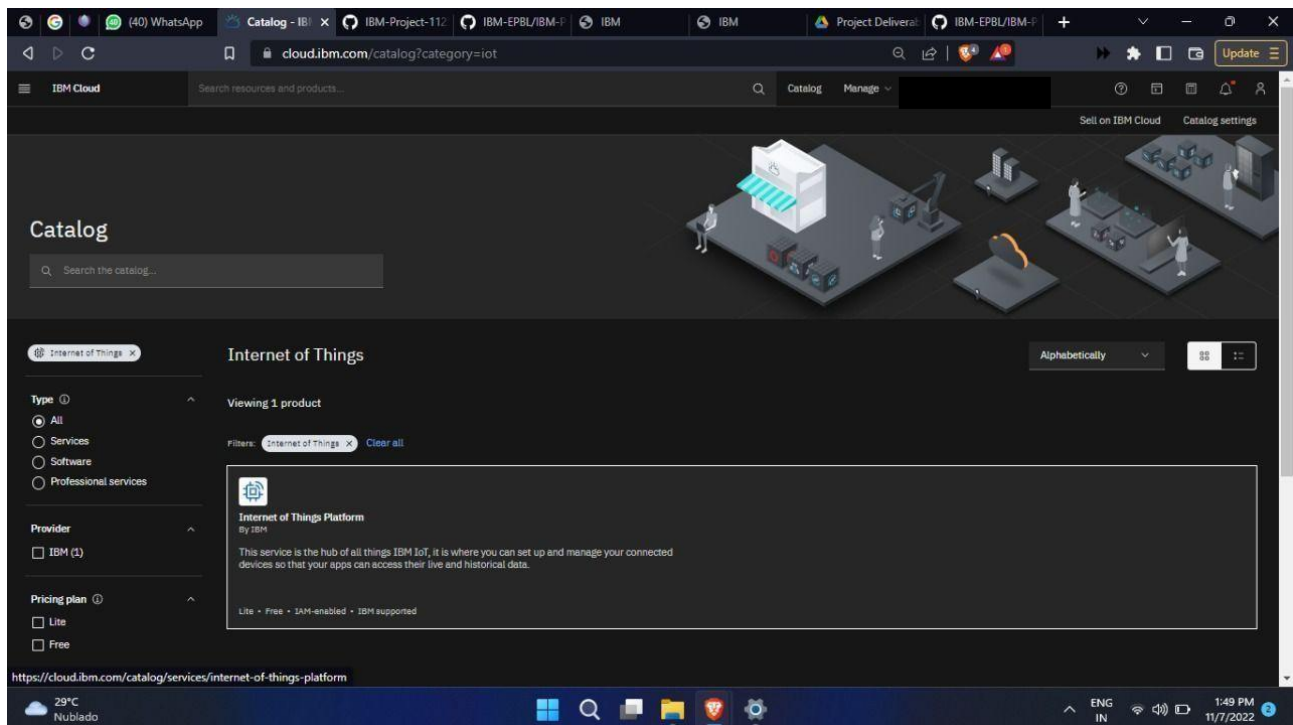
2. Home page of IBM cloud.



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.

The screenshot shows the IBM Cloud console for creating a new Internet of Things Platform service. The page is titled "Internet of Things Platform" and includes a "Create" button. The "Select a location" dropdown is set to "Frankfurt (eu-de)". The "Select a pricing plan" section shows a table with the "Lite" plan selected, which is free and includes up to 500 registered devices and 200 MB of data. The "Summary" panel on the right shows the service name "Internet of Things Platform-60" and the resource group "Default". The "Create" button is visible at the bottom right of the summary panel.

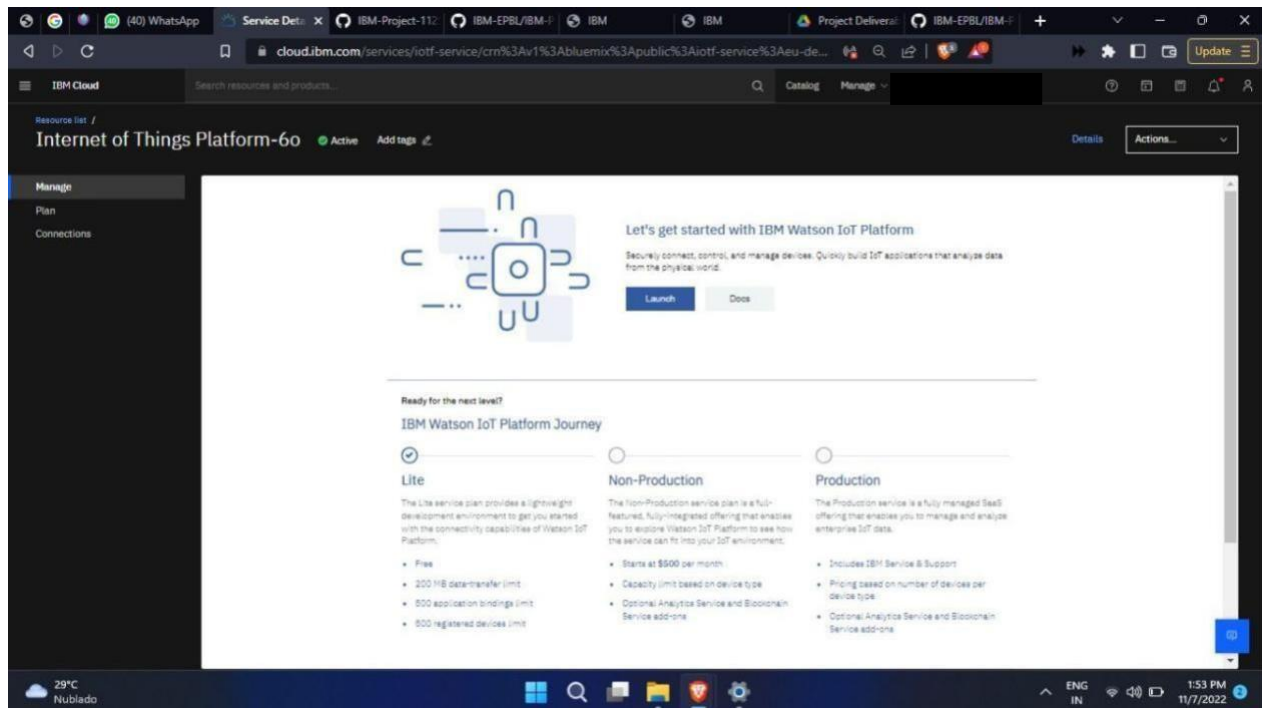
Plan	Features	Pricing
Lite	Includes up to 500 registered devices, and a maximum of 200 MB of each data metric Maximum of 500 registered devices Maximum of 500 application bindings Maximum of 200 MB of each of data exchanged, data analyzed and edge data analyzed	Free

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.

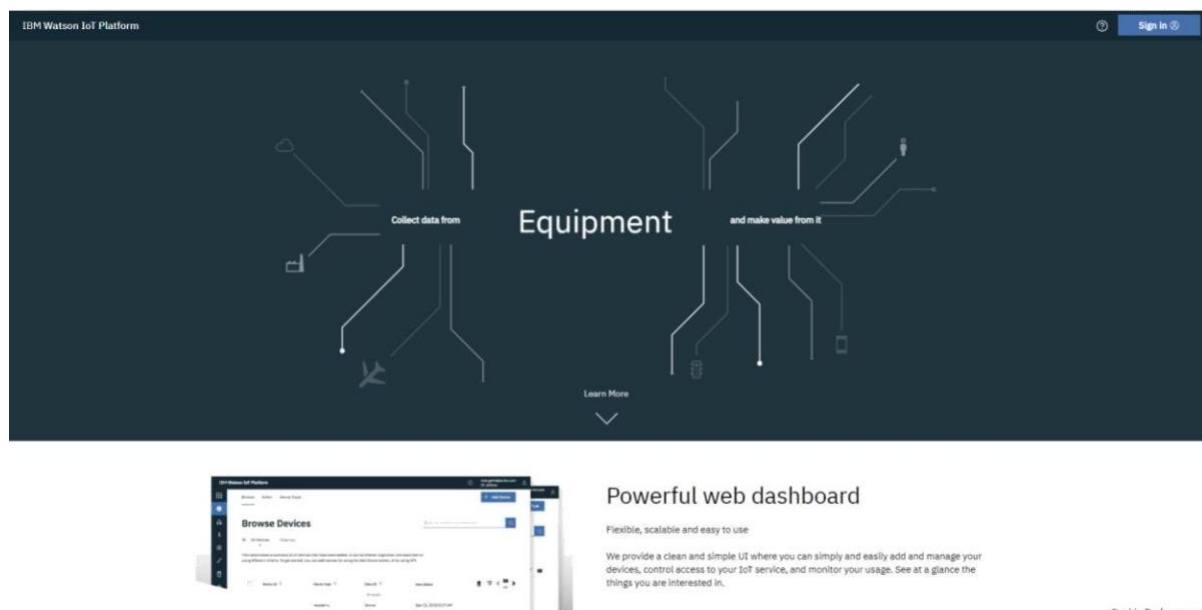
The screenshot shows the IBM Cloud console for the "Internet of Things Platform-60" resource. The page is titled "Internet of Things Platform-60" and includes a "Launch" button. The "Ready for the next level?" section shows the "IBM Watson IoT Platform Journey" with three stages: Lite, Non-Production, and Production. The "Lite" stage is selected, and the "Launch" button is visible. The "Summary" panel on the right shows the service name "Internet of Things Platform-60" and the resource group "Default". The "Create" button is visible at the bottom right of the summary panel.

Stage	Features
Lite	The Lite service plan provides a lightweight development environment to get you started with the connectivity capabilities of Watson IoT Platform. <ul style="list-style-type: none"><li>Free</li><li>200 MB data-transfer limit</li><li>500 application binding limit</li><li>500 registered devices limit</li></ul>
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. <ul style="list-style-type: none"><li>Starts at \$500 per month</li><li>Capacity limit based on device type</li><li>Optional Analytics Service and Blockchain Service add-ons</li></ul>
Production	The Production service is a fully managed SaaS offering that enables you to manage and analyze enterprise IoT data. <ul style="list-style-type: none"><li>Includes IBM Service &amp; Support</li><li>Pricing based on number of devices per device type</li><li>Optional Analytics Service and Blockchain Service add-ons</li></ul>

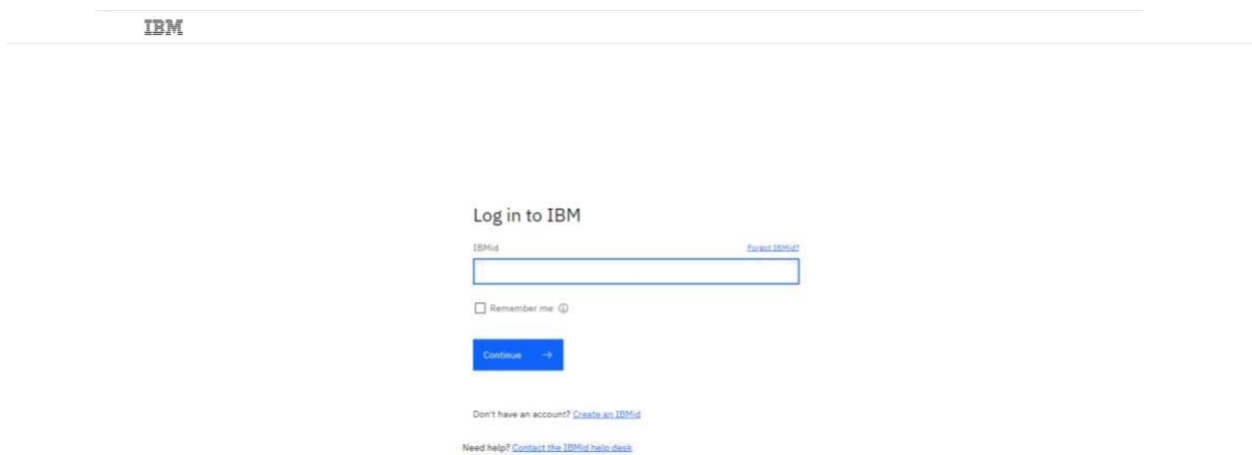
7. Internet of Things Platform Child\_safety will be created, where there are different options like manage, plan, and connection ( manage is for launch, Plan gives us the idea about the payment package and its upgrades, and lastly the connection is for to connect IoT with other services)



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.



IBM

Log in to IBM

IBMid [Forgot IBMid?](#)

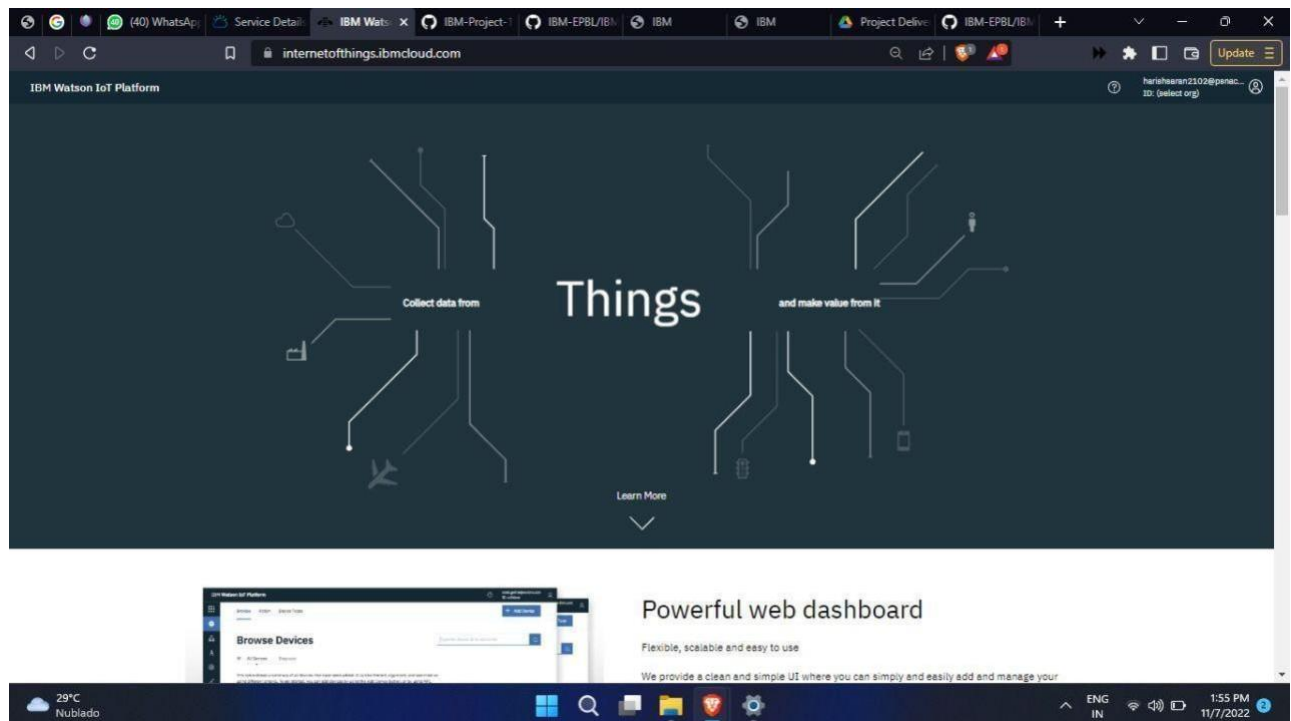
☐ Remember me ⓘ

[Continue](#) →

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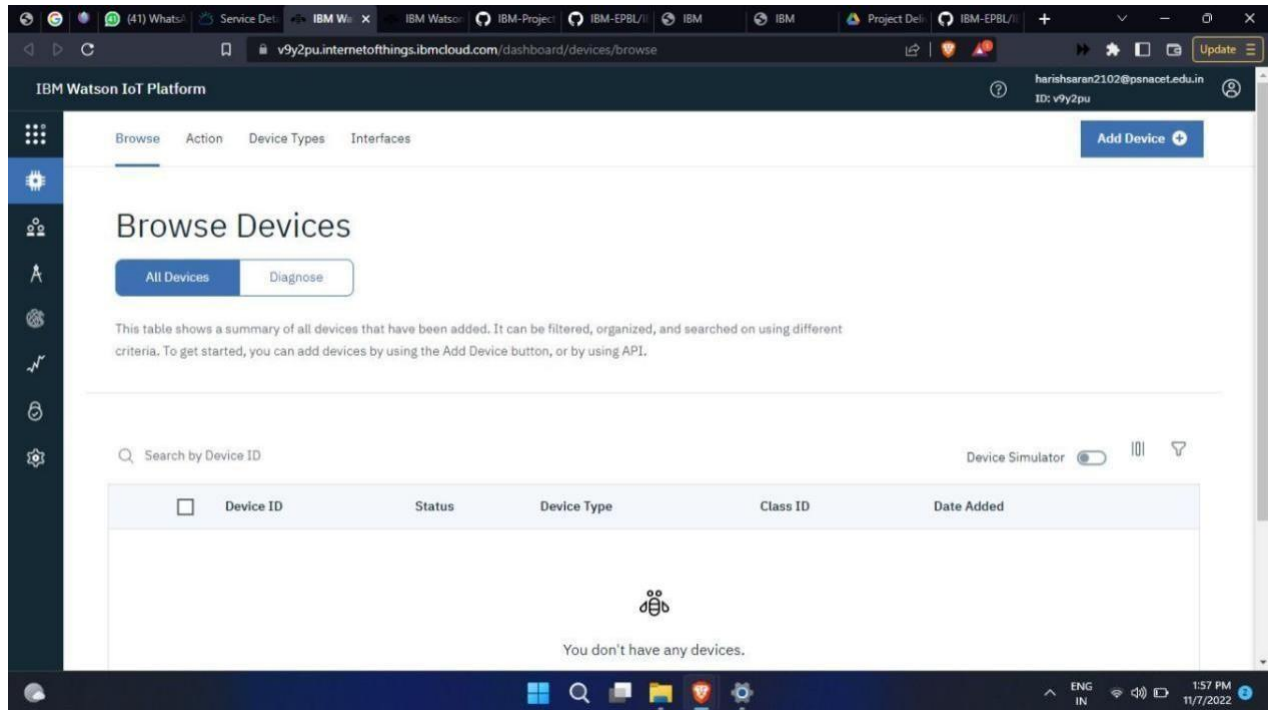
Need help? [Contact the IBMid help desk](#)

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

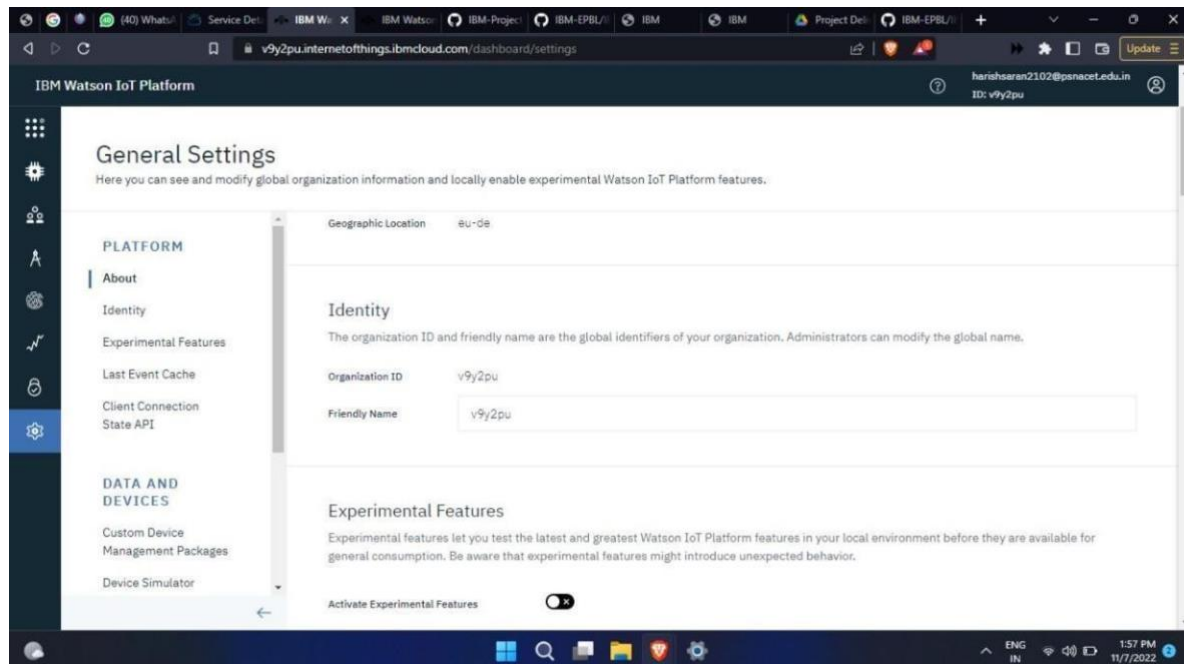




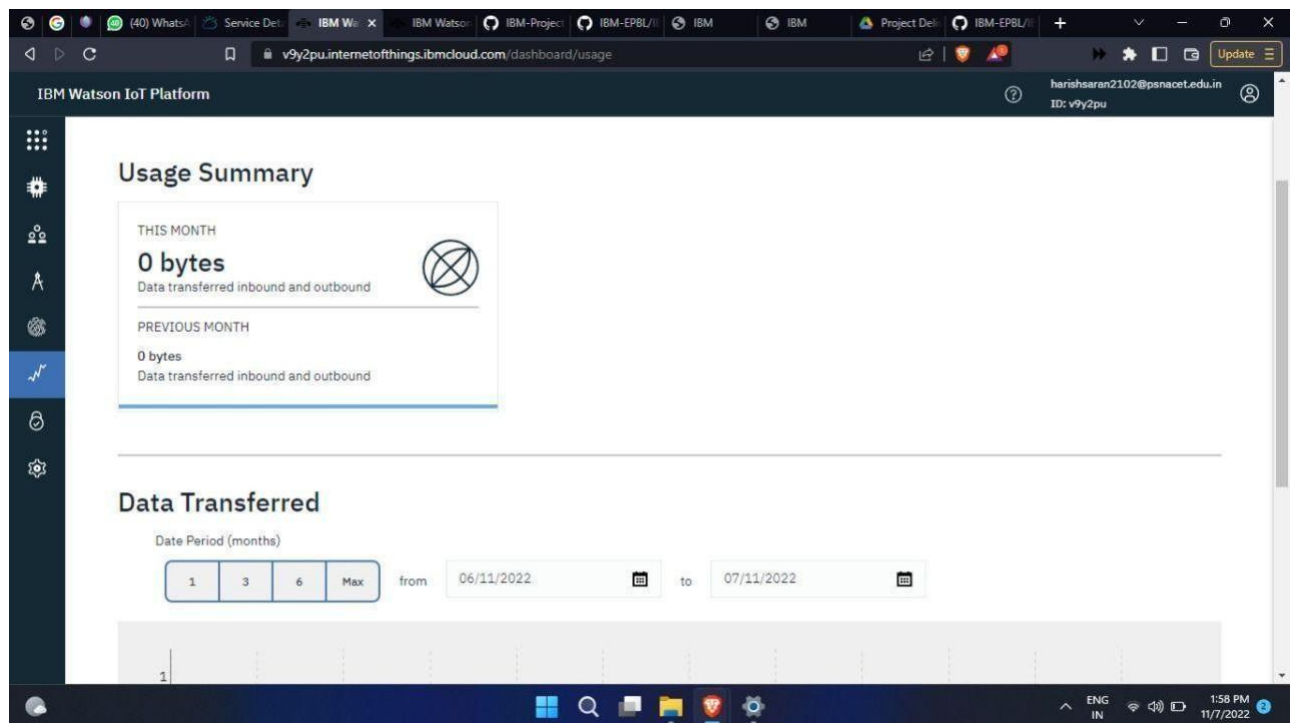
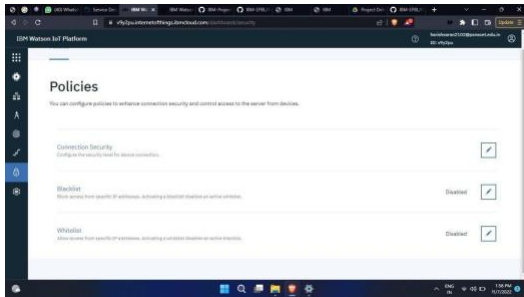
11. And again clicking on the launch button will open this tab, the device will help in the creation of the devices, the addition of devices, and the display of details of the devices.



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.



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

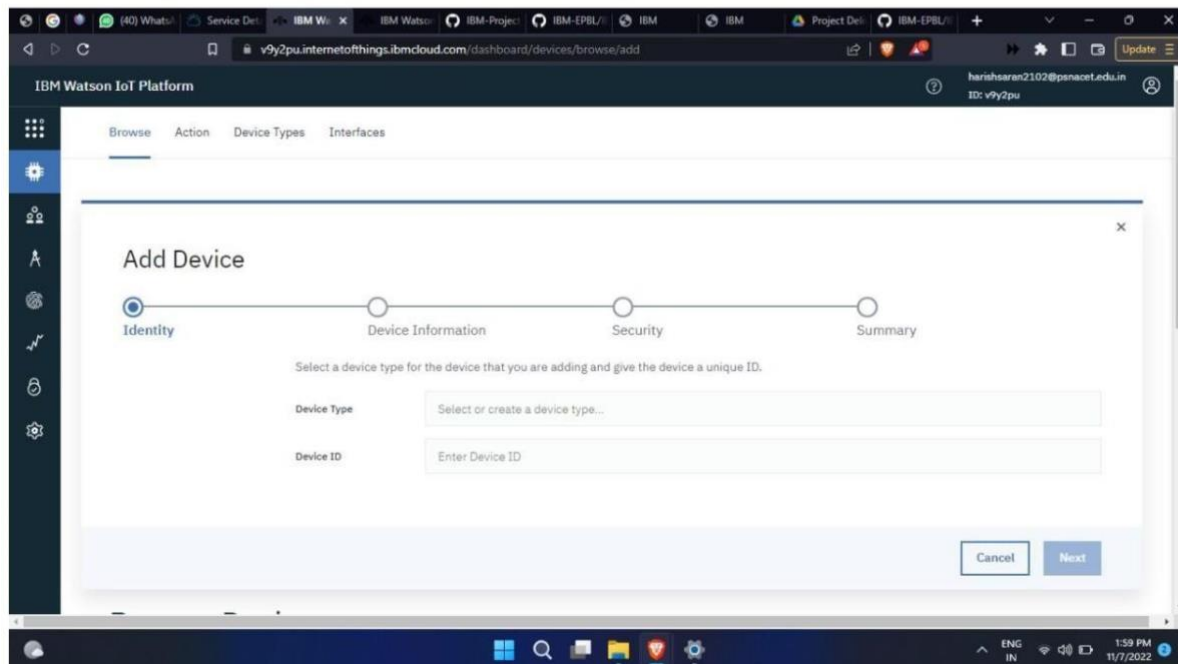
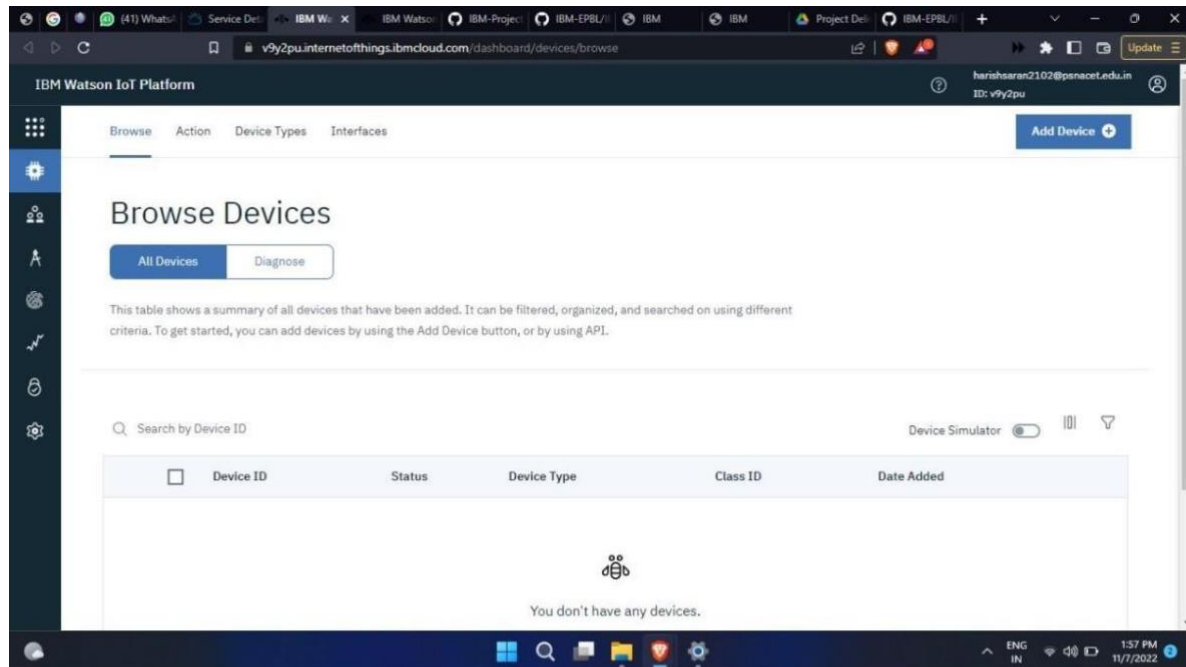
The screenshot displays the 'Browse Members' interface in the IBM Watson IoT Platform. The page title is 'Browse Members'. Below the title, there is a search bar with the placeholder text 'Type the member email to search for'. A table lists the members of the organization. The table has columns for 'Email Address', 'Name', 'Role', 'Added By', and 'Expires'. There is one member listed: harishsaran2102@psnacet.edu.in, with the role of Administrator. The page also features an 'Add Members' button in the top right corner and a sidebar with various navigation icons on the left.

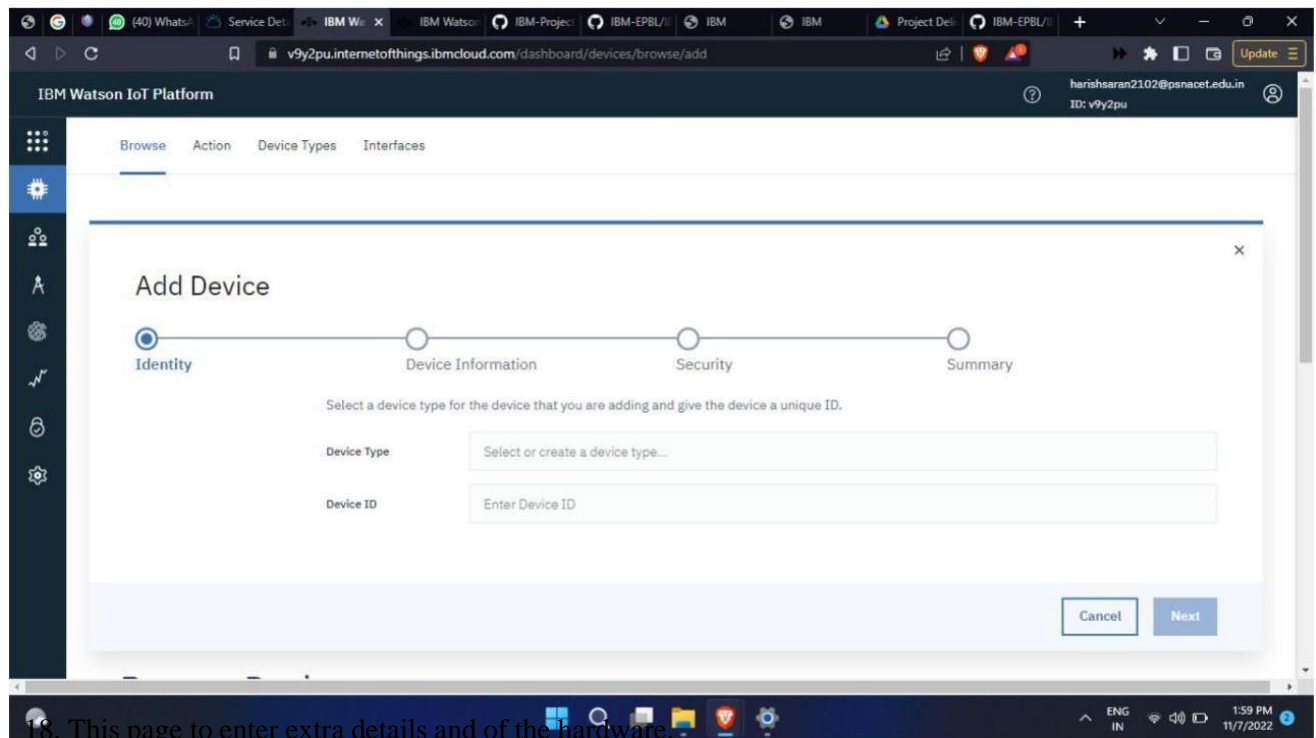
Email Address	Name	Role	Added By	Expires
harishsaran2102@psnacet.edu.in	harishsaran2102@psn...	Administrator	-	-

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

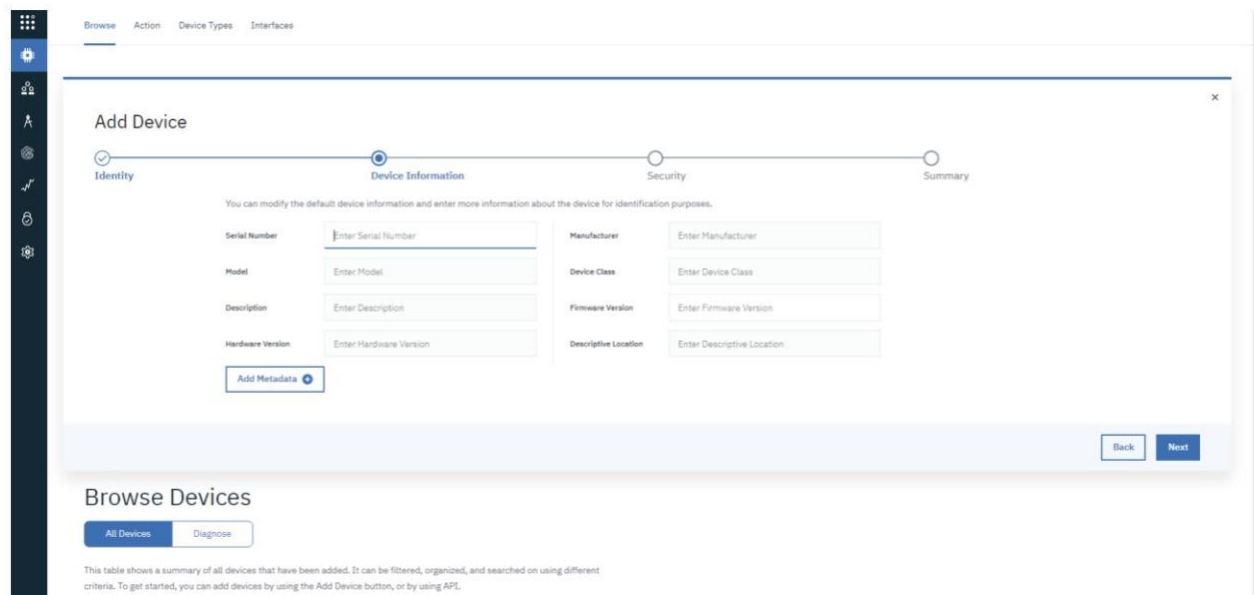


17. Click on the device tab and click on the add device button, then give the device type and device id and click next.





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 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 marked with a checkmark, and the 'Device Information' step is also marked with a checkmark. The 'Summary' step is marked with a circle. The 'Security' step contains two options for selecting a device authentication token: 'Auto-generated authentication token (default)' and 'Self-provided authentication token'. The 'Auto-generated authentication token' option is selected. Below the options, there is a text input field labeled 'Authentication token' with the placeholder text '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. Authentication token are encrypted before we store them.' At the bottom right of the wizard, there are 'Back' and 'Next' buttons. Below the wizard, the text 'Browse Devices' is visible.

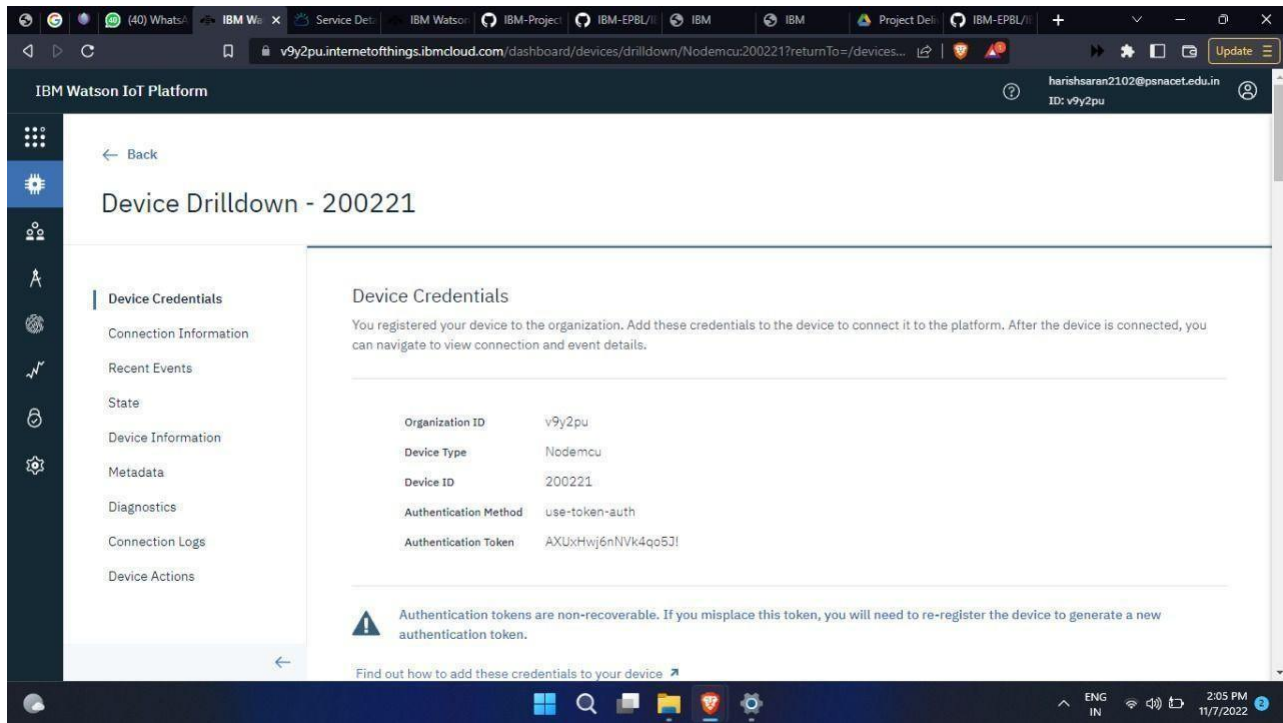
20. Clicking on next it goes to the summary of the device then click finish.

The screenshot shows the 'Add Device' wizard in the IBM Watson IoT Platform, now at the 'Summary' step. The 'Security' step is marked with a checkmark, and the 'Summary' step is marked with a blue circle. The 'Identity' and 'Device Information' steps are also marked with checkmarks. The 'Summary' step contains a message: 'Verify that the following information is correct then select Finish'. Below the message, there is a table with the following information:

Device Type	Nodemcu
Device ID	200221
Security Token	To be generated

Below the table, there is a 'View Metadata' button. At the bottom right of the wizard, there is a 'Finish' button. The browser address bar shows the URL: [v9y2pu.internetofthings.ibmcloud.com/dashboard/devices/browse/add](https://v9y2pu.internetofthings.ibmcloud.com/dashboard/devices/browse/add). The user's name and ID are visible in the top right corner: 'harisharan2102@psnacet.edu.in' and 'ID: v9y2pu'. The Windows taskbar at the bottom shows the time as 2:04 PM on 11/7/2022.

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

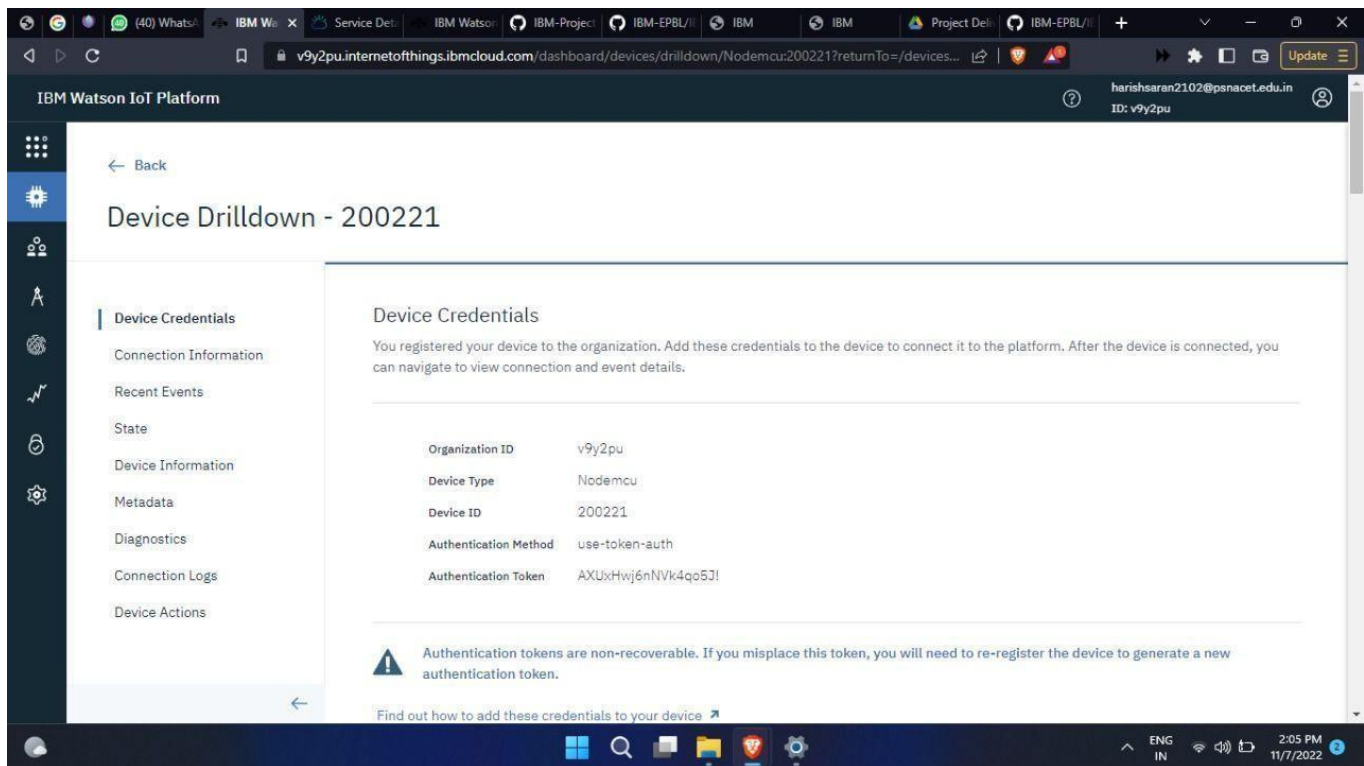


The screenshot shows the IBM Watson IoT Platform interface. The browser address bar displays the URL: `v9y2pu.internetofthings.ibmcloud.com/dashboard/devices/drilldown/Nodemcu:200221?returnTo=/devices...`. The page title is "Device Drilldown - 200221". On the left, a sidebar menu lists options: Device Credentials (selected), Connection Information, Recent Events, State, Device Information, Metadata, Diagnostics, Connection Logs, and Device Actions. The main content area, titled "Device Credentials", contains the following details:

Organization ID	v9y2pu
Device Type	Nodemcu
Device ID	200221
Authentication Method	use-token-auth
Authentication Token	AXUxHwj6nNVk4qo5Jl

Below the table, a warning icon and text state: "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 at the bottom says "Find out how to add these credentials to your device". The user's profile in the top right shows "harisharan2102@psnacet.edu.in" and "ID: v9y2pu". The system clock at the bottom right indicates "2:05 PM 11/7/2022".

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 is identical to the one above, showing the same IBM Watson IoT Platform interface with the "Device Credentials" for device 200221. The details table and warning message are the same. The browser address bar and user profile information are also consistent with the previous image.

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

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

Device ID	Status	Device Type	Class ID	Date Added
200221	Disconnected	Nodemcu	Device	7 Nov 2022 14:05

Items per page 50 | 1-1 of 1 item

1 of 1 page

IBM Watson IoT Platform

Browse Action Device Types Interfaces

Add Device

Search by Device ID

Device Simulator

Device ID	Status	Device Type	Class ID	Date Added
200221	Disconnected	Nodemcu	Device	7 Nov 2022 14:05

Identity Device Information Recent Events State Logs

Device ID: 200221

Device Type: Nodemcu

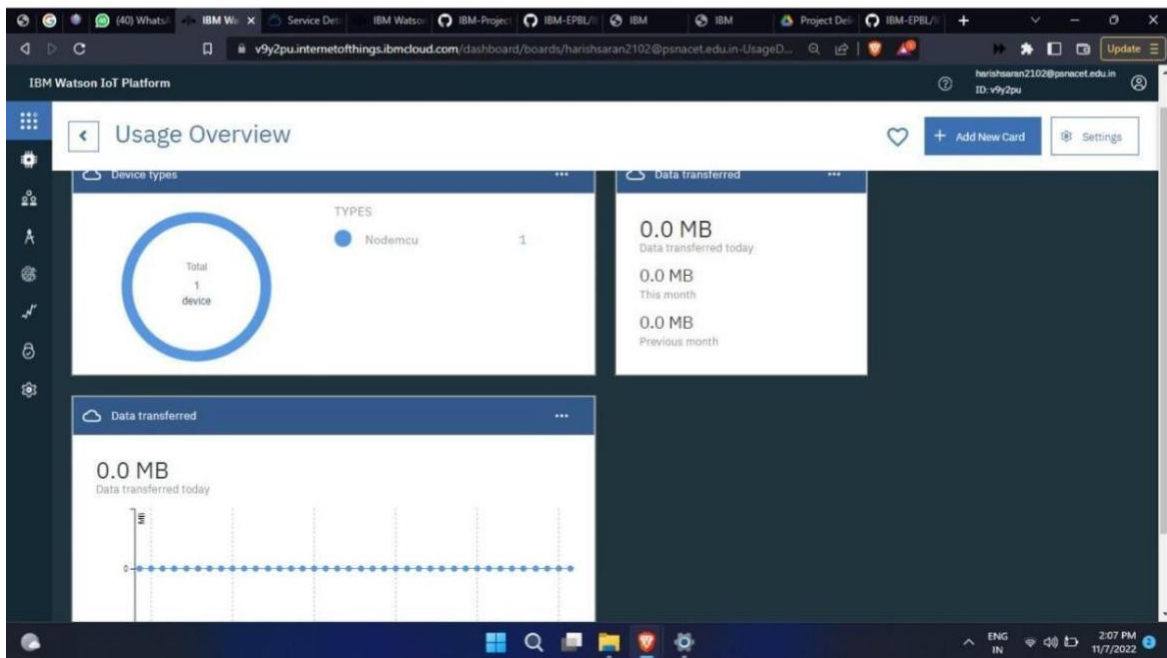
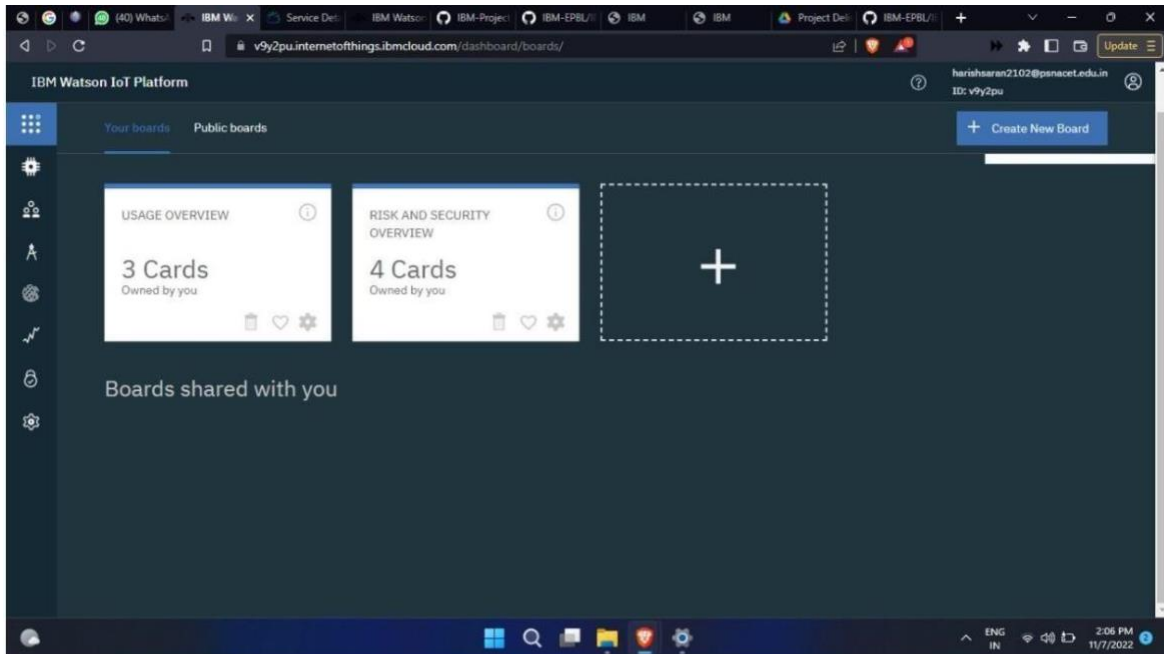
Date Added: 7 Nov 2022 14:05

Added By: harishsaran2102@psnacet.edu.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