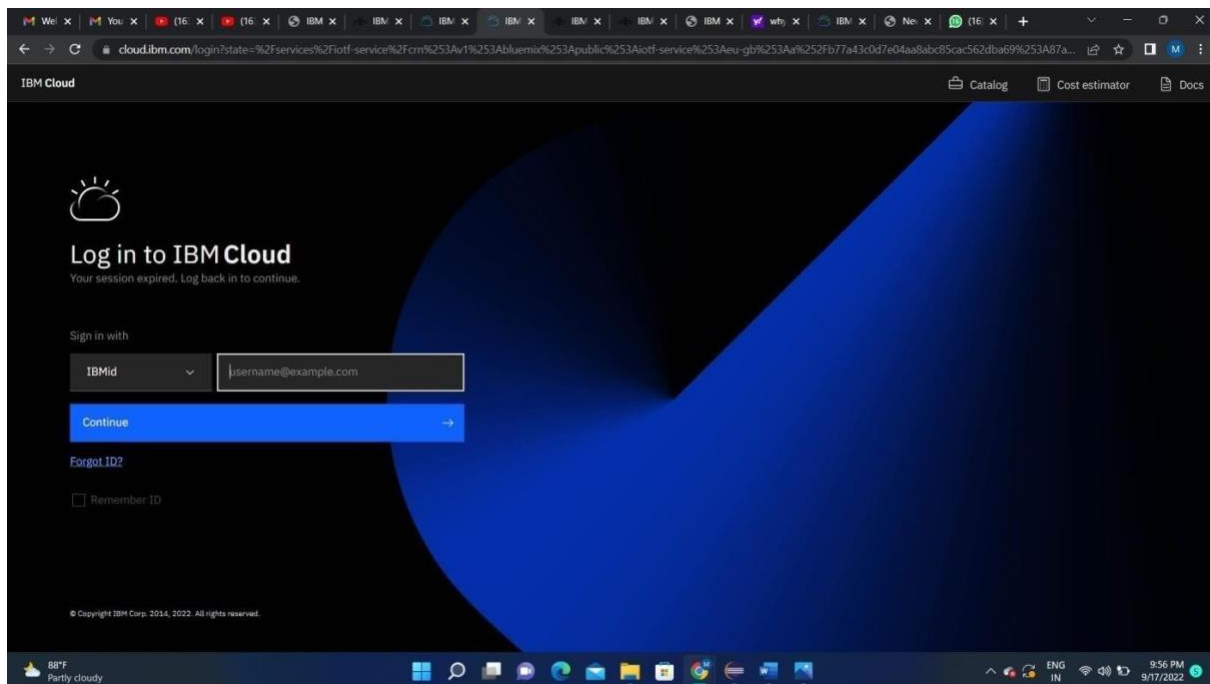


CREATE IBM WATSON IOT PLATFORM AND DEVICE

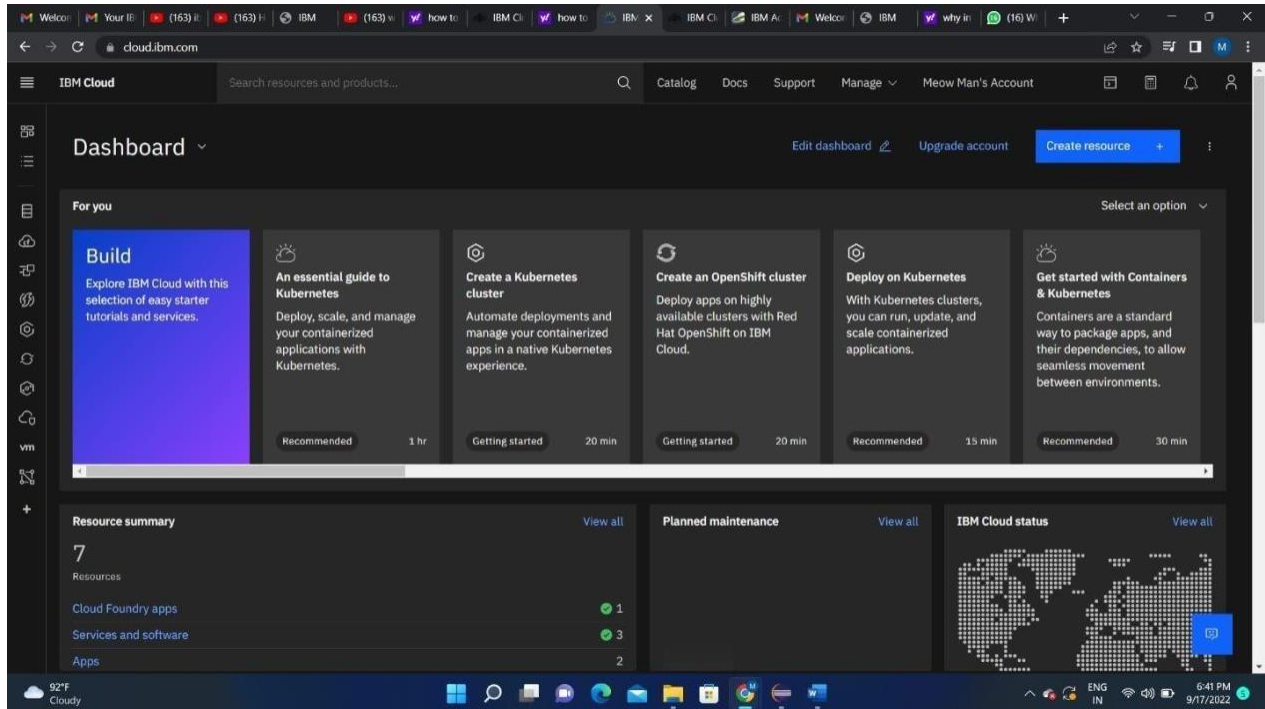
Date	15 November 2022
Team ID	PNT2022TMID08696
Project Name	Project - IOT Based Safety Gadget for Childsafety Monitoring and Notification.
Maximum Marks	4 Marks

STEPS:

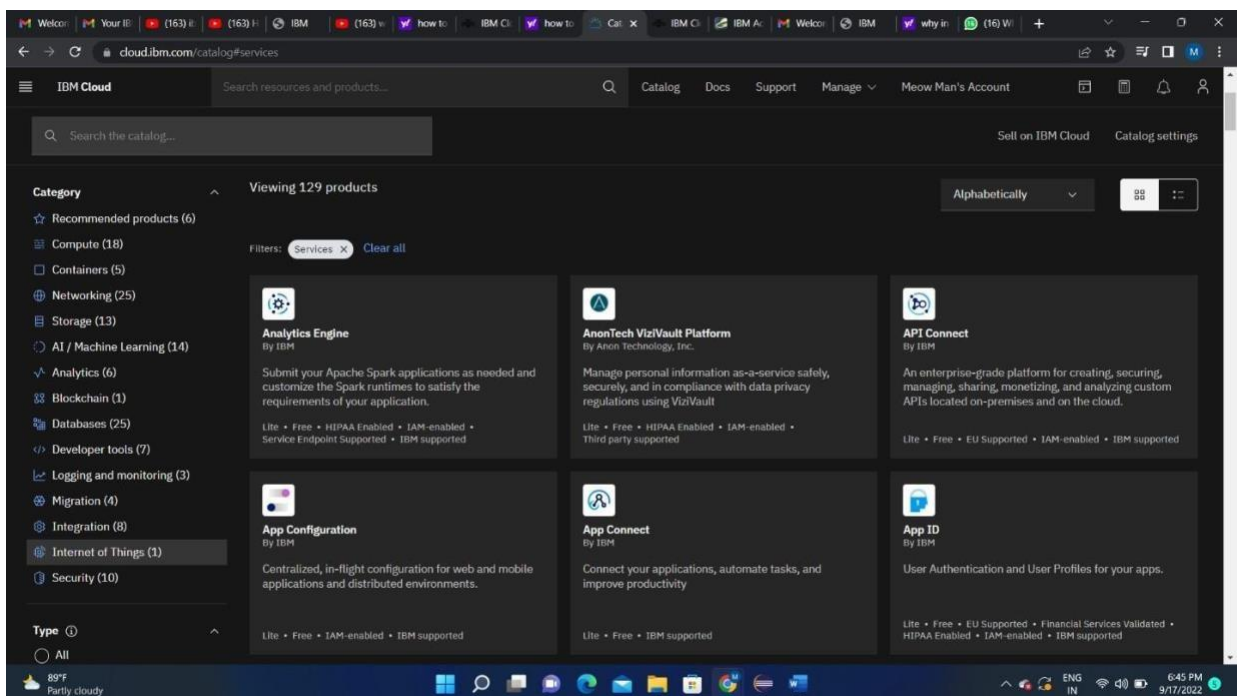
1. Firstly create an IBM cloud account with IBMid and password



2. Home page of IBM cloud



3. Click on the catalog on the top



Click on IoT in the category mentioned

The screenshot shows the IBM Cloud IoT 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 a table with one plan: 'Lite'. The table has columns for 'Plan', 'Features', and 'Pricing'. The 'Lite' plan is free and includes up to 500 registered devices and a maximum of 200 MB of each data metric. A warning message on the right 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.

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

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

The screenshot shows the IBM Cloud IoT Platform service page with the 'Configure your resource' section. The 'Lite' plan is selected. The 'Service name' field is filled with 'Internet of Things Platform-bb'. The 'Tags' field is filled with 'Examples: env:dev, version:1'. The 'Access management tags' field is filled with 'Examples: access:dev, proj:version:1'. The 'Create' button is disabled. A warning message on the right 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.

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. 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, displaying a 'Select a location' dropdown menu with 'Dallas (us-south)' selected. Below this is a 'Select a pricing plan' section with a table showing the 'Lite' plan, which is free and includes up to 500 registered devices and 200 MB of data metric. 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, and the 'Add to estimate' button is visible. The right sidebar shows the 'Summary' section with details: 'Internet of Things Platform', 'Free', 'Location: Dallas', 'Plan: Lite', 'Service name: Internet of Things Platform-2w', and 'Resource group: Default'. The bottom of the page shows the Windows taskbar with the date 9/17/2022 and time 7:23 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

The screenshot shows the 'Configure your resource' section of the IBM Cloud Internet of Things Platform service page. The 'Service name' field is filled with 'Internet of Things Platform-child_safety'. The 'Select a resource group' dropdown menu shows 'Default' selected. The 'Tags' field is empty, with examples provided: 'env:dev, version-1'. The 'Access management tags' field is also empty, with examples: 'access:dev, proj:version-1'. The 'Create' button is now enabled and highlighted in blue. The right sidebar shows the 'Summary' section with details: 'Internet of Things Platform', 'Free', 'Location: London', 'Plan: Lite', 'Service name: Internet of Things Platform-child_safety', and 'Resource group: Default'. The bottom of the page shows the Windows taskbar with the date 9/17/2022 and time 7:26 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. 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)

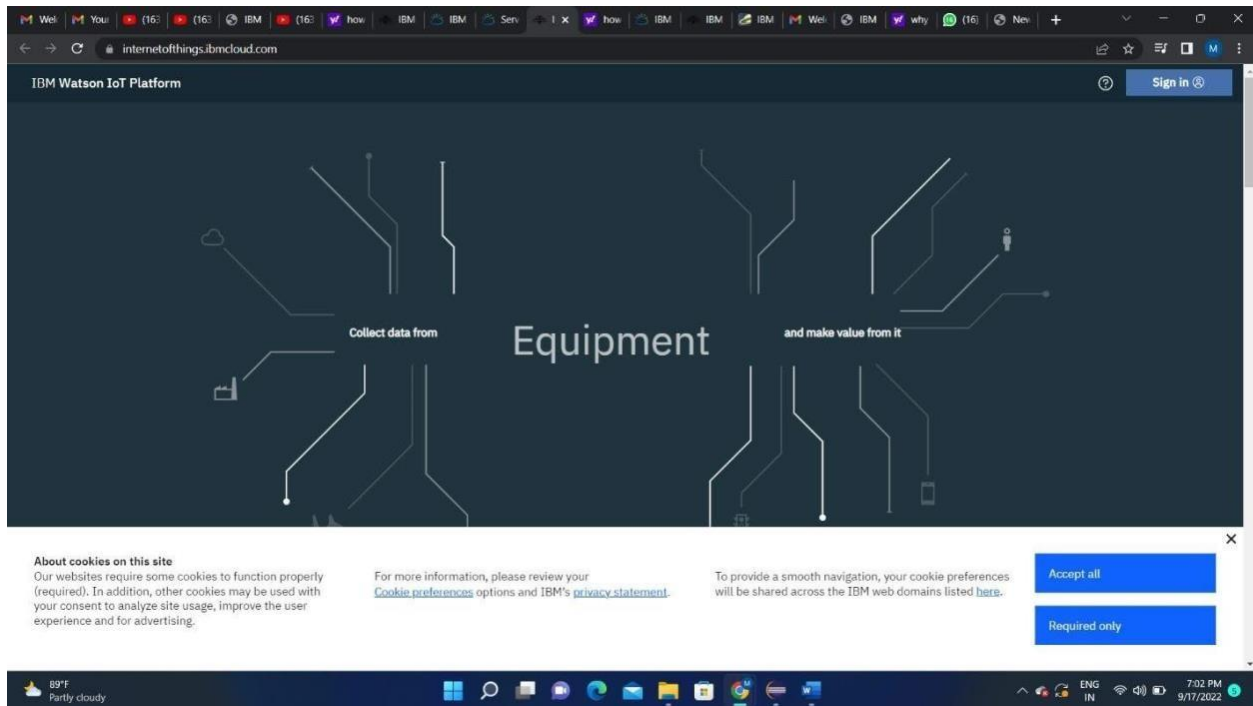
The screenshot shows the IBM Cloud IoT Platform console. The top navigation bar includes 'IBM Cloud', a search bar, and links for 'Catalog', 'Docs', 'Support', 'Manage', and 'Meow Man's Account'. The main header displays 'Resource list / Internet of Things Platform-child_safety' with an 'Active' status 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 large graphic of a device with a lock icon and the text 'Let's get started with IBM Watson IoT Platform'. Below this, there are three service plans: 'Lite' (Free), 'Non-Production' (Starts at \$500 per month), and 'Production' (Includes IBM Service & Support). The bottom of the screen shows a Windows taskbar with various application icons and a system tray with the date and time (7:28 PM, 9/17/2022).

The screenshot shows the IBM Cloud IoT Platform console with the 'Plan' tab selected. The main content area displays the 'Current plan' as 'Lite'. Below this, there are 'Features' listed: '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', and 'Maximum of 200 MB of each of data exchanged, data analyzed and edge data analyzed'. To the right, the 'Current usage' is shown as 'N/A' with a note: 'Lite plan services are deleted after 30 days of inactivity.' Below the plan details, there is a 'Change pricing plan' section with a table showing the 'Lite' plan and its features and pricing.

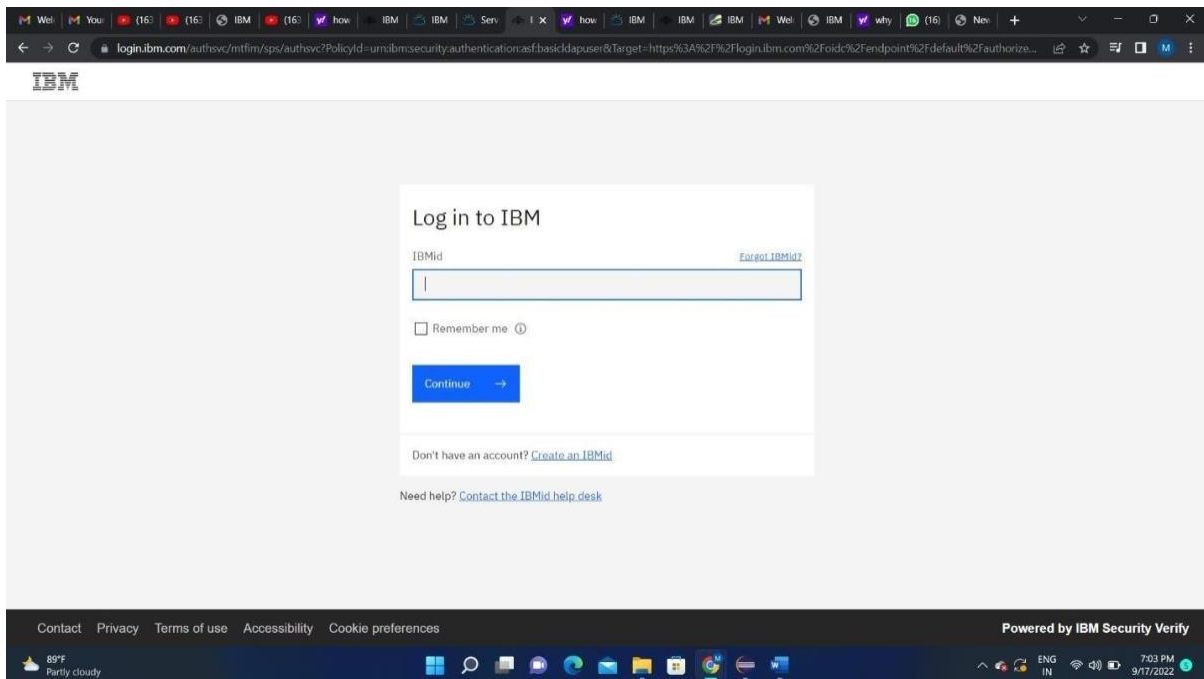
Plan	Features	Pricing
Lite	Includes up to 500 registered devices, and a maximum of 200 MB of each data metric Maximum of 500 registered devices Maximum of 500 application bindings Maximum of 200 MB of each of data exchanged, data analyzed and edge data analyzed	Free

The bottom of the screen shows a Windows taskbar with various application icons and a system tray with the date and time (7:28 PM, 9/17/2022).

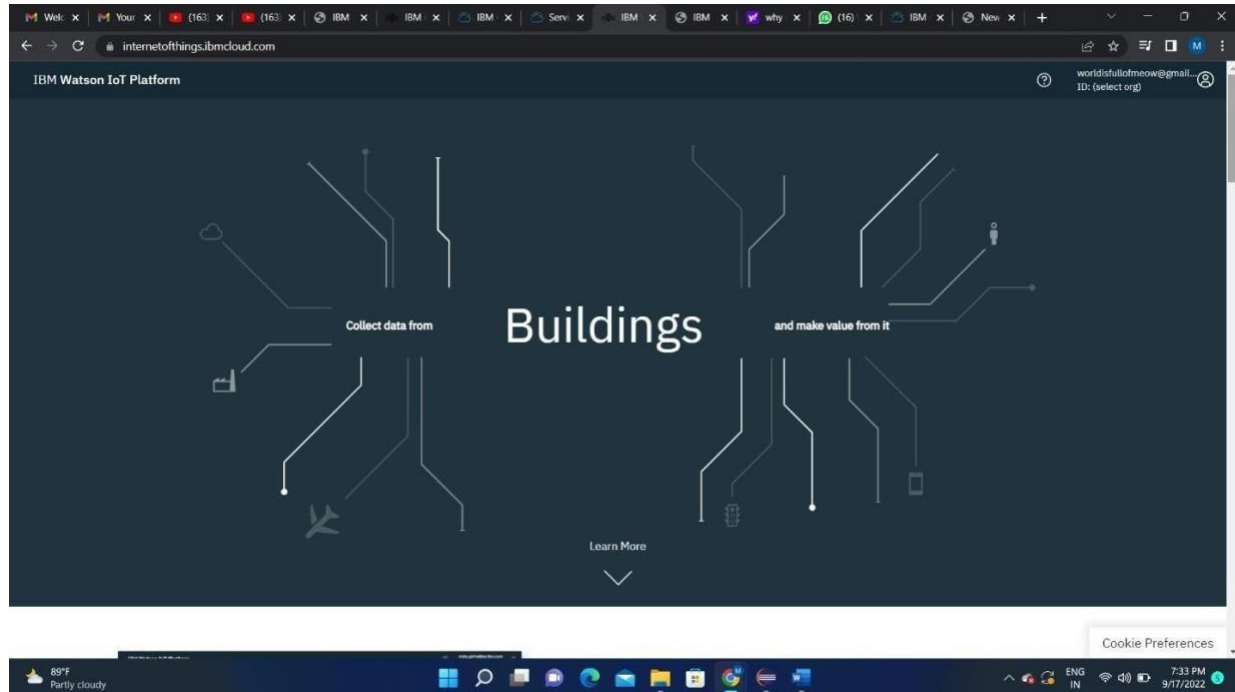
7. Clicking on the launch button in the manage tab, it will open to this



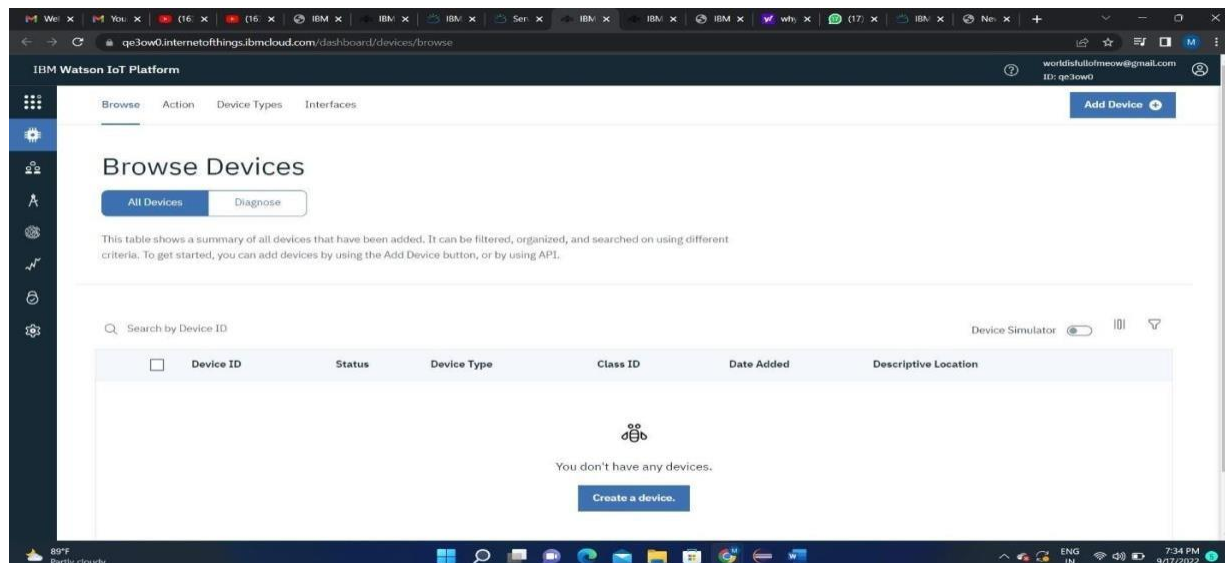
8. Enter the details to sign in to the Watson Cloud to create a device



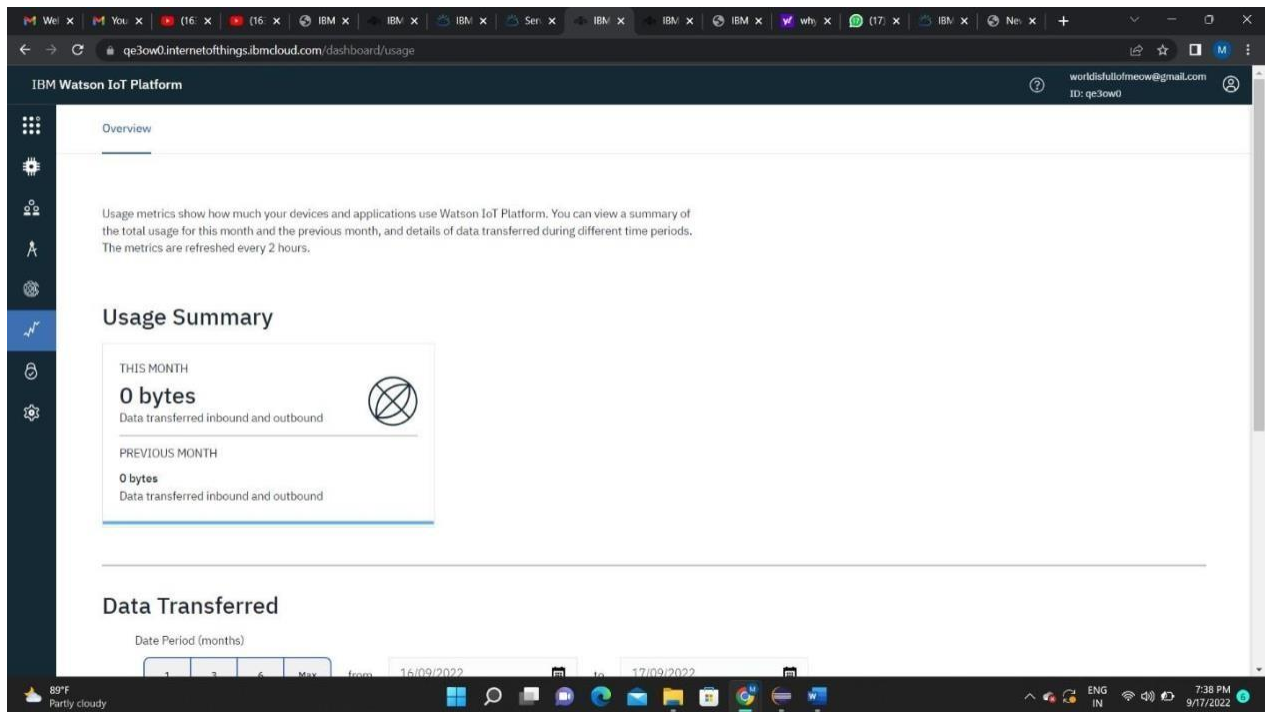
9. Once logged in the name will be displayed and it goes back to the first page



10. 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



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

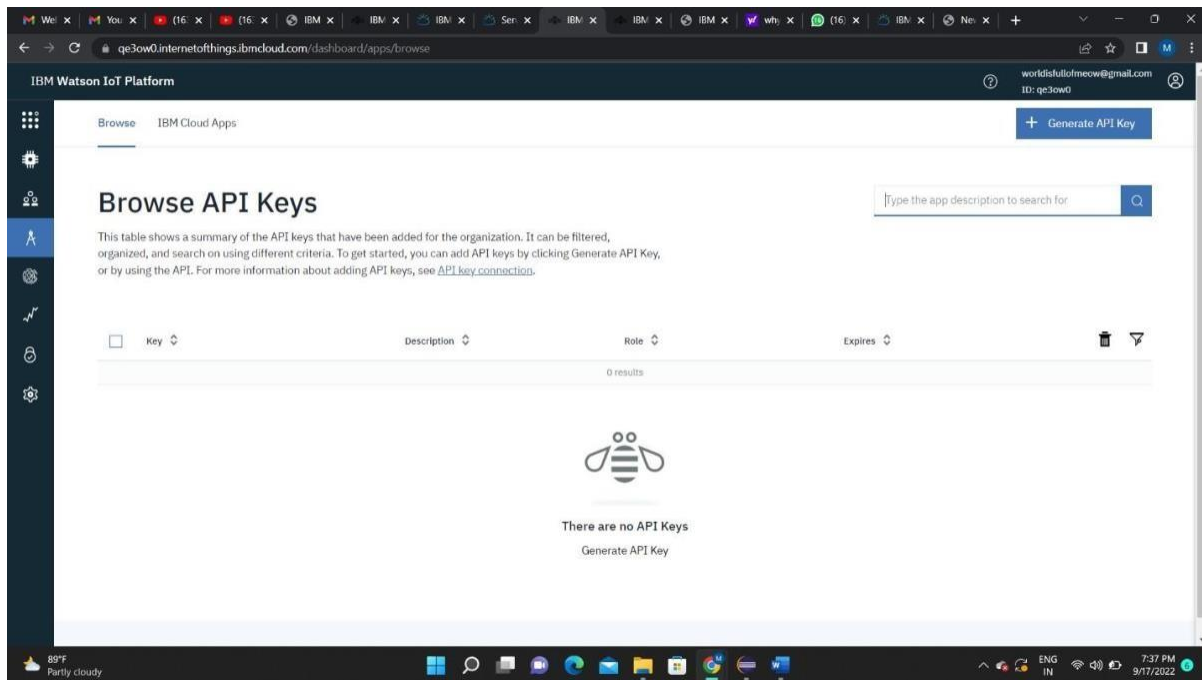


12. The member tab is add the teams members to work in the platform

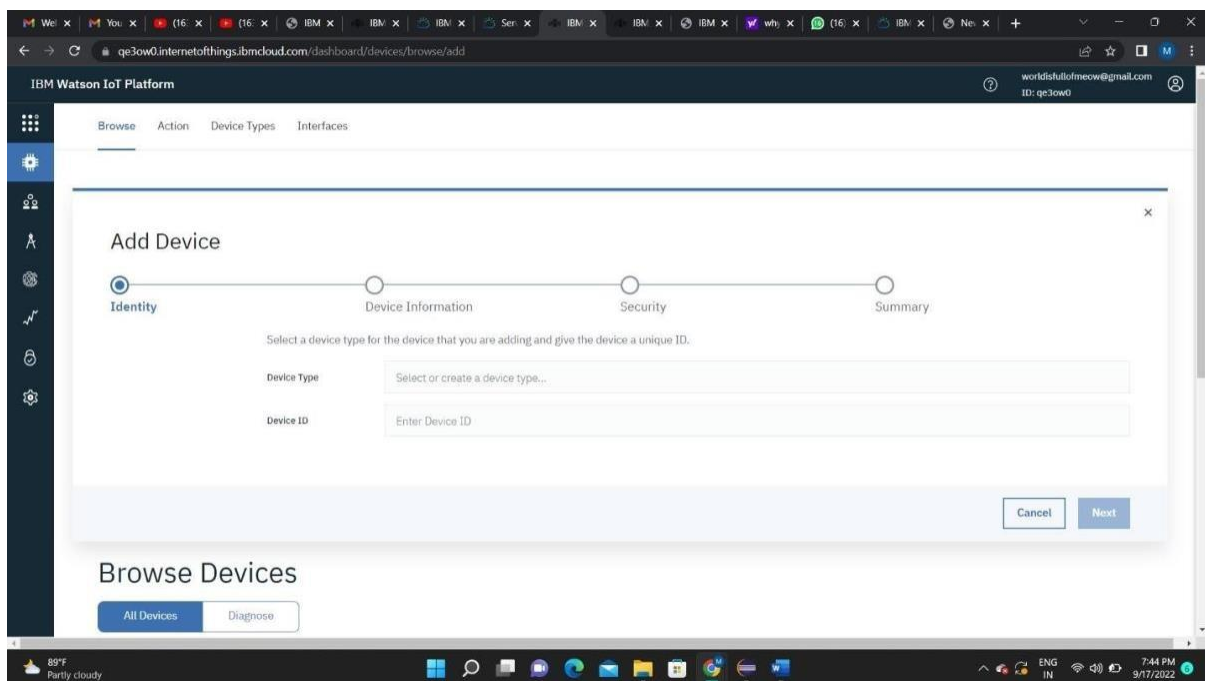
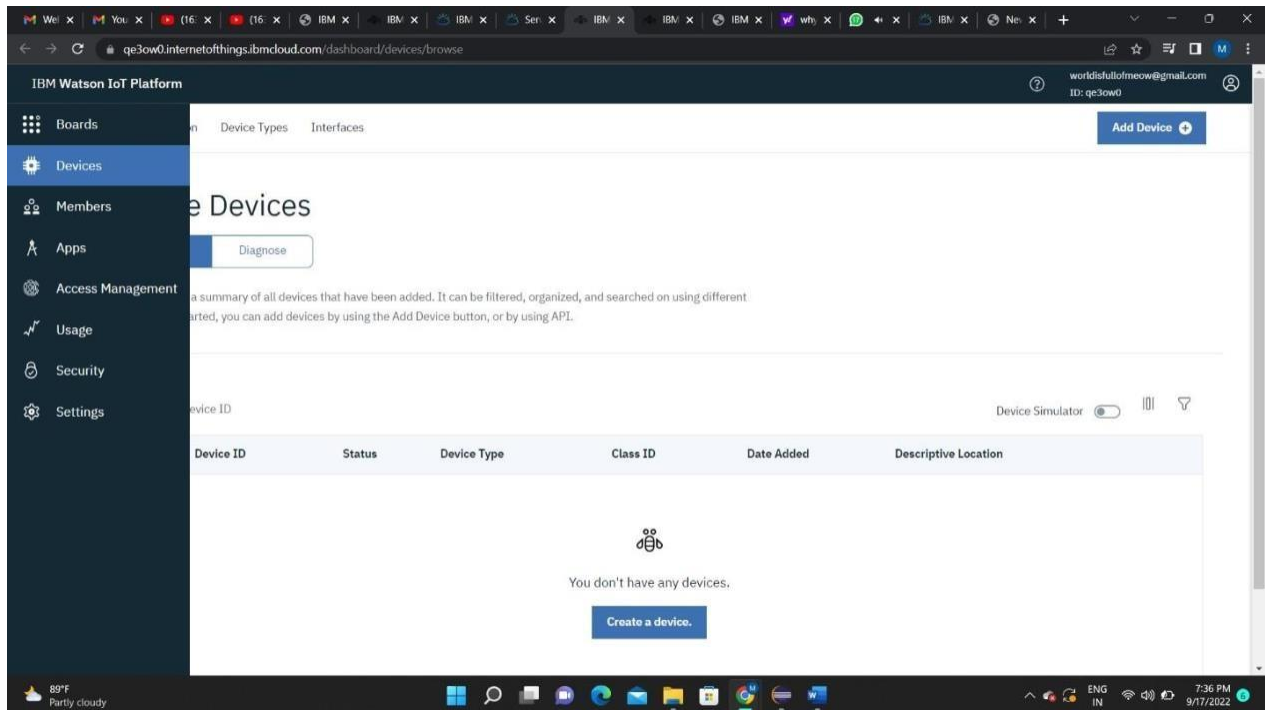
The screenshot shows the 'Browse Members' page in the IBM Watson IoT Platform. The page title is 'Browse Members'. Below the title, there is a search bar with the placeholder text 'Type the member email to search for'. Below the search bar, there is a table showing the members of the organization. The table has columns for 'Email Address', 'Name', 'Role', 'Added By', and 'Expires'. There is one member listed: 'worldisfulofmeow@gmail.com' with the role of 'Administrator'. The page includes a sidebar with navigation icons and a top navigation bar with the user's email and ID. The bottom of the screen shows a Windows taskbar with various application icons and system information like temperature and time.

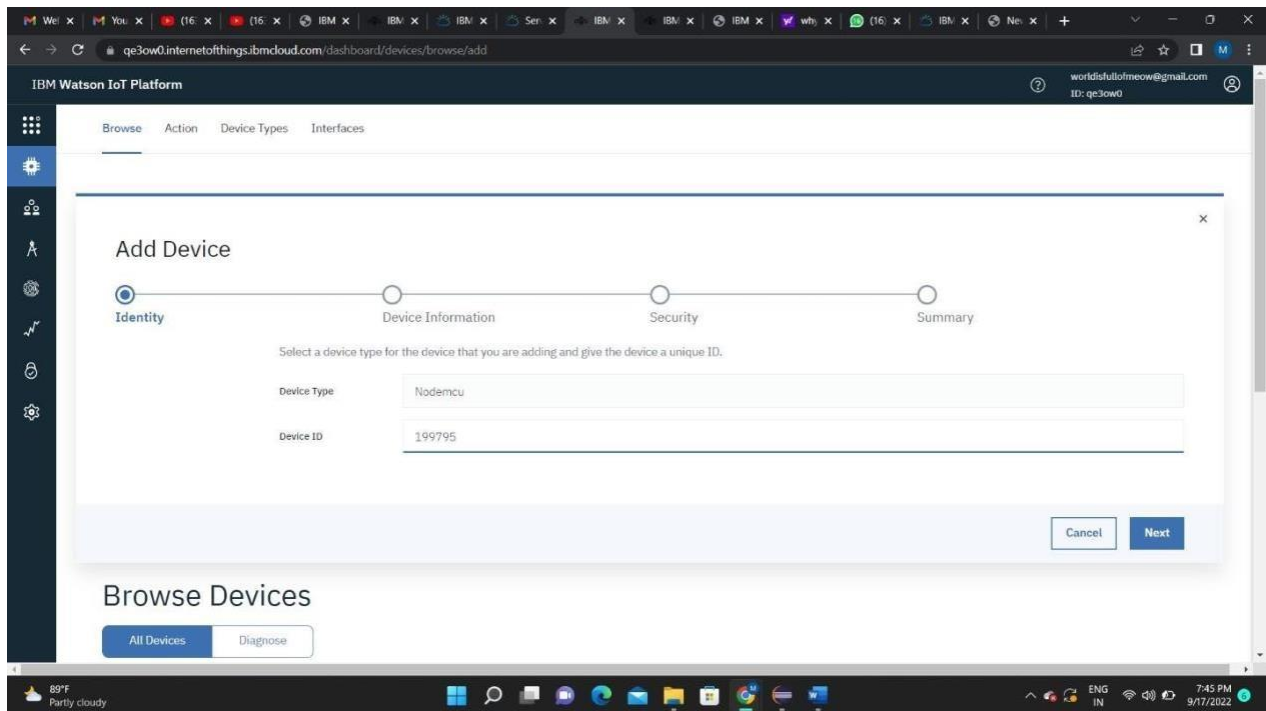
Email Address	Name	Role	Added By	Expires
worldisfulofmeow@gmail.com	worldisfulofmeow@gmail.com	Administrator	-	-

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

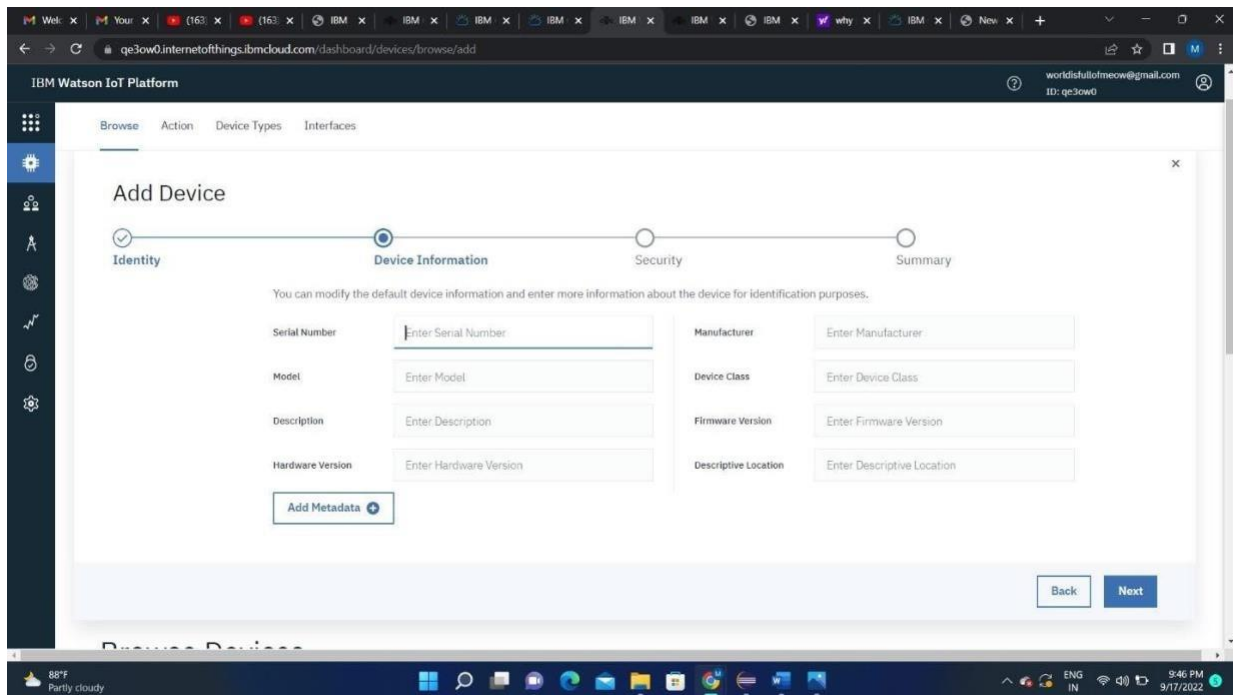


14. Click on the device tab and click on the add device button, then give the device type and device id and click next





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



16. 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 authentication tokens: '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.

17. 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. It displays the information entered in the previous steps: 'Device Type: NodeMCU', 'Device ID: 199795', and 'Security Token: 1997199520012005'. A 'View Metadata' button is visible next to 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

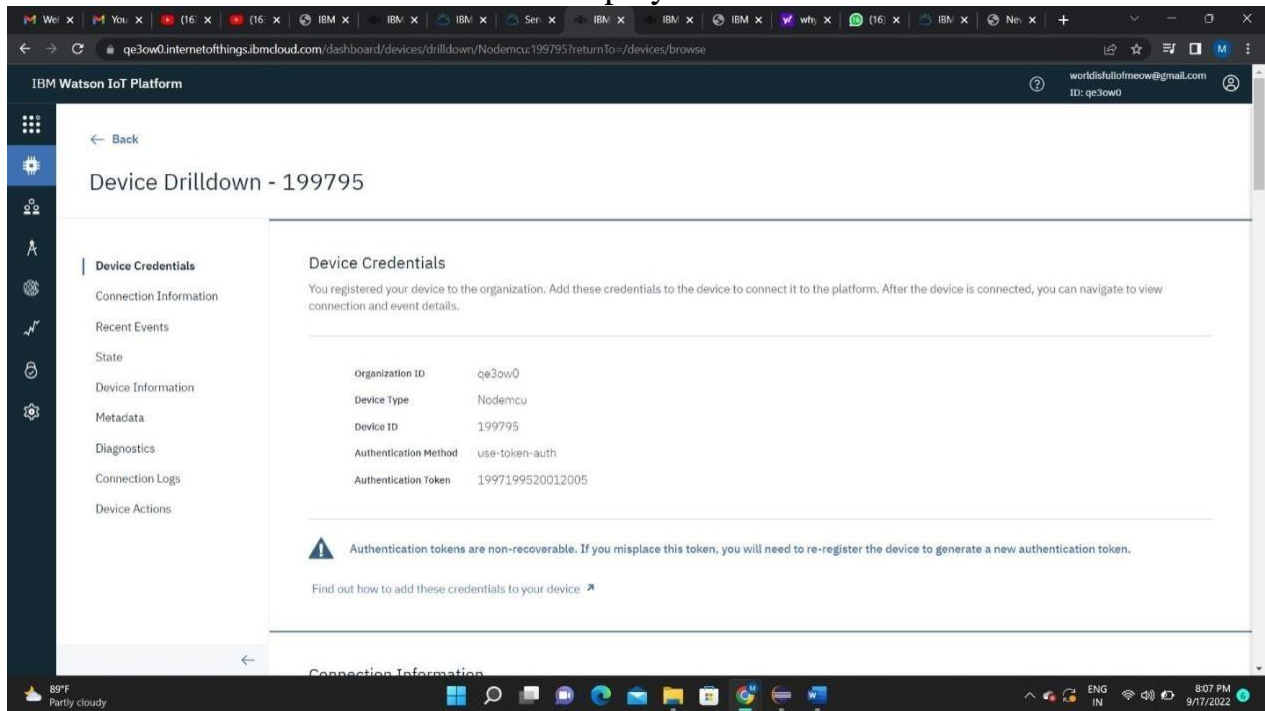
Device ID
199795

View Metadata

Security Token
1997199520012005

Back Finish

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

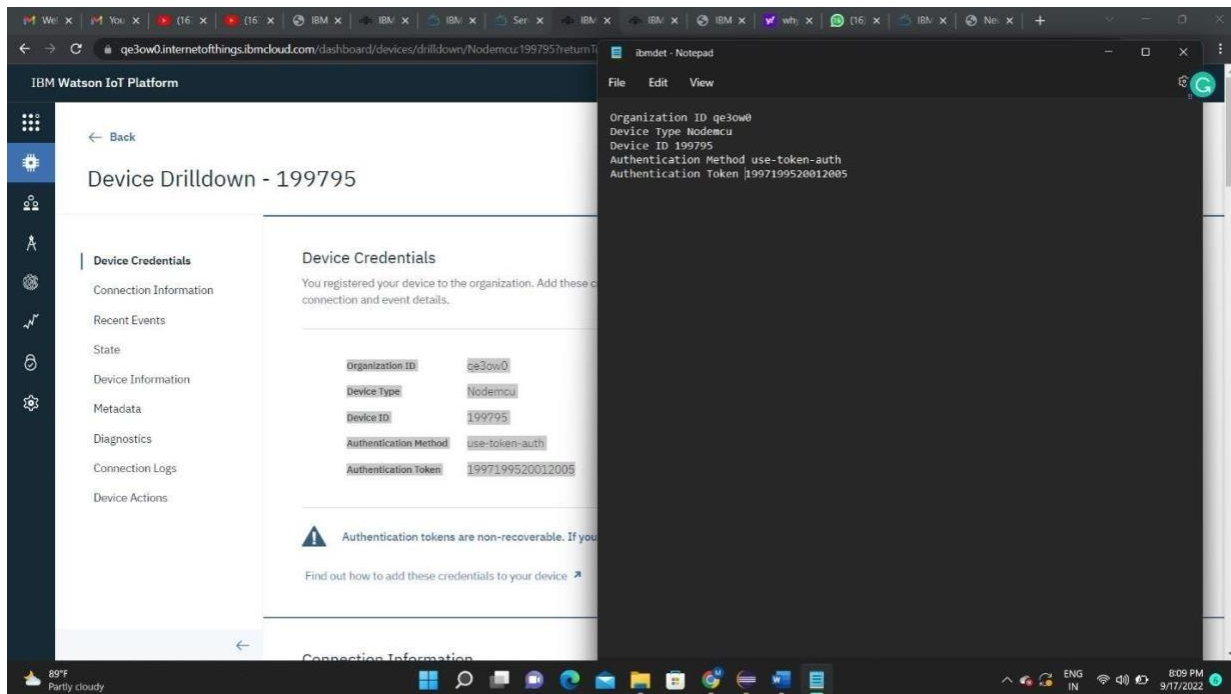


The screenshot shows the IBM Watson IoT Platform interface. The left sidebar contains navigation icons. The main content area is titled 'Device Drilldown - 199795'. Under the 'Device Credentials' tab, a table displays the following information:

Organization ID	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 is provided to 'Find out how to add these credentials to your device'.

19. Safe the details of the device as the authentication tokens are non-recoverable 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
```


20. 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 labeled 'Search by Device ID' is present. A table lists devices with columns: Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location. One device is listed with ID 199795, Status Disconnected, and Device Type Nodemcu. Below the table, a detailed view for the selected device is shown, featuring tabs for Identity, Device Information, Recent Events, State, and Logs. The 'Recent Events' tab is active, 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.

This screenshot shows the same IBM Watson IoT Platform dashboard as the previous one, but with the 'Device Information' tab selected for the device with ID 199795. The 'Device Information' tab displays the following details:

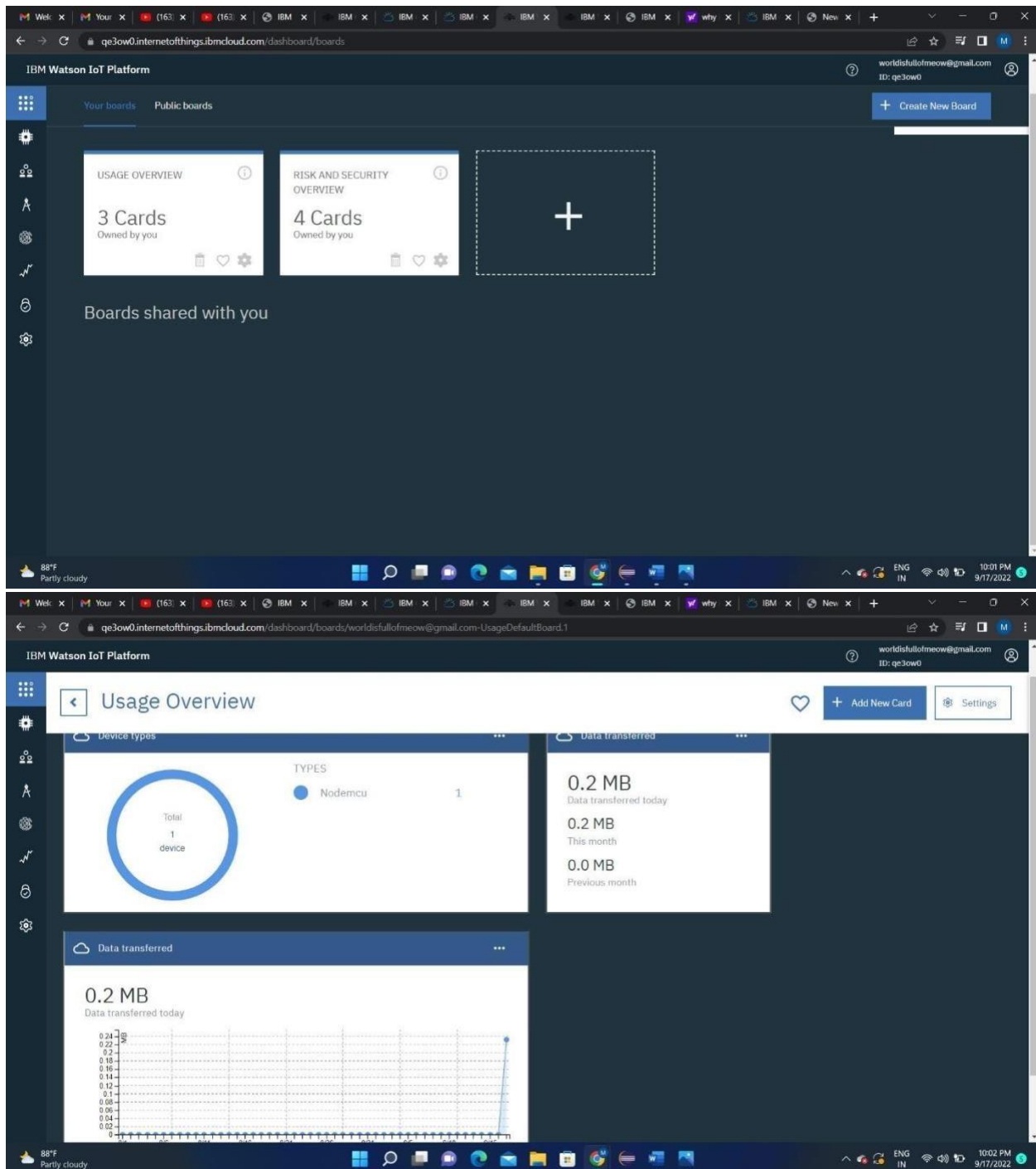
Property	Value
Device ID	199795
Device Type	Nodemcu
Date Added	17 Sep 2022 20:07
Added By	worldisfullofmeow@gmail.com
Connection Status	Disconnected

At the bottom of the detailed view, there is a pagination control showing 'Items per page 50' and '1-1 of 1 item'.

In a similar way, we can create n number of devices with a 50 per page limit as

per the requirement of our project.

21. The Boards will display card for the project.



RESULT:

An IBM Watson cloud for IoT and a device is created