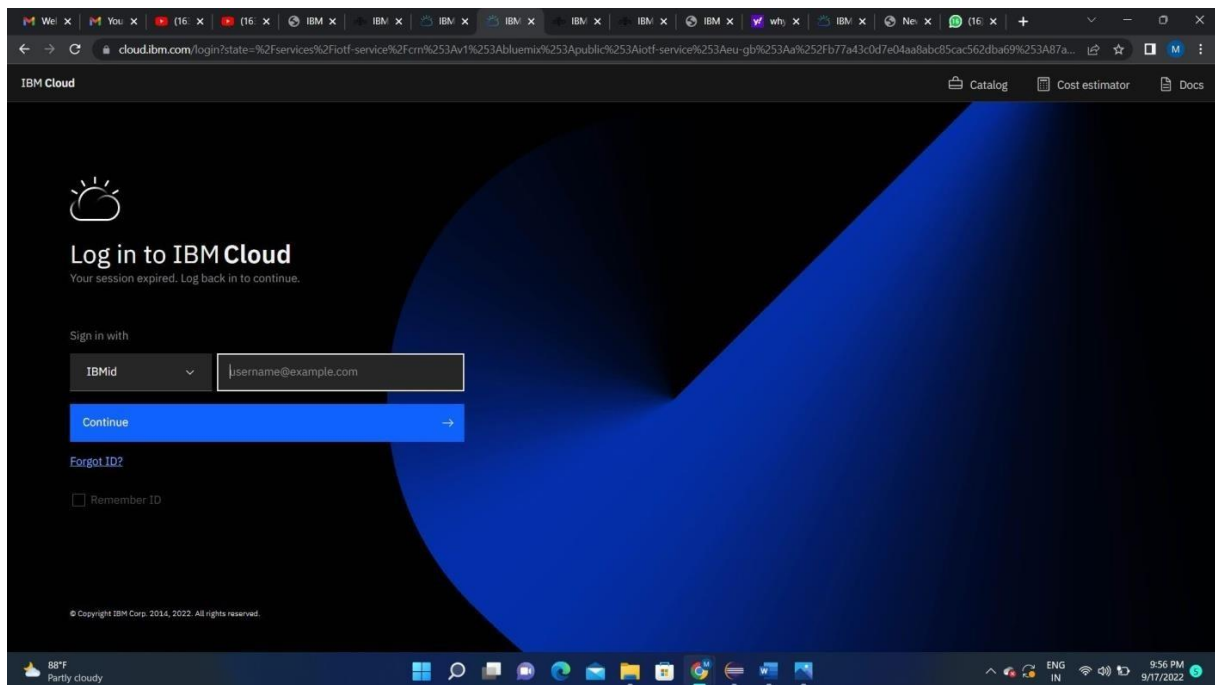


CREATE IBM WATSON IOT PLATFORM AND DEVICE

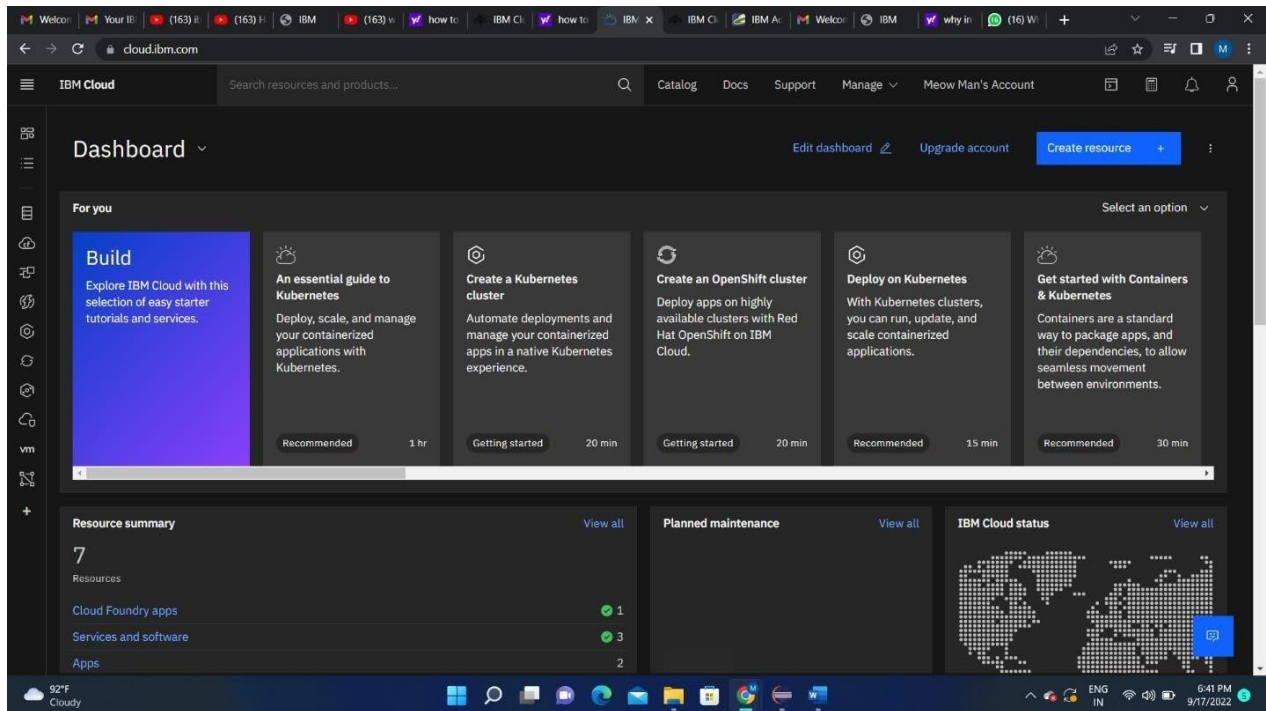
Team ID	PNT2022TMID03637
Project Name	Project - IOT based safety gadget for child safety monitoring and notification
Maximum Marks	4 Marks

STEPS:

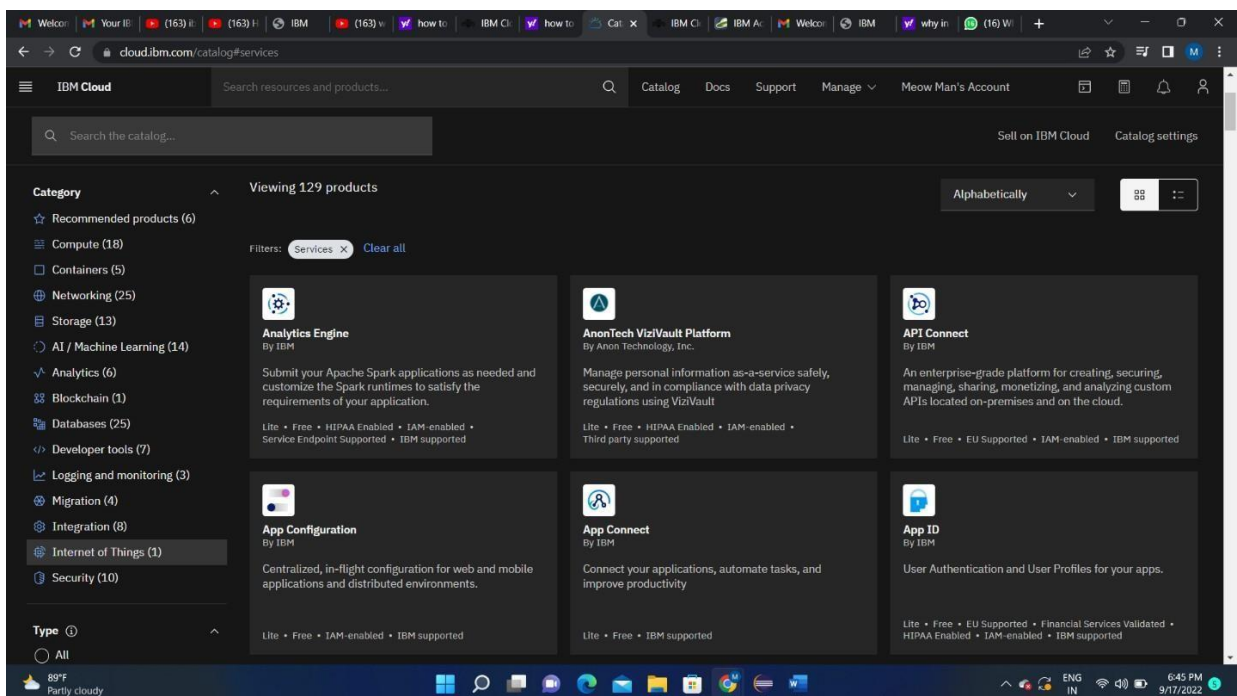
1. Firstly create an IBM cloud account with IBMid and password



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 table with pricing plans. The 'Lite' plan is highlighted, showing it is free and includes up to 500 registered devices and 200 MB of data. 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 'Summary' panel on the right shows the service name 'Internet of Things Platform-bb' and the resource group 'Default'. The 'Create' button is visible at the bottom right.

Plan	Features	Pricing
Lite	Includes up to 500 registered devices, and a maximum of 200 MB of each data metric 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, specifically the 'Configure your resource' section. The 'Lite' plan is still highlighted in the table. A warning message is present: '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 'Summary' panel on the right shows the service name 'Internet of Things Platform-bb' and the resource group 'Default'. The 'Create' button is visible at the bottom right.

Plan	Features	Pricing
Lite	Includes up to 500 registered devices, and a maximum of 200 MB of each data metric 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

Configure your resource

Service name: Internet of Things Platform-bb

Select a resource group: Default

Tags: Examples: env:dev, version-1

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

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 'Internet of Things Platform' creation page. The 'Create' tab is active. Under 'Select a location', 'Dallas (us-south)' is selected. Under 'Select a pricing plan', the 'Lite' plan is chosen. The plan details are as follows:

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

On the right, a 'Summary' panel shows: Internet of Things Platform, Free, Location: Dallas, Plan: Lite, Service name: Internet of Things Platform-2w, 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.' At the bottom, there is a checkbox for 'I have read and agree to the following license agreements:' and buttons for 'Create' and 'Add to estimate'.

This screenshot shows the same IBM Cloud page, but now in the 'Configure your resource' section. The 'Service name' is 'Internet of Things Platform-child_safety' and the 'Resource group' is 'Default'. The 'Tags' field has the example 'env:dev, version-1'. The 'Access management tags' field has the example 'access:dev, prop:version-1'. The 'Summary' panel on the right now shows: Internet of Things Platform, Free, Location: London, Plan: Lite, Service name: Internet of Things Platform-child_safety, Resource group: Default. The 'I have read and agree to the following license agreements:' checkbox is now checked. The 'Create' button is highlighted in blue.

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 servies)

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, there's a 'Ready for the next level?' section titled 'IBM Watson IoT Platform Journey' with three stages: 'Lite', 'Non-Production', and 'Production'. Each stage has a description and a 'Free' or 'Starts at \$500 per month' label.

Resource list / 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 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' with its features. To the right, the 'Current usage' is shown as 'N/A'. Below this, there's a 'Change pricing plan' section with a table showing the 'Lite' plan and its pricing.

Resource list / 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

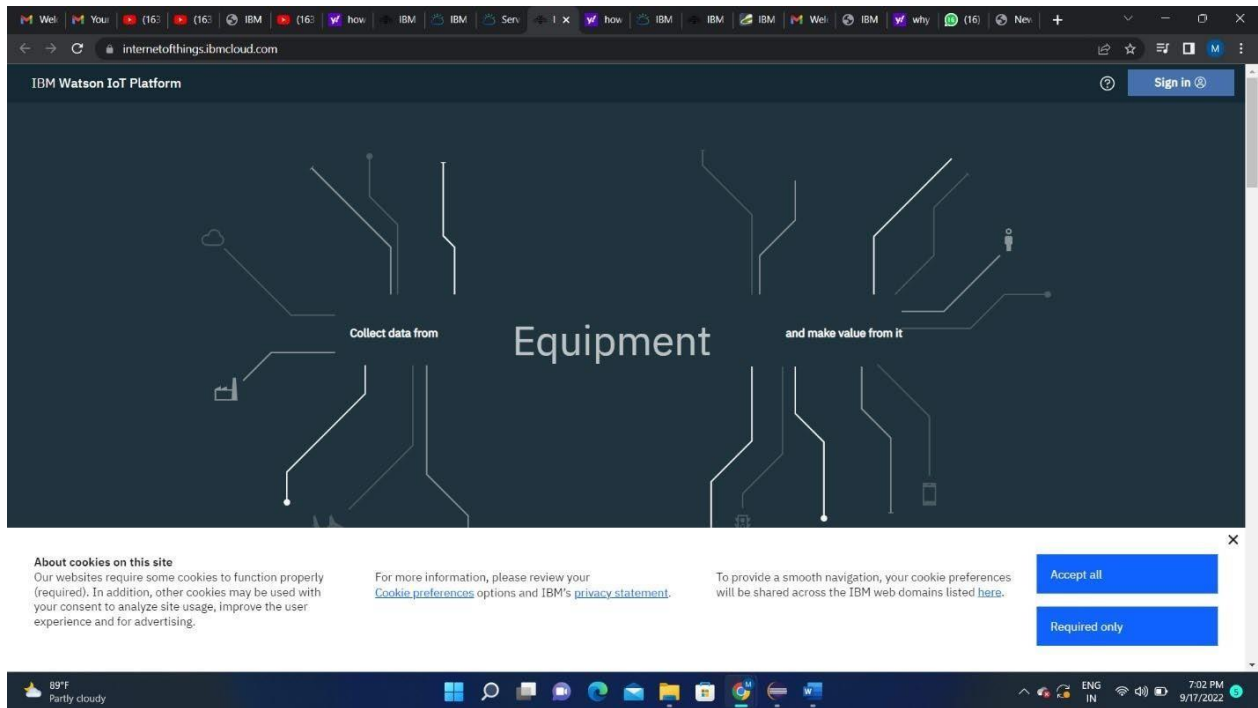
N/A

Lite plan services are deleted after 30 days of inactivity.

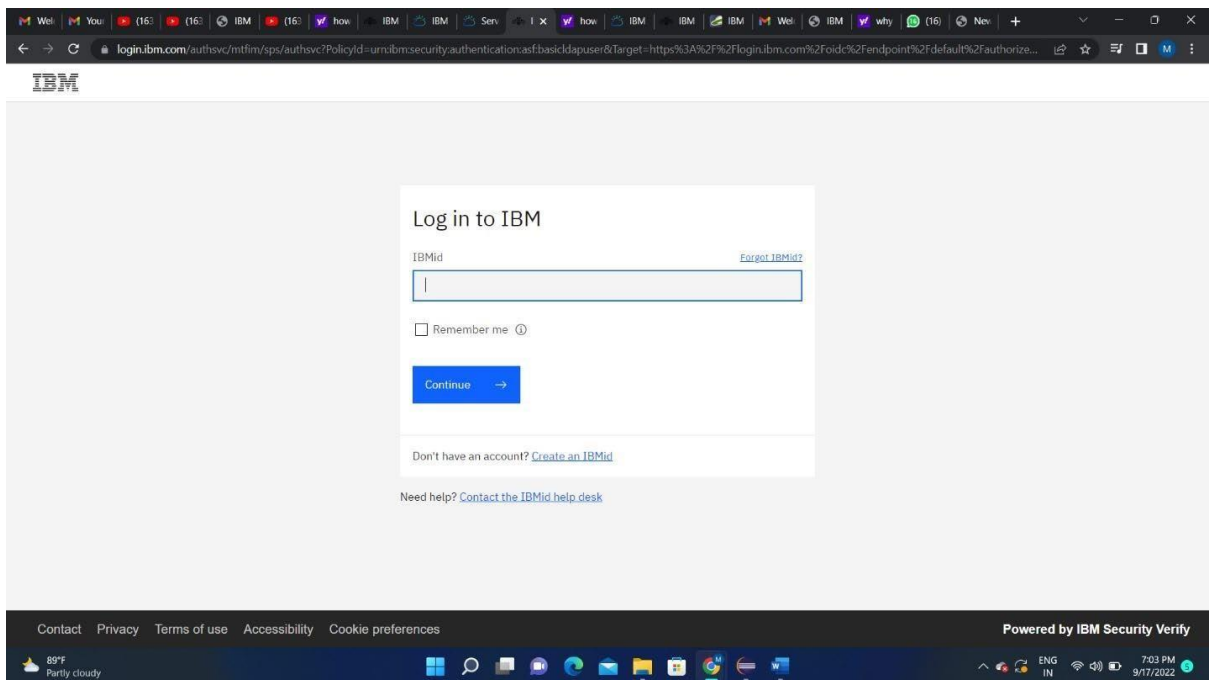
Change pricing plan

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 +

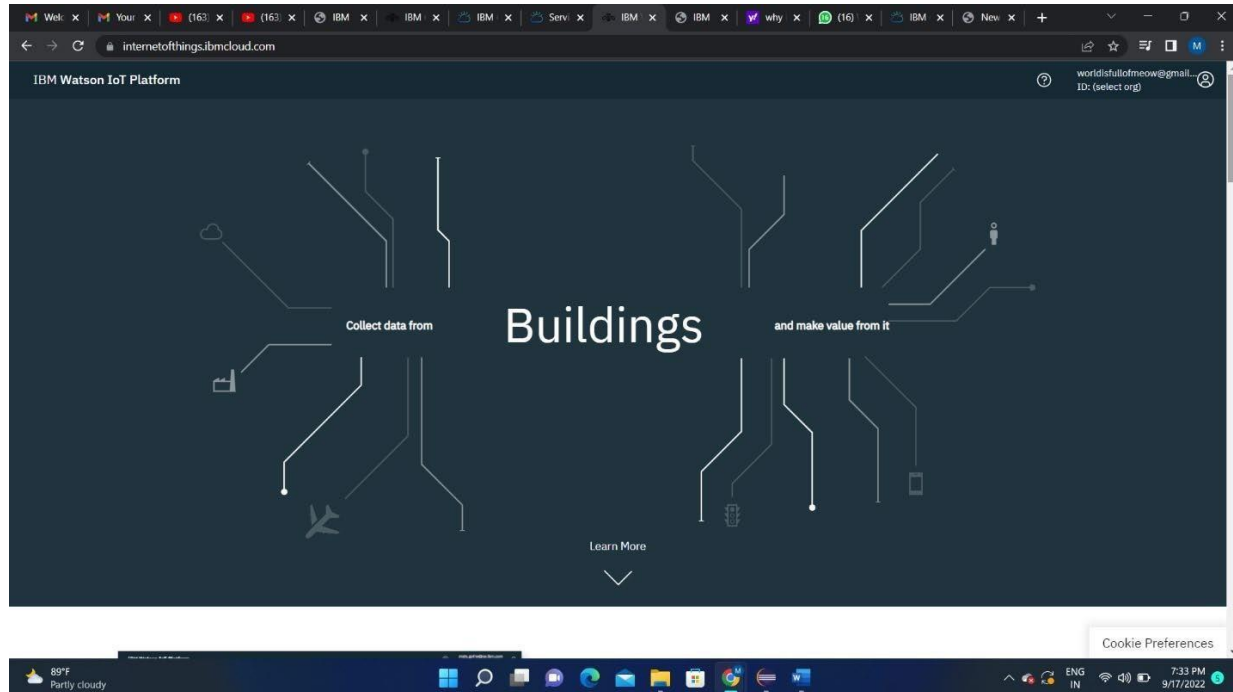
7. Clicking on the launch button in the manage tab, it will open to this



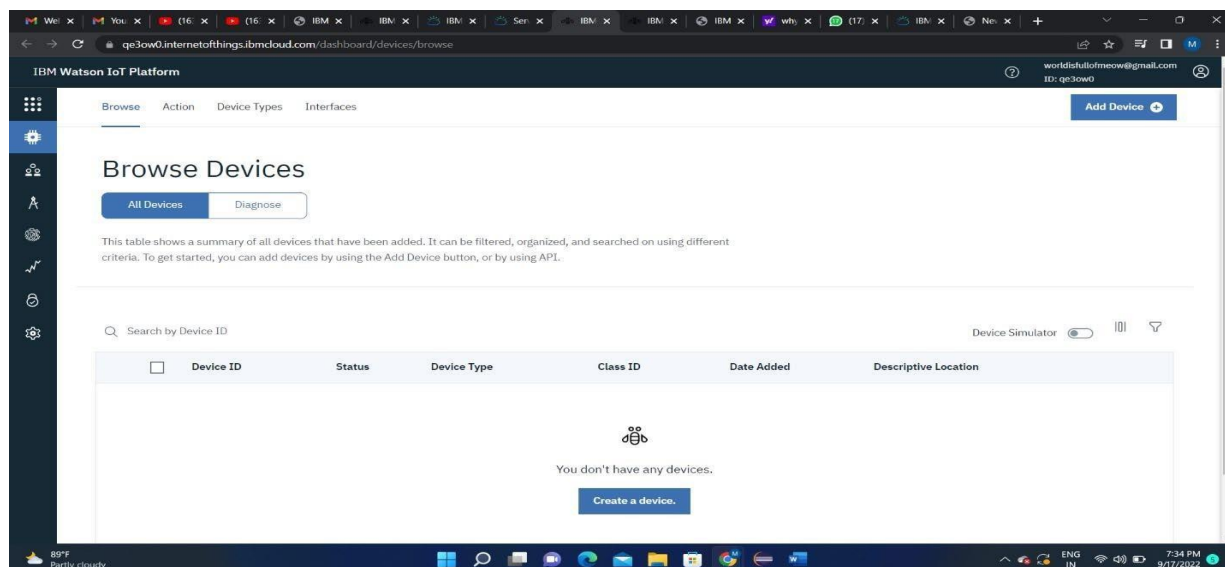
8. Enter the details to sign in to the Watson Cloud to create a device



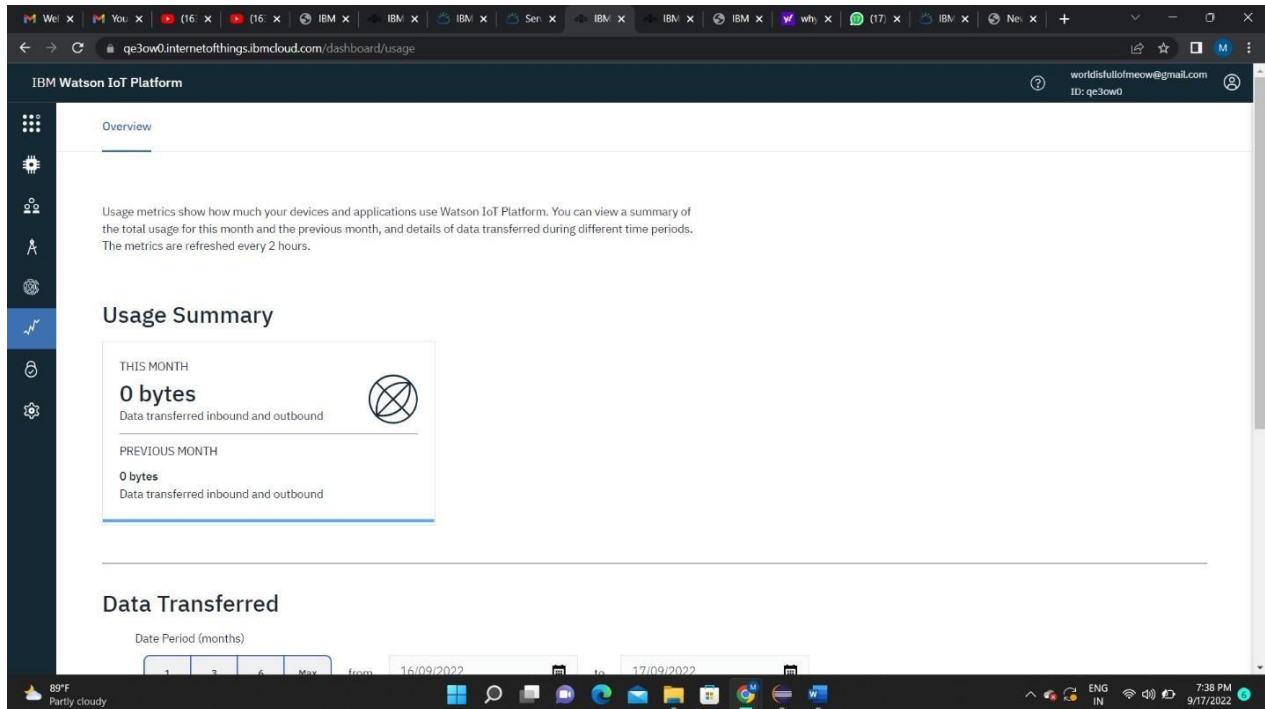
9. Once logged in the name will be displayed and it goes back to the first page



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 a list of members. The table has columns for 'Email Address', 'Name', 'Role', 'Added By', and 'Expires'. There is a single row of data for the user 'worldisfullofmeow@gmail.com' with the role '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 status information.

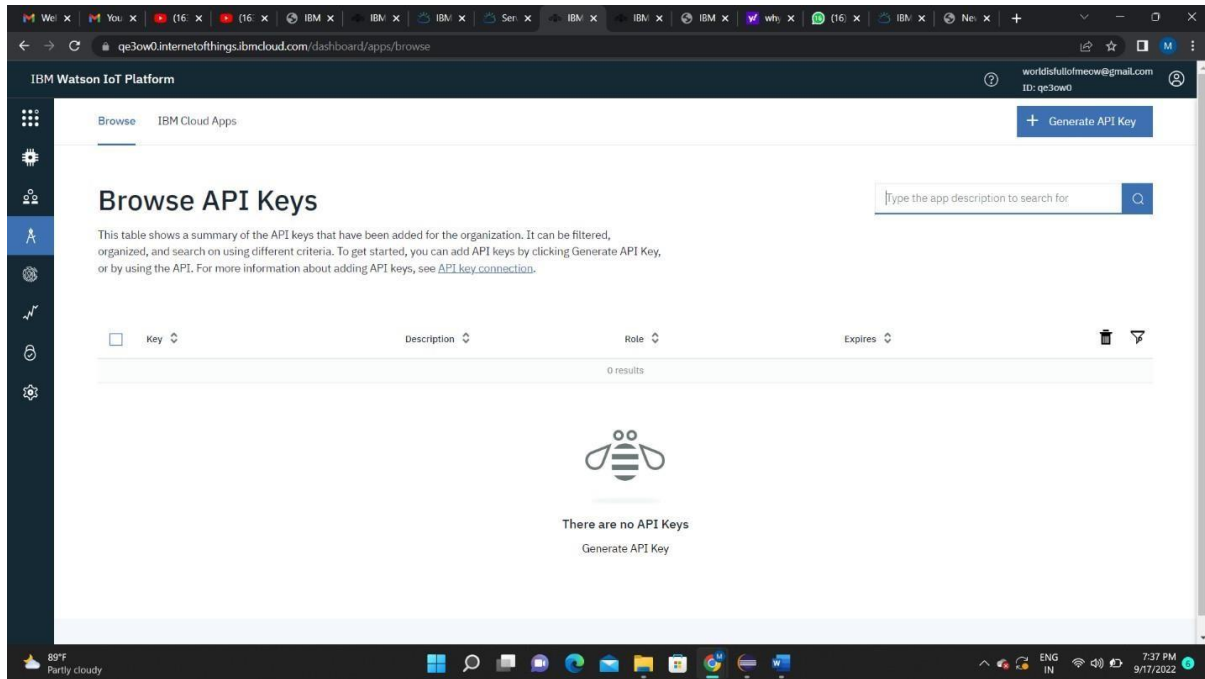
Browse Members

Type the member email to search for

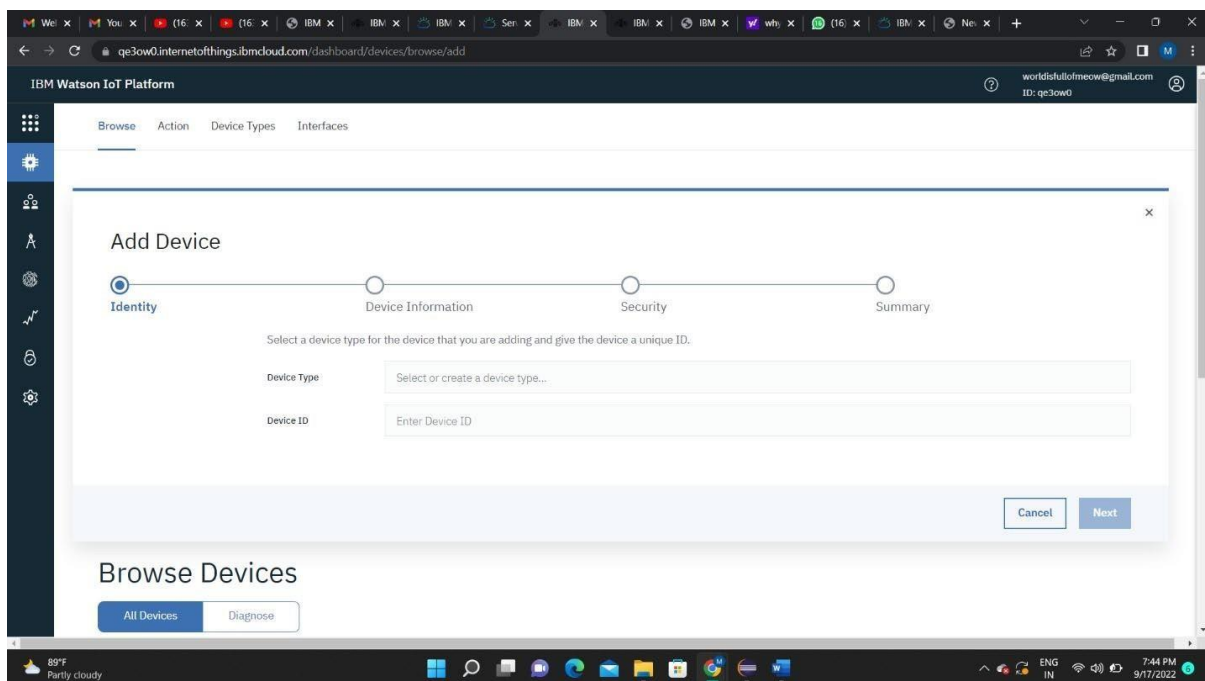
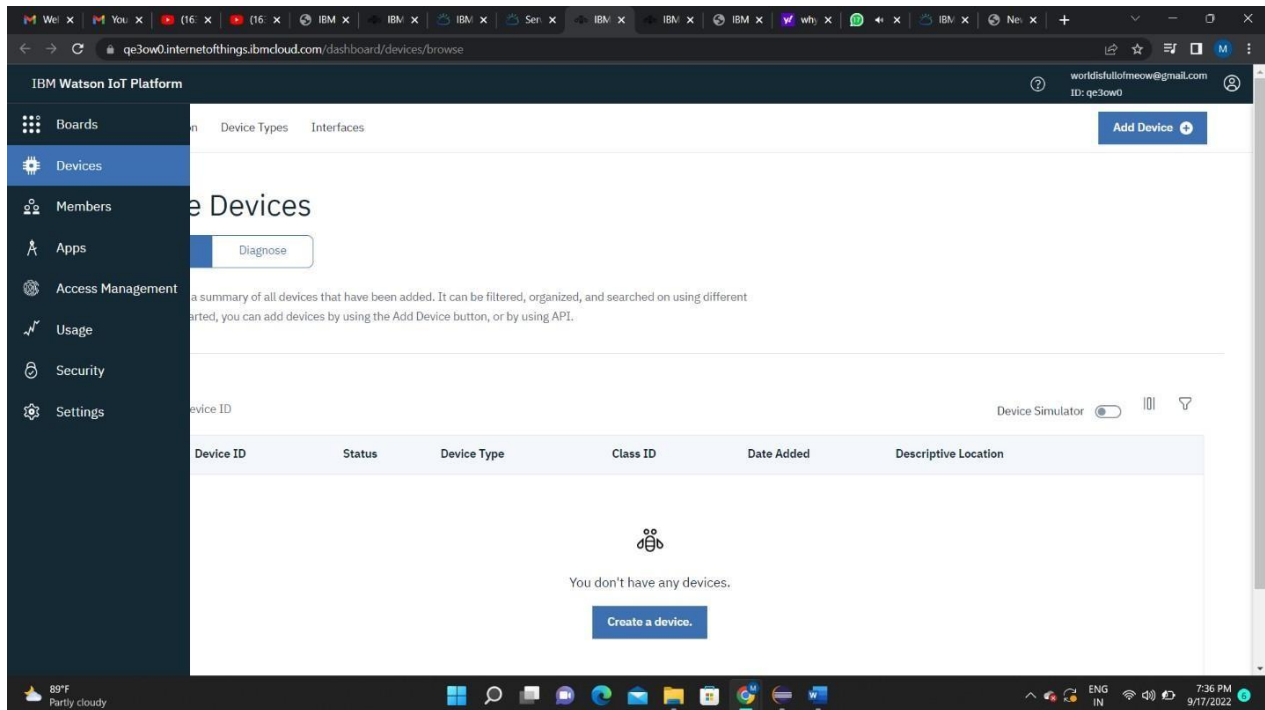
This table shows a summary of the members of the organization. It can be filtered, organized, and search on using different criteria. To get started, you can add members by clicking Add Members, or by using the API. For more information about members, see [Managing user access](#).

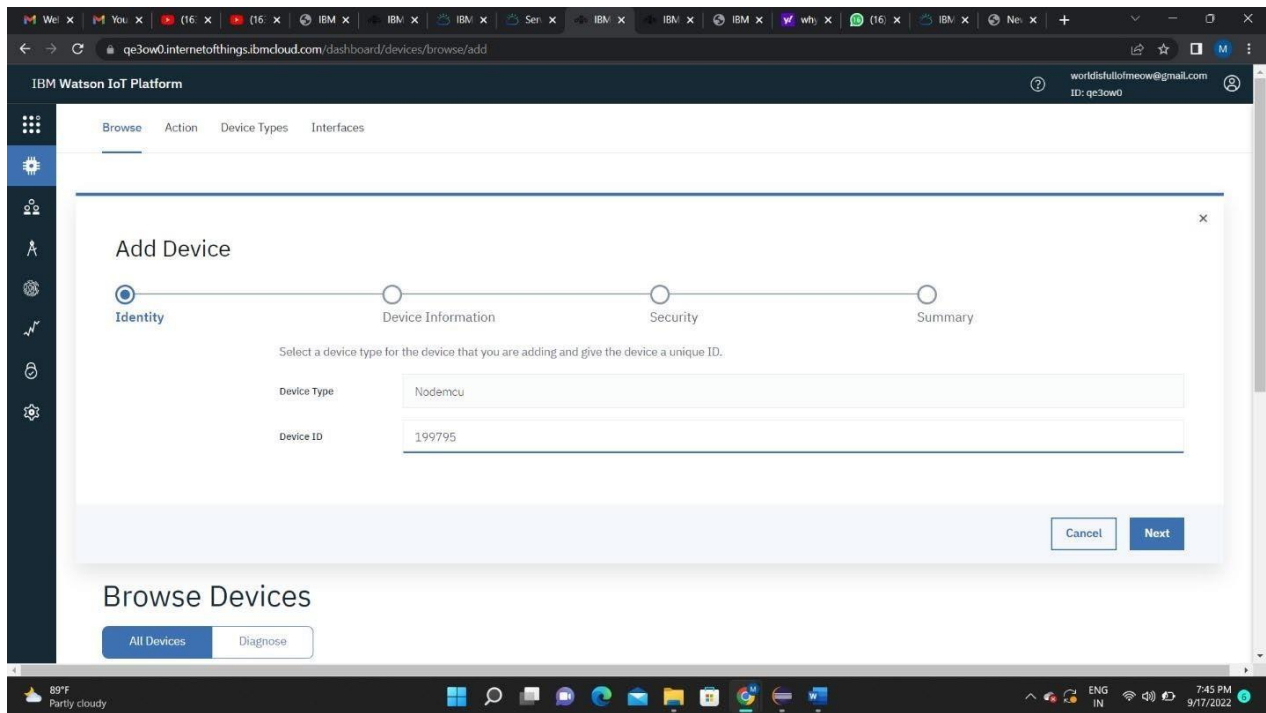
<input type="checkbox"/>	Email Address	Name	Role	Added By	Expires	
1 result						
<input type="checkbox"/>	worldisfullofmeow@gmail.com	worldisfullofmeow@gmail.com	Administrator	-	-	

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

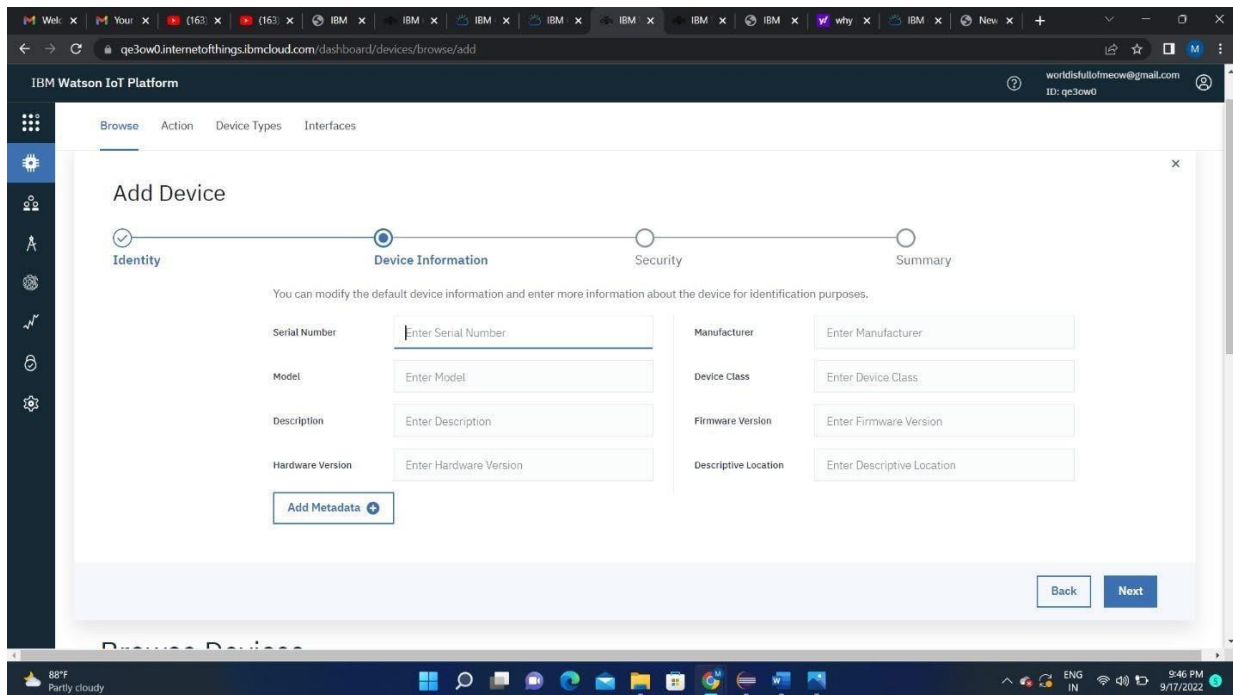


14. Click on the device tab and click on the add device button, then give the device type and device id and click next





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: '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 device details: 'Device Type: NodeMCU', 'Device ID: 199795', and 'Security Token: 1997199520012005'. A 'View Metadata' button is present. At the bottom, 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

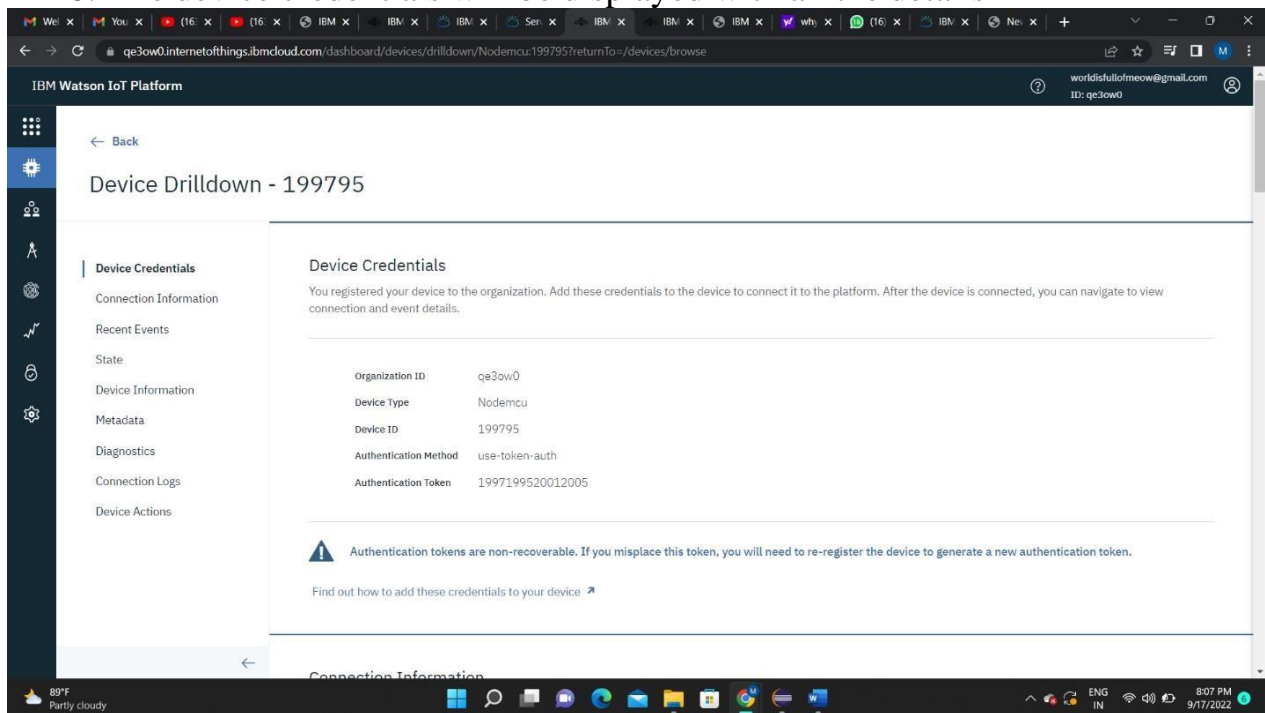
Device ID
199795

View Metadata

Security Token
1997199520012005

Back Finish

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

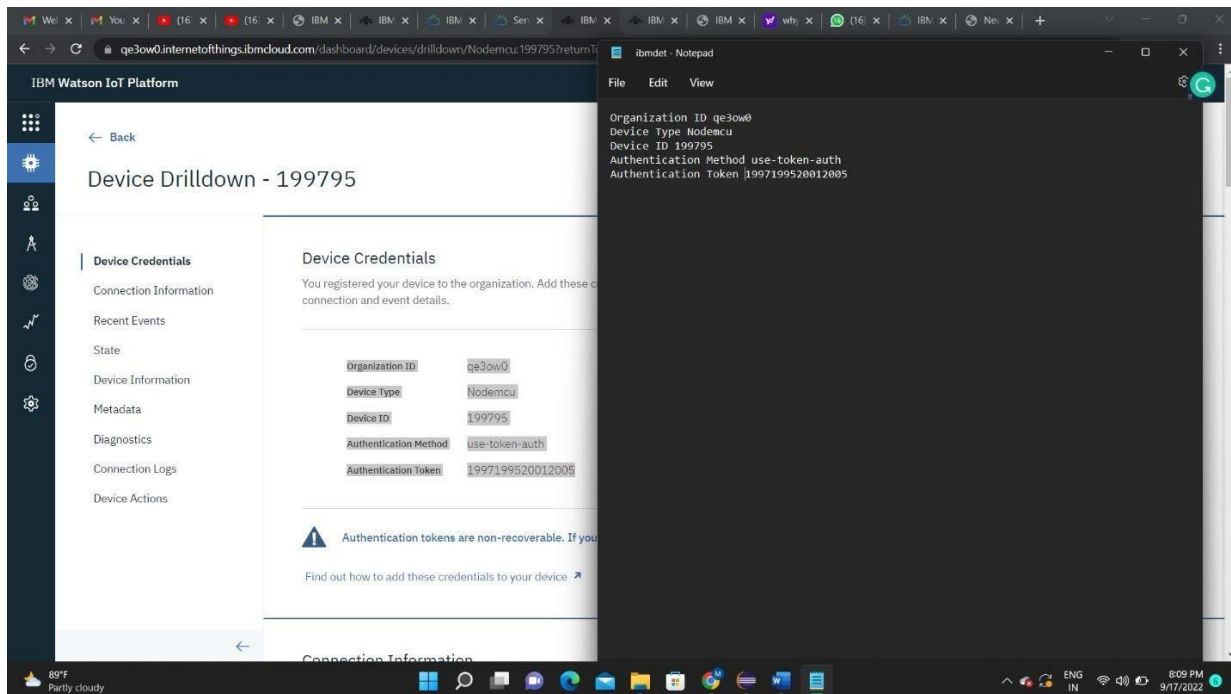


The screenshot shows the IBM Watson IoT Platform interface. The left sidebar contains navigation icons. The main content area is titled 'Device Drilldown - 199795'. Under the 'Device Credentials' tab, a table displays the following information:

Organization ID	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. 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.

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
-------	-------	--------	---------------

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

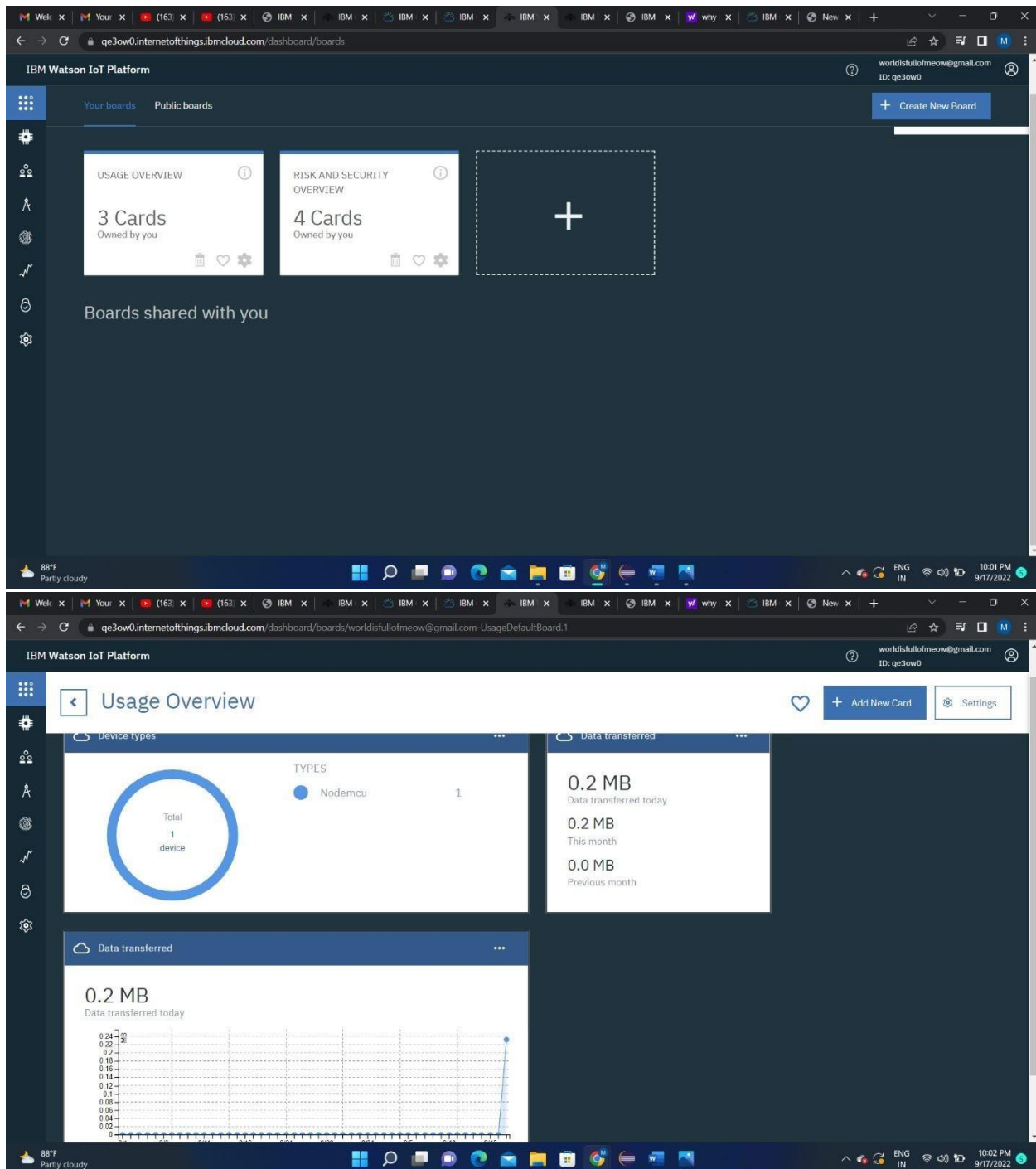
Items per page: 50 | 1-1 of 1 item

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.

21.The Boards will display card for the project.



RESULT:

An IBM Watson cloud for IoT and a device is created