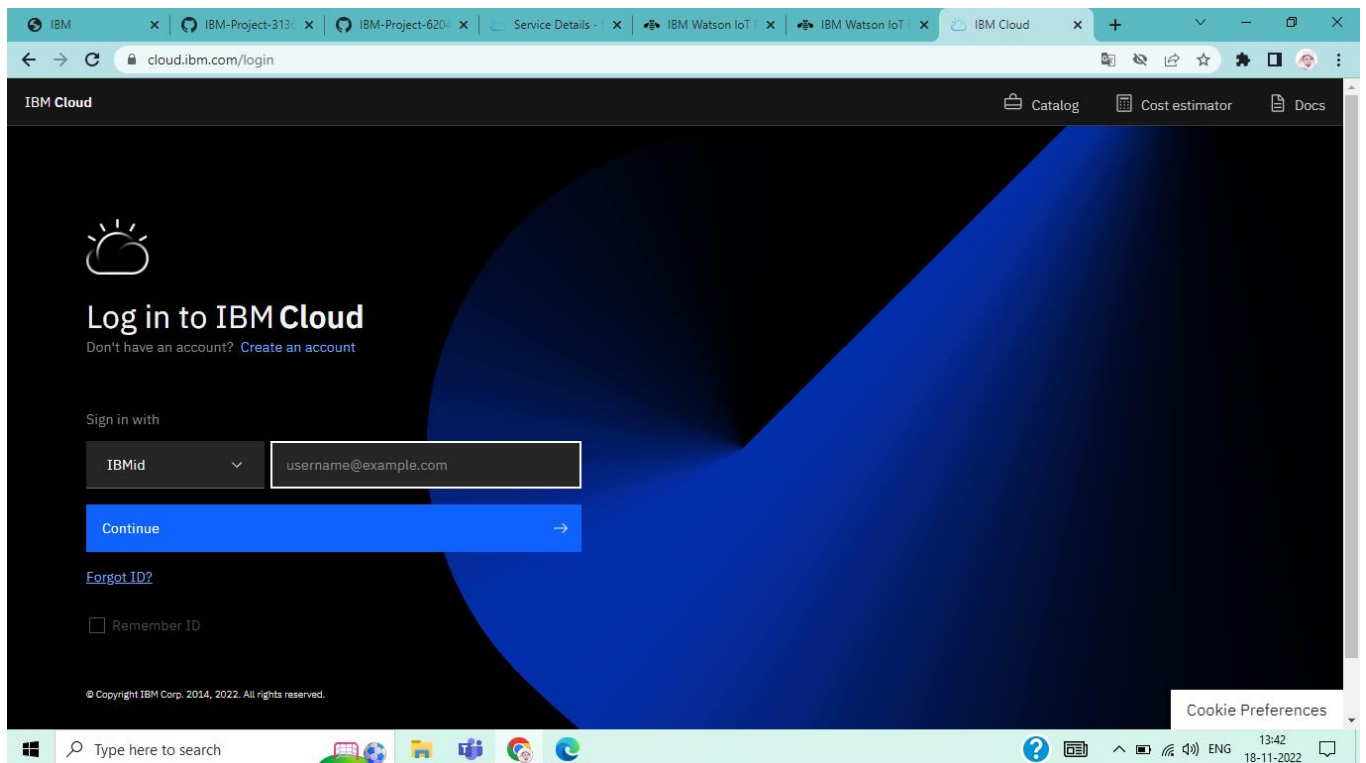


CREATE IBM WATSON IOT PLATFORM AND DEVICE

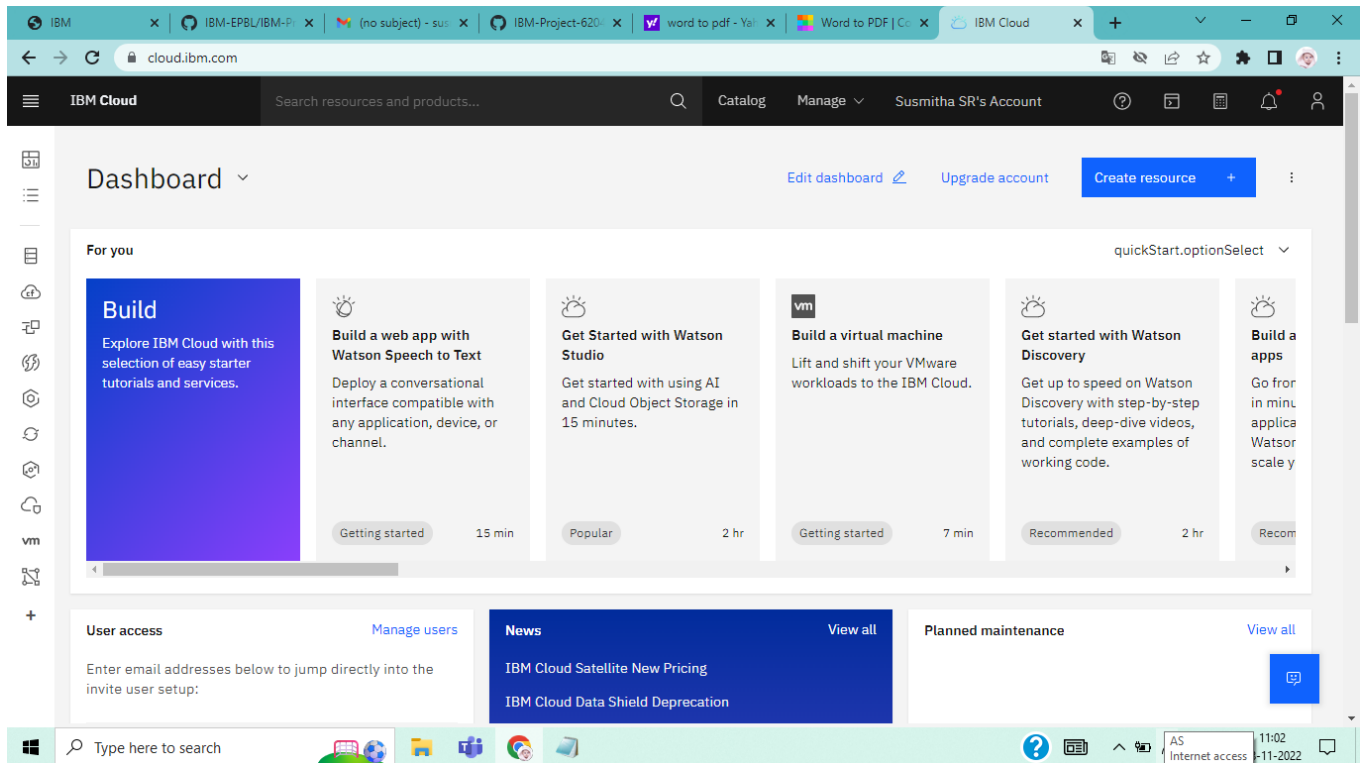
Date	22-10-2022
Team ID	PNT2022TMID11105
Project Name	IOT based safety gadgetfor child safety monitoring and notification
Maximum Marks	4 Marks
Submitted By	Susmitha SR Swaranamaliga PJ Sowmiya NM Vasundara S

STEPS:

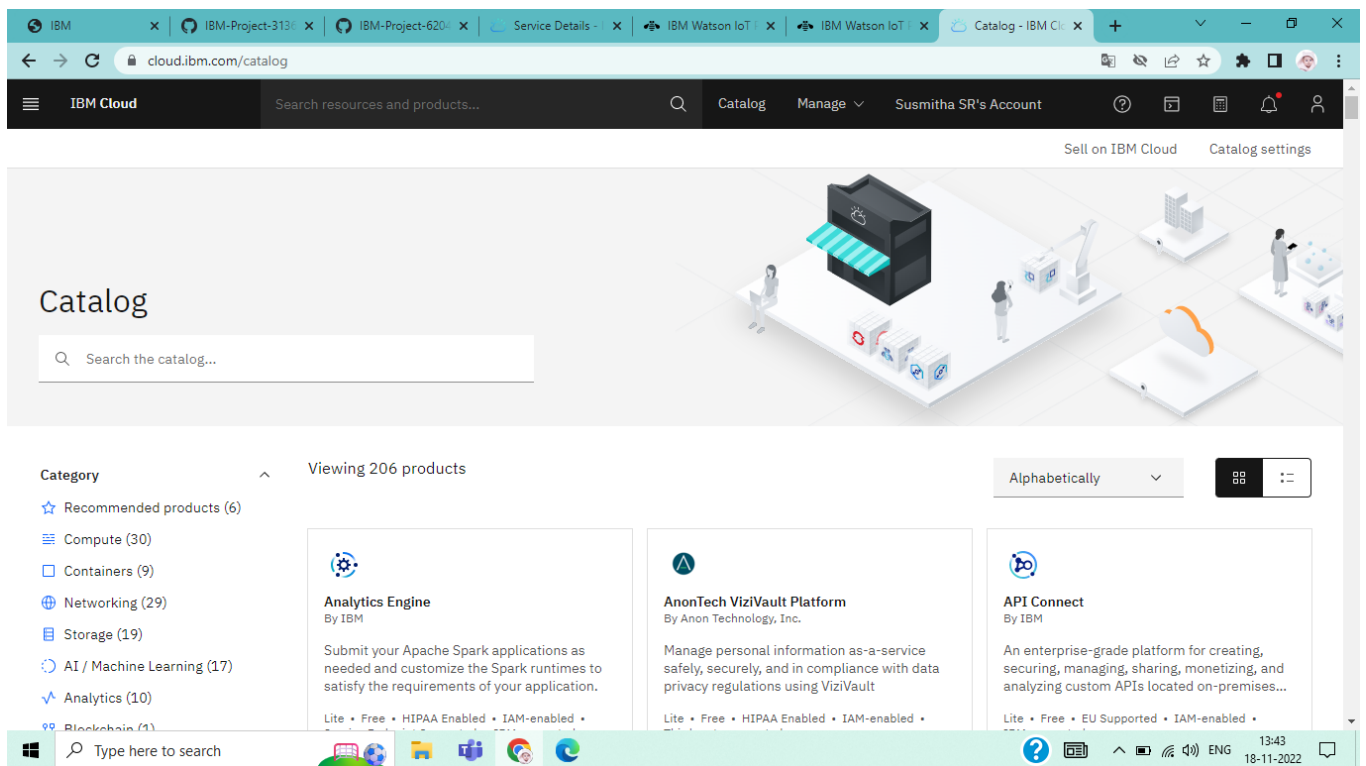
1. Firstly create an IBM cloud account with IBMid and password



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 catalog page for the Internet of Things Platform. The page is titled "Internet of Things Platform" and includes a description: "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." The page has two tabs: "Create" and "About". The "Create" tab is active, showing a form to select a location and a pricing plan. The location is set to "London (eu-gb)". The pricing plan is set to "Lite", which includes up to 500 registered devices, a maximum of 200 MB of each data metric, and a maximum of 500 application bindings. The pricing is "Free". The page also includes a "Summary" section on the right, which lists the service name, location, plan, and resource group. The "Create" button is visible at the bottom of the form.

IBM Cloud

Search resources and products...

Catalog Manage Susmitha SR'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

Select a location

London (eu-gb)

Select a pricing plan

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

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

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

Create

Add to estimate

4. 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, similar to the previous one. However, the "Create" button is disabled, and an error message is displayed: "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 error message is highlighted with a yellow box. The "Create" button is also highlighted with a yellow box. The "Summary" section on the right is visible, showing the service name, location, plan, and resource group. The "Create" button is at the bottom of the form.

IBM Cloud

Search resources and products...

Catalog Manage Susmitha SR'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

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Last updated 08/15/2022

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Location Frankfurt London Dallas Washington DC

Select a location

London (eu-gb)

Select a pricing plan

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

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

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Create

Add to estimate

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](#).

5. Enter the location and in the configure your resource type the servicename and choose the plan, tick the agree with agreements and then click on create

The screenshot shows the IBM Cloud catalog interface for the 'Internet of Things Platform' service. The browser address bar shows 'cloud.ibm.com/catalog/services/internet-of-things-platform'. The page has a dark header with the IBM Cloud logo, a search bar, and navigation links like 'Catalog', 'Manage', and 'Susmitha SR's Account'. On the left, there's a sidebar with 'Location' options (Frankfurt, London, Dallas, Washington DC) and 'Related links' (Docs, Terms). The main content area displays the 'Lite' plan details, including a description of the service and its limitations. Below this, the 'Configure your resource' section contains four input fields: 'Service name' (set to 'Internet of Things Platform-ot'), 'Select a resource group' (set to 'Default'), 'Tags' (with examples like 'env:dev, version-1'), and 'Access management tags' (with examples like 'access:dev, proj:version-1'). On the right, a 'Summary' panel shows the selected plan ('Free'), location ('London'), and service name. It also includes a checkbox for 'I have read and agree to the following license agreements:' with a 'Terms' link. At the bottom of the summary panel are 'Create' and 'Add to estimate' buttons. The Windows taskbar at the bottom shows the search bar and various application icons.

IBM Cloud

Search resources and products...

Location

Frankfurt

London

Dallas

Washington DC

Related links

Docs

Terms

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

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.

Lite plan services are deleted after 30 days of inactivity.

Free

Configure your resource

Service name

Internet of Things Platform-ot

Select a resource group

Default

Tags

Examples: env:dev, version-1

Access management tags

Examples: access:dev, proj:version-1

Summary

Internet of Things Platform

Free

Location: London

Plan: Lite

Service name: Internet of Things Platform-ot

Resource group: Default

☒ I have read and agree to the following license agreements:

Terms

Create

Add to estimate

Type here to search

13:44

18-11-2022

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 otherservices)

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, Manage, and the user's account (Susmitha SR's Account). The main header displays 'Internet of Things Platform-8h' with an 'Active' status and an 'Add tags' link. A left sidebar contains a 'Manage' tab (selected), 'Plan', and 'Connections'. The main content area features a large graphic of a central node connected to several peripheral nodes. Below this, a section titled 'Let's get started with IBM Watson IoT Platform' provides a brief description and includes 'Launch' and 'Docs' buttons. Further down, a 'Ready for the next level?' section introduces the 'IBM Watson IoT Platform Journey' with three stages: 'Lite', 'Non-Production', and 'Production'. Each stage has a brief description and a progress indicator.

Resource list /

Internet of Things Platform-8h 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

Non-Production

The Non-Production service plan is a full-featured, fully-integrated offering that enables

Production

The Production service is a fully managed SaaS offering that enables you to manage and analyze

This screenshot shows the same IBM Cloud IoT Platform console, but with the 'Plan' tab selected in the left sidebar. The main content area now displays detailed information for each stage of the 'IBM Watson IoT Platform Journey'. The 'Lite' plan is highlighted with a checkmark and lists its features: Free, 200 MB data-transfer limit, 500 application bindings limit, and 500 registered devices limit. The 'Non-Production' plan is marked with a circle and lists: Starts at \$500 per month, Capacity limit based on device type, and Optional Analytics Service and Blockchain Service add-ons. The 'Production' plan is also marked with a circle and lists: Includes IBM Service & Support, Pricing based on number of devices per device type, and Optional Analytics Service and Blockchain Service add-ons. At the bottom right, there is a button to 'Continue your journey on IBM Marketplace'.

Resource list /

Internet of Things Platform-8h Active [Add tags](#)

Details [Actions...](#)

Manage

Plan

Connections

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
- 200 MB data-transfer limit
- 500 application bindings limit
- 500 registered devices limit

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
- Capacity limit based on device type
- Optional Analytics Service and Blockchain Service add-ons

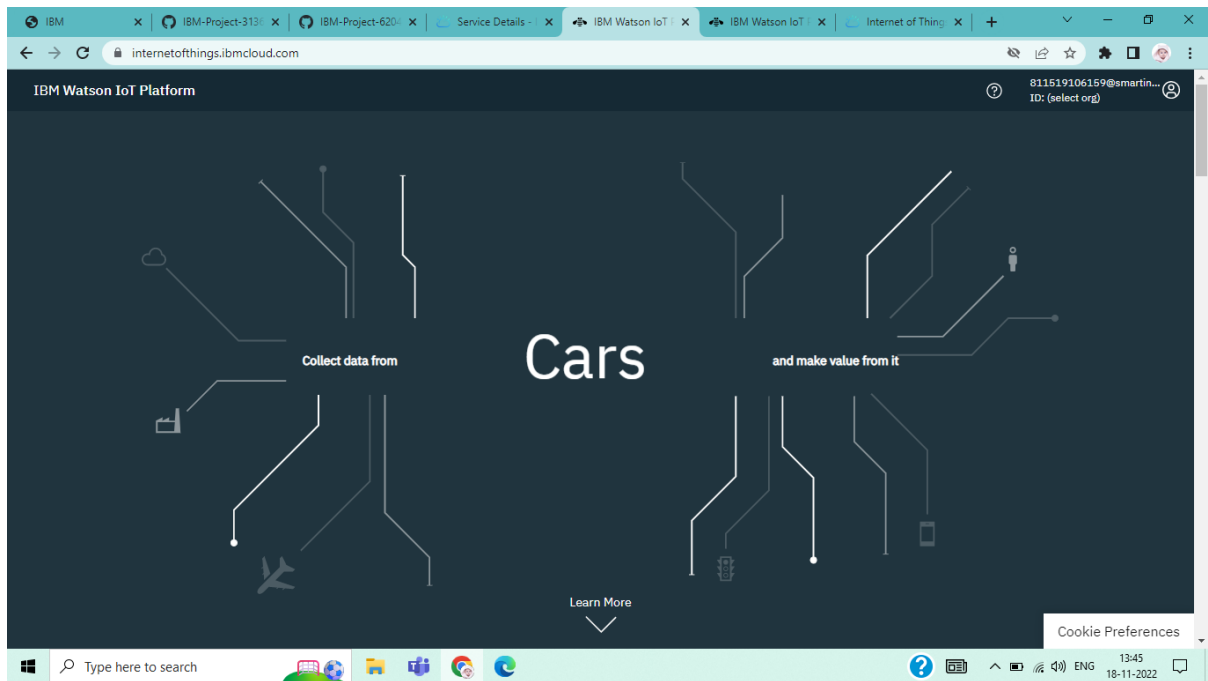
Production

The Production service is a fully managed SaaS offering that enables you to manage and analyze enterprise IoT data.

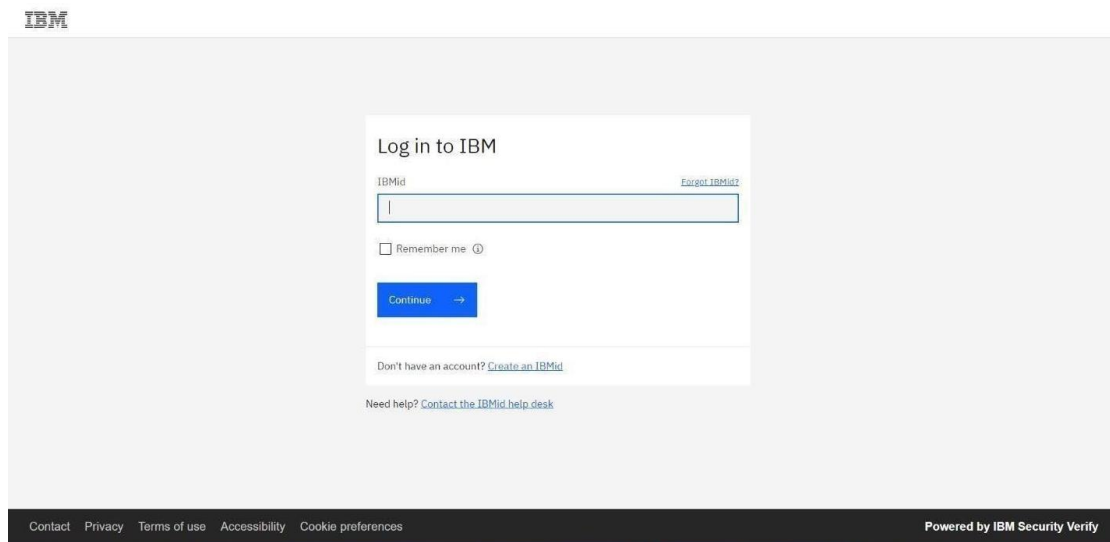
- Includes IBM Service & Support
- Pricing based on number of devices per device type
- Optional Analytics Service and Blockchain Service add-ons

[Continue your journey on IBM Marketplace](#)

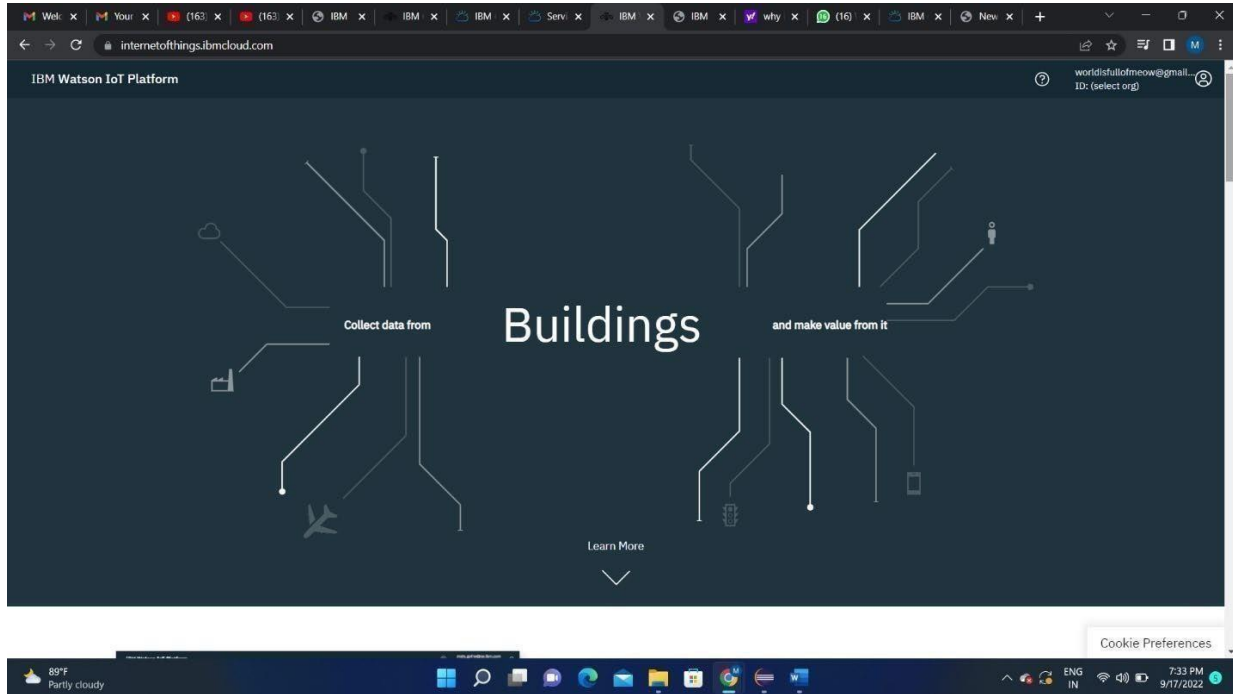
7. Clicking on the launch button in the manage tab, it will open to this



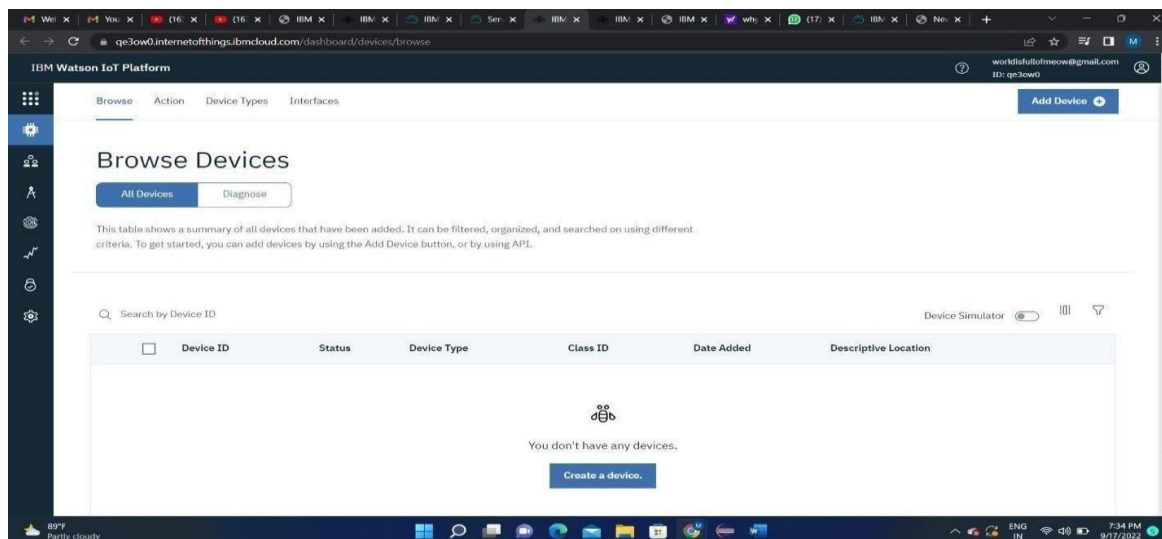
8. Enter the details to sign in to the Watson Cloud to create a device



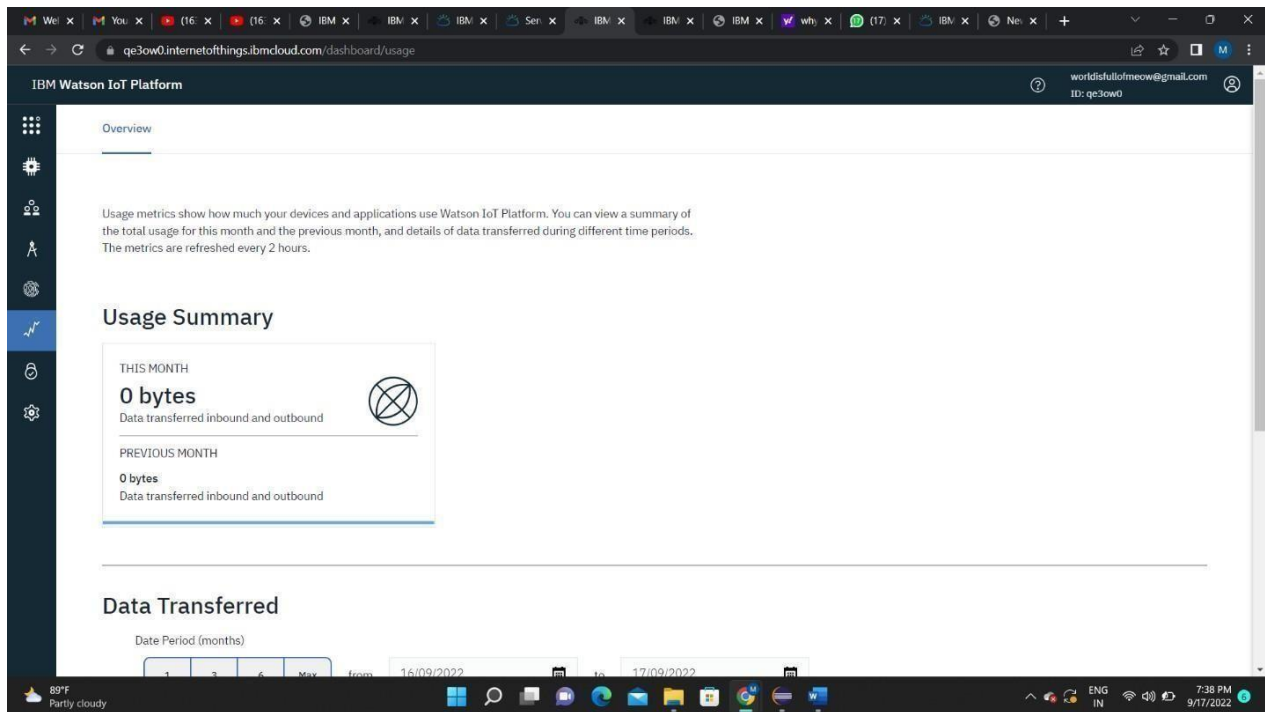
9. Once logged in the name will be displayed and it goes back to the first page



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.

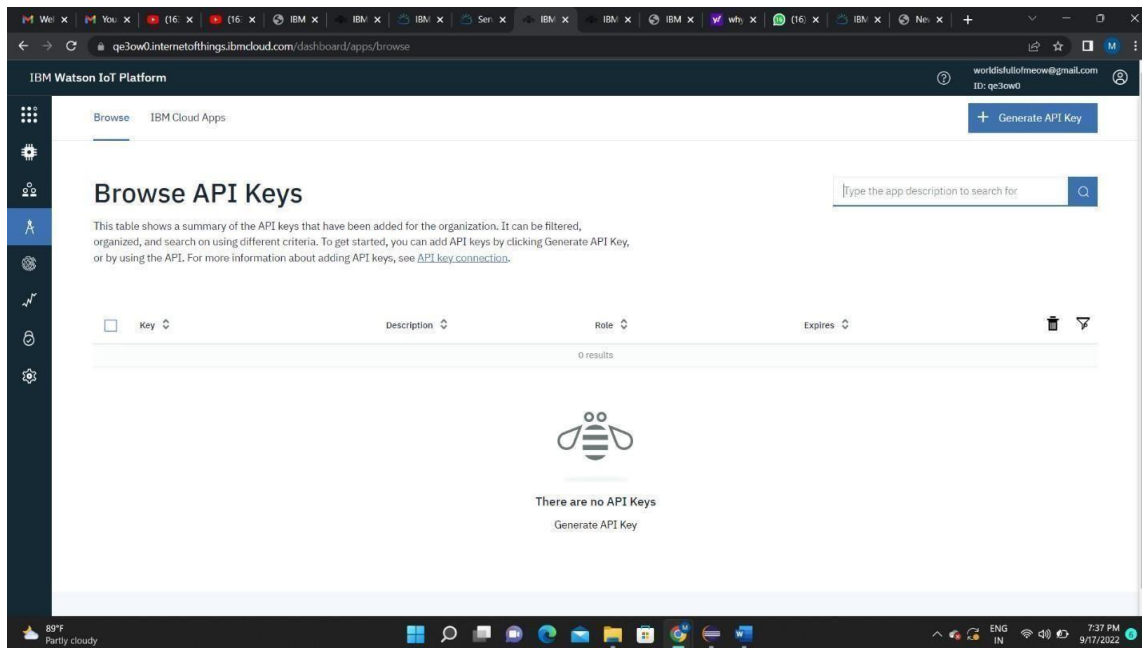


12. The member tab is add the teams members to work in the platform

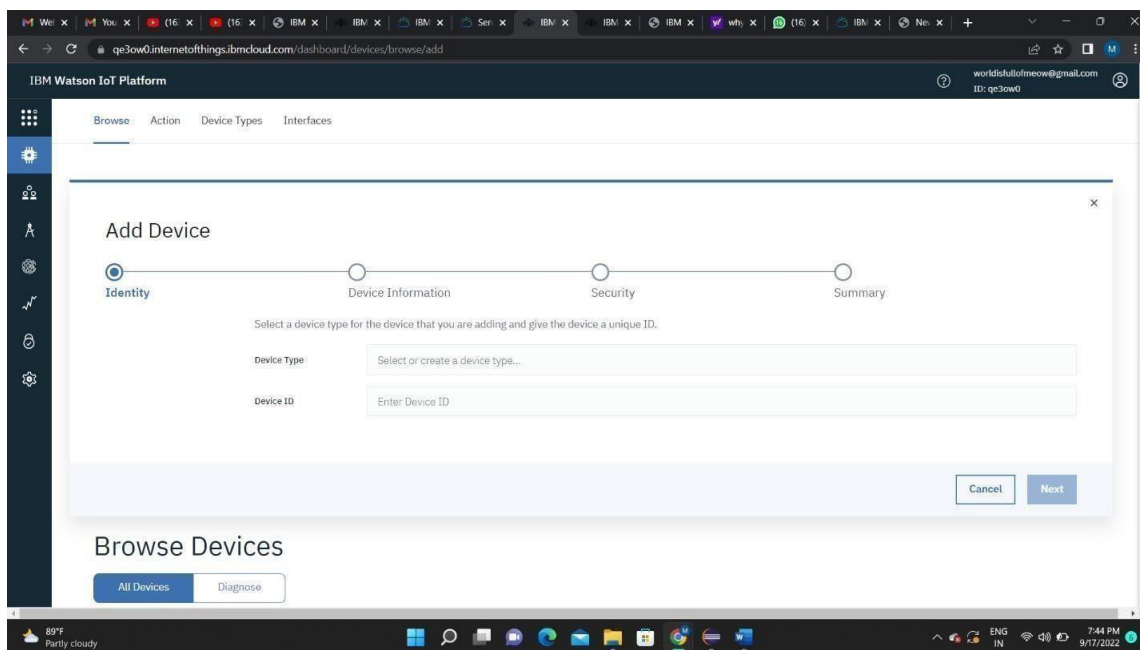
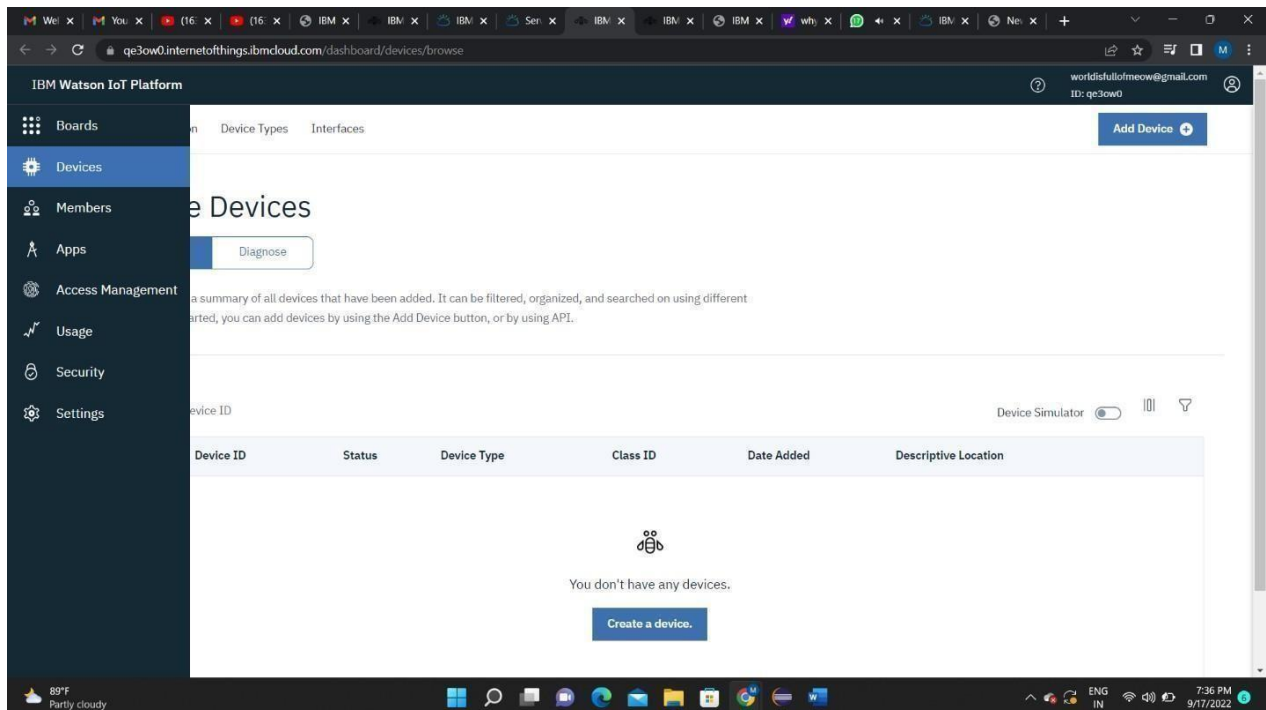
The screenshot shows the 'Browse Members' page in the IBM Watson IoT Platform. The page title is 'Browse Members'. Below the title, there is a search bar with the placeholder text 'Type the member email to search for'. Below the search bar, there is a table showing the members of the organization. The table has columns for 'Email Address', 'Name', 'Role', 'Added By', and 'Expires'. There is one member listed: 'worldisfulofmeow@gmail.com' with the role 'Administrator'. The page includes a sidebar with navigation icons and a top navigation bar with the user's email 'worldisfulofmeow@gmail.com' and ID 'qe3ow0'. The browser address bar shows the URL 'qe3ow0.internetofthings.ibmcloud.com/dashboard/members/browse'.

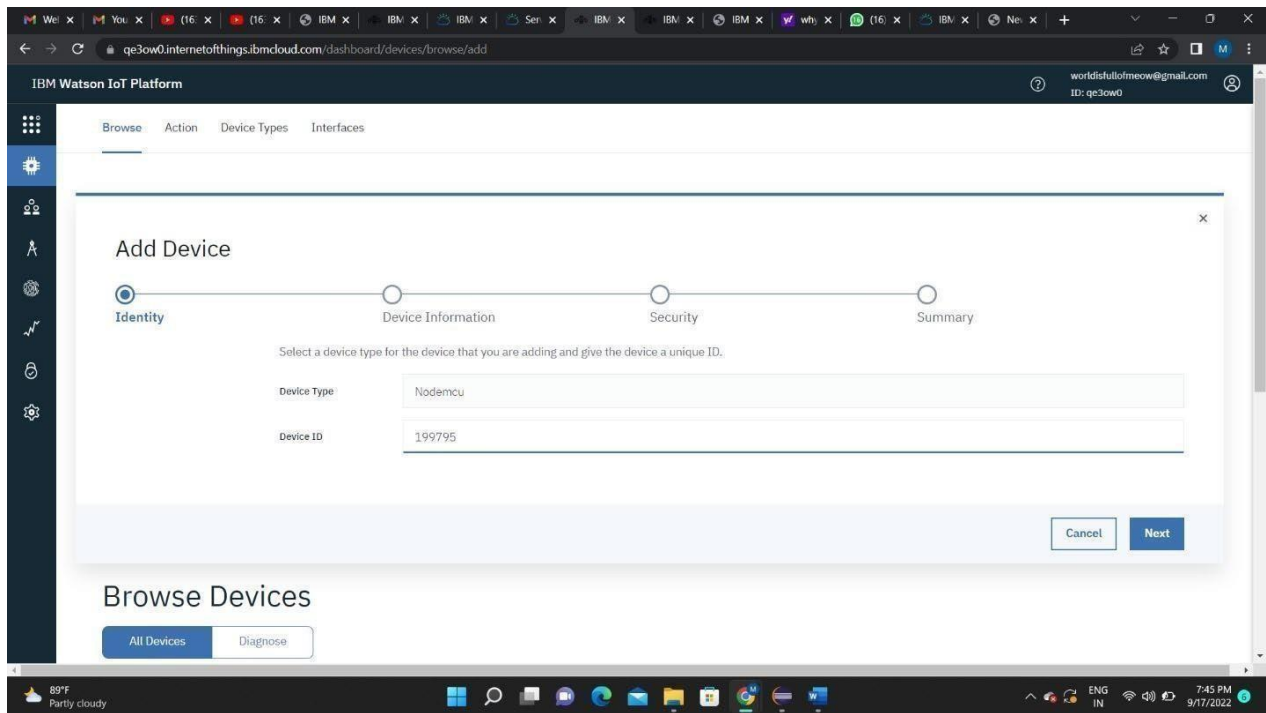
Email Address	Name	Role	Added By	Expires
worldisfulofmeow@gmail.com	worldisfulofmeow@gmail.com	Administrator	-	-

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

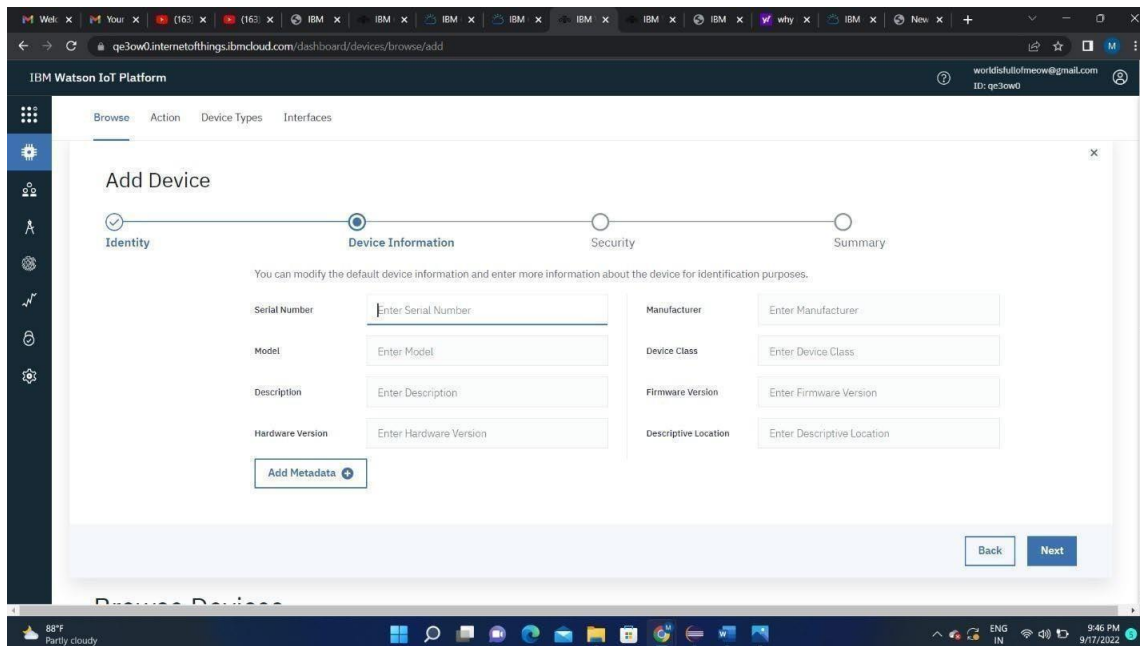


14. Click on the device tab and click on the add device button, then give the device type and device id and click next





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. The 'Auto-generated authentication token (default)' option is selected, displaying a generated token: 1997199520012005. The 'Self-provided authentication token' option is also visible, requiring a user-defined token between 8 and 36 characters. The wizard progress bar at the top shows four steps: Identity, Device Information, Security, and Summary. The bottom of the screen shows a Windows taskbar with the date 9/17/2022 and time 8:06 PM.

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

Make a note of the generated token. Lost authentication tokens cannot be recovered. Tokens are encrypted before being stored.

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.

89°F Partly cloudy 8:06 PM 9/17/2022

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. 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. The wizard progress bar at the top shows four steps: Identity, Device Information, Security, and Summary. The bottom of the screen shows a Windows taskbar with the date 9/17/2022 and time 8:07 PM.

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

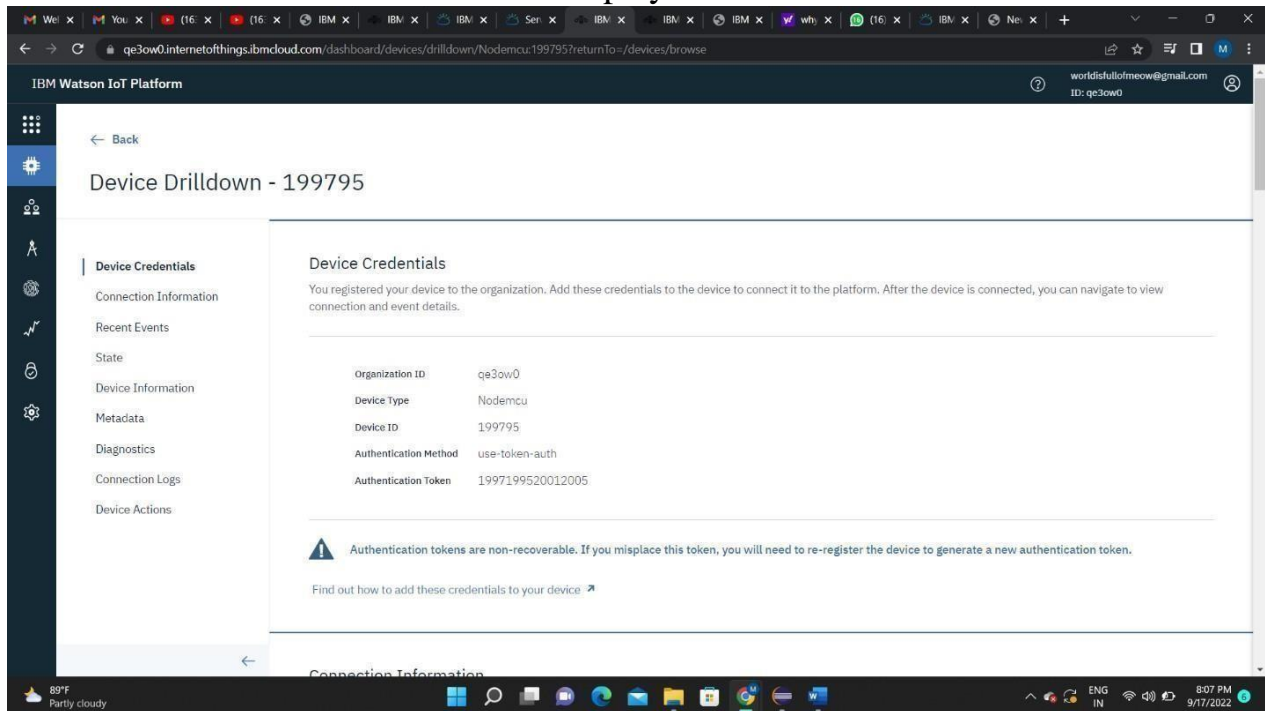
View Metadata

Security Token: 1997199520012005

Back Finish

89°F Partly cloudy 8:07 PM 9/17/2022

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

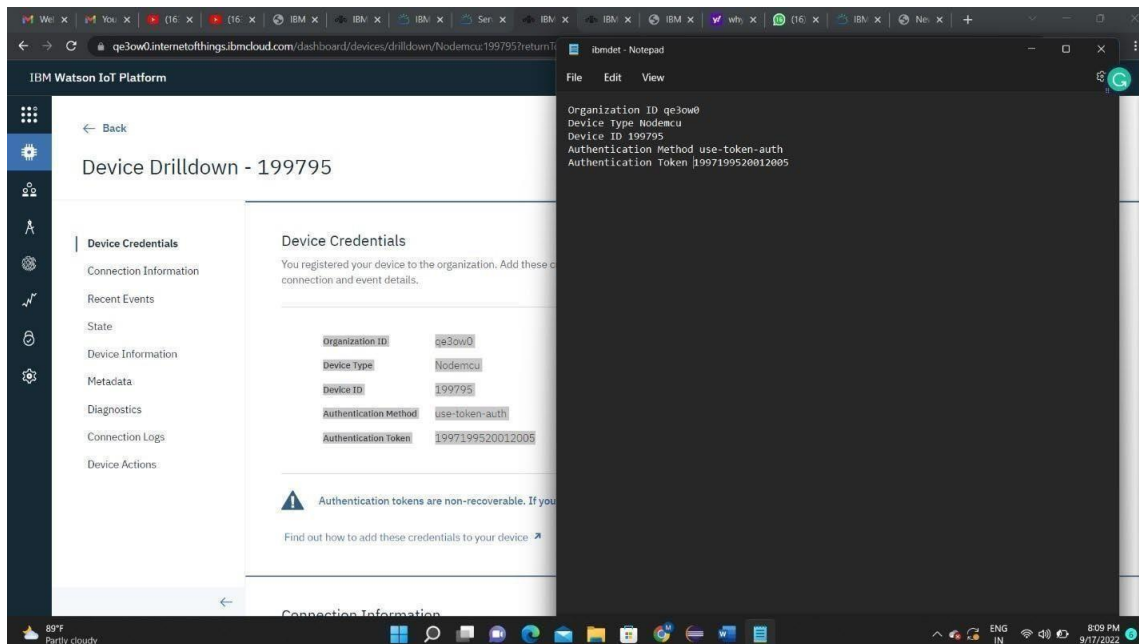


The screenshot shows the IBM Watson IoT Platform interface. The left sidebar contains navigation icons. The main content area is titled 'Device Drilldown - 199795'. Under the 'Device Credentials' tab, a table displays the following information:

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 is open in the foreground, 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 modal window is open for the selected device, showing 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 and time 8:11 PM 9/17/2022.

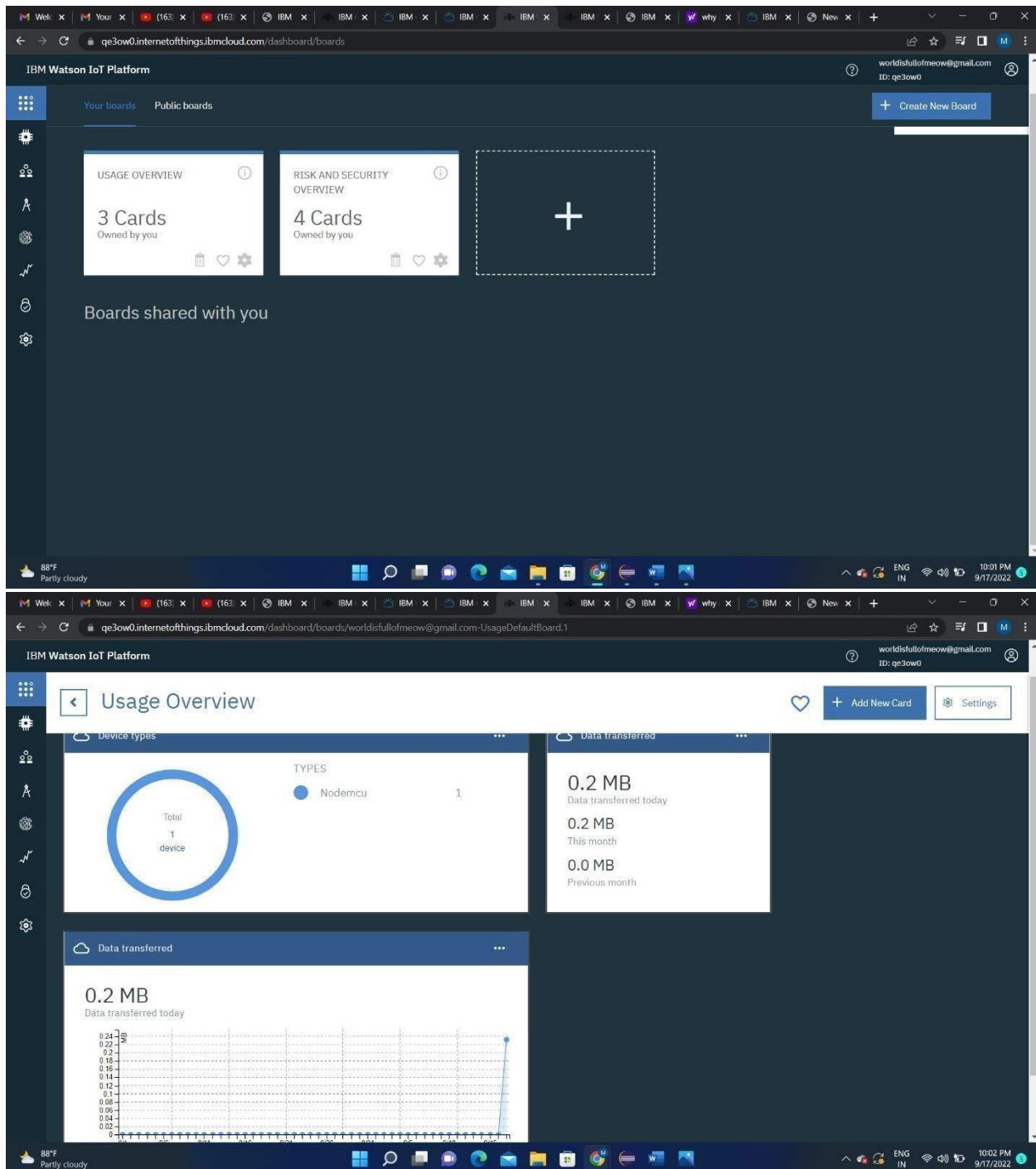
This screenshot shows the same IBM Watson IoT Platform dashboard, but with the 'Device Information' tab selected in the modal window. The 'Device Information' tab displays the following details for the device with ID 199795:

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 modal, 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.

21. The Boards will display card for the project.



RESULT:

An IBM Watson cloud for IoT and a device is created