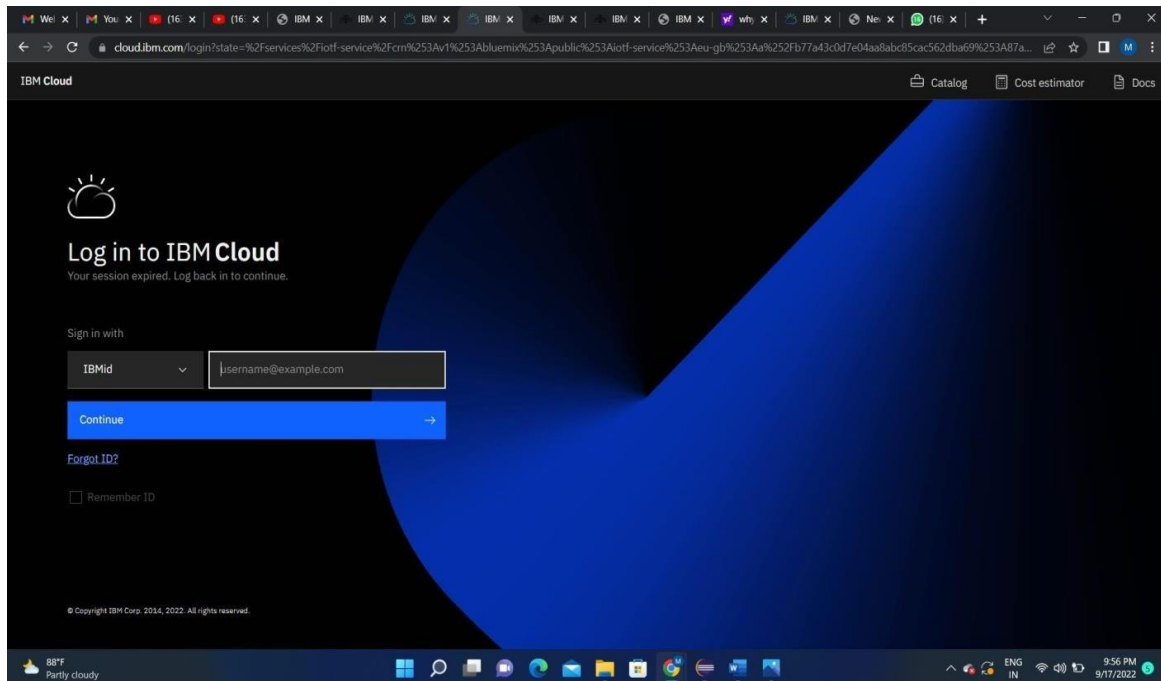


CREATE IBM WATSON IOT PLATFORM AND DEVICE

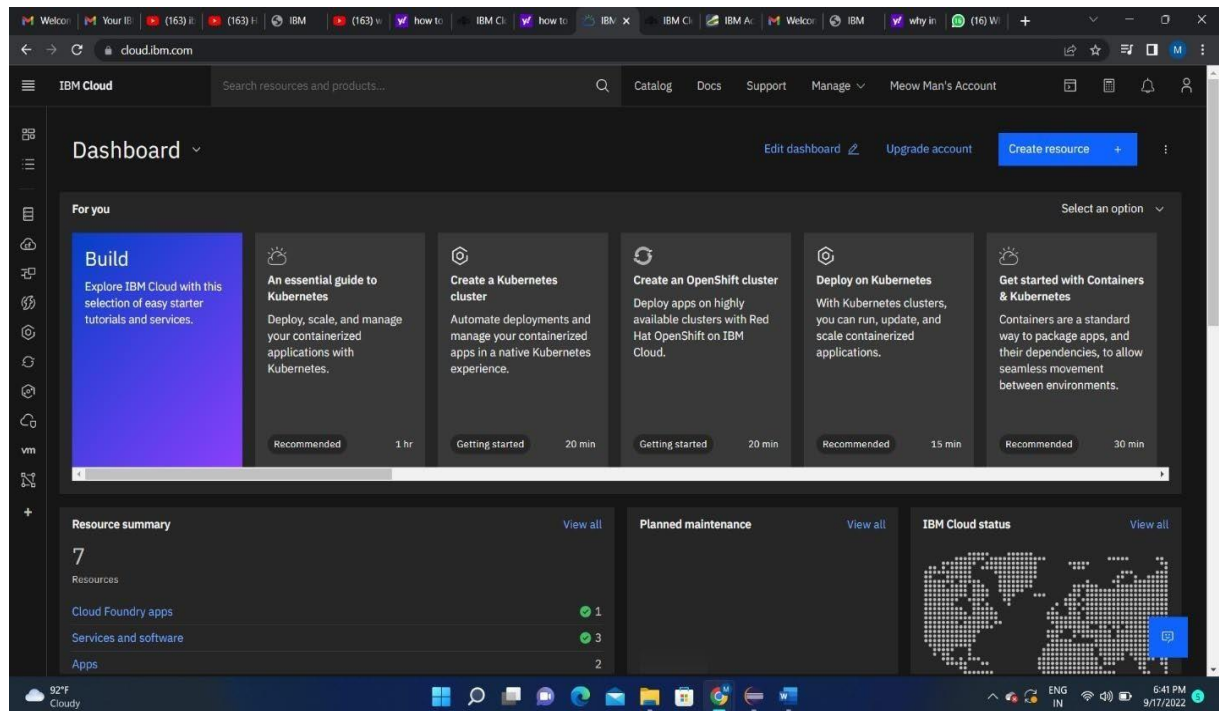
Date	22-10-2022
Team ID	PNT2022TMID01804
Project Name	IOT based safety gadgetfor child safety monitoring and notification
Maximum Marks	4 Marks
Submitted By	Pranesh.K Sathurthi Anand.M.S Sanjay.S Shree Ram.S

STEPS:

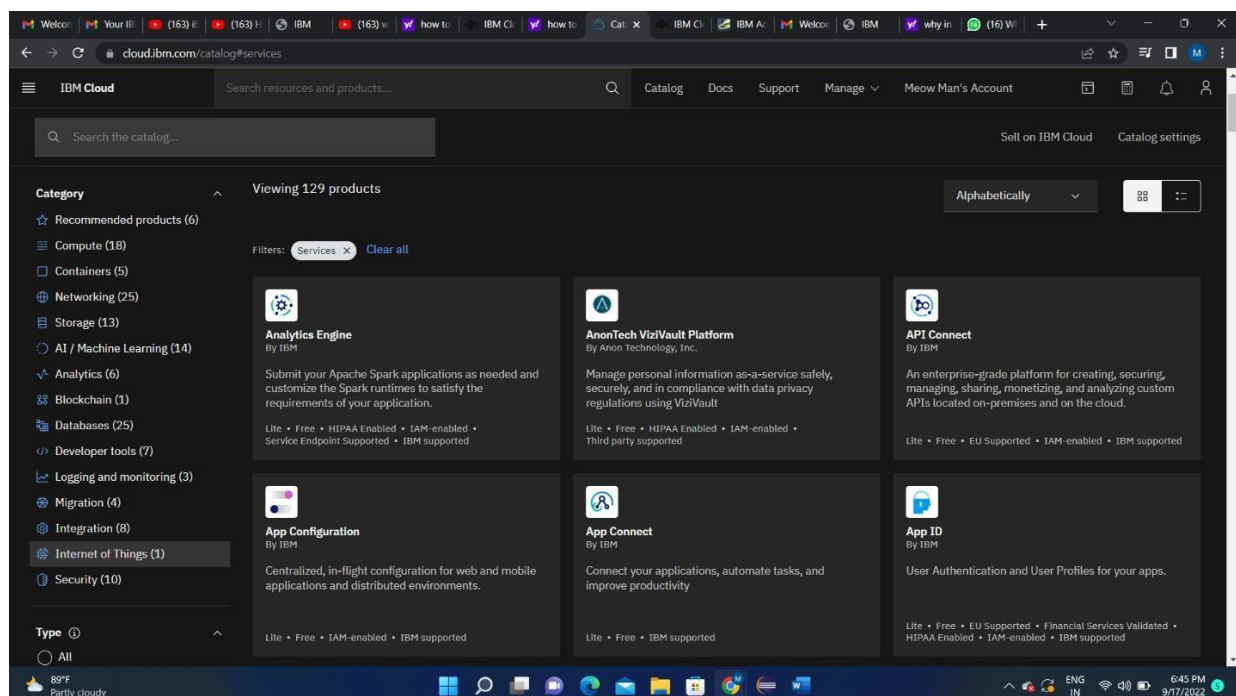
1. Firstly create an IBM cloud account with IBMid and password



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 IoT Platform service page. The 'Create' tab is active, displaying a 'Select a location' dropdown set to 'Dallas (us-south)' and a 'Select a pricing plan' section. The 'Lite' plan is selected, showing features like 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 resource group 'Default'. 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 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 'Service name' is 'Internet of Things Platform-bb' and the 'Resource group' is '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.' 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 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 'Create' page for the Internet of Things Platform. The location is set to 'Dallas (us-south)'. The 'Lite' plan is selected, which includes up to 500 registered devices and a maximum of 200 MB of each data metric. The pricing is 'Free'. 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.

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

Updated on: 08/15/2022

Category: Internet of Things

Compliance: IAM-enabled

Location: Frankfurt, London, Dallas, Washington DC

Related links: Docs, Terms

Select a location: Dallas (us-south)

Select a pricing plan: Lite

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.

Pricing: Free

Summary:

Internet of Things Platform Free

Location: Dallas

Plan: Lite

Service name: Internet of Things Platform-2w

Resource group: Default

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.

I have read and agree to the following license agreements. Terms

Create

Add to estimate

The screenshot shows the IBM Cloud 'Create' page for the Internet of Things Platform. The location is set to 'London'. The 'Lite' plan is selected. The service name is configured as 'Internet of Things Platform-child_safety'. The resource group is set to 'Default'. The 'Create' button is now enabled.

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

Updated on: 08/15/2022

Category: Internet of Things

Compliance: IAM-enabled

Location: Frankfurt, London, Dallas, Washington DC

Related links: Docs, Terms

Select a location: London

Select a pricing plan: Lite

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.

Pricing: Free

Summary:

Internet of Things Platform Free

Location: London

Plan: Lite

Service name: Internet of Things Platform-child_safety

Resource group: Default

I have read and agree to the following license agreements. Terms

Create

Add to estimate

Configure your resource

Service name: Internet of Things Platform-child_safety

Select a resource group: Default

Tags: Examples: env:dev, version-1

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

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 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 options: 'Lite', 'Non-Production', and 'Production'. The 'Lite' option is selected and shows a 'Free' price point.

Resource list / Internet of Things Platform-child_safety Active Add tags

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

Manage Plan Connections

Current plan

Lite

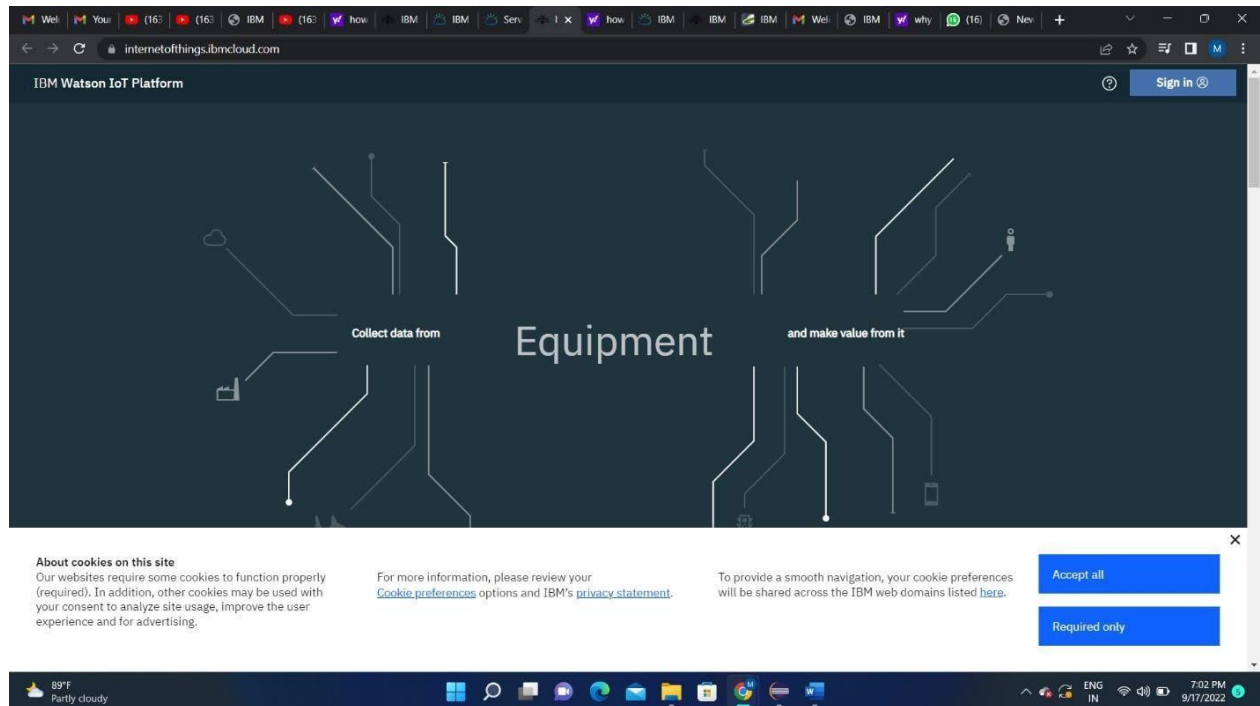
Features

- 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

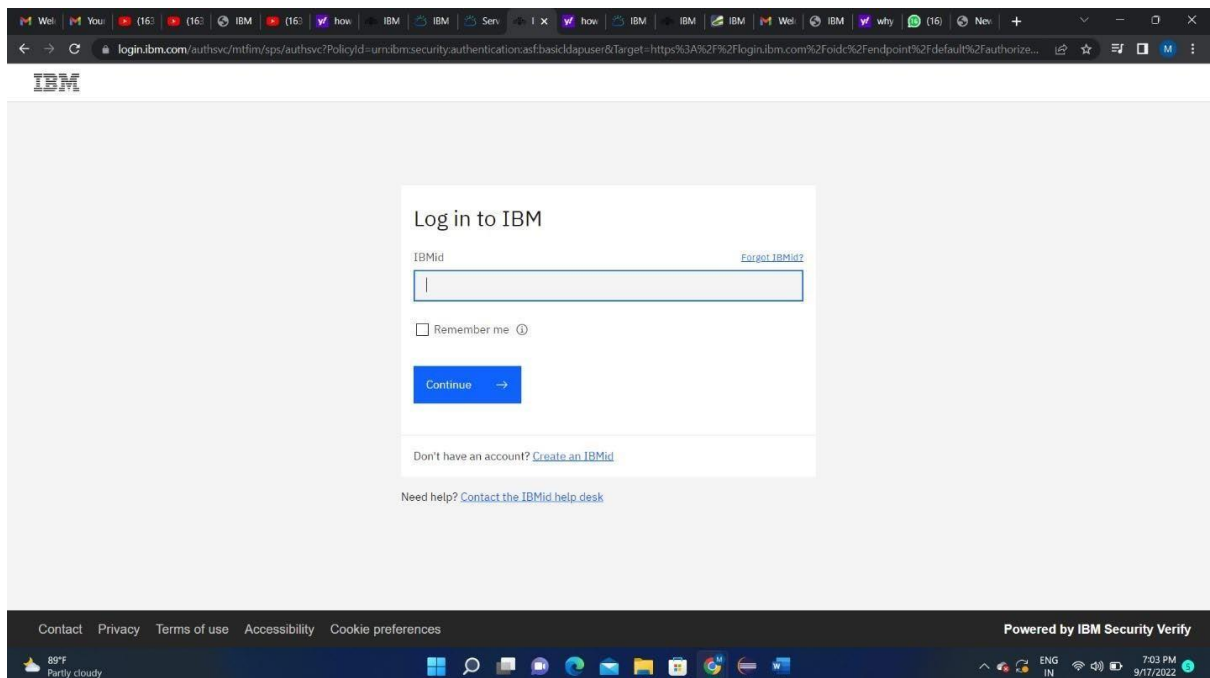
Change pricing plan

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

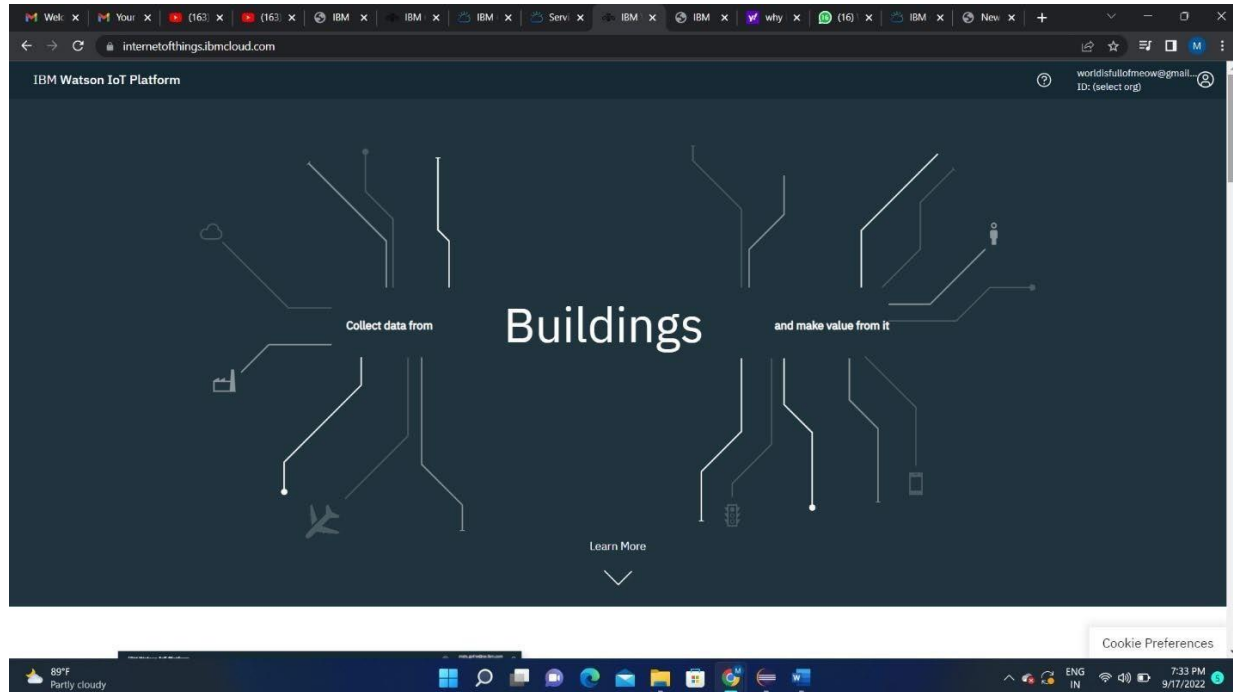
7. Clicking on the launch button in the manage tab, it will open to this



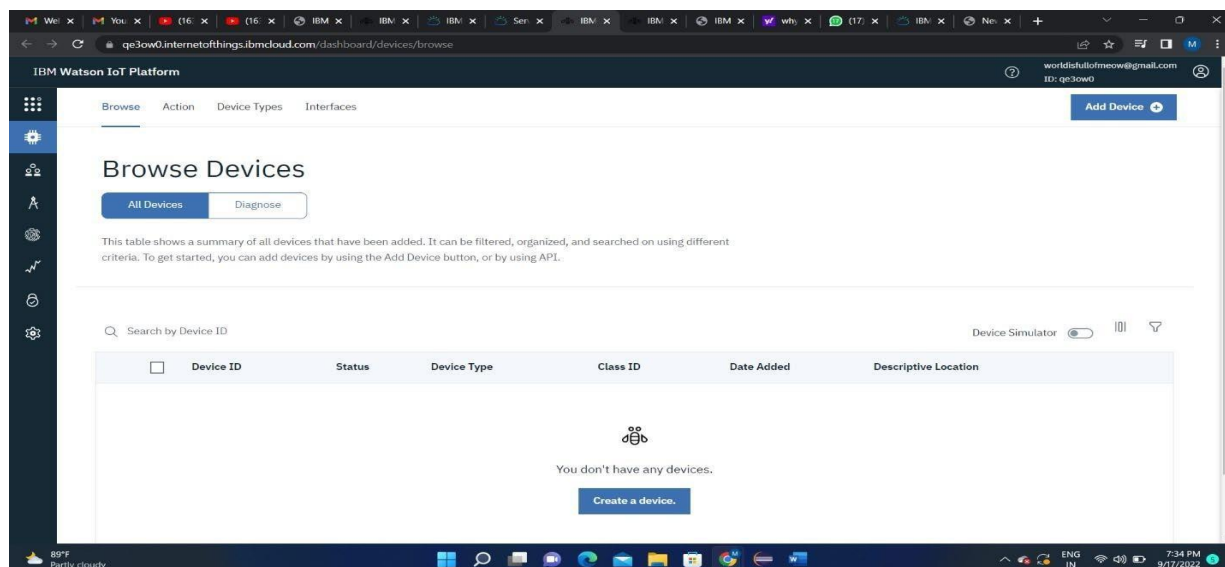
8. Enter the details to sign in to the Watson Cloud to create a device



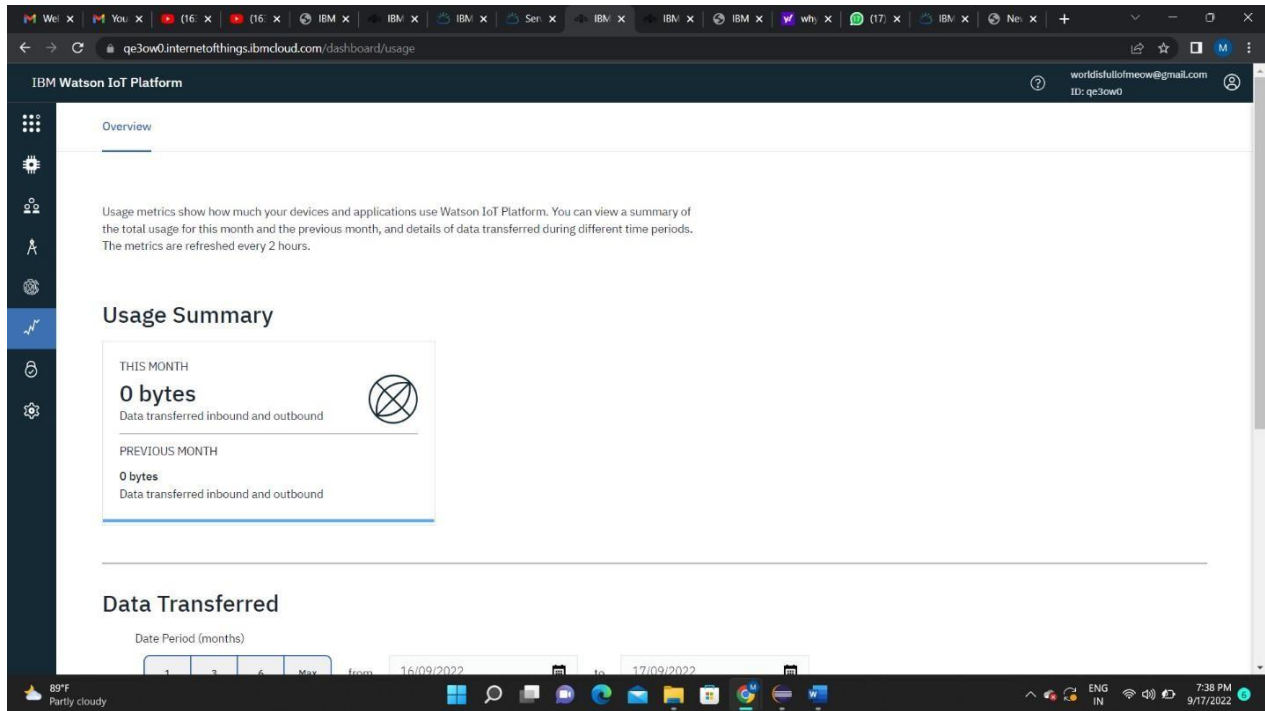
9. Once logged in the name will be displayed and it goes back to the first page



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 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.

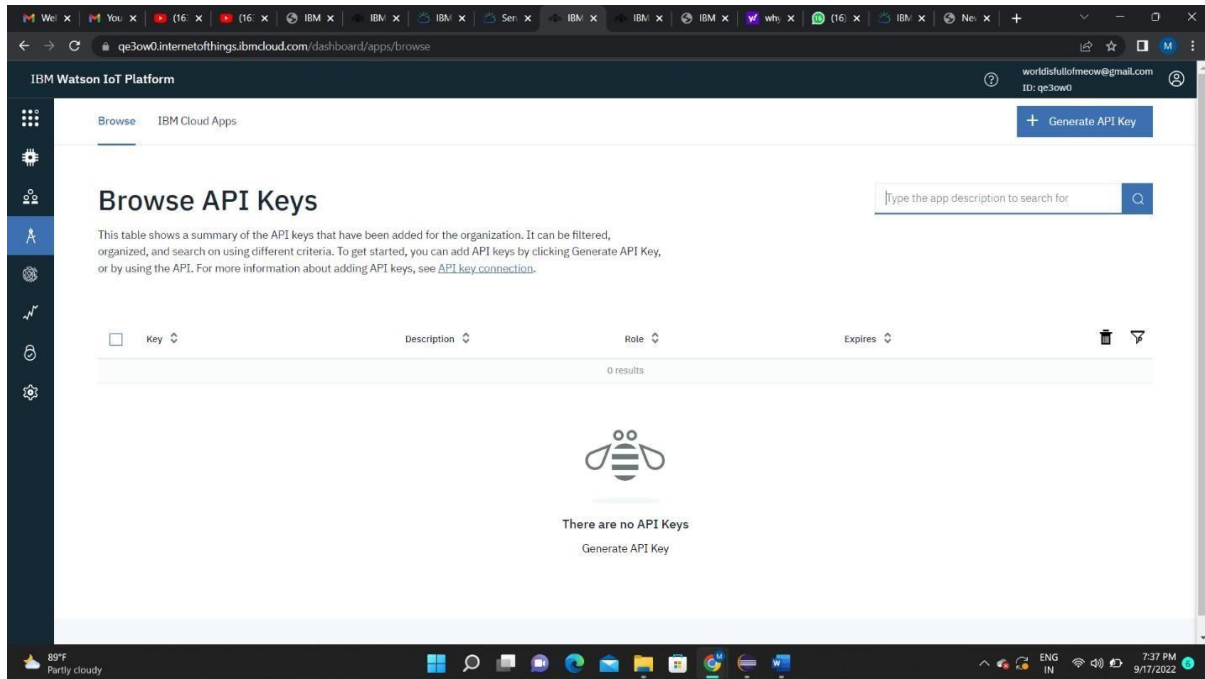
Browse Members

Type the member email to search for

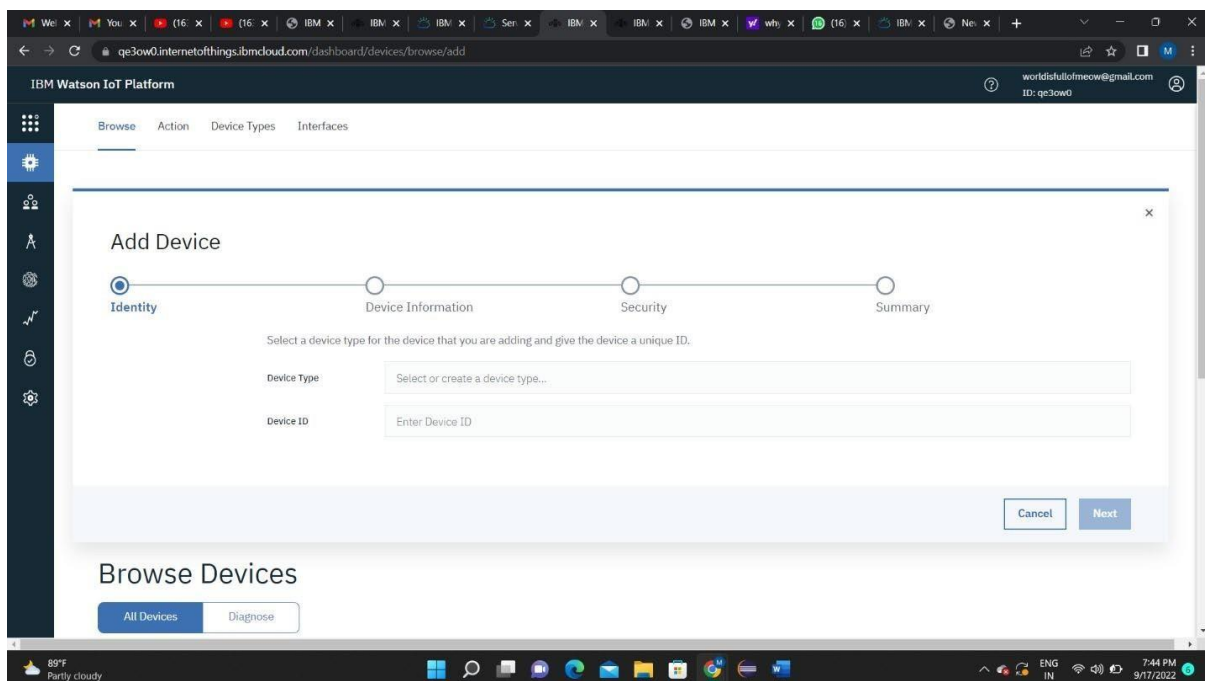
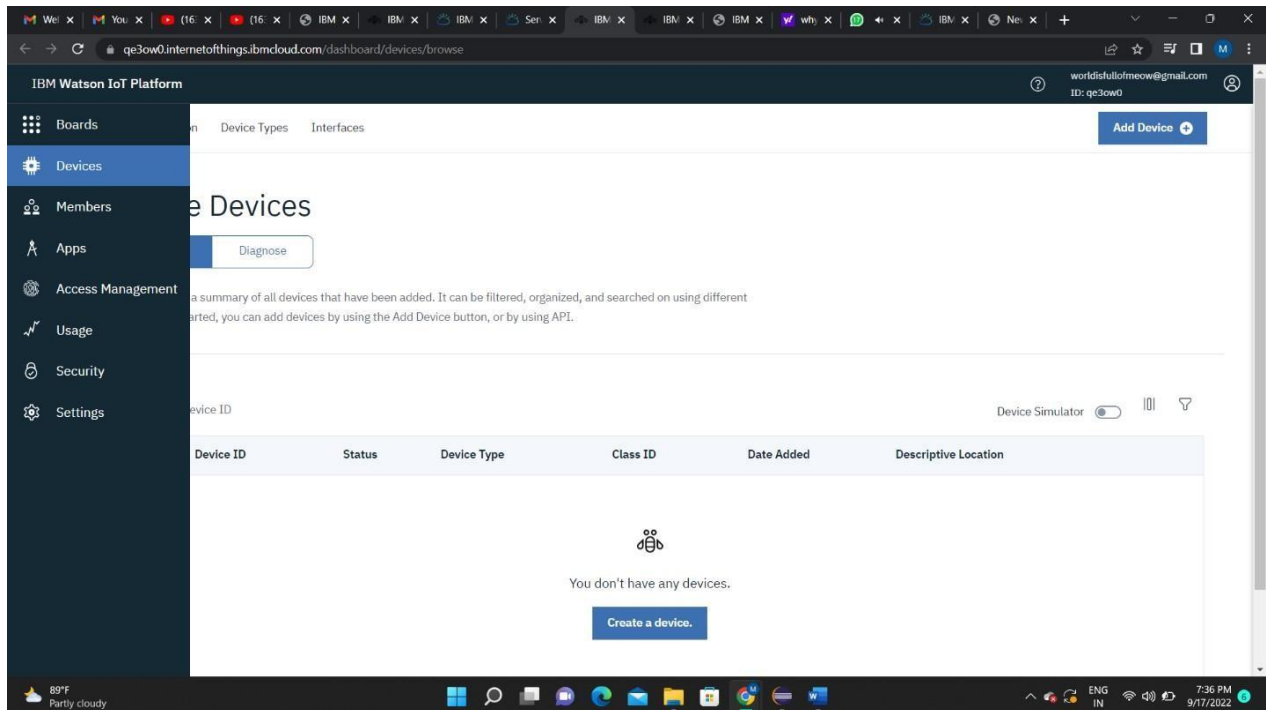
This table shows a summary of the members of the organization. It can be filtered, organized, and search on using different criteria. To get started, you can add members by clicking Add Members, or by using the API. For more information about members, see [Managing user access](#).

<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



IBM Watson IoT Platform

worldisfullofmeow@gmail.com
ID: qe3ow0

Browse Action Device Types Interfaces

Add Device

Identity Device Information Security Summary

Select a device type for the device that you are adding and give the device a unique ID.

Device Type:

Device ID:

Browse Devices

89°F Partly cloudy 7:45 PM 9/17/2022

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

IBM Watson IoT Platform

worldisfullofmeow@gmail.com
ID: qe3ow0

Browse Action Device Types Interfaces

Add Device

Identity Device Information Security Summary

You can modify the default device information and enter more information about the device for identification purposes.

Serial Number	<input type="text" value="Enter Serial Number"/>	Manufacturer	<input type="text" value="Enter Manufacturer"/>
Model	<input type="text" value="Enter Model"/>	Device Class	<input type="text" value="Enter Device Class"/>
Description	<input type="text" value="Enter Description"/>	Firmware Version	<input type="text" value="Enter Firmware Version"/>
Hardware Version	<input type="text" value="Enter Hardware Version"/>	Descriptive Location	<input type="text" value="Enter Descriptive Location"/>

88°F Partly cloudy 9:46 PM 9/17/2022

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.' and 'Authentication token are encrypted before we store them.'

IBM Watson IoT Platform

worldishulofmeow@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.

Authentication token are encrypted before we store them.

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.

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

worldishulofmeow@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

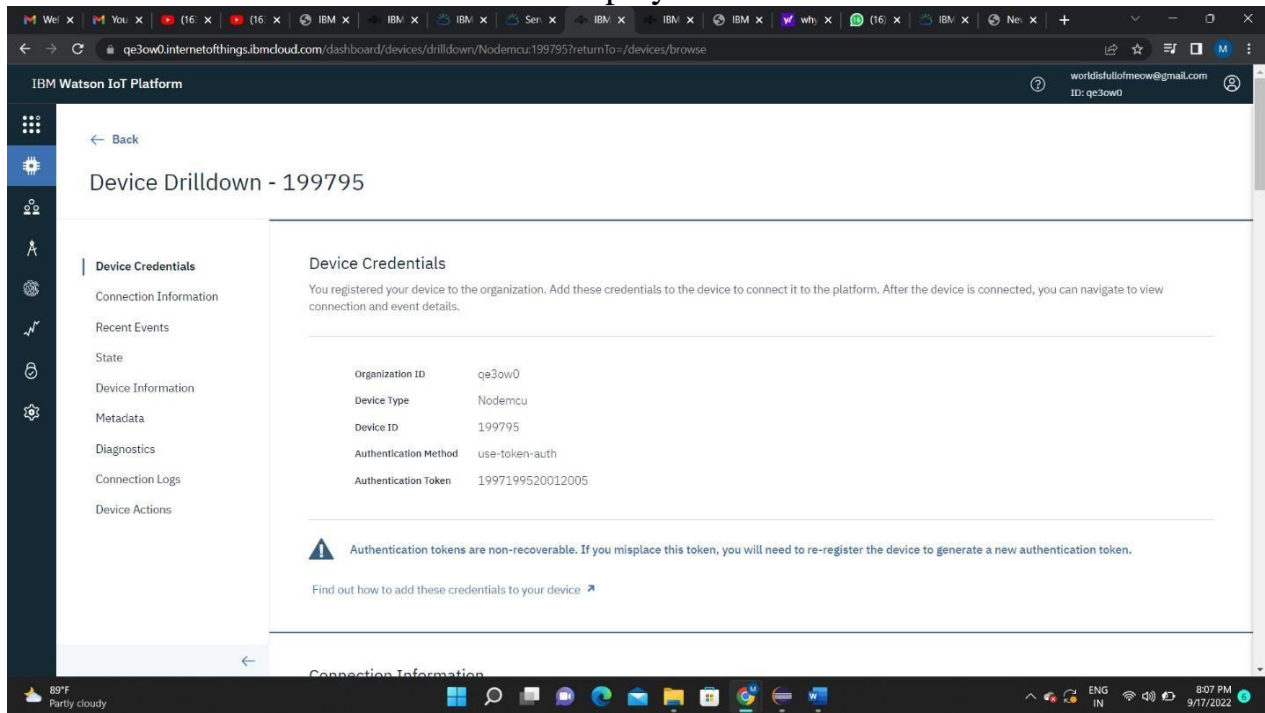
Device ID
199795

View Metadata

Security Token
1997199520012005

Back Finish

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

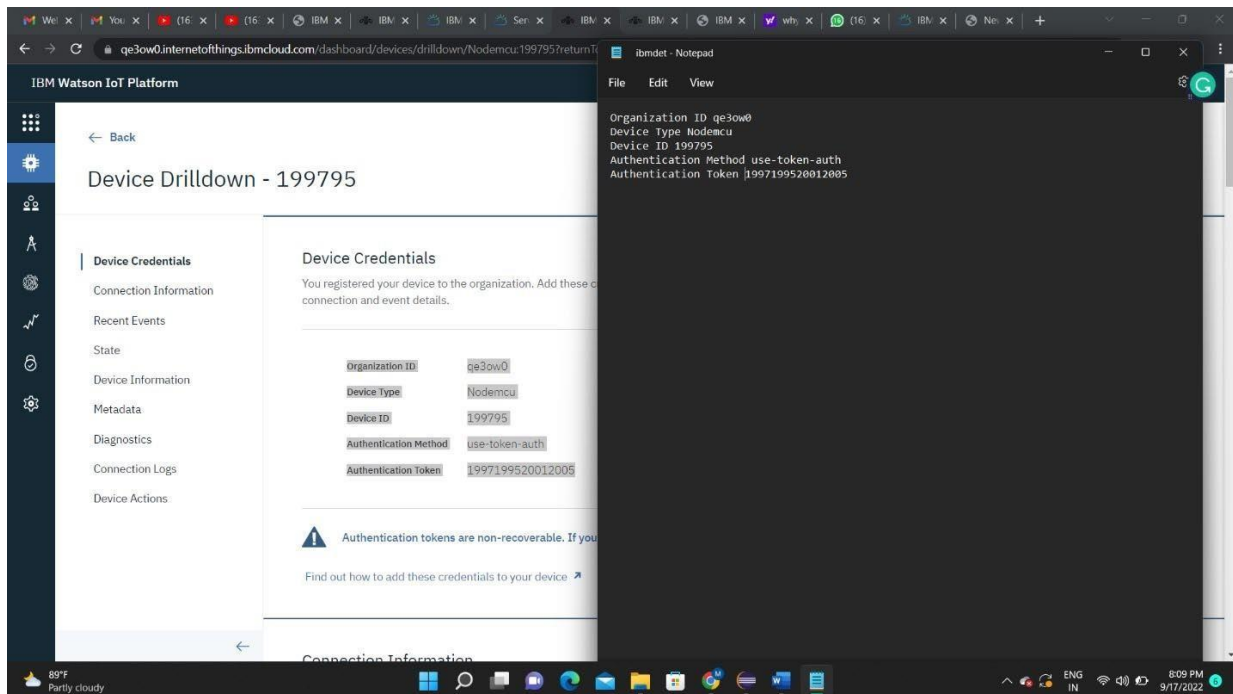


The screenshot shows the IBM Watson IoT Platform dashboard. The left sidebar contains a navigation menu with icons for Home, Devices, Recent Events, State, Device Information, Metadata, Diagnostics, Connection Logs, and Device Actions. The main content area is titled "Device Drilldown - 199795". Under 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." A link "Find out how to add these credentials to your device" is provided.

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.

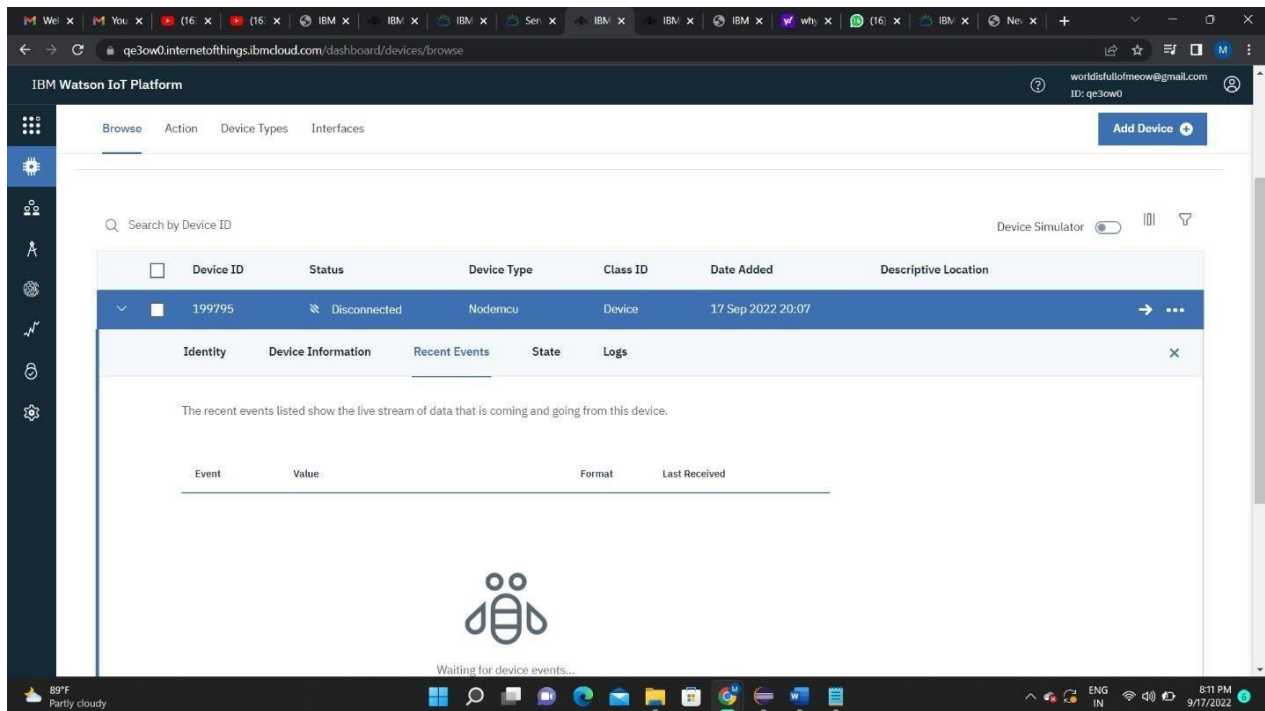


The screenshot shows the same IBM Watson IoT Platform dashboard as in the previous image. A Notepad window titled "ibmdet - Notepad" is open, displaying the device credentials extracted from the dashboard:

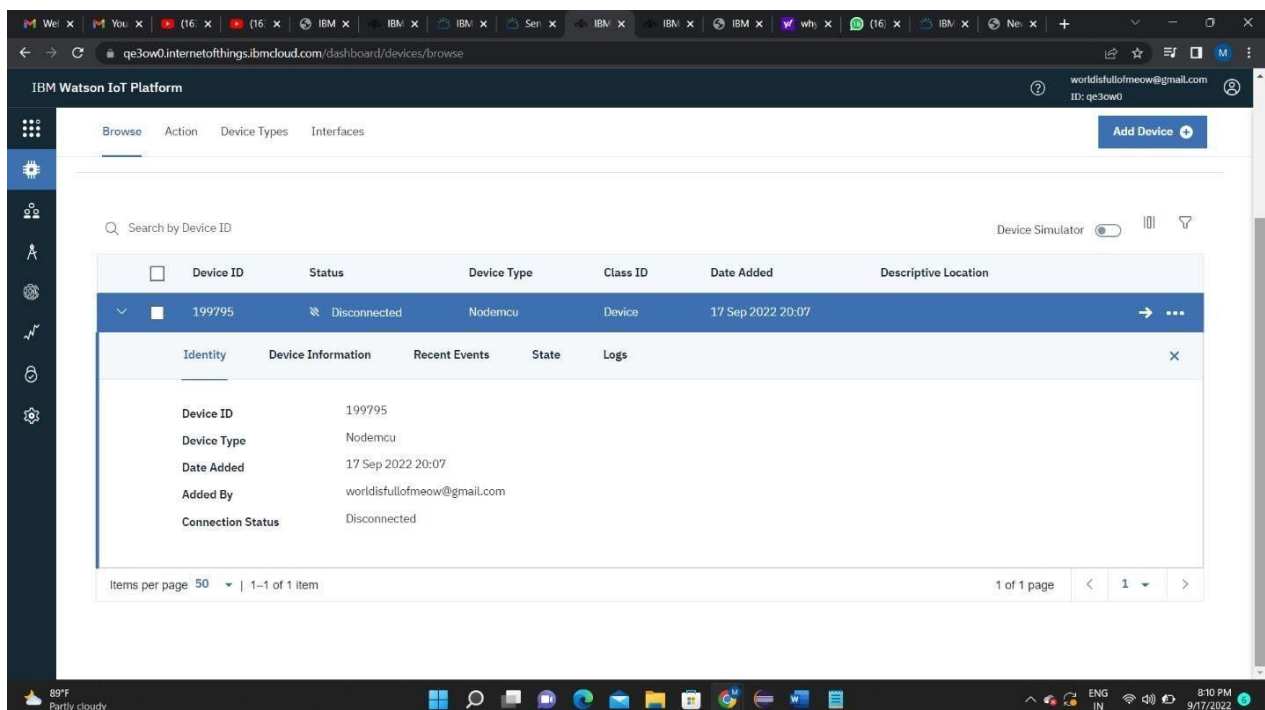
```
Organization ID qe3ow0
Device Type Nodemcu
Device ID 199795
Authentication Method use-token-auth
Authentication Token 1997199520012005
```

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 is present with the text 'Search by Device ID'. Below the search bar, there is a table with columns: Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location. The table contains one row with the following data: Device ID: 199795, Status: Disconnected, Device Type: Nodemcu, Class ID: Device, Date Added: 17 Sep 2022 20:07. To the right of the table, there is a 'Device Simulator' toggle switch. Below the table, there is a section titled 'Identity' with tabs for 'Identity', 'Device Information', 'Recent Events', 'State', and 'Logs'. The 'Recent Events' tab is selected, showing a message: 'The recent events listed show the live stream of data that is coming and going from this device.' Below this message, there is a table with columns: Event, Value, Format, and Last Received. The table is currently empty. At the bottom of the dashboard, there is a status bar showing '89°F Partly cloudy' and the time '8:11 PM 9/17/2022'.



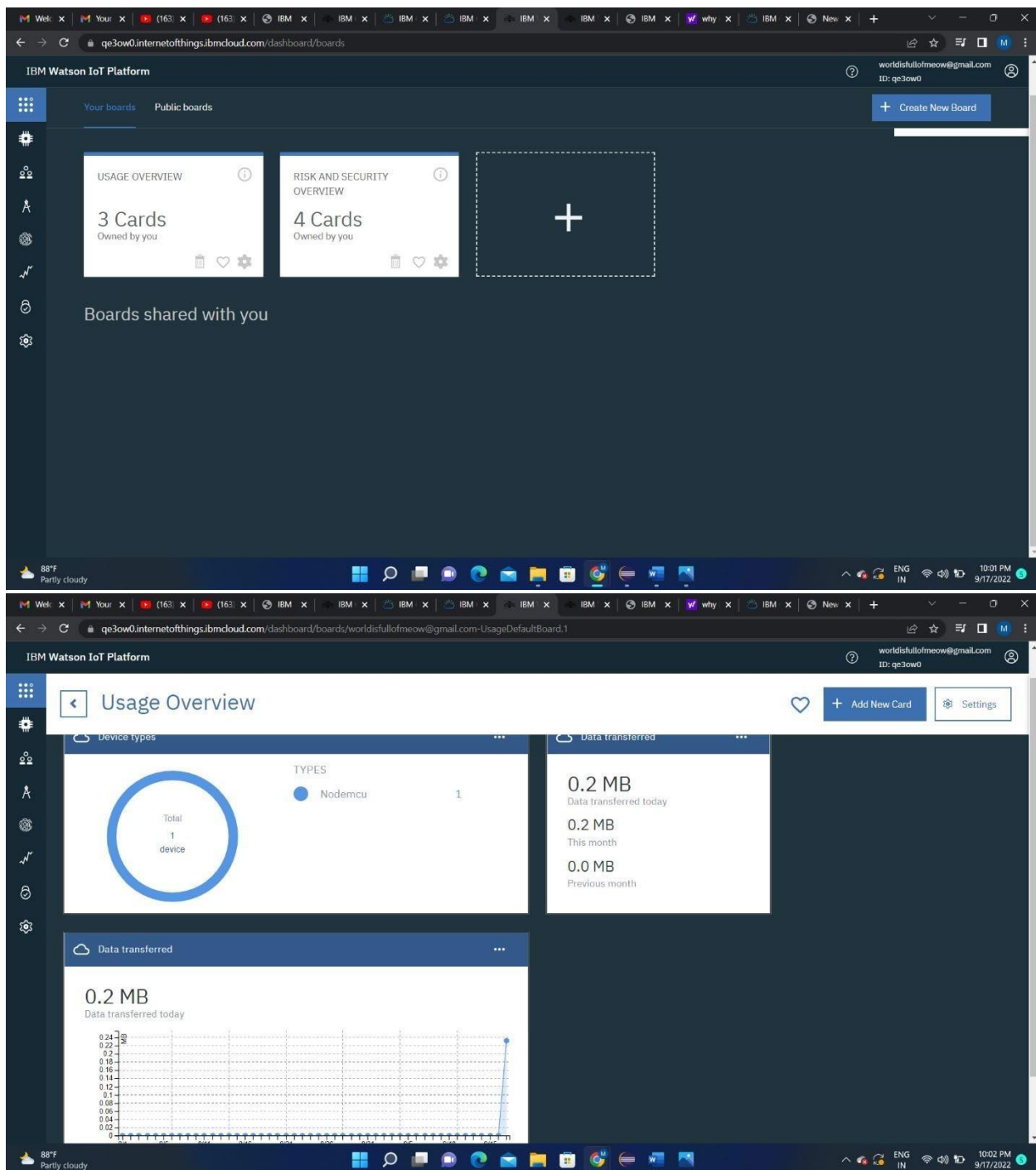
The screenshot shows the IBM Watson IoT Platform dashboard with the 'Identity' tab selected. The table below the tabs displays the following details:

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 dashboard, there is a status bar showing '89°F Partly cloudy' and the time '8:10 PM 9/17/2022'.

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