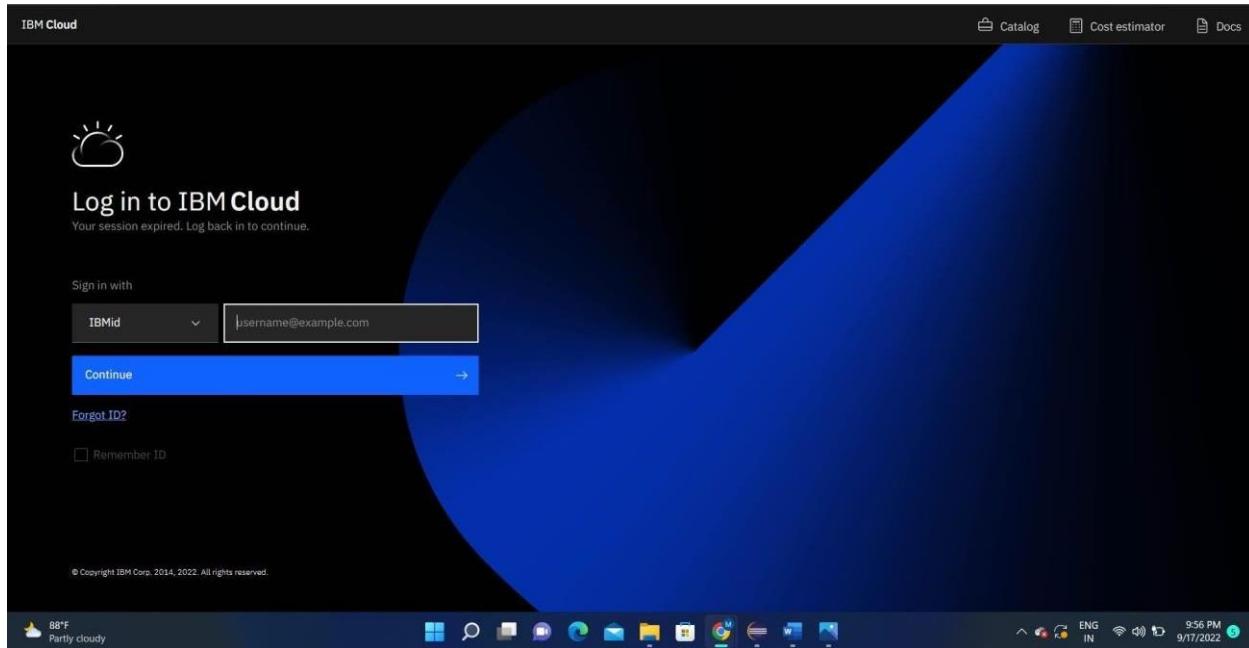


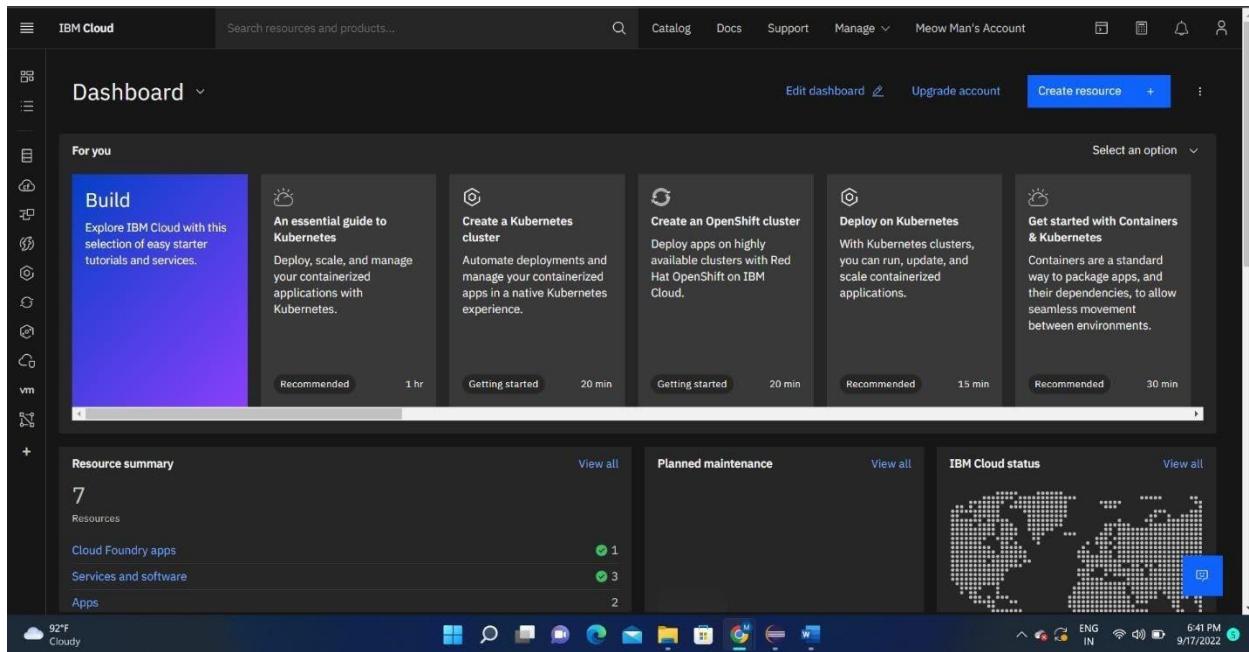
To create the IBM Watson IoT platform and device

STEPS:

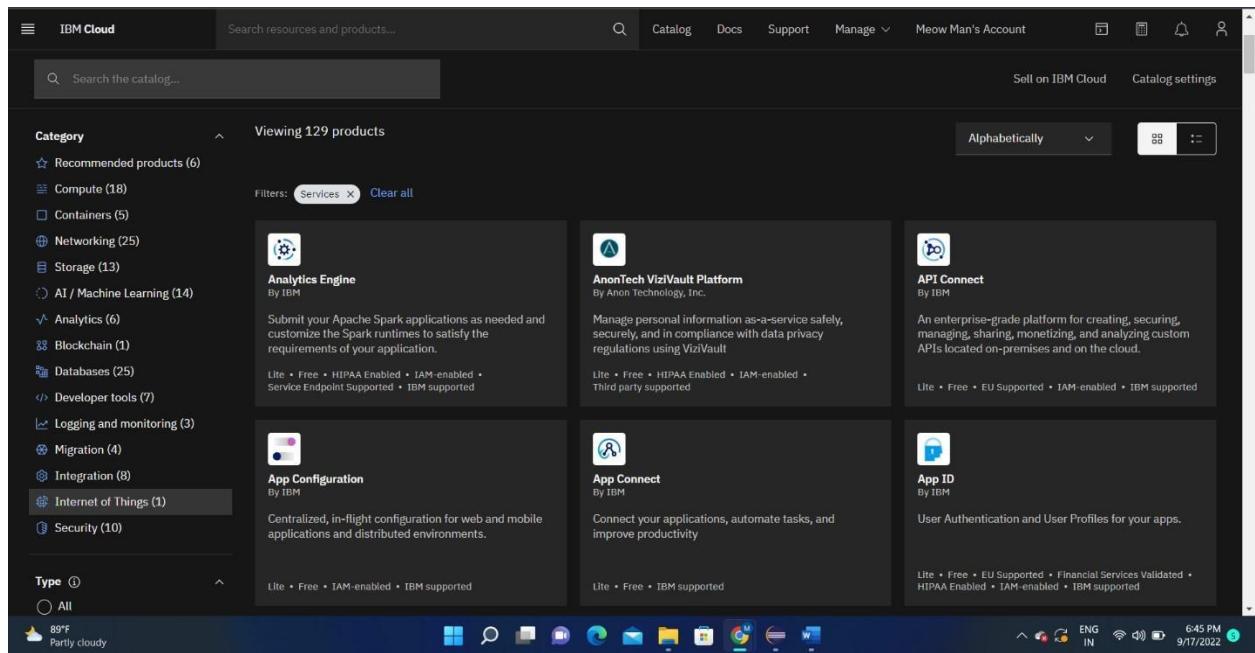
1. Firstly create an IBM cloud account with IBMid and password



2. Home page of IBM cloud



3. Click on the catalog on the top



4. Click on IoT in the category mentioned

Summary

Internet of Things Platform Free

Location: Dallas
Plan: Lite
Service name: Internet of Things Platform-bb
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

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

Summary

Internet of Things Platform Free

Location: London
Plan: Lite
Service name: Internet of Things Platform-bb
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

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 Catalog interface. On the left, there's a sidebar with service details: Type: Service, Provider: IBM, Updated on: 08/15/2022, Category: Internet of Things, Compliance: IAM-enabled, and Location: Frankfurt, London, Dallas, Washington DC. The main area displays the "Internet of Things Platform" service. It has tabs for "Create" (selected) and "About". A dropdown menu for "Select a location" shows "Dallas (us-south)". Below it, a dropdown for "Select a pricing plan" shows "Lite". A table compares the "Lite" plan against others, highlighting features like up to 500 registered devices and 200 MB of data metric. A note states: "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." A warning box says: "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." To the right, a "Summary" panel shows the service name, location, plan, and resource group. At the bottom, there's a checkbox for "I have read and agree to the following license agreements" and a "Create" button.

This screenshot shows the configuration step for creating a new service. The sidebar remains the same. The main area now shows a "Configure your resource" section. It includes fields for "Service name" (set to "Internet of Things Platform-child_safety"), "Select a resource group" (set to "Default"), "Tags" (with an example of "env:dev, version:1"), and "Access management tags" (with an example of "access:dev, proj:version-1"). The "Create" button is highlighted in blue at the bottom right. The "Summary" panel on the right shows the final configuration: Location: London, Plan: Lite, Service name: Internet of Things Platform-child_safety, and Resource group: Default. There's also a checked checkbox for license agreements.

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)

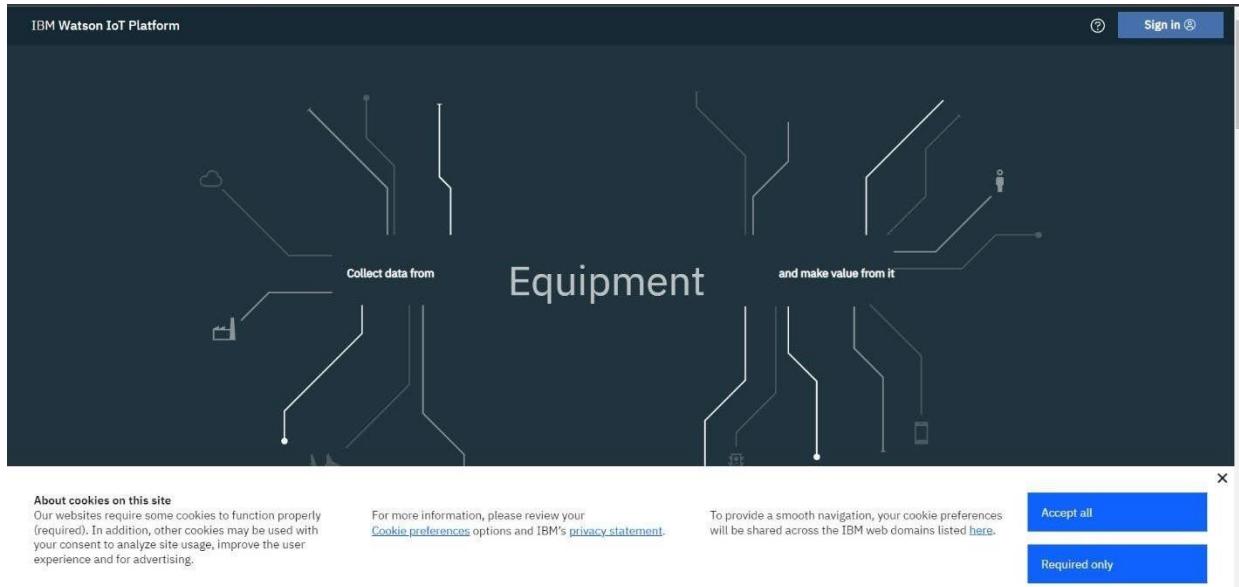
7.

The screenshot shows the IBM Cloud interface with the URL [https://cloud.ibm.com/resources/iot-service/cn%3Av1%3Abluemix%3Apublic%3Aiot-service%3Aeu-gb%3Aa%2Fb77a43c0d7e04aa8abx85ca562dba69%3A87a72bcb-1bf7-44a2-b735-4cd2b61b2403%3A%3A7panelId=plan&new=true](#). The top navigation bar includes 'IBM Cloud', a search bar, 'Catalog', 'Docs', 'Support', 'Manage', and 'Meow Man's Account'. The main content area displays the 'Internet of Things Platform-child_safety' service, which is active. The 'Manage' tab is selected, showing options like 'Plan' and 'Connections'. A central panel features a graphic of interconnected nodes and the text 'Let's get started with IBM Watson IoT Platform'. Below this, a section titled 'Ready for the next level?' shows the 'IBM Watson IoT Platform Journey' with three stages: 'Lite', 'Non-Production', and 'Production'. The 'Lite' stage is highlighted. The 'Plan' section shows the 'Lite' plan is currently selected. The 'Current usage' section indicates 'N/A' with a note that services are deleted after 30 days of inactivity. The bottom status bar shows the weather as '89°F Partly cloudy' and the date/time as '9/17/2022 7:28 PM'.

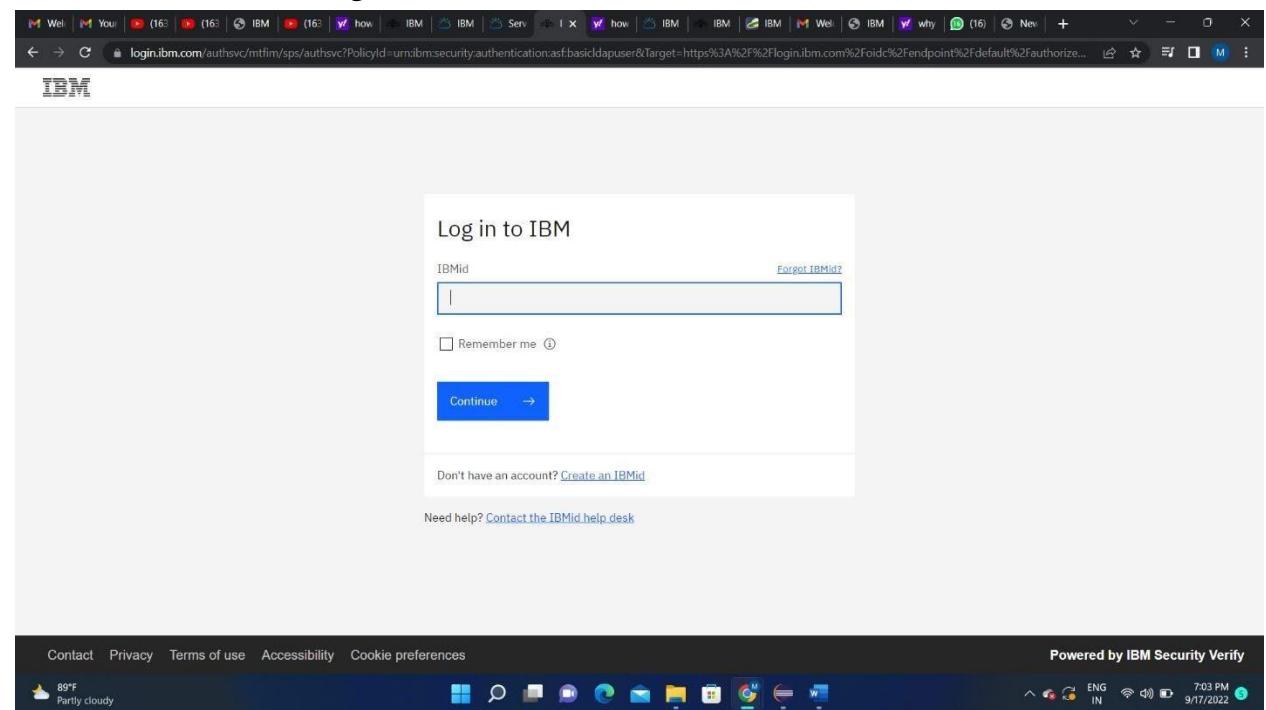
The screenshot shows the IBM Cloud interface with the same URL as the previous screenshot. The 'Plan' tab is now selected. The left sidebar shows 'Manage', 'Plan' (selected), and 'Connections'. The main content area displays the 'Current plan' as 'Lite'. It lists features such as up to 500 registered devices and 200 MB of data metric. The 'Current usage' section shows 'N/A' and notes that services are deleted after 30 days of inactivity. A 'Change pricing plan' section allows switching to other plans, with the 'Lite' plan currently selected. The bottom status bar shows the weather as '89°F Partly cloudy' and the date/time as '9/17/2022 7:28 PM'.

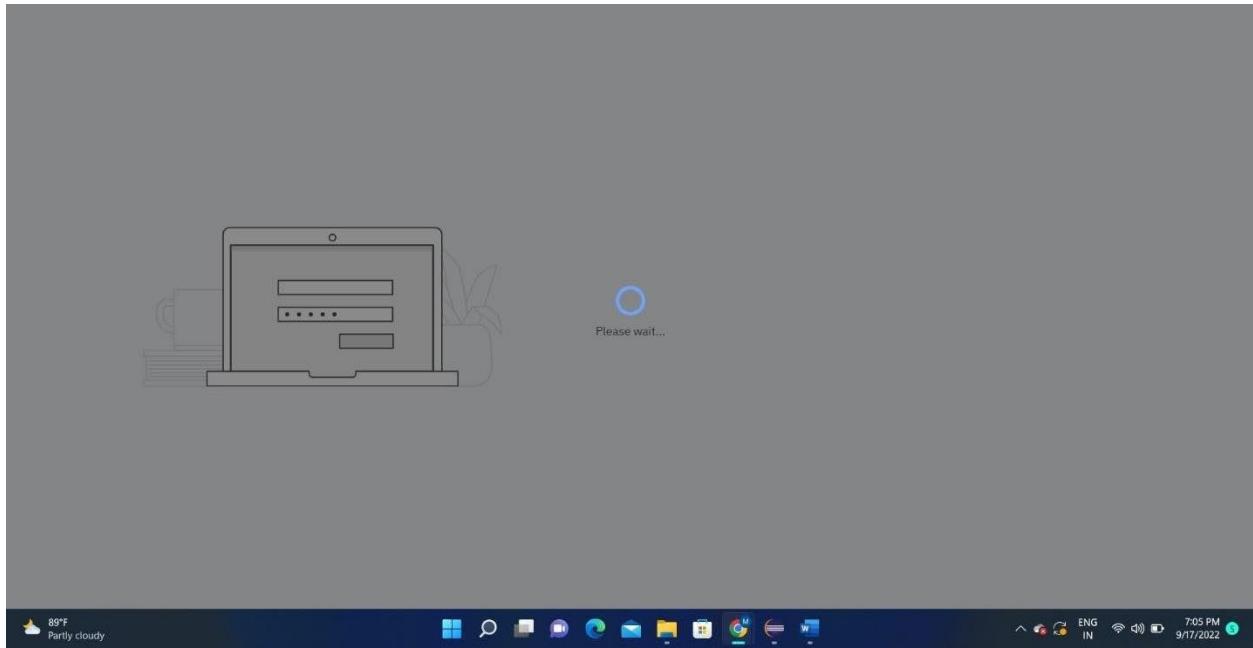
Clicking on the launch button in the manage tab, it will open to this

8.

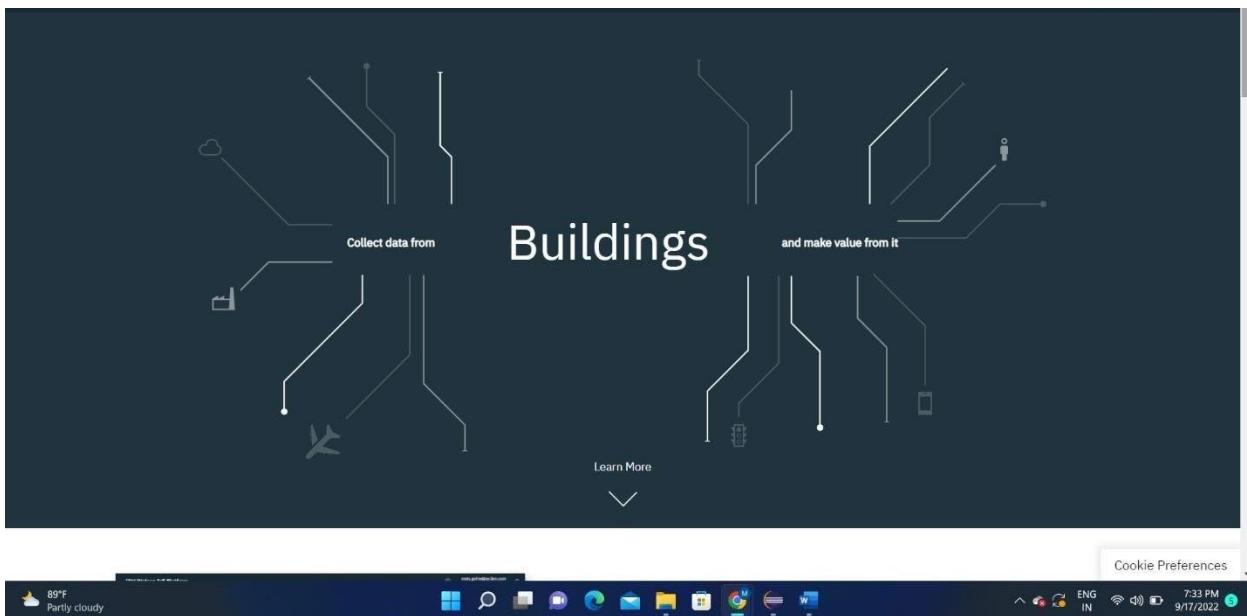


9. Enter the details to sign in to the Watson Cloud to create a device





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.

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

<input type="checkbox"/>	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
You don't have any devices.						

Create a device.

12. The setting tab is used to change the general setting if needed for the project.

General Settings
Here you can see and modify global organization information and locally enable experimental Watson IoT Platform features.

PLATFOM Current Features
Custom Cards

About

Identity

Experimental Features

Last Event Cache

Client Connection State API

DATA AND DEVICES

Custom Device Management Packages

Device Simulator

SECURITY

Activate Last Event Cache

Last Event Cache
The last event cache (LEC) stores information about the last event a connected device sent to the platform. For more information, see the last event cache documentation.

Activate Client Connection State API

Client Connection State API
The Client Connection State API provides client connection status information. For more information, see the client state monitoring documentation.

13. In the security tab we can choose the type of security connection and can change according to specification

The screenshot shows the 'Policies' section of the Watson IoT Platform. On the left is a dark sidebar with various icons. The main area has a header 'Policies' and a sub-header 'You can configure policies to enhance connection security and control access to the server from devices.' Below this are three policy items: 'Connection Security' (Configure the security level for device connection), 'Blacklist' (Block access from specific IP addresses. Activating a blacklist disables an active whitelist, currently set to 'Disabled'), and 'Whitelist' (Allow access from specific IP addresses. Activating a whitelist disables an active blacklist, currently set to 'Disabled'). Each item has a blue edit icon on the right.

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

The screenshot shows the 'Usage' section of the Watson IoT Platform. It features an 'Overview' header and a detailed 'Usage Summary' section. The 'Usage Summary' section includes two boxes: 'THIS MONTH' showing '0 bytes' transferred inbound and outbound, and 'PREVIOUS MONTH' also showing '0 bytes' transferred. Below this is a 'Data Transferred' section with a date range selector from '16/09/2022' to '17/09/2022'. The bottom of the screen shows a Windows taskbar with weather information (89°F, Partly cloudy) and system status icons.

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

The screenshot shows the 'Browse Members' page. On the left is a dark sidebar with various icons. At the top right is a blue button labeled '+ Add Members'. Below it is a search bar with the placeholder 'Type the member email to search for' and a magnifying glass icon. The main area has a title 'Browse Members' and a summary text: '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](#)'. A table header row includes columns for 'Email Address', 'Name', 'Role', 'Added By', and 'Expires'. Below the header is a single result row: 'worldisfullofmeow@gmail.com' (Email Address), 'worldisfullofmeow@gmail.com' (Name), 'Administrator' (Role), '-' (Added By), and '-' (Expires). At the bottom of the page is a standard Windows taskbar.

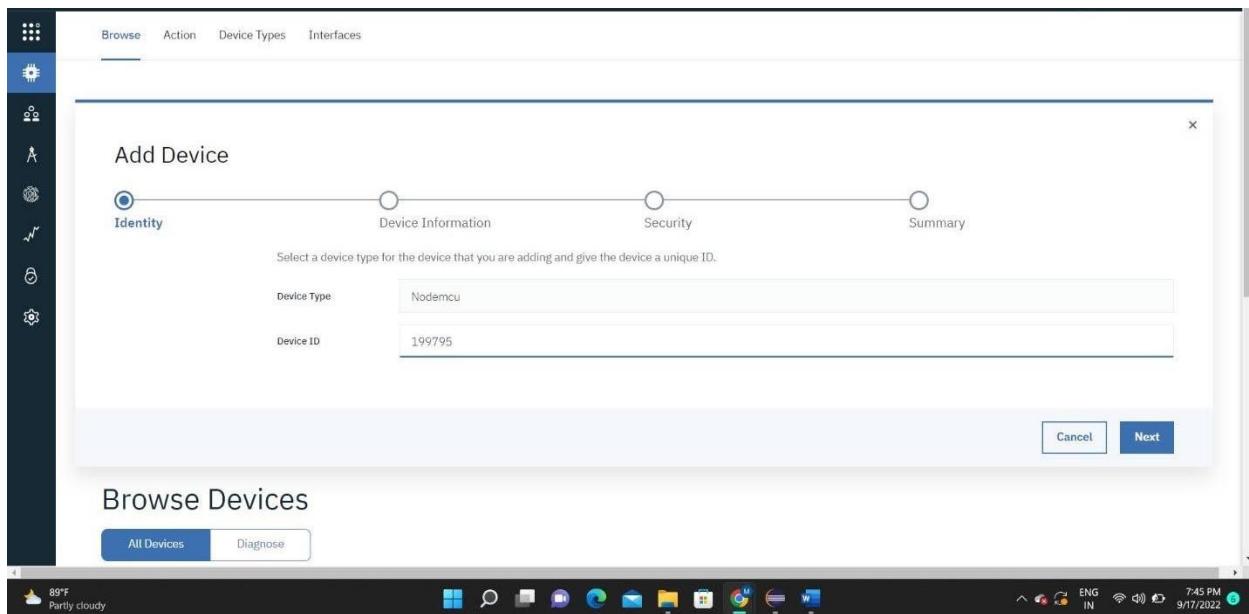
16. This tab is used when you want to connect to some other platform and to integrate with other services.

The screenshot shows the 'Browse API Keys' page. The sidebar on the left is identical to the previous screenshot. At the top right is a blue button labeled '+ Generate API Key'. Below it is a search bar with the placeholder 'Type the app description to search for' and a magnifying glass icon. The main area has a title 'Browse API Keys' and a summary text: 'This table shows a summary of the API keys that have been added for the organization. It can be filtered, organized, and search on using different criteria. To get started, you can add API keys by clicking Generate API Key, or by using the API. For more information about adding API keys, see [API key connection](#)'. A table header row includes columns for 'Key', 'Description', 'Role', and 'Expires'. Below the header is a message '0 results'. In the center, there is a large bee icon and the text 'There are no API Keys' followed by a 'Generate API Key' button. The bottom features a Windows taskbar.

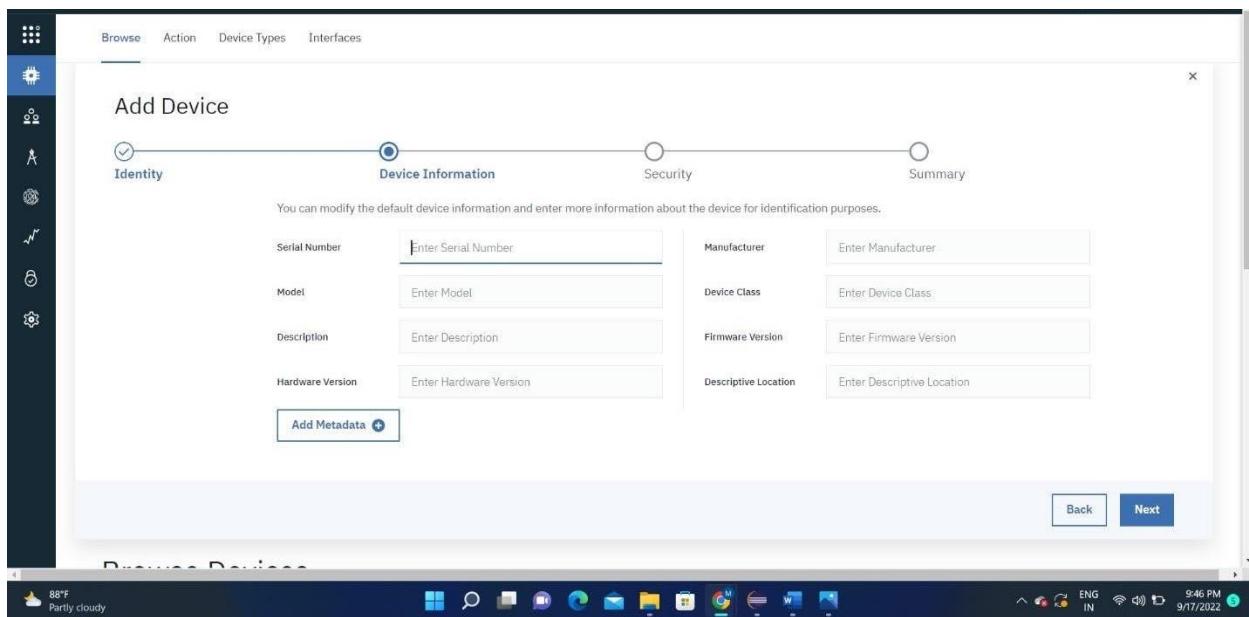
17. Click on the device tab and click on the add device button, then give the device type and device id and click next

The screenshot shows the 'Devices' section of a device management application. The left sidebar includes 'Boards', 'Devices' (selected), 'Members', 'Apps', 'Access Management', 'Usage', 'Security', and 'Settings'. The main area displays a summary of devices with a 'Diagnose' button. A message states: 'This page provides a summary of all devices that have been added. It can be filtered, organized, and searched on using different filters on the left. Once you have added devices, you can add devices by using the Add Device button, or by using API.' Below this is a table with columns: Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location. A 'Device Simulator' toggle switch is present. The bottom status bar shows weather (89°F, Partly cloudy), system icons, and the date/time (9/17/2022, 7:36 PM).

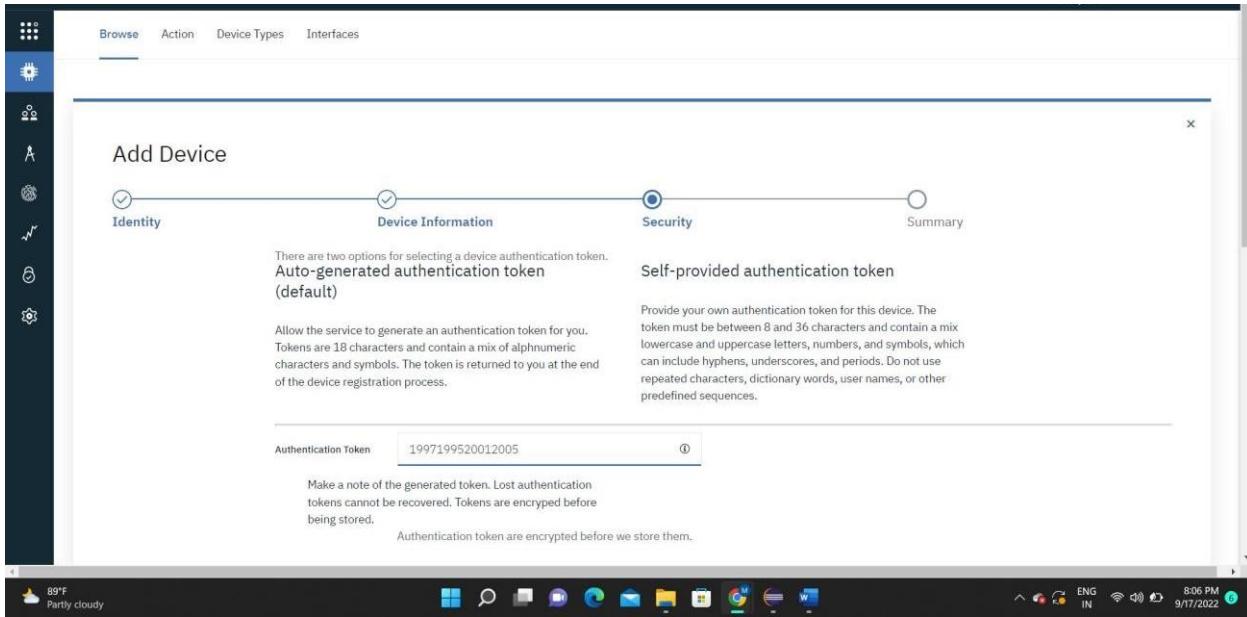
The screenshot shows the 'Add Device' wizard at the 'Identity' step. The title is 'Add Device'. The steps are: Identity, Device Information, Security, Summary. The 'Identity' step requires selecting a device type and entering a device ID. A note says: 'Select a device type for the device that you are adding and give the device a unique ID.' The 'Device Type' field has a placeholder 'Select or create a device type...' and the 'Device ID' field has a placeholder 'Enter Device ID'. Buttons for 'Cancel' and 'Next' are at the bottom right. The background shows the 'Browse Devices' section with 'All Devices' and 'Diagnose' buttons. The bottom status bar shows weather (89°F, Partly cloudy), system icons, and the date/time (9/17/2022, 7:44 PM).



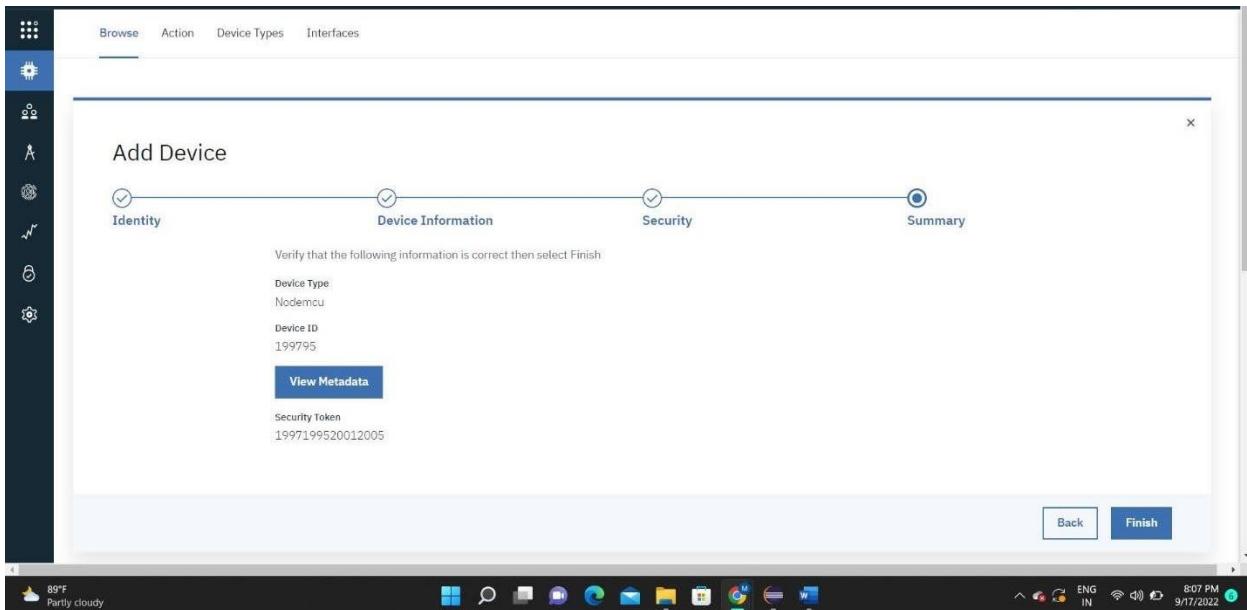
18. This page to enter extra details and of the hardware



19. Clicking next it goes to the security where we do authentication token id.



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



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

Device Drilldown - 199795

Device Credentials

You registered your device to the organization. Add these credentials to the device to connect it to the platform. After the device is connected, you can navigate to view connection and event details.

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

⚠️ 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.

22. Safe the details of the device as the authentication tokens are nonrecoverable and if misplaced then we have to create a new one.

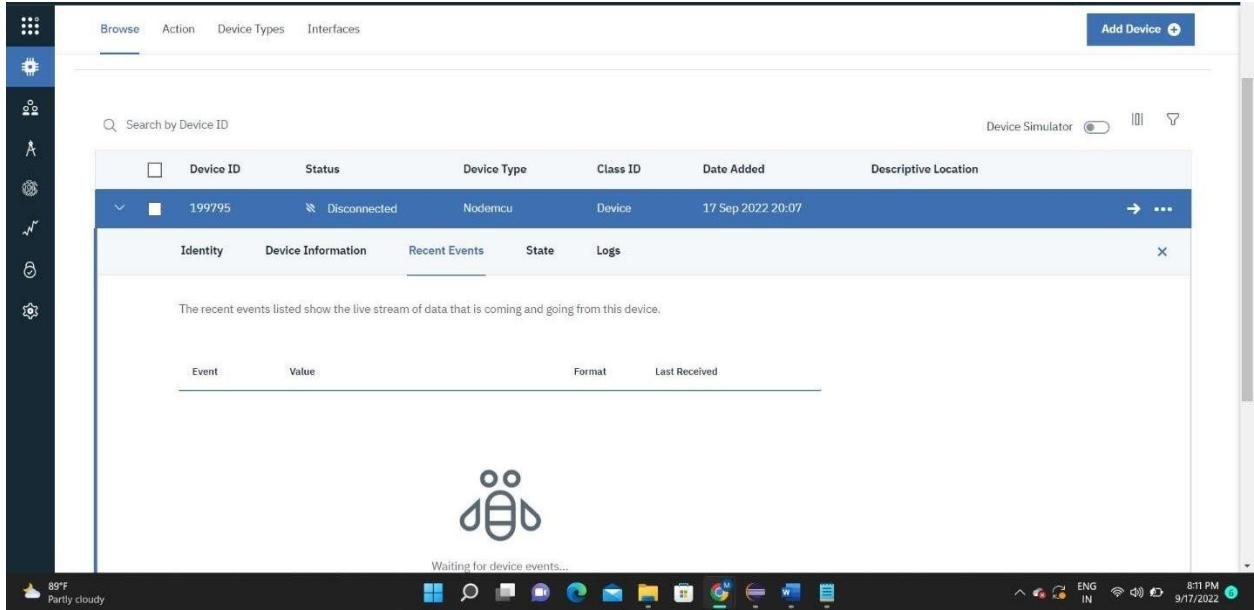
ibndet - Notepad

File Edit View

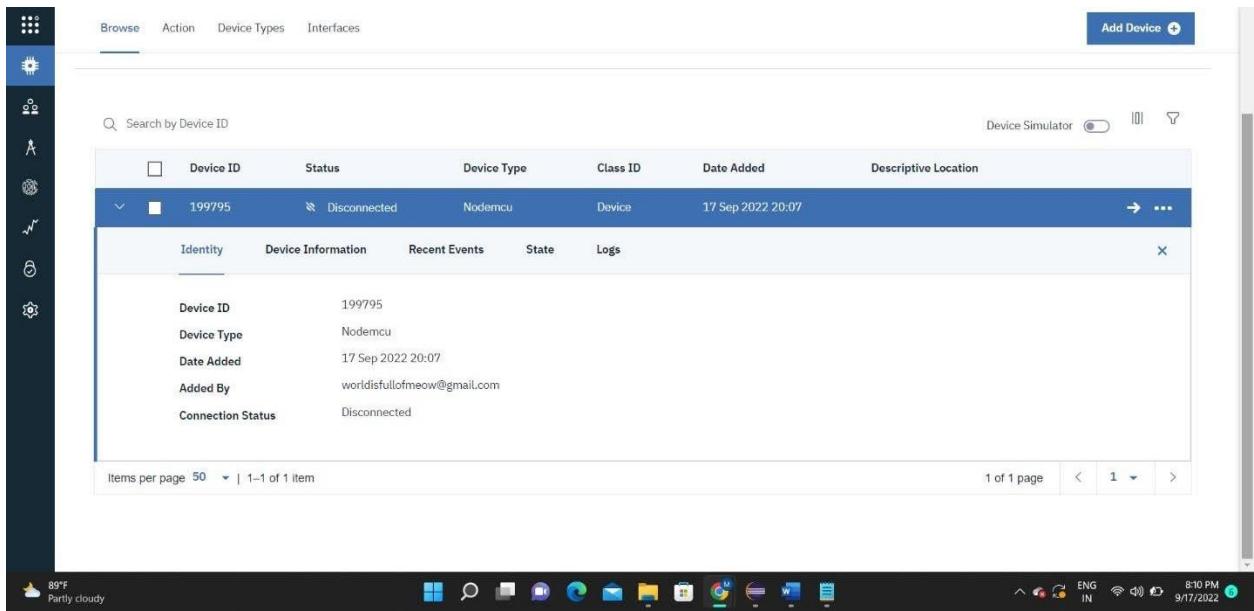
Organization ID qe3ow0
Device Type Nodemcu
Device ID 199795
Authentication Method use-token-auth
Authentication Token 1997199520012005

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.



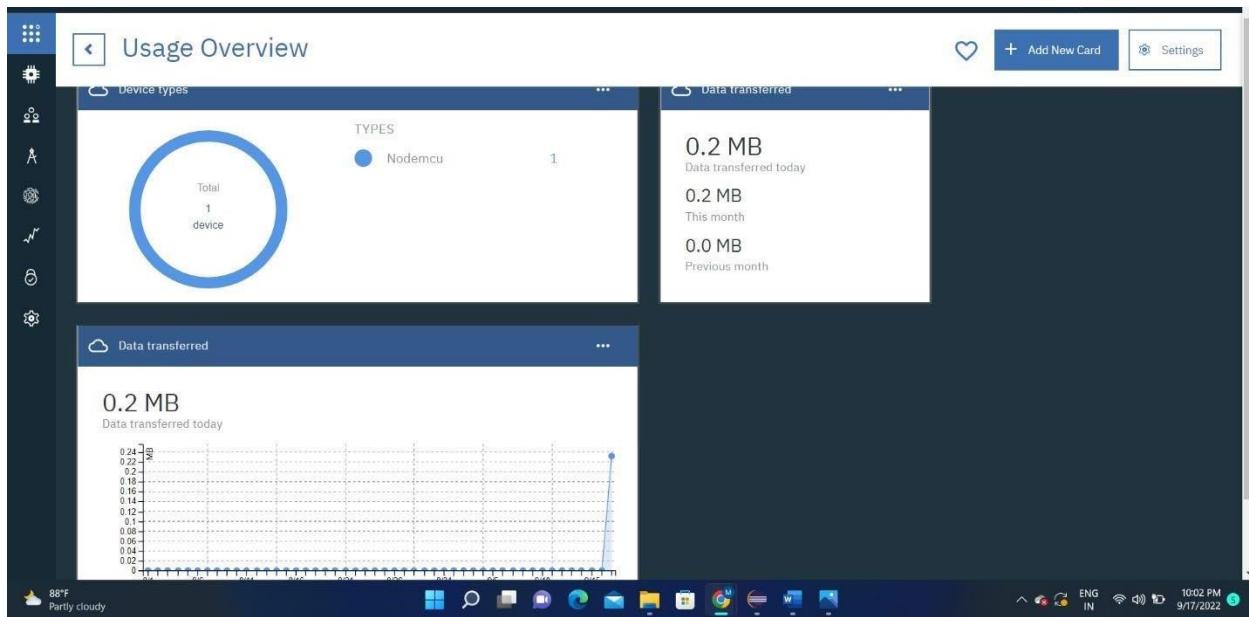
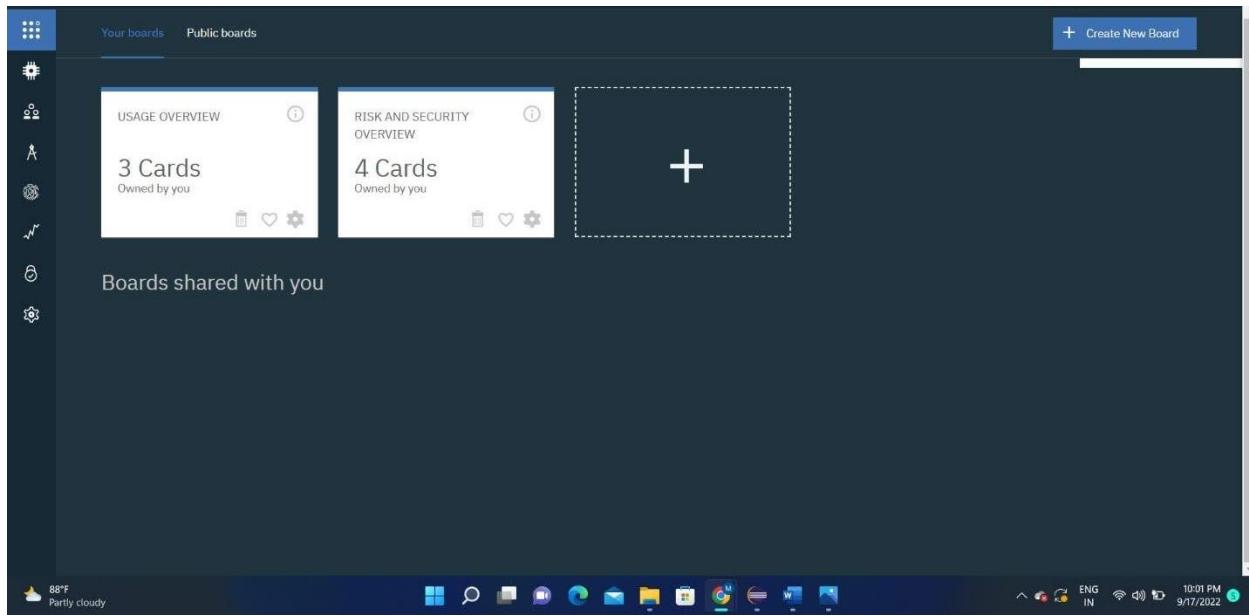
This screenshot shows a device management interface. At the top, there are tabs for 'Browse', 'Action', 'Device Types', and 'Interfaces'. On the right, there's a blue button labeled 'Add Device' with a plus sign. Below the tabs is a search bar with placeholder text 'Search by Device ID'. To the right of the search bar is a 'Device Simulator' toggle switch. The main area displays a table with columns: 'Device ID' (199795), 'Status' (Disconnected), 'Device Type' (NodeMCU), 'Class ID' (Device), 'Date Added' (17 Sep 2022 20:07), and 'Descriptive Location'. Below the table, there are five tabs: 'Identity', 'Device Information', 'Recent Events' (which is underlined, indicating it's active), 'State', and 'Logs'. A message below the tabs says, 'The recent events listed show the live stream of data that is coming and going from this device.' Under the 'Recent Events' tab, there are columns for 'Event', 'Value', 'Format', and 'Last Received'. At the bottom of the interface is a decorative logo of a cat's face and the text 'Waiting for device events...'. The system tray at the bottom shows weather information (89°F, Partly cloudy), system icons, and a date/time stamp (9/17/2022 8:10 PM).



This screenshot shows the same device management interface as the previous one, but with the 'Device Information' tab active. The table below the header now displays specific details for the device: Device ID (199795), Device Type (NodeMCU), Date Added (17 Sep 2022 20:07), Added By (worldisfullofmeow@gmail.com), and Connection Status (Disconnected). At the bottom of the interface, there are buttons for 'Items per page' (set to 50), a page number indicator (1 of 1 page), and navigation arrows. The system tray at the bottom shows weather information (89°F, Partly cloudy), system icons, and a date/time stamp (9/17/2022 8:10 PM).

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 created