

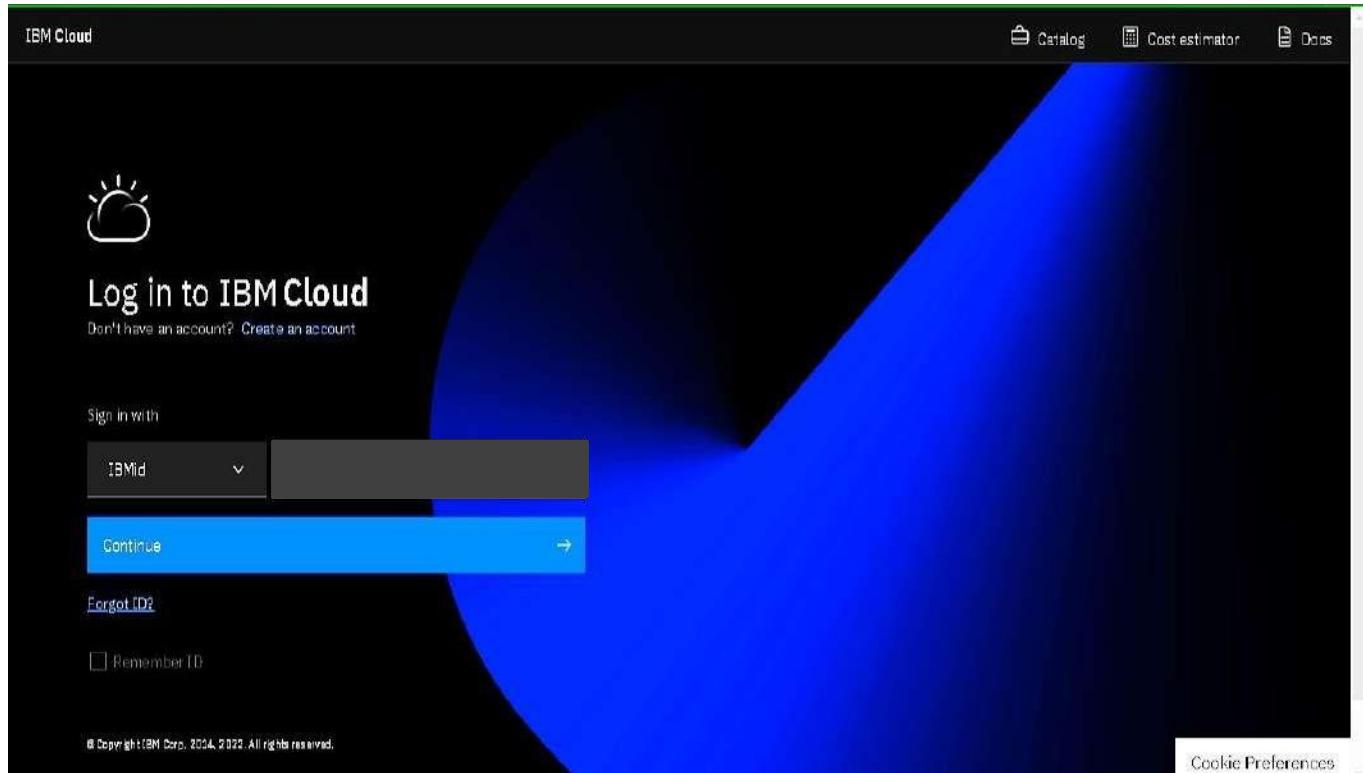
Create And Configure IBM Cloud Service

Create IBM Watson IoT Platform And Device

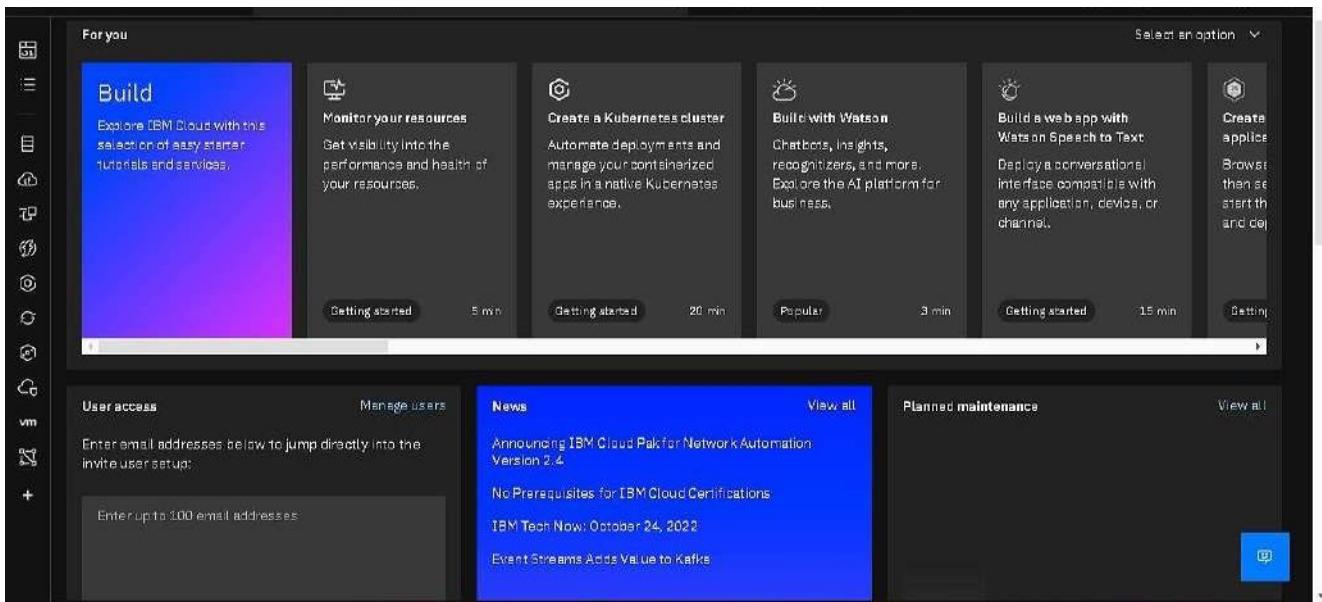
Team ID	PNT2022TMID38861
Project Name	IoT Based Safety Gadget For Child Safety Monitoring & Notification
Maximum Marks	4 Marks

STEPS

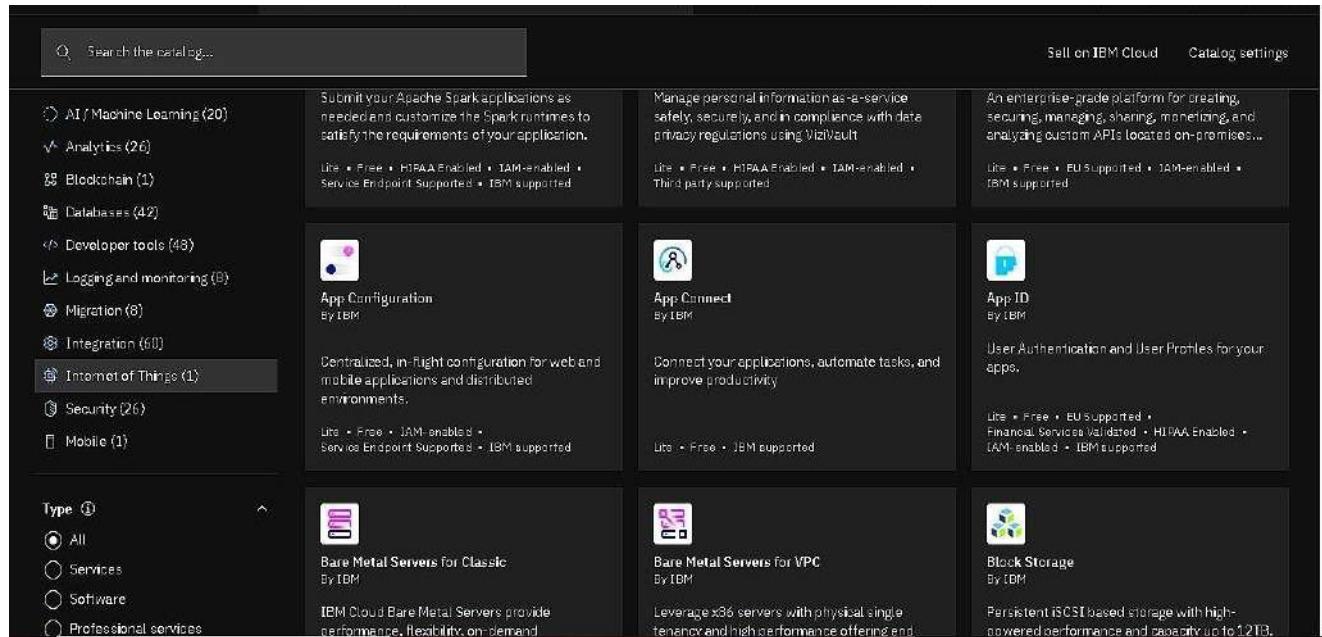
1. Firstly create an IBM cloud account with IBMid and password



2. Home page of IBM cloud



3. Click on the catalog on the top



Catalog			
<input type="text"/> Search the catalog...	Sell on IBM Cloud	Catalog settings	
<ul style="list-style-type: none"><input type="radio"/> AI / Machine Learning (20)<input checked="" type="radio"/> Analytics (26)<input type="radio"/> Blockchain (1)<input type="radio"/> Databases (42)<input type="radio"/> Developer tools (48)<input type="radio"/> Logging and monitoring (8)<input type="radio"/> Migration (8)<input type="radio"/> Integration (60)<input checked="" type="radio"/> Internet of Things (1)<input type="radio"/> Security (26)<input type="radio"/> Mobile (1)	<ul style="list-style-type: none">Submit your Apache Spark applications as needed and customize the Spark runtimes to satisfy the requirements of your application.	<ul style="list-style-type: none">Manage personal information as-a-service safely, securely, and in compliance with data privacy regulations using ViiziVault	<ul style="list-style-type: none">An enterprise-grade platform for creating, securing, managing, sharing, monetizing, and analyzing custom APIs located on-premises...
	<ul style="list-style-type: none">Lite • Free • HIPAA Enabled • IAM-enabled • Service Endpoint Supported • IBM supported	<ul style="list-style-type: none">Lite • Free • HIPAA Enabled • IAM-enabled • Third party supported	<ul style="list-style-type: none">Lite • Free • EU Supported • IAM-enabled • IBM supported
	 App Configuration By IBM	 App Connect By IBM	 App ID By IBM
	<ul style="list-style-type: none">Centralized, in-flight configuration for web and mobile applications and distributed environments.	<ul style="list-style-type: none">Connect your applications, automate tasks, and improve productivity	<ul style="list-style-type: none">User Authentication and User Profiles for your apps.
	<ul style="list-style-type: none">Lite • Free • IAM-enabled • Service Endpoint Supported • IBM supported	<ul style="list-style-type: none">Lite • Free • IBM supported	<ul style="list-style-type: none">Lite • Free • EU Supported • Financial Services Validated • HIPAA Enabled • IAM-enabled • IBM supported
Type 	<input checked="" type="radio"/> All	 Bare Metal Servers for Classic By IBM	 Bare Metal Servers for VPC By IBM
	<ul style="list-style-type: none">IBM Cloud Bare Metal Servers provide performance, flexibility, on-demand	<ul style="list-style-type: none">Leverage x86 servers with physical single-tenancy and high performance offering end...	 Block Storage By IBM
			<ul style="list-style-type: none">Persistent iSCSI based storage with high-powered performance and capacity up to 12TB.

4. Click on IoT in the category mentioned

Catalog /

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 app can access their live and historical data.

Create **About**

Type: Service Provider: IBM Updated on: 03/16/2022 Category: Internet of Things Compliance: IAM-enabled

Select a location: Frankfurt (eu-de)

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 analysis and edge data analyzed	Free

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

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 analysis 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 of each of data exchanged, data analysis and edge data analyzed per month.

Lite plan services are deleted after 30 days of inactivity.

Configure your resource

Service name: Internet of Things Platform-Child_Safety Select a resource group: Default

Tags: Example: env/dev, version:1 Access management tags: Example: access/dev, propversion:1

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 it agreements and then click on create

The screenshot shows the IBM Cloud Catalog interface for creating a new service. The service selected is 'Internet of Things Platform'. On the left, there are details like Type: Service, Provider: IBM, and Location: Frankfurt (eu-de). The 'Create' button is highlighted. On the right, the 'Summary' panel shows the service name as 'Internet of Things Platform-6g' and the location as 'Frankfurt'. It also includes a note about license agreements and a checkbox that is unchecked. Below the summary are two buttons: 'Create' and 'Add to estimate'.

This screenshot shows the same process as the first one, but with the location set to Dallas (us-south). The configuration and summary panels are identical to the first screenshot, with the location changed to Dallas and the provider changed to IBM.

7. 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)

Resource list / Internet of Things Platform-Child_Safety Active Add tags 2

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 Non-Production Production

The Lite service plan provides a lightweight development environment to get you started with...

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

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

Resource list / Internet of Things Platform-Child_Safety Active Add tags 2

Details Actions... ▾

Manage

Plan Connections

Current plan

Lite

Current usage

N/A

Lite plan services are deleted after 30 days of inactivity.

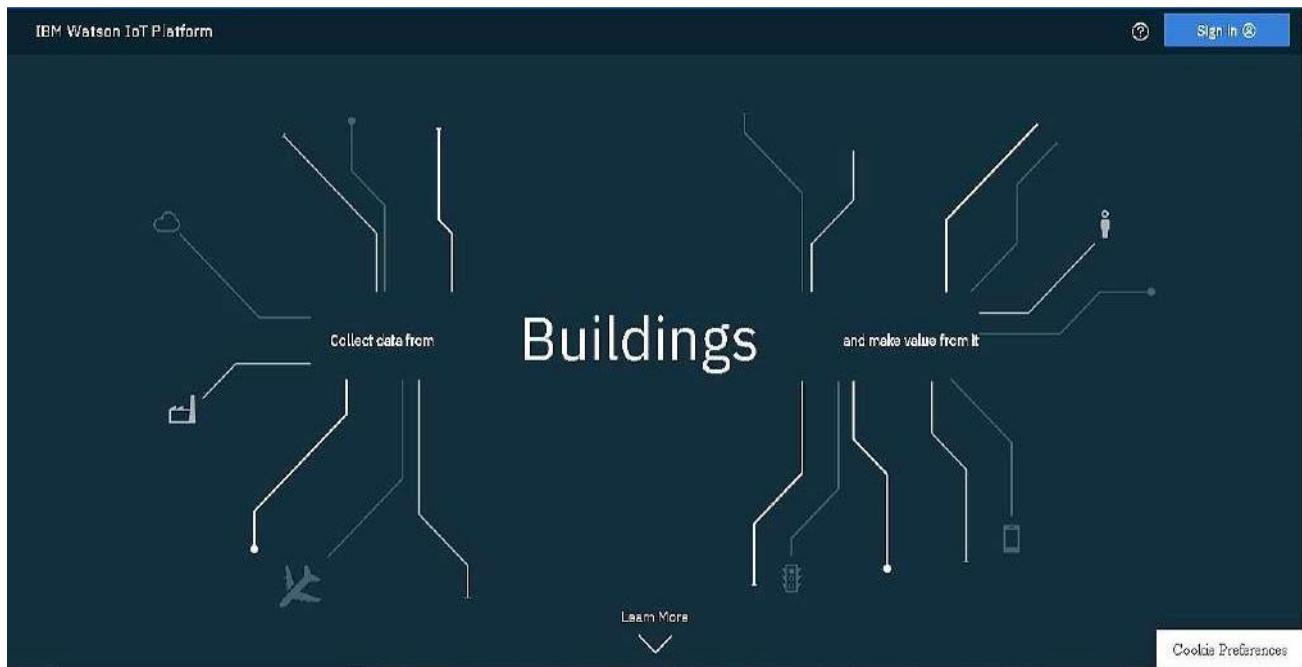
Features

- 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	Free

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



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

The image shows the "Log in to IBM" page. The header says "IBM" and the sub-header says "Log in to IBM". There is a text input field for "IBMid" with a placeholder "Forgot IBMid?". Below the input field is a "Remember me" checkbox. A "Continue" button with a right-pointing arrow is located below the checkbox. At the bottom of the form, there is a link "Don't have an account? Create an IBMid" and a link "Need help? Contact the IBMid help desk". At the very bottom of the page, there is a footer with links: "Contact", "Privacy", "Terms of use", "Accessibility", "Cookie preferences", and "Powered by IBM Security Verify".

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

The image shows the "Browse Devices" page of the IBM Watson IoT Platform. The top navigation bar includes "IBM Watson IoT Platform", "Browse", "Action", "Device Types", "Interfaces", and an "Add Device" button. On the left, there is a vertical sidebar with various icons. The main content area is titled "Browse Devices" and contains a sub-section with "All Devices" and "Diagnose" buttons. A message below states: "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." There is a search bar labeled "Search by Device ID" and a "Device Simulator" toggle switch. Below these, a table header is shown with columns: "Device ID", "Status", "Device Type", "Class ID", and "Date Added". The table body is currently empty, displaying the message "You don't have any devices.".

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

The screenshot shows the IBM Cloud Apps interface. On the left is a dark sidebar with various icons. The main header bar has 'Browse' and 'IBM Cloud Apps' on the left and a 'Generate API Key' button on the right. Below the header, the title 'Browse API Keys' is displayed. A search bar with placeholder text 'Type the app description to search for:' and a magnifying glass icon is positioned to the right of the title. A descriptive text block explains that the table shows a summary of API keys added for the organization, which can be filtered, organized, and searched using different criteria. It provides instructions to add API keys by clicking 'Generate API Key' or using the API, and links to 'API key connection'. The main content area features a table with columns: 'Key' (with a checkbox icon), 'Description', 'Role', and 'Expires'. The table is currently empty, showing '0 results'. At the bottom center is a small icon of a person wearing a crown. Below the icon, the text 'There are no API Keys' is displayed, followed by a 'Generate API Key' button.

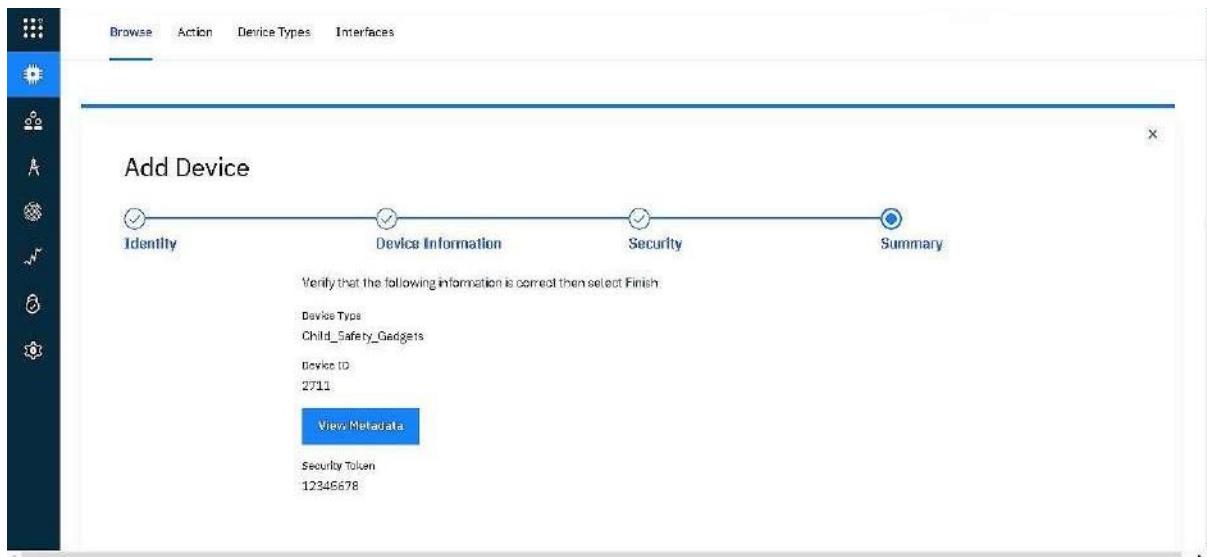
13. Click on the device tab and click on the add device button, then give the device type and device id and click next

The screenshot shows the 'Add Device' process in a software application. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. On the left, a vertical sidebar lists icons for Home, Devices, Actions, Diagnose, and Help. The main area is titled 'Add Device' and shows the 'Identity' step selected. A progress bar at the top indicates four steps: Identity (selected), Device Information, Security, and Summary. Below the progress bar, instructions say 'Select a device type for the device that you are adding and give the device a unique ID.' There are two input fields: 'Device Type' (with placeholder 'Select or create a device type...') and 'Device ID' (with placeholder 'Enter Device ID'). At the bottom right are 'Cancel' and 'Next' buttons.

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

The screenshot shows the 'Add Device' process in a software application, specifically on the 'Device Information' step. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. On the left, a vertical sidebar lists icons for Home, Devices, Actions, Diagnose, and Help. The main area is titled 'Add Device' and shows the 'Device Information' step selected. A progress bar at the top indicates four steps: Identity (selected), Device Information (selected), Security, and Summary. Below the progress bar, instructions say 'You can modify the default device information and enter more information about the device for identification purposes.' There are six input fields arranged in a grid: 'Serial Number' (placeholder 'Enter Serial Number'), 'Manufacturer' (placeholder 'Enter Manufacturer'); 'Model' (placeholder 'Enter Model'), 'Device Class' (placeholder 'Enter Device Class'); 'Description' (placeholder 'Enter Description'), 'Firmware Version' (placeholder 'Enter Firmware Version'); 'Hardware Version' (placeholder 'Enter Hardware Version'), 'Descriptive Location' (placeholder 'Enter Descriptive Location'). At the bottom left is an 'Add Metadata' button, and at the bottom right are 'Cancel' and 'Next' buttons.

15. Clicking next it goes to the security where we do authentication token id.
16. Clicking on next it goes to the summary of the device then click finish



17. The device credentials will be displayed with all the details
Safe the details of the device as the authentication tokens are non-recoverable and if misplaced then we have to create a new one.

Device Drilldown - 2711

Device Credentials	
Connection Information	Organization ID: klauew
Recent Events	Device Type: Child_Safety_Gadgets
State	Device ID: 2711
Device Information	Authentication Method: use-token-auth
Metadata	Authentication Token: 12345678
Diagnostics	
Connection Logs	
Device Actions	

⚠️ Authentication tokens are non-recoverable. If you misplaced this token, you will need to re-register the device to generate a new authentication token.

18. 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.

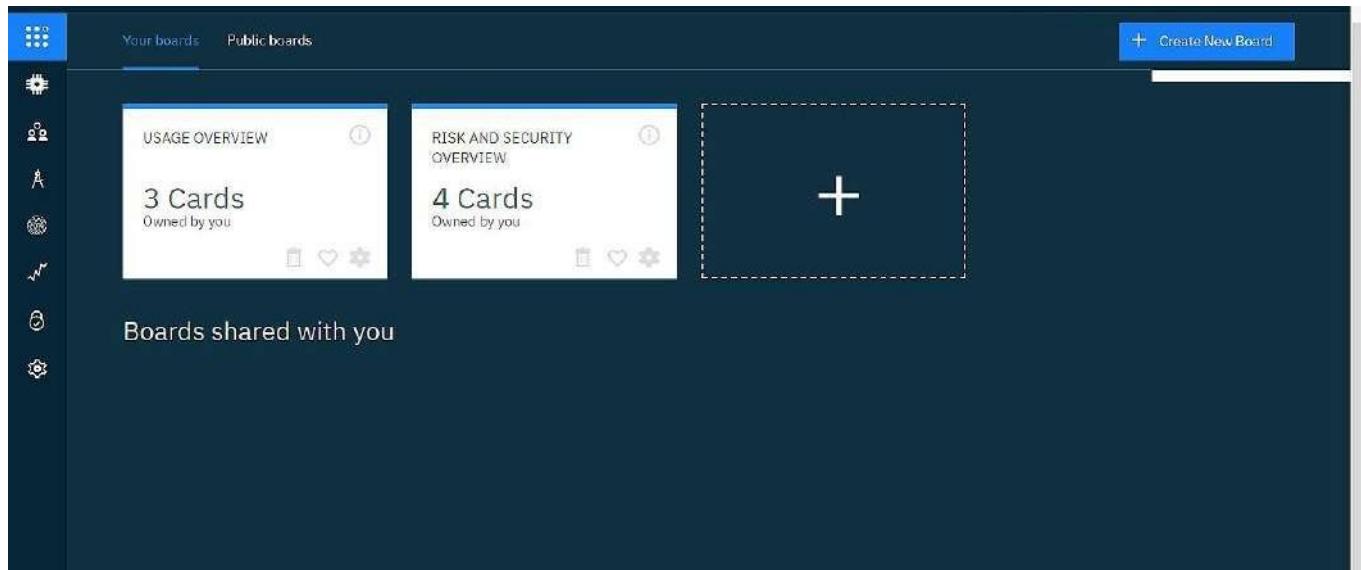
The screenshot shows the 'Browse Devices' page with a sidebar containing icons for Home, Action, Device Types, and Interfaces. At the top, there are navigation links for 'Browse', 'Action', 'Device Types', 'Interfaces', and a blue 'Add Device' button. Below these are two buttons: 'All Devices' (highlighted in blue) and 'Diagnose'. A descriptive text block states: '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.' A search bar labeled 'Search by Device ID' is present, along with a 'Device Simulator' toggle switch. The main table has columns: Device ID, Status, Device Type, Class ID, and Date Added. One row is shown: Device ID 2711, Status Disconnected, Device Type Child_Safety_Gadgets, Class ID Device, and Date Added Oct 30, 2022 9:00 PM. Below the table are pagination controls for 'Items per page' (50), '1 of 1 page', and navigation arrows. The bottom of the screen shows a Windows taskbar with various pinned icons and a system tray indicating the date as 30-10-2022 and time as 21:02.

The screenshot shows the device details page for device ID 2711. The top navigation bar includes 'Browse', 'Action', 'Device Types', 'Interfaces', and a blue 'Add Device' button. A note below the navigation says: 'criteria. To get started, you can add devices by using the Add Device button, or by using API.' The main area features a search bar 'Search by Device ID' and a 'Device Simulator' toggle switch. The table header for the device details table is identical to the one on the previous page. The detailed view for device ID 2711 shows the following information:

Identity	Device Information	Recent Events	State	Logs
Device ID	2711			
Device Type	Child_Safety_Gadgets			
Date Added	Oct 30, 2022 9:00 PM			
Added By				
Connection Status	Disconnected			

In a similar way, we can create n number of devices with a 50 per page limit as per the requirement of our project.

19..The Boards will display card for the project.



RESULT:

An IBM Watson cloud for IoT and a device is created

TEAM ID : PNT2022TMID38861

TEAM LEADER : D.SIVA SANKAR

TEAM MEMBER 1 : R.GOKUL

TEAM MEMBER 2 : S.JEEVANANTHAM

TEAM MEMBER 3 : N.LOGESH KUMAR

TEAM SIZE : 4

MENTOR : BARADWAJ IL