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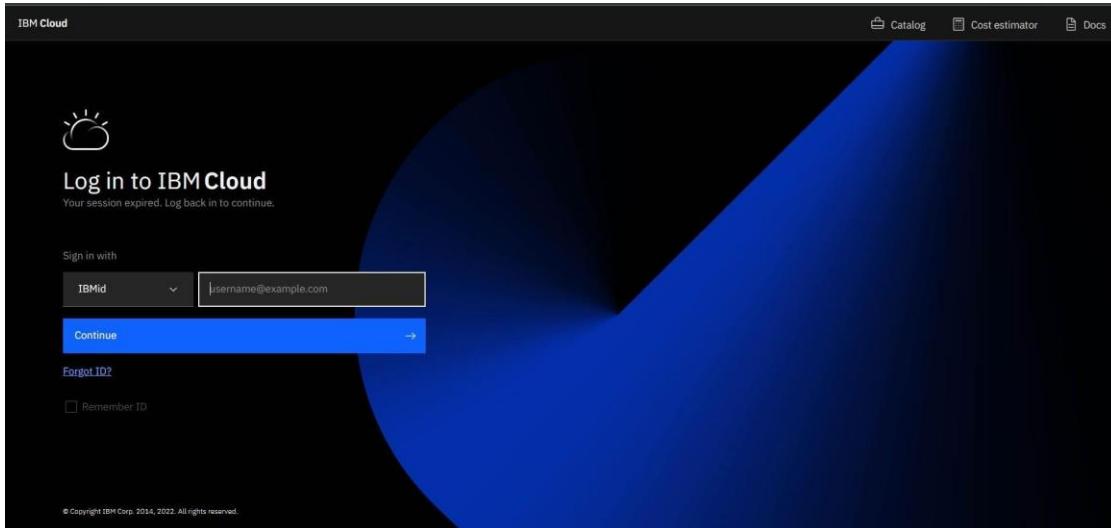
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## CREATE IBM WATSON IOT PLATFORM AND DEVICE

### 1. To create the IBM Watson IOT platform and device

#### STEPS:

##### 1. create an IBM cloud account with the individual IBM id and password



##### 2. Home page of IBM cloud

A screenshot of the IBM Cloud dashboard. At the top, it says "Dashboard" and has links for "Edit dashboard", "Upgrade account", and "Create resource". Below this is a "For you" section with six cards: "Build" (Explore IBM Cloud with this selection of easy starter tutorials and services), "An essential guide to Kubernetes" (Deploy, scale, and manage your containerized applications with Kubernetes), "Create a Kubernetes cluster" (Automate deployments and manage your containerized apps in a native Kubernetes experience), "Create an OpenShift cluster" (Deploy apps on highly available clusters with Red Hat OpenShift on IBM Cloud), "Deploy on Kubernetes" (With Kubernetes clusters, you can run, update, and scale containerized applications), and "Get started with Containers &amp; Kubernetes" (Containers are a standard way to package apps, and their dependencies, to allow seamless movement between environments). Below this is a "Resource summary" section showing 7 resources, including Cloud Foundry apps, Services and software, and Apps. It also shows 1 planned maintenance item and an "IBM Cloud status" map.

##### 3. Click on the catalog on the top

A screenshot of the IBM Cloud Catalog. At the top, it says "Viewing 129 products" and has filters for "Services" and "Clear all". It also includes sorting options "Alphabetically" and "Type". The catalog displays a grid of service cards: "Analytics Engine" by IBM, "AnonTech VizVault Platform" by AnonTech Technology, Inc., "API Connect" by IBM, "App Configuration" by IBM, "App Connect" by IBM, and "App ID" by IBM. Each card provides a brief description and details about its type and supported features like IBM-supported, Financial Services Validated, and HIPAA Enabled.

#### 4. Click on IoT in the category mentioned

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, Location: Frankfurt, London, Dallas, Washington DC, and Related links: Docs, Terms. The main content area is titled 'Internet of Things Platform'. It has tabs for 'Create' and 'About'. Below the tabs, it says 'Select a location' with a dropdown set to 'Dallas (us-south)'. A section for 'Select a pricing plan' follows, with a note that prices do not include tax and monthly prices are shown for the United States. A table lists the 'Plan', 'Features', and 'Pricing' for the 'Lite' plan. The 'Features' column includes: 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; and Maximum of 200 MB of each of data exchanged, data analyzed and edge data analyzed. The 'Pricing' column shows 'Free'. To the right, a 'Summary' panel shows the service name, location (Dallas), plan (Lite), and resource group (Default). A modal window titled 'Existing Lite plan instance' informs the user that they can have only one Lite plan instance per resource group and provides options to delete the current instance or create a new one.

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

This screenshot is similar to the previous one but shows the result of deleting a Lite plan instance. The 'Features' table now includes a note: '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.' The rest of the interface remains the same, including the summary panel and the 'Existing Lite plan instance' modal.

#### 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

This screenshot shows the configuration step for creating a new service instance. The 'Service name' field is filled with 'Internet of Things Platform-bb'. The 'Select a resource group' dropdown is set to 'Default'. The 'Access management tags' field contains 'Examples: env:dev, version-1'. The rest of the interface is identical to the previous screenshots, including the summary panel and the 'Existing Lite plan instance' modal.

#### 7. click create

The screenshot shows the configuration of a new service named "Internet of Things Platform-child\_safety". In the "Plan" section, the "Lite" plan is selected, which includes up to 500 registered devices and 200 MB of data exchange. The "Pricing" section indicates it's free. The "Summary" panel on the right provides basic information about the service.

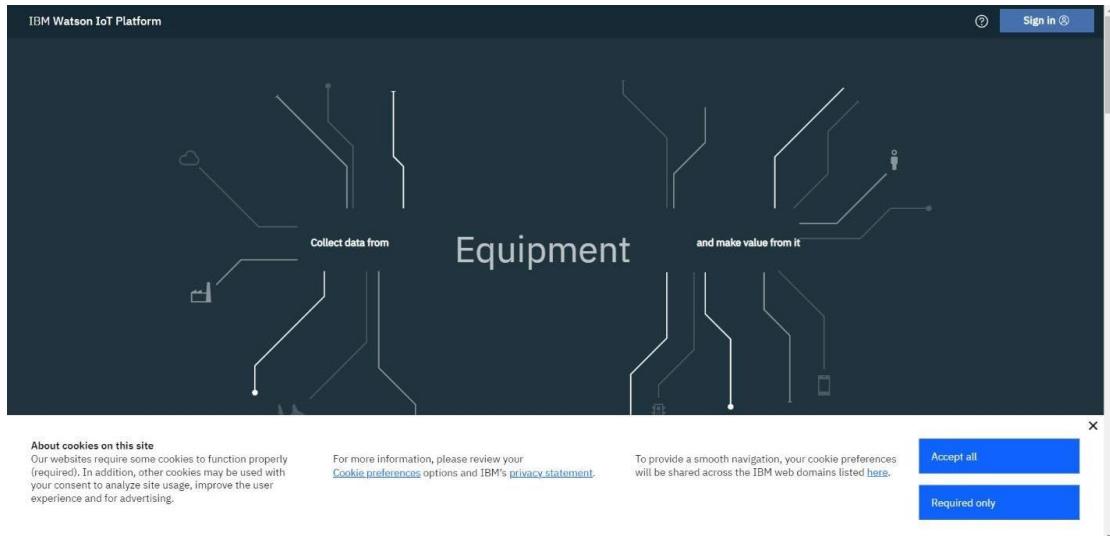
8. Internet of Things Platform Child\_safety will be created, where there are different options like manage, plan, and connection

This screenshot shows the "Manage" tab for the "Internet of Things Platform-child\_safety" service. It features a central "Journey" diagram and sections for "Plan", "Connections", and "Current usage". A "Launch" button is prominently displayed.

9. 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

This screenshot shows the "Plan" tab for the "Internet of Things Platform-child\_safety" service. It displays the current plan as "Lite" and provides a detailed view of its features and pricing.

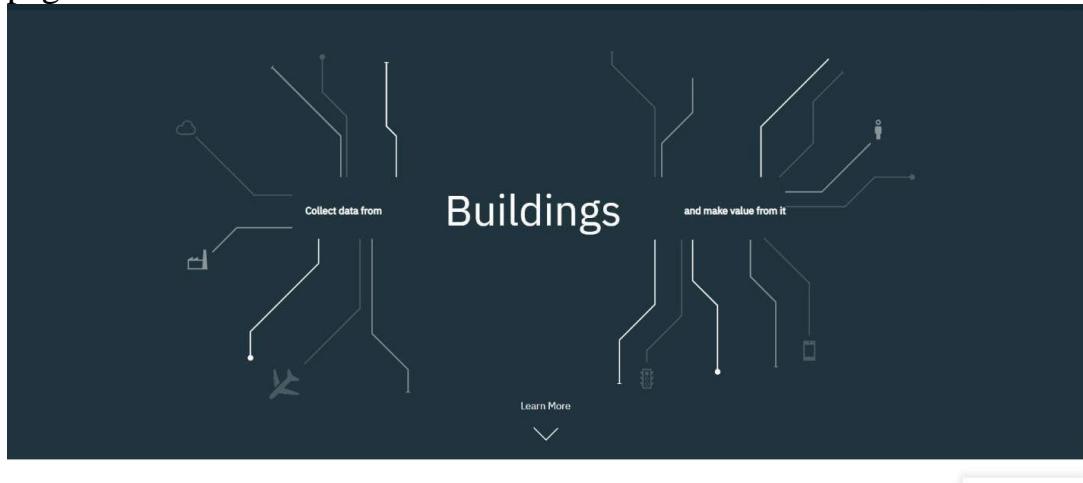
10. Click on the launch button in the manage tab, it will open to this



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

The image shows the IBM login page. It features a "Log in to IBM" header. Below it is a form with a text input field labeled "IBMid", a "Forgot IBMid?" link, a "Remember me" checkbox, and a "Continue" button. At the bottom of the form, there is a link "Don't have an account? [Create an IBMid](#)". Below the form, there is a link "Need help? [Contact the IBMid help desk](#)". The background of the page has a subtle circuit board pattern.

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



13. 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 screenshot shows the 'Browse Devices' tab. At the top, there are tabs for 'Browse', 'Action', 'Device Types', and 'Interfaces'. A blue 'Add Device' button is located in the top right corner. On the left, a sidebar contains icons for Home, Settings, Device, Data, and Security. The main area is titled 'Browse Devices' with sub-tabs 'All Devices' (selected) and 'Diagnose'. A message 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 API1.' Below this is a search bar labeled 'Search by Device ID' and a 'Device Simulator' toggle switch. A table header includes columns for Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location. A message at the bottom says 'You don't have any devices.' with a 'Create a device.' button.

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

The screenshot shows the 'General Settings' tab. The sidebar on the left has sections for 'PLATFORM' (About, Identity), 'Experimental Features' (Last Event Cache, Client Connection State API), 'DATA AND DEVICES' (Custom Device Management Packages, Device Simulator), and 'SECURITY'. The main content area is titled 'General Settings' with a sub-section 'Current Features' showing 'Custom Cards'. It also includes 'Last Event Cache' (activated), 'Client Connection State API' (activated), and 'Activate Client Connection State API' (disabled).

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

The screenshot shows the 'Policies' tab. The sidebar on the left has sections for 'POLICIES' (Connection Security, Blacklist, Whitelist). The main content area is titled 'Policies' with a sub-section 'Connection Security' (edit icon). It also includes 'Blacklist' (disabled) and 'Whitelist' (disabled).

16. 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 interface. It includes an 'Overview' header and a 'Usage Summary' card. The card displays 'THIS MONTH' and '0 bytes' transferred, with a note that it's for inbound and outbound data. Below this is a 'PREVIOUS MONTH' section showing '0 bytes' transferred. A 'Data Transferred' section follows, featuring a date range selector from '14/08/2020' to '17/08/2020'.

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

The screenshot shows the 'Members' section of the Watson IoT Platform interface. It includes a 'Browse' header and a 'Browse Members' card. The card displays a summary of organization members, noting 1 result found. A table lists one member: 'worldisfullofmeow@gmail.com' with the role 'Administrator'. A search bar at the top right allows users to search for member emails.

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

The screenshot shows the 'API Keys' section of the Watson IoT Platform interface. It includes a 'Browse' header and a 'Browse API Keys' card. The card displays a summary of API keys, noting 0 results found. A search bar at the top right allows users to search for app descriptions. A small bee icon is displayed in the center of the page.

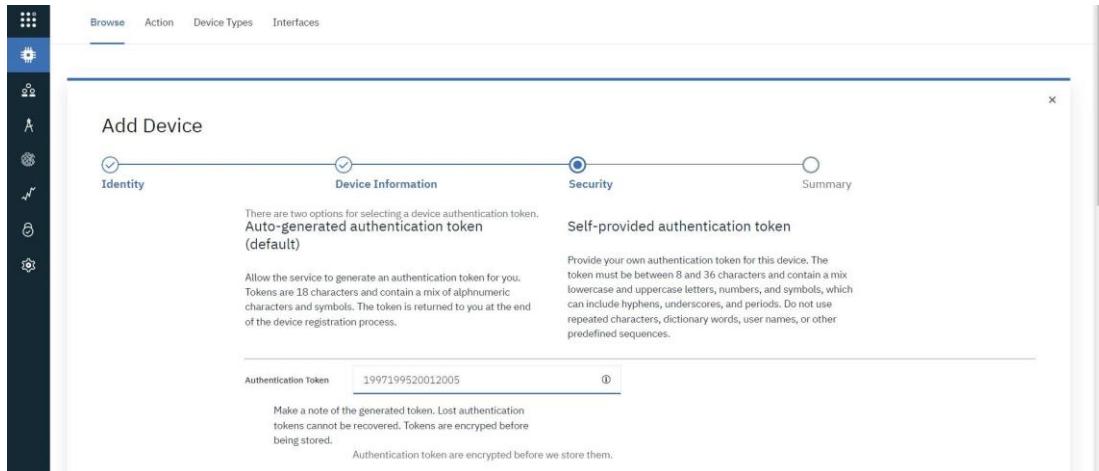
19. Click on the device tab and click on the add device button, then give the device type and device id and click next

The screenshot shows the Device Management interface with the 'Devices' tab selected. A central panel displays a message: 'You don't have any devices.' with a 'Create a device.' button. On the left, a sidebar lists 'Members', 'Apps', 'Access Management', 'Usage', 'Security', and 'Settings'. Below the sidebar, a sub-navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A modal window titled 'Add Device' is open, showing a four-step process: 'Identity' (selected), 'Device Information', 'Security', and 'Summary'. The 'Identity' step requires selecting a 'Device Type' (a dropdown placeholder 'Select or create a device type...') and entering a 'Device ID' (a text input field 'Enter Device ID'). At the bottom of the modal are 'Cancel' and 'Next' buttons.

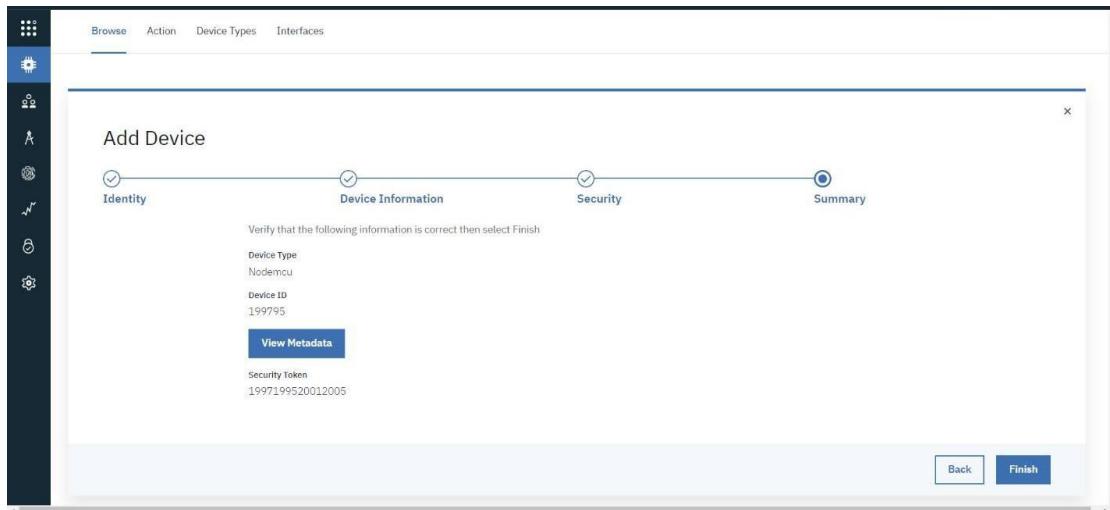
## 20. This page to enter extra details and of the hardware

This screenshot shows the 'Device Information' step of the 'Add Device' wizard. It includes fields for 'Serial Number' (text input 'Enter Serial Number'), 'Model' (text input 'Enter Model'), 'Description' (text input 'Enter Description'), 'Hardware Version' (text input 'Enter Hardware Version'), 'Manufacturer' (text input 'Enter Manufacturer'), 'Device Class' (text input 'Enter Device Class'), 'Firmware Version' (text input 'Enter Firmware Version'), and 'Descriptive Location' (text input 'Enter Descriptive Location'). A 'Back' button and a 'Next' button are at the bottom right. The 'Identity' step is also visible above the information fields.

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



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



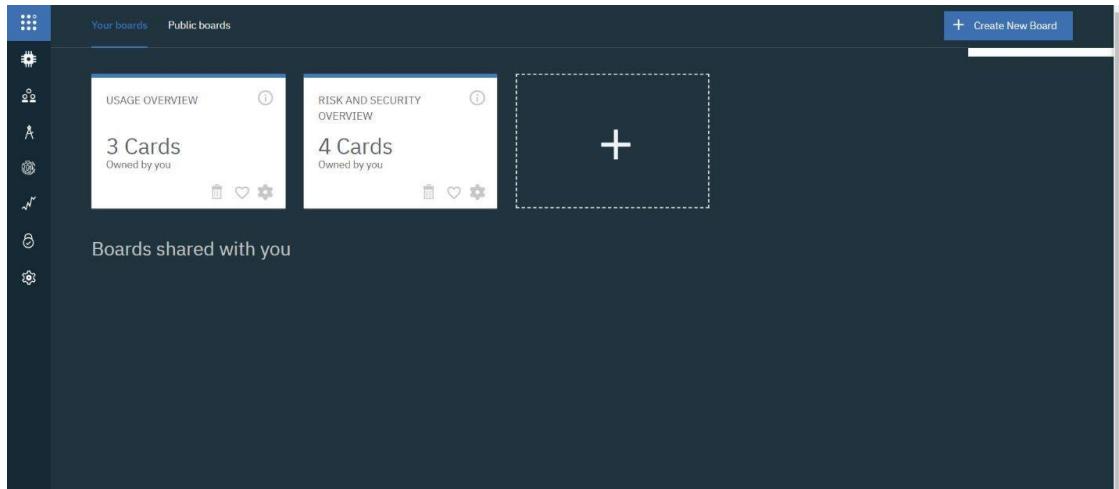
23. The device credentials will be displayed with all the details

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

25..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.

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

26. The Boards will display card for the project.



## CONCLUSION:

An IBM Watson cloud for IoT and a device is created