

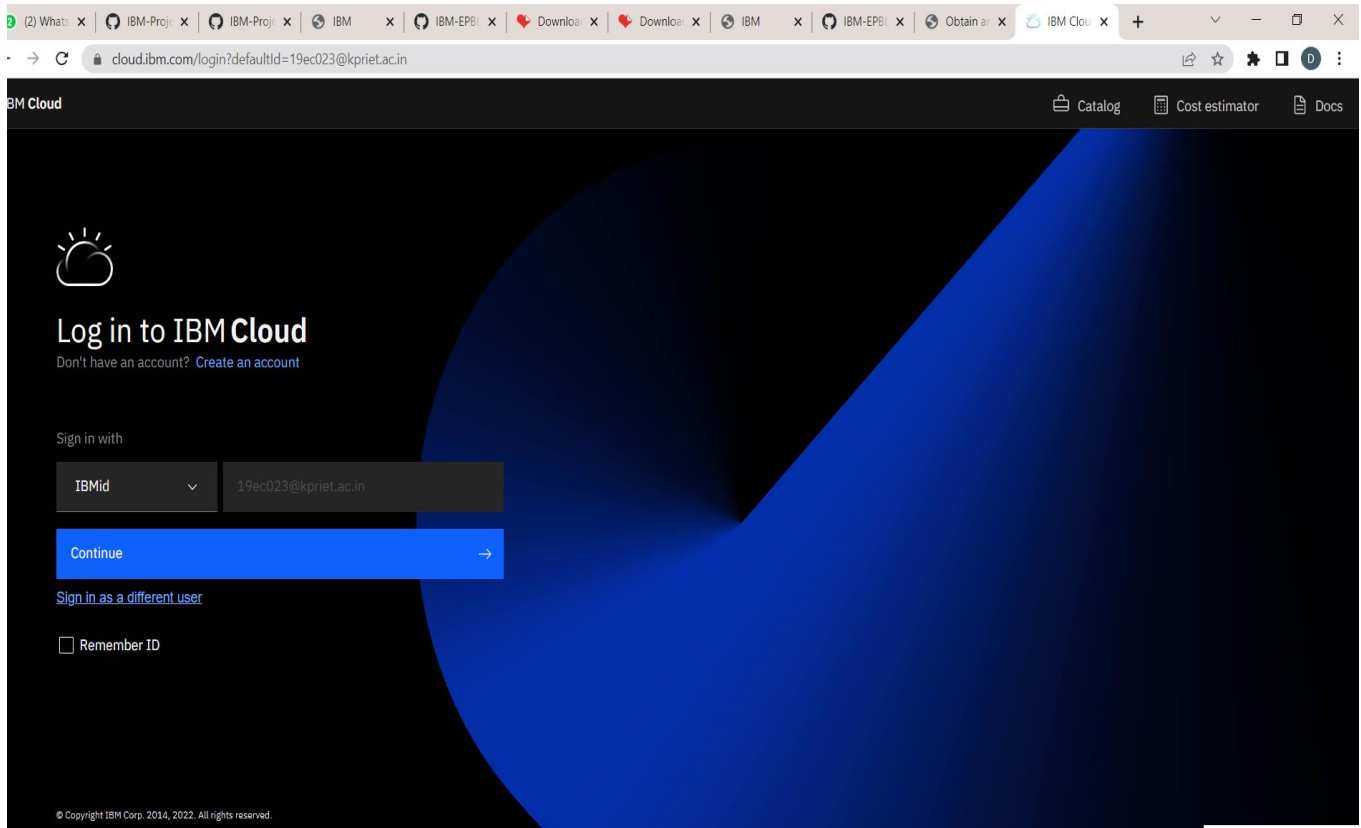
CREATE IBM WATSON IOT PLATFORM AND DEVICE

AIM:

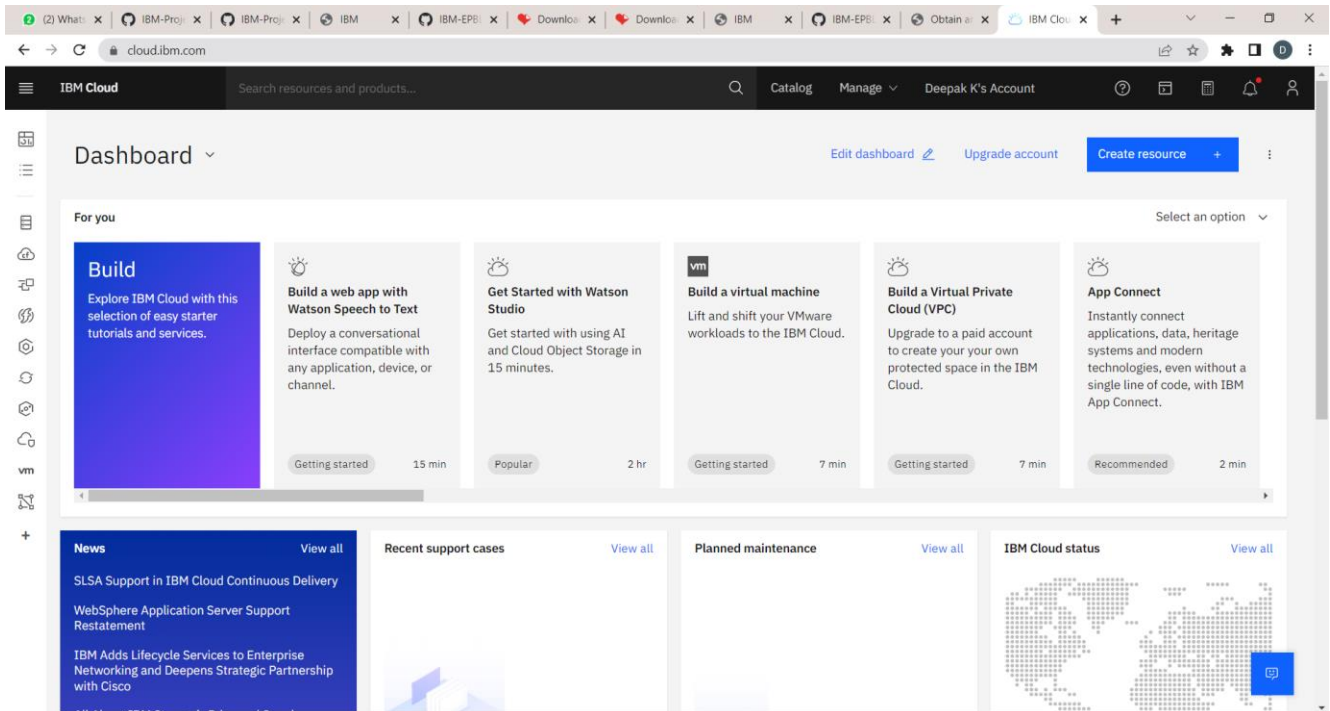
To create the IBM Watson IoT platform and device

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.

The screenshot shows the IBM Cloud Catalog interface. At the top, there's a navigation bar with 'IBM Cloud', a search bar, and links to 'Catalog', 'Manage', and 'Deepak K's Account'. Below the navigation bar, there's a large banner with the word 'Catalog' and a search bar. To the left, there's a 'Category' sidebar with a list of categories: Recommended products (6), Compute (30), Containers (9), Networking (30), Storage (20), AI / Machine Learning (17), Analytics (10), Blockchain (1), Databases (28), and Developer tools (25). The main content area shows a grid of product cards. The first card is 'Analytics Engine' by IBM, which is highlighted. It describes submitting Apache Spark applications and lists features like 'Lite', 'Free', 'HIPAA Enabled', 'IAM-enabled', 'Service Endpoint Supported', and 'IBM supported'. Other cards visible include 'AnonTech ViziVault Platform' and 'API Connect'.

4. Click on IoT in the category mentioned.

The screenshot shows the IBM Cloud 'Internet of Things Platform' page. The page has a header with 'Catalog / Internet of Things Platform' and 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.' Below the header, there's a 'Create' button and an 'About' tab. The 'Create' section has a 'Select a location' dropdown menu with 'Frankfurt (eu-de)' selected. Below that, there's a 'Select a pricing plan' section. It says 'Displayed prices do not include tax. Monthly prices shown are for country or location: [United States](#)'. There's a table with two columns: 'Plan' and 'Features'. The 'Lite' plan is selected, and it includes 'up to 500 registered devices, and a maximum of 200 MB of each data metric'. The 'Pricing' column shows 'Free'. On the right side, there's a 'Summary' panel with details: 'Internet of Things Platform', 'Free', 'Location: Frankfurt', 'Plan: Lite', 'Service name: Internet of Things Platform-le', and 'Resource group: Default'. At the bottom, there's a checkbox for 'I have read and agree to the following license agreements:' with a 'Terms' link. Below that are 'Create' and 'Add to estimate' buttons.

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

5.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. 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 "Create" tab is selected, and the "Select a location" dropdown is set to "Frankfurt (eu-de)". The "Select a pricing plan" section shows a table with the "Lite" plan selected. The table has columns for Plan, Features, and Pricing. The "Lite" plan is free and includes up to 500 registered devices and a maximum of 200 MB of each data metric. The "Summary" panel on the right shows the service name, location, plan, and a checkbox for agreeing to the terms. The "Create" button is visible.

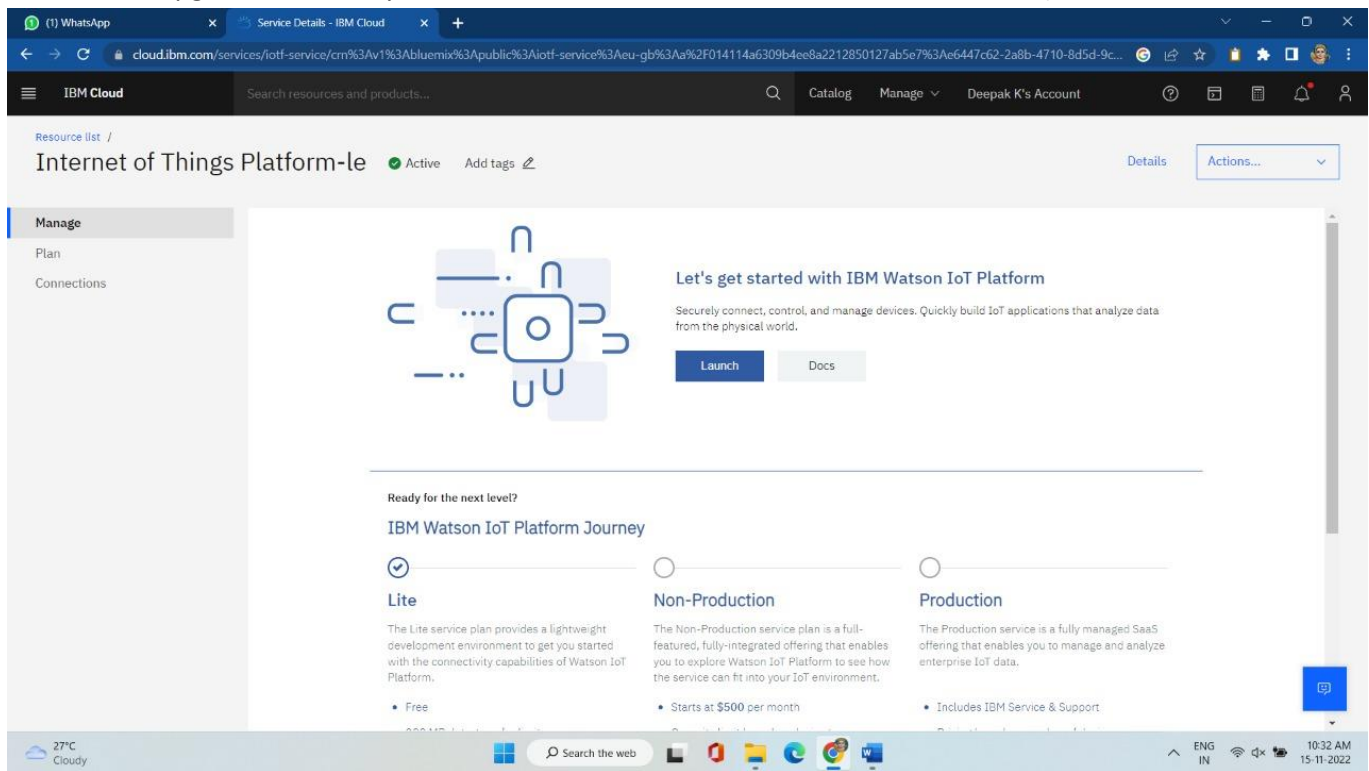
Plan	Features	Pricing
Lite	Includes up to 500 registered devices, and a maximum of 200 MB of each data metric Maximum of 500 registered devices Maximum of 500 application bindings Maximum of 200 MB of each of data exchanged, data analyzed and edge data analyzed	Free

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.

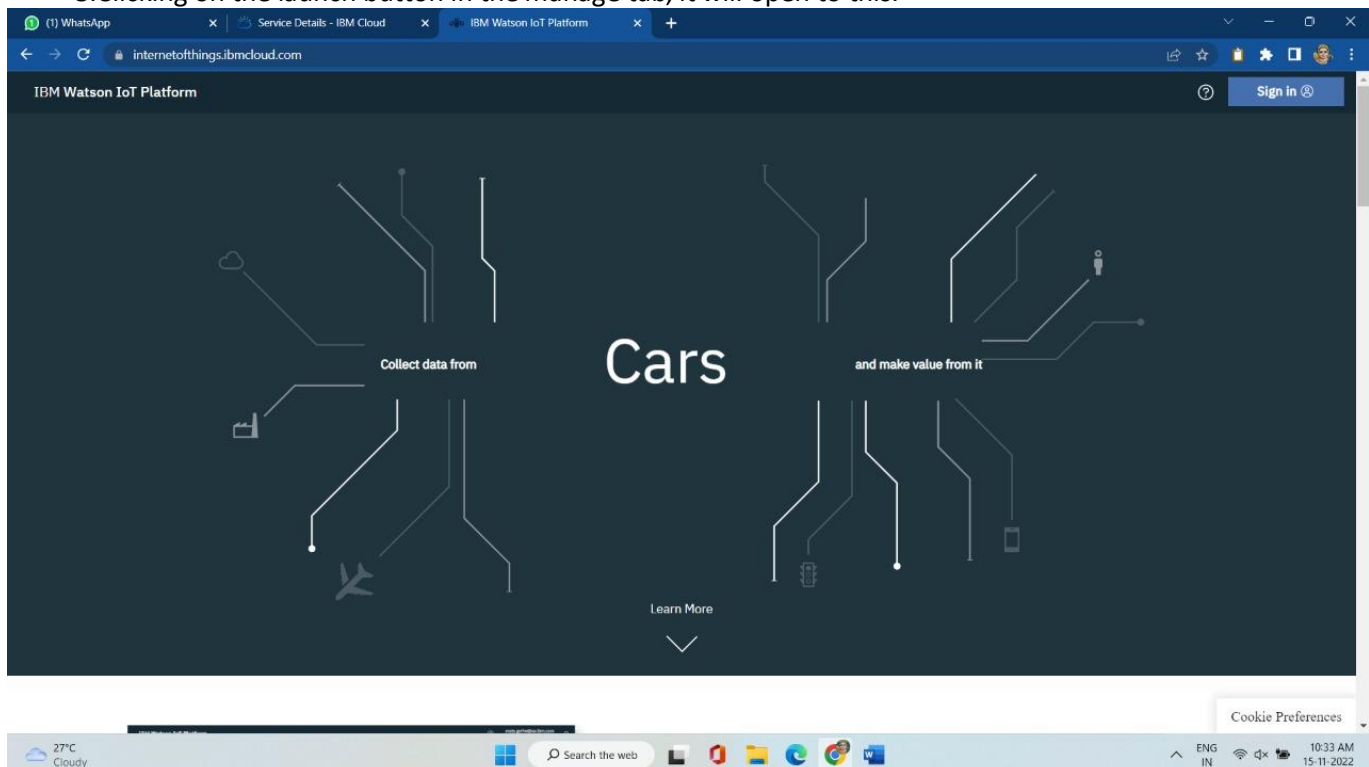
The screenshot shows the IBM Cloud service details page for the Internet of Things Platform. The page is titled "Internet of Things Platform-le" and includes a "Manage" tab. The "Plan" section shows the "Lite" plan selected. The "Connections" section shows a diagram of a device connected to the platform. The "Let's get started with IBM Watson IoT Platform" section includes a "Launch" button. The "Ready for the next level?" section shows the "IBM Watson IoT Platform Journey" with three stages: Lite, Non-Production, and Production. The "Lite" stage is selected, and the "Launch" button is visible.

Stage	Description
Lite	The Lite service plan provides a lightweight development environment to get you started with the connectivity capabilities of Watson IoT Platform.
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.
Production	The Production service is a fully managed SaaS offering that enables you to manage and analyze enterprise IoT data.


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 services)



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.



Log in to IBM

IBMId [Forgot IBMId?](#)

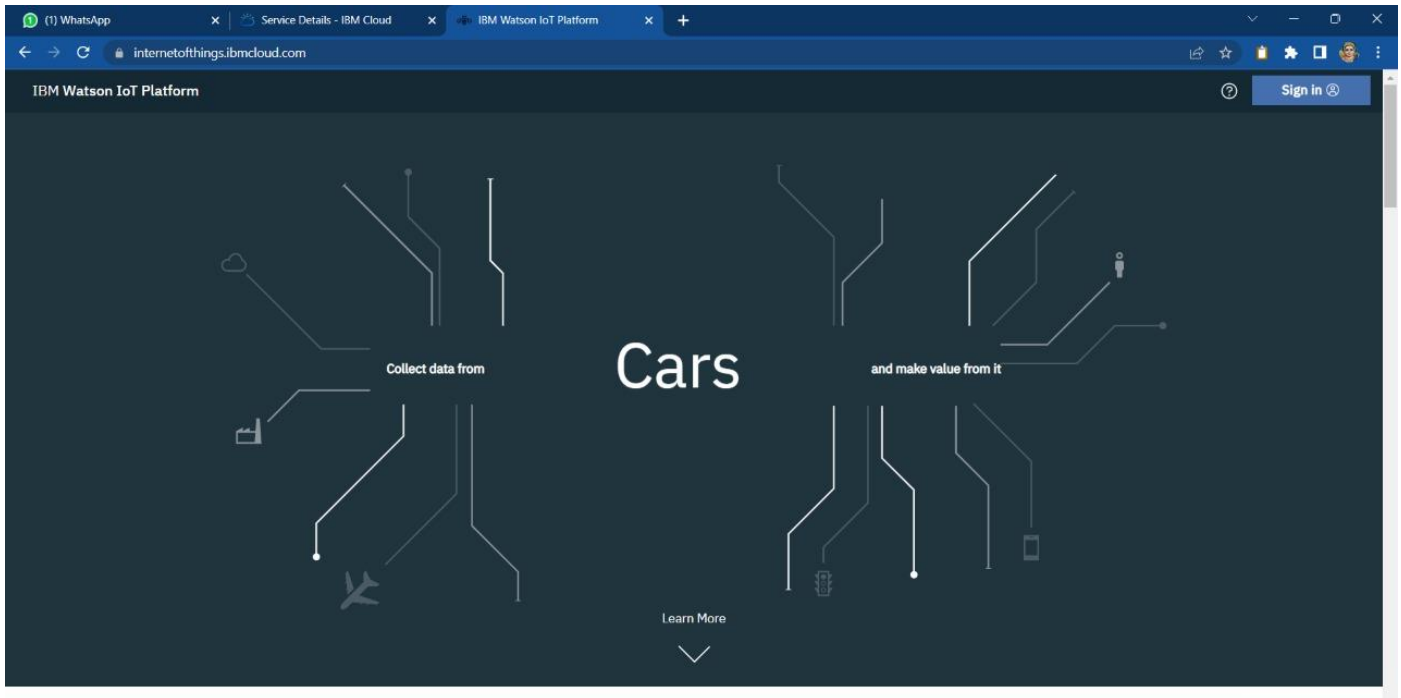
☐ Remember me ⓘ

[Continue](#) →

Don't have an account? [Create an IBMId](#)

Need help? [Contact the IBMId help desk](#)

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

The image displays two screenshots of the IBM Watson IoT Platform interface, illustrating the process of adding a new device.

Top Screenshot: Browse Devices

- The browser address bar shows the URL: `9v7njv.internetofthings.ibmcloud.com/dashboard/devices/browse`.
- The page title is "Browse Devices".
- There are tabs for "All Devices" 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 API."
- A search bar is labeled "Search by Device ID".
- A table header is visible with columns: Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location.
- A message in the center says: "You don't have any devices."
- A button labeled "Create a device." is present.

Bottom Screenshot: Add Device Wizard

- The browser address bar shows the URL: `9v7njv.internetofthings.ibmcloud.com/dashboard/devices/browse/add`.
- The page title is "Add Device".
- The wizard has four steps: Identity, Device Information, Security, and Summary. The "Identity" step is currently selected.
- A message says: "Select a device type for the device that you are adding and give the device a unique ID."
- Fields for "Device Type" and "Device ID" are shown. The "Device Type" field contains the value "123" and the "Device ID" field contains the value "1234567".
- Buttons for "Cancel" and "Next" are at the bottom right.

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

The screenshot shows the 'Add Device' wizard in the IBM Watson IoT Platform. The progress bar indicates four steps: Identity (completed), Device Information (current), Security, and Summary. The 'Device Information' step contains a form with the following fields:

Field	Placeholder
Serial Number	Enter Serial Number
Model	Enter Model
Description	Enter Description
Hardware Version	Enter Hardware Version
Manufacturer	Enter Manufacturer
Device Class	Enter Device Class
Firmware Version	Enter Firmware Version
Descriptive Location	Enter Descriptive Location

Below the form is an 'Add Metadata' button. At the bottom right of the wizard are 'Back' and 'Next' buttons. The browser's address bar shows the URL: `9v7njv.internetofthings.ibmcloud.com/dashboard/devices/browse/add`. The system tray at the bottom indicates a temperature of 27°C, 'Cloudy' weather, and the time 02:23 PM on 15-11-2022.

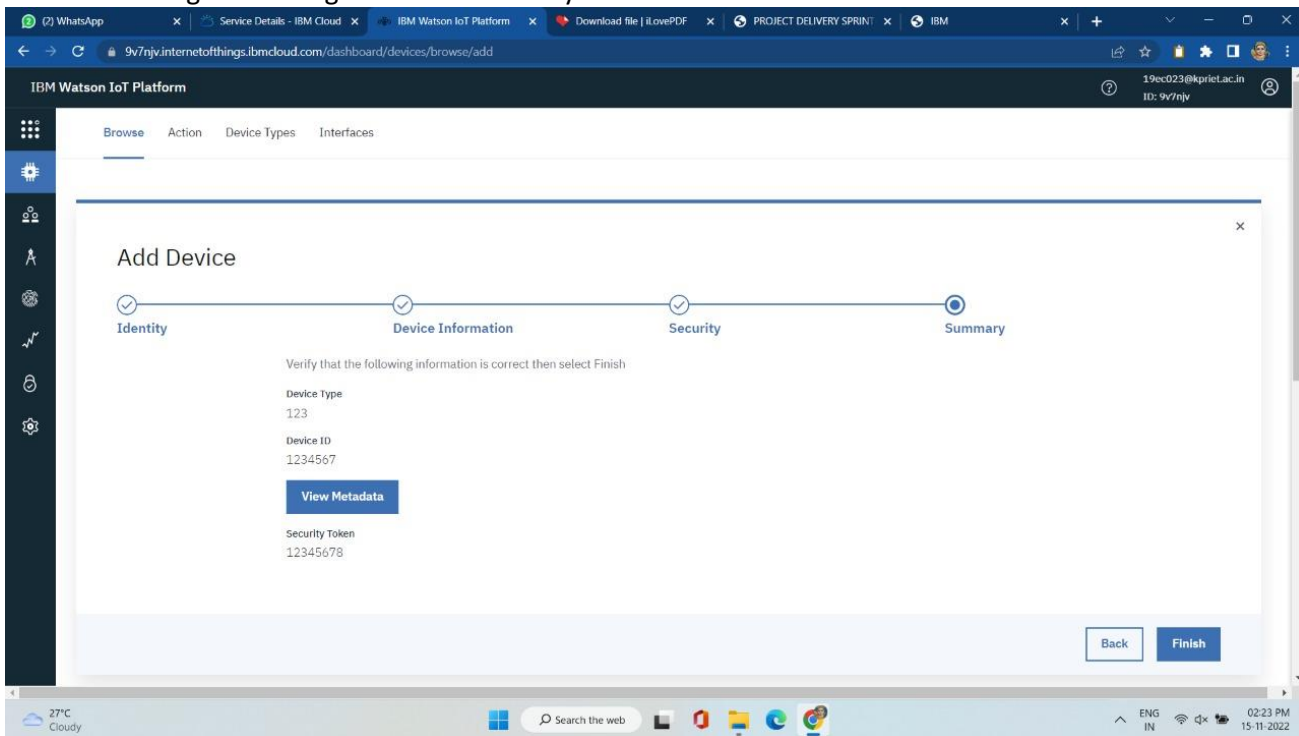
13.Clicking next it goes to the security where we do authentication token id.

The screenshot shows the 'Add Device' wizard at the 'Security' step. The progress bar shows 'Identity' and 'Device Information' as completed, 'Security' as the current step, and 'Summary' as the next step. The page presents two options for selecting a device authentication token:

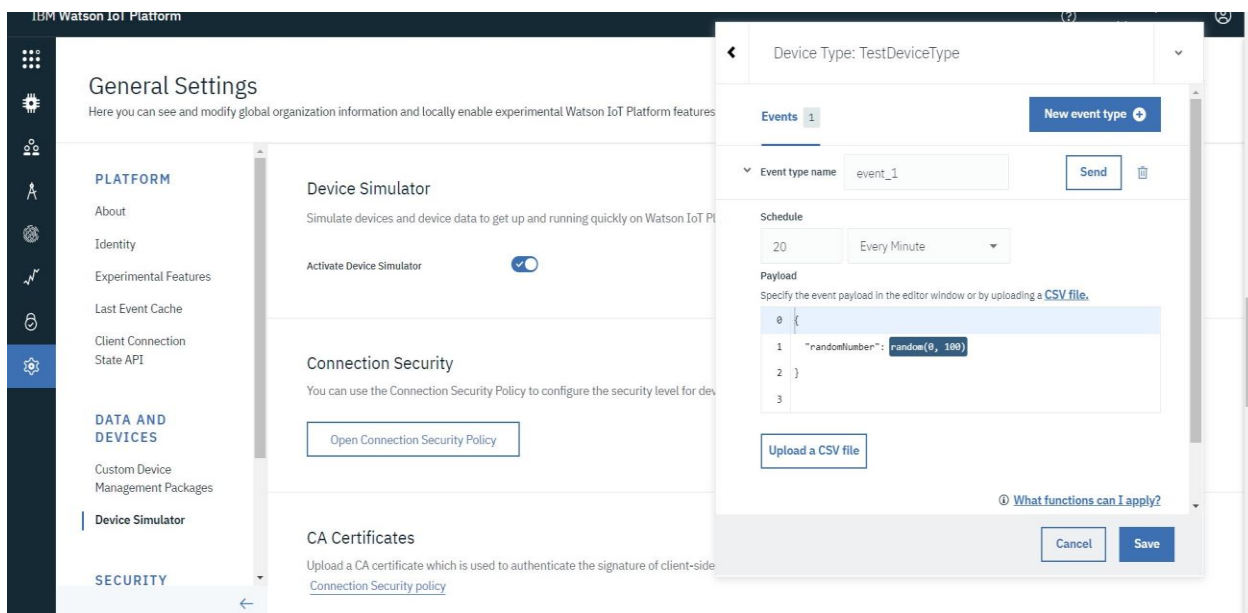
- Auto-generated authentication token (default)**: A section explaining that the service will generate an 18-character alphanumeric token. It includes a note: 'Make a note of the generated token. Lost authentication tokens cannot be recovered. Tokens are encrypted before being stored.' Below this is a text input field containing the token '1234567d'.
- Self-provided authentication token**: A section explaining that the user must provide their own token, which must be 8-36 characters long and contain a mix of lowercase letters, uppercase letters, numbers, and symbols (including hyphens, underscores, and periods). It also states: 'Authentication token are encrypted before we store them.'

At the bottom right of the wizard are 'Back' and 'Next' buttons. The browser's address bar shows the URL: `9v7njv.internetofthings.ibmcloud.com/dashboard/devices/browse/add`. The system tray at the bottom indicates a temperature of 27°C, 'Cloudy' weather, and the time 02:23 PM on 15-11-2022.

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



15. 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



IBM Watson IoT Platform

Browse Action Device Types Interfaces

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

Device Simulator

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
1234567	Disconnected	123	Device	Nov 15, 2022 2:20 PM	

Items per page 50 | 1-1 of 1 item

1 of 1 page

Device Drilldown - 1234567

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	9v7njv
Device Type	123
Device ID	1234567
Authentication Method	use-token-auth
Authentication Token	12345678

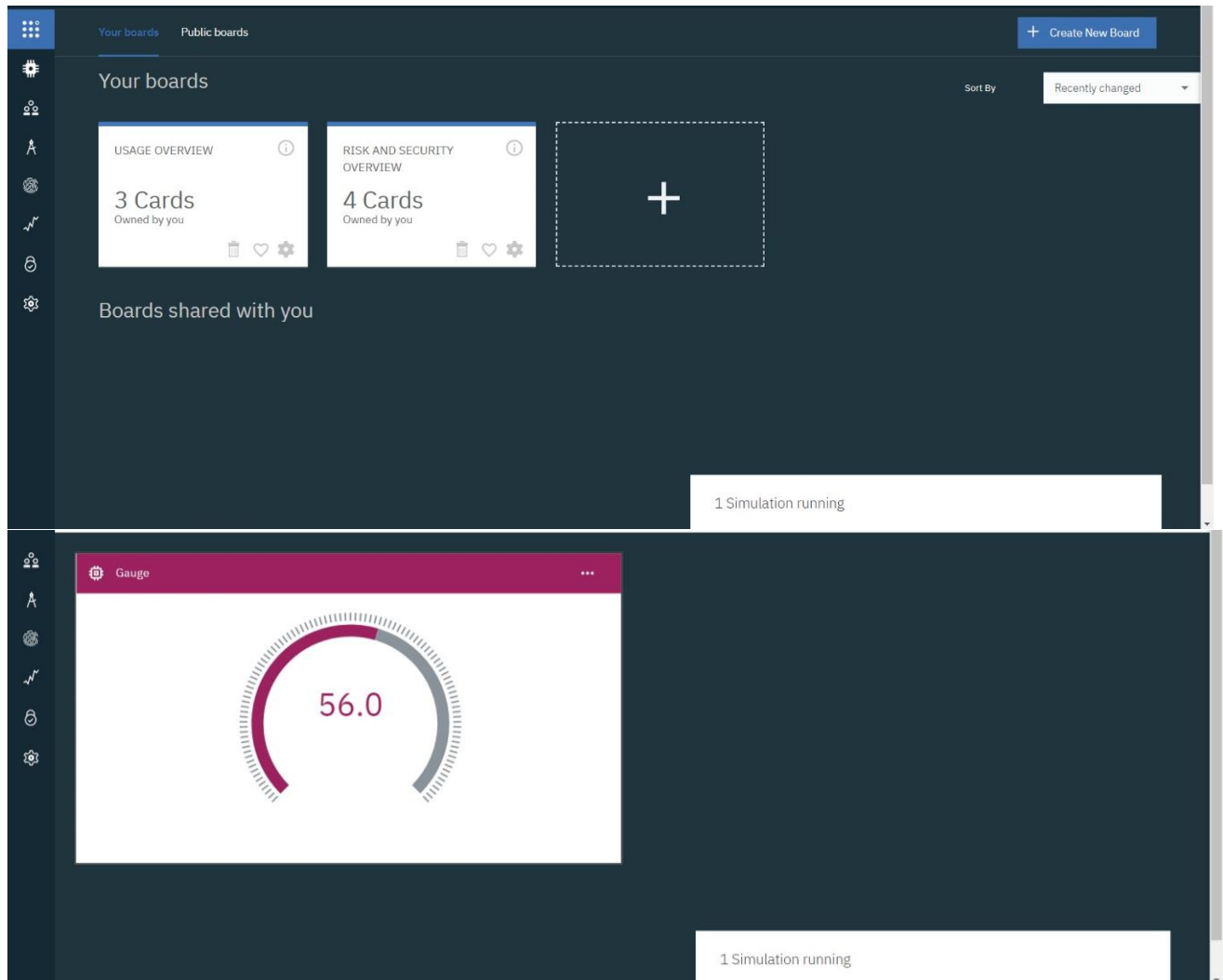
Authentication tokens are non-recoverable. If you misplace this token, you will need to re-register the device to generate a new authentication token.

Find out how to add these credentials to your device

Connection Information

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

16.The Boards will display card for the project.



RESULT:

An IBM Watson cloud for IoT and a device is create