

CREATE IBM WATSON IOT PLATFORM AND DEVICE CREATE IBM WATSON IOT PLATFORM AND DEVICE

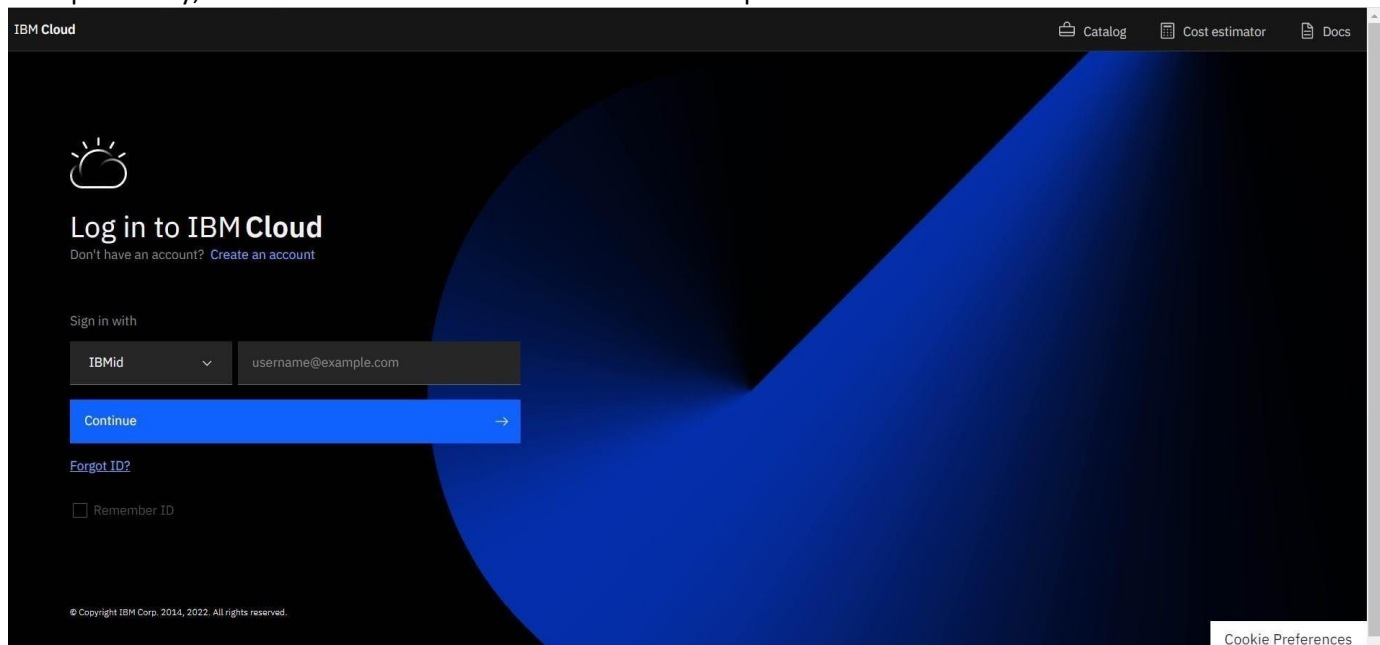
Date	10 November 2022
Team ID	PNT2022TMID05711
Project Name	Gas leakage monitoring and alerting system for industries

AIM:

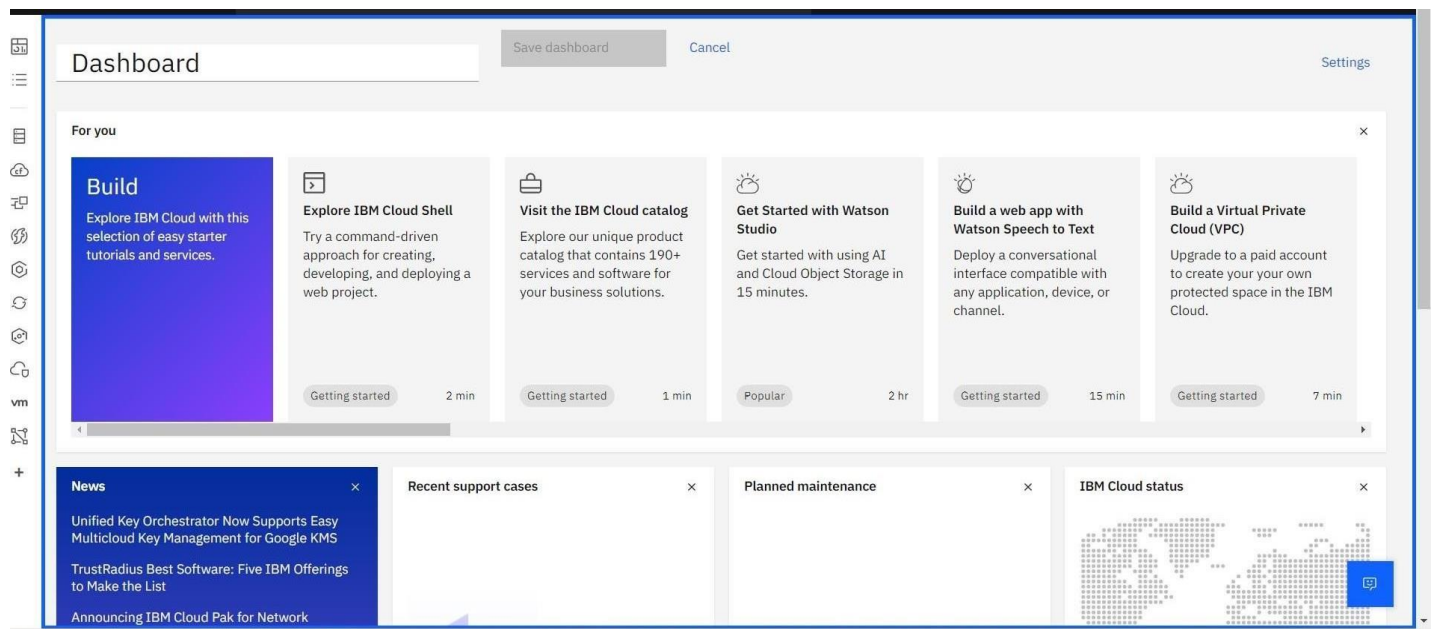
To create the IBM Watson IoT platform and device.

Steps to be followed

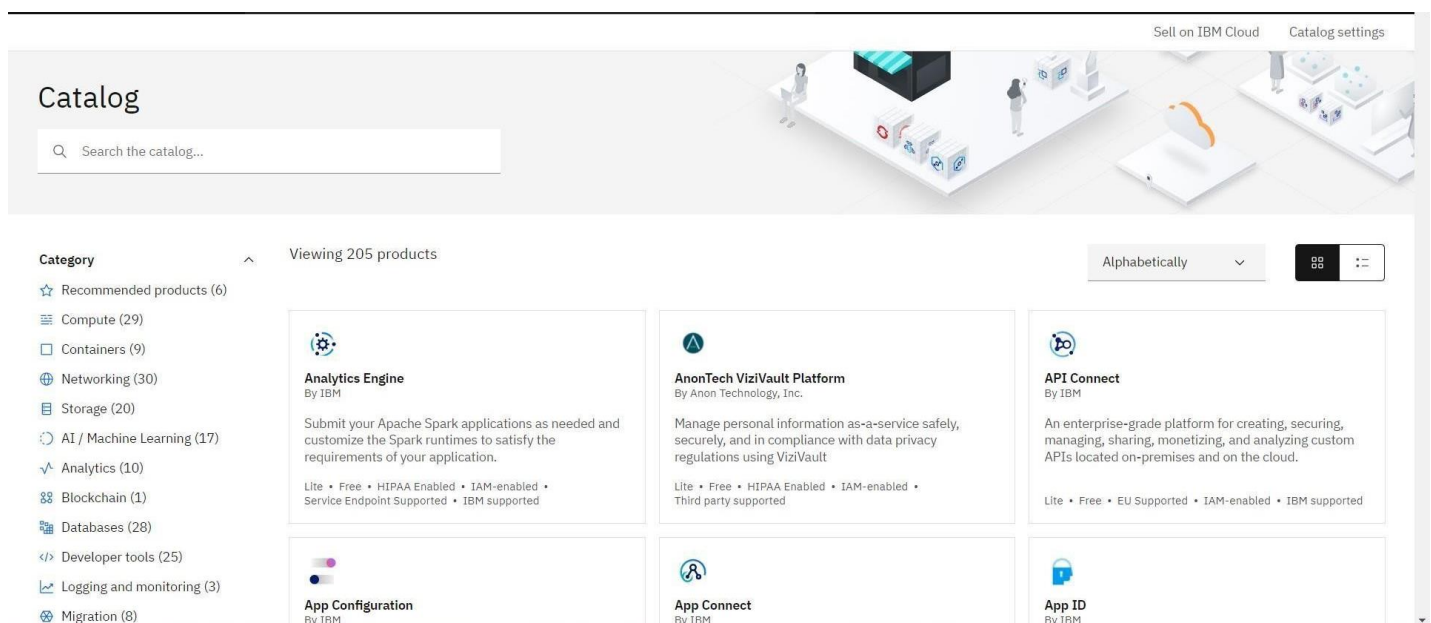
Step 1: Firstly, create an IBM cloud account with IBM id and password.



Step 2: Home page of IBM cloud.



Step 3: Click on the catalog on the top.



Step 4: Click on IoT in the category mentioned.

The screenshot shows the IBM Cloud Catalog interface. On the left, a sidebar lists various categories: Compute (29), Containers (9), Networking (30), Storage (20), AI / Machine Learning (17), Analytics (10), Blockchain (1), Databases (28), Developer tools (25), Logging and monitoring (3), Migration (8), Integration (10), **Internet of Things (1)** (highlighted), Security (25), and Mobile (1). Below the categories, there are filters for 'Type' (All, Services) and 'Provider' (IBM). The main area displays a grid of service cards. The 'Internet of Things' category is selected, showing the 'Internet of Things Platform' card. Other visible cards include 'Analytics Engine', 'AnonTech ViziVault Platform', 'API Connect', 'App Configuration', 'App Connect', 'App ID', 'Bare Metal Servers for Classic', 'Bare Metal Servers for VPC', and 'Block Storage'.

Step 5: Click on Internet of Things Platform.

The screenshot shows the IBM Cloud Catalog interface with the 'Internet of Things Platform' service selected. The left sidebar shows the 'Type' filter set to 'All' and the 'Provider' filter set to 'IBM (1)'. The main area displays the details for the 'Internet of Things Platform' service, including its 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 pricing plan is 'Lite • Free • IAM-enabled • IBM supported'. The 'Compliance' section shows 'IAM-enabled' as a filter. The 'Location' section is also visible.

Step 6: If already a lite is present delete it else u can't create another.

Last updated
08/15/2022

Category
Internet of Things

Compliance
IAM-enabled

Location
Frankfurt
London
Dallas
Washington DC

Related links
[Docs](#)
[Terms](#)

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 analyzed 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 each of data exchanged, data analyzed, and edge data analyzed per month. Lite plan services are deleted after 30 days of inactivity.	Free

Configure your resource

Service name
Internet of Things Platform-gm

Tags ⓘ
Examples: env:dev, version-1

Select a resource group ⓘ
Default

Access management tags ⓘ
Examples: access:dev, proj:version-1

Summary

Internet of Things Platform **Free**

Location: Frankfurt
Plan: Lite
Service name: Internet of Things Platform-gm
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

Step 7: Tick agreements and then click on create.

Last updated
08/15/2022

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☐ I have read and agree to the following license agreements:
[Terms](#) ⓘ

Create

Add to estimate

Step 8: Click on the launch button.

Resource list /

Internet of Things Platform-gb

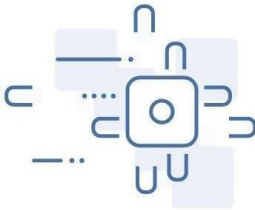
Active Add tags

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

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

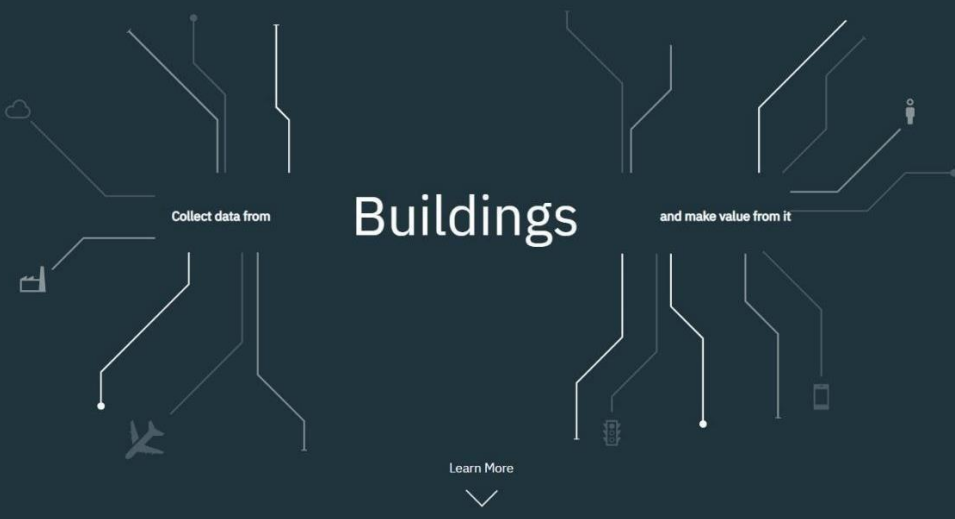
The Production service is a fully managed SaaS offering that enables you to manage and analyze enterprise IoT data.

Chat icon

Step 9: After clicking on the launch button this tab will open.

IBM Watson IoT Platform

Sign in



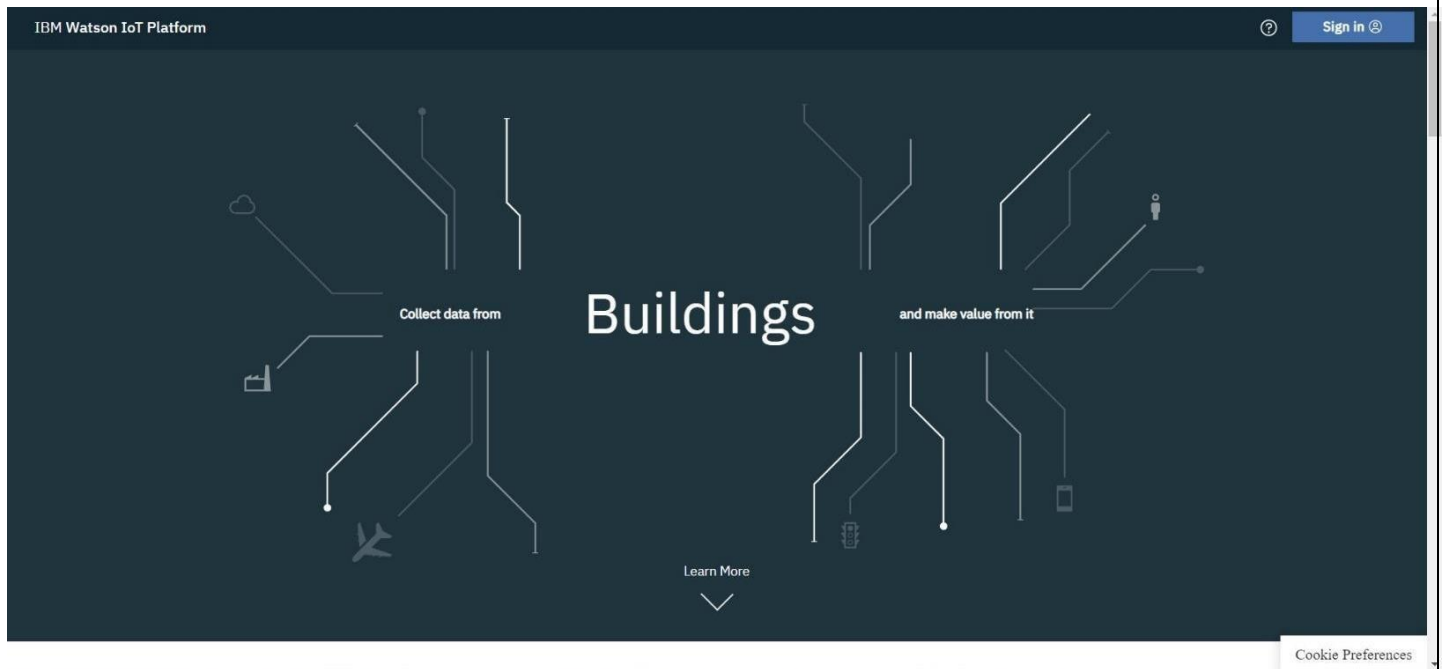
Buildings

Collect data from and make value from it

Learn More

Cookie Preferences

Step 10: Click on Sign in.



Step 11: Fill the login details.

IBM

Log in to IBM

IBMId [Forgot IBMId?](#)

☐ Remember me [?](#)

[Continue](#) [→](#)

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

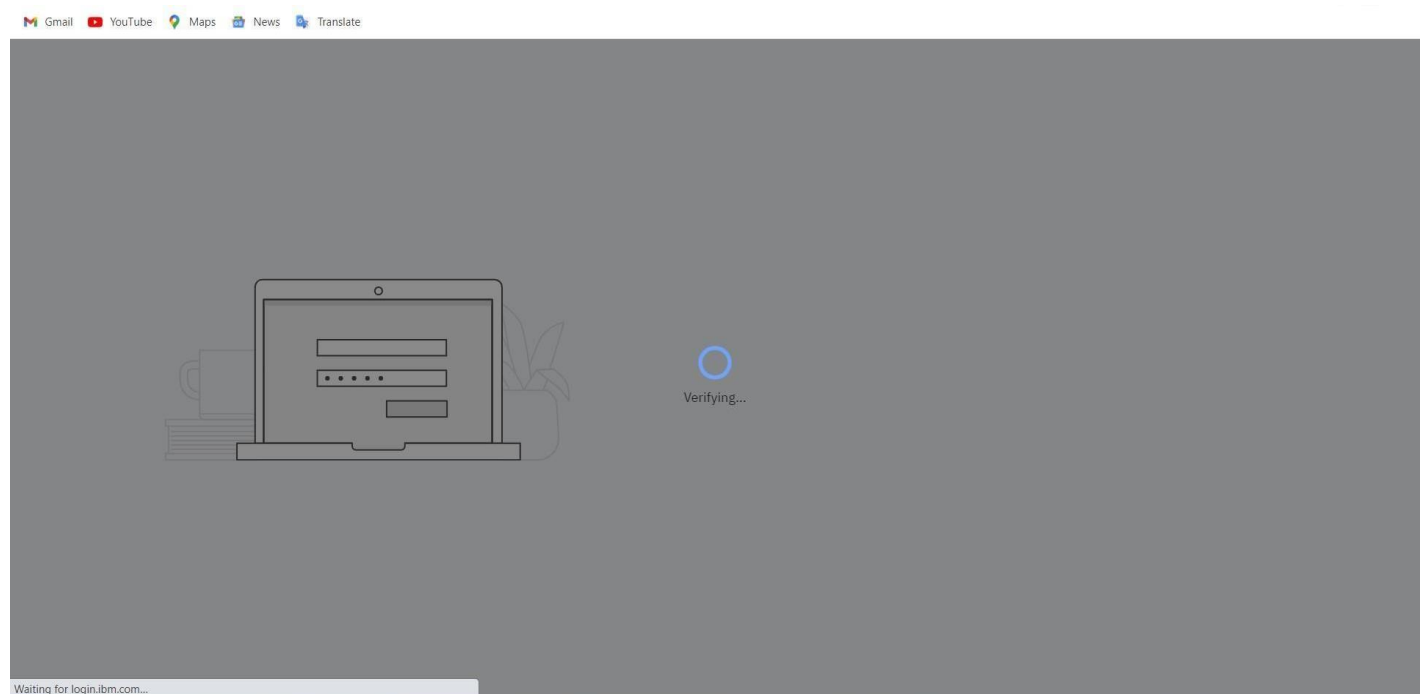
Need help? [Contact the IBMId help desk](#)

[Contact](#) [Privacy](#) [Terms of use](#) [Accessibility](#) [Cookie preferences](#)

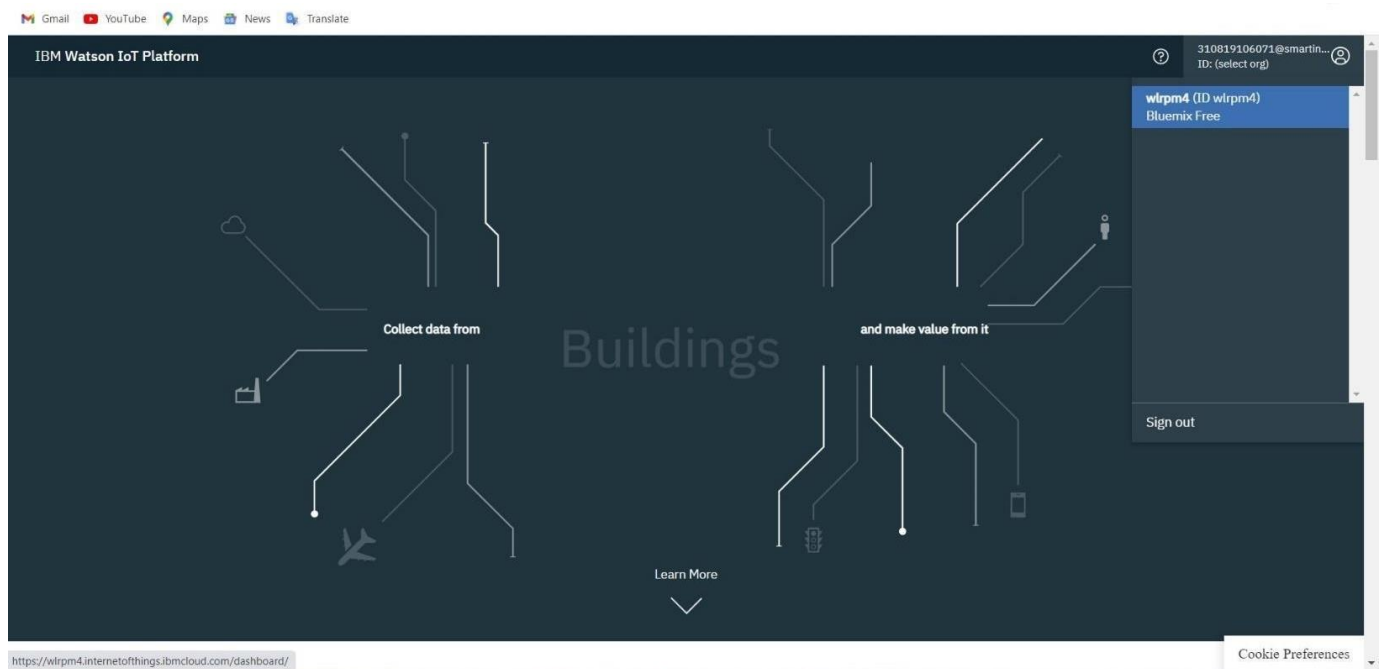
https://www.ibm.com/account/reg/signup?formid=urx-19776&target=https%3A%2F%2Flogin.ibm.com%2Foidc%2Fendpoint%2Fdefault%2Fauthorize%3Fqslid%3Dc63ebbe9-b78e-4b1c-b8da-5879b125b518%26client_id%3D3D0DQ0NTEtOGZkNC00

Powered by IBM Security Verify

Step 12: Sign in on progress.



Step 13: Once it is logged in, the name will be displayed. Click on it and then click on Bluemix Free.



Step 14: This is the IBM Watson platform.

IBM Watson IoT Platform

310819106071@smartinternz.com
ID: wlrpm4

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

Device Simulator ☒

<input type="checkbox"/>	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
>	<input type="checkbox"/>	14325	Disconnected	Testdevicetype	Device	Nov 5, 2022 5:33 AM

Items per page 50 | 1-1 of 1 item

1 of 1 page

0 Simulations running

Step 15: Click on Add Device.

IBM Watson IoT Platform

310819106071@smartinternz.com
ID: wlrpm4

Browse Action Device Types Interfaces

Add Device +

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Items per page 50 | 1-1 of 1 item

1 of 1 page

0 Simulations running

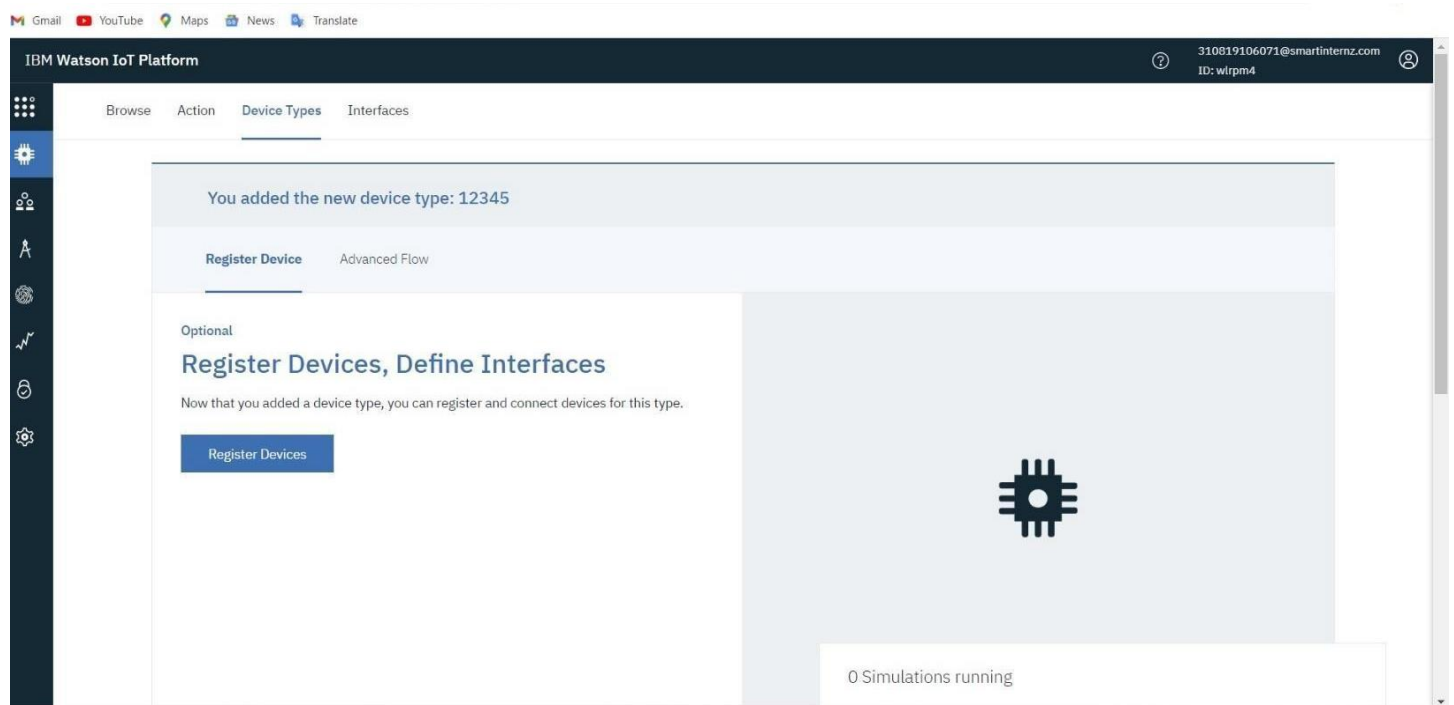
Step 16: Click on Device Type.

The screenshot shows the IBM Watson IoT Platform interface. At the top, there's a navigation bar with 'Browse', 'Action', 'Device Types', and 'Interfaces'. The 'Device Types' tab is selected. A modal dialog titled 'Add Device' is open, showing a progress bar with four steps: Identity (selected), Device Information, Security, and Summary. Below the progress bar, a message says: '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 a dropdown menu showing 'Select or create a device type...' and 'Device ID' with a text input field containing 'Enter Device ID'. At the bottom right of the dialog are 'Cancel' and 'Next' buttons. Below the dialog, the 'Browse Devices' section is visible, showing '0 Simulations running' and an 'Adobe Express' button.

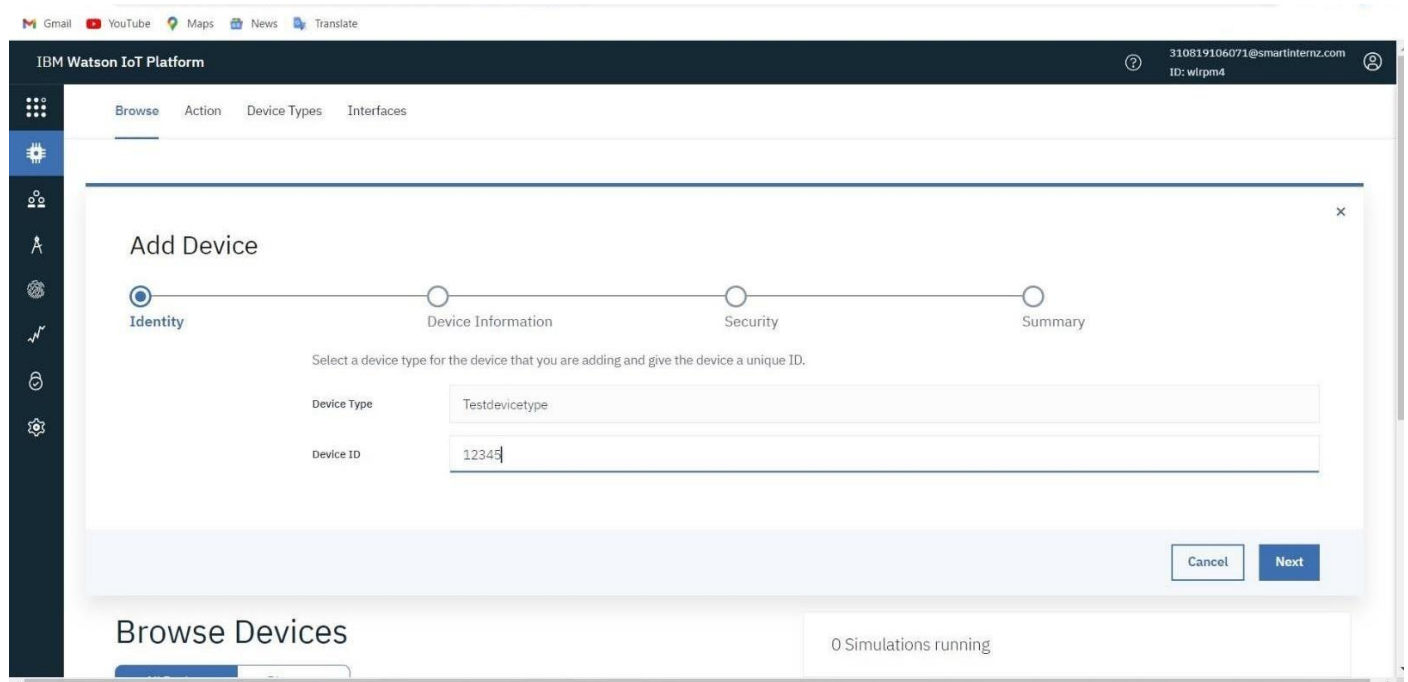
Step 17: Fill the details.

The screenshot shows the IBM Watson IoT Platform interface. At the top, there's a navigation bar with 'Browse', 'Action', 'Device Types', and 'Interfaces'. The 'Device Types' tab is selected. A modal dialog titled 'Add Type' is open, showing a progress bar with two steps: Identity (selected) and Device Information. Below the progress bar, a message says: 'Device types group devices that have similar characteristics, such as model number, firmware version, or location. Give the device type a unique name and a description that identifies characteristics that are shared by devices of this type.' There are three input fields: 'Type' with a dropdown menu showing 'Device', 'Or', and 'Gateway'; 'Name' with a text input field containing '12345'; and 'Description' with a text input field. Below the 'Name' field, a note says: 'The device type name is used to identify the device type uniquely and uses a restricted set of characters to make it suitable for API use.' At the bottom right of the dialog is a 'Next' button. Below the dialog, the 'Browse Devices' section is visible, showing '0 Simulations running' and an 'Adobe Express' button.

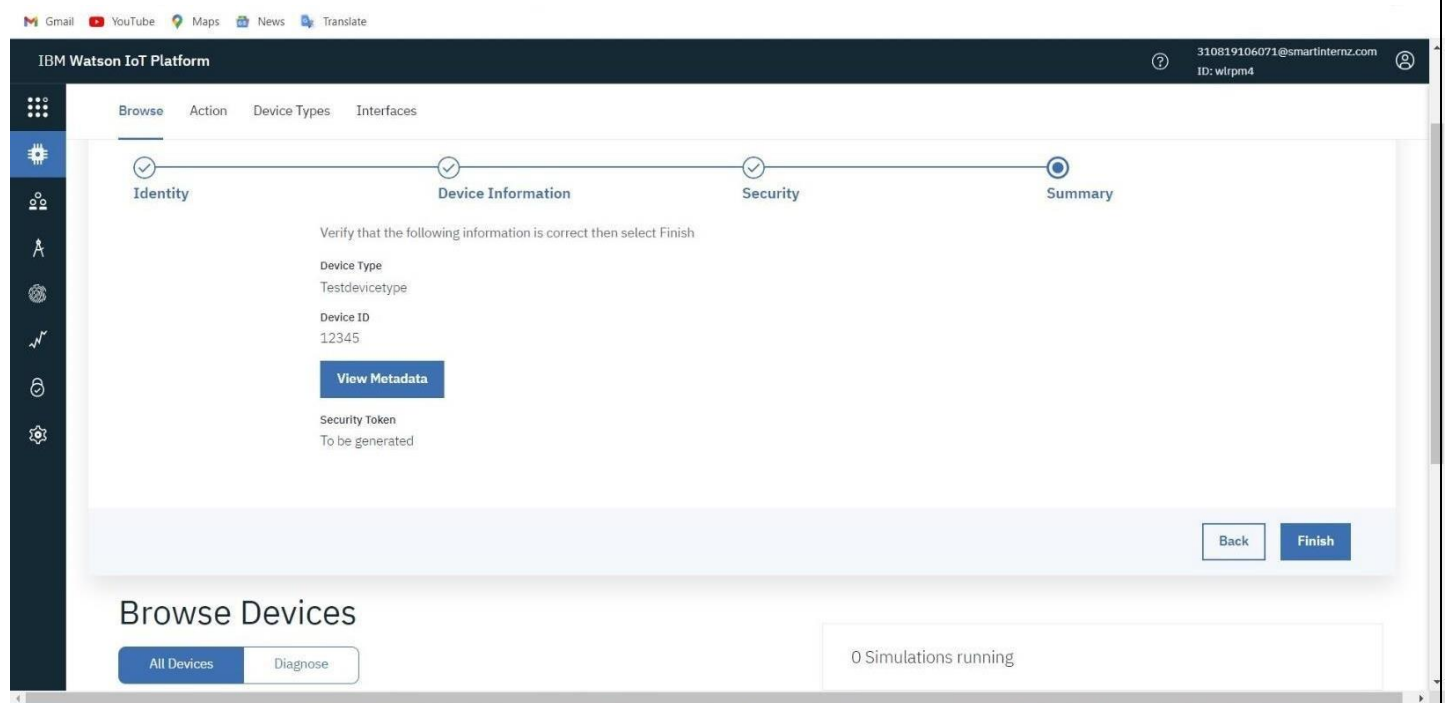
Step 18: Click on Register Devices.



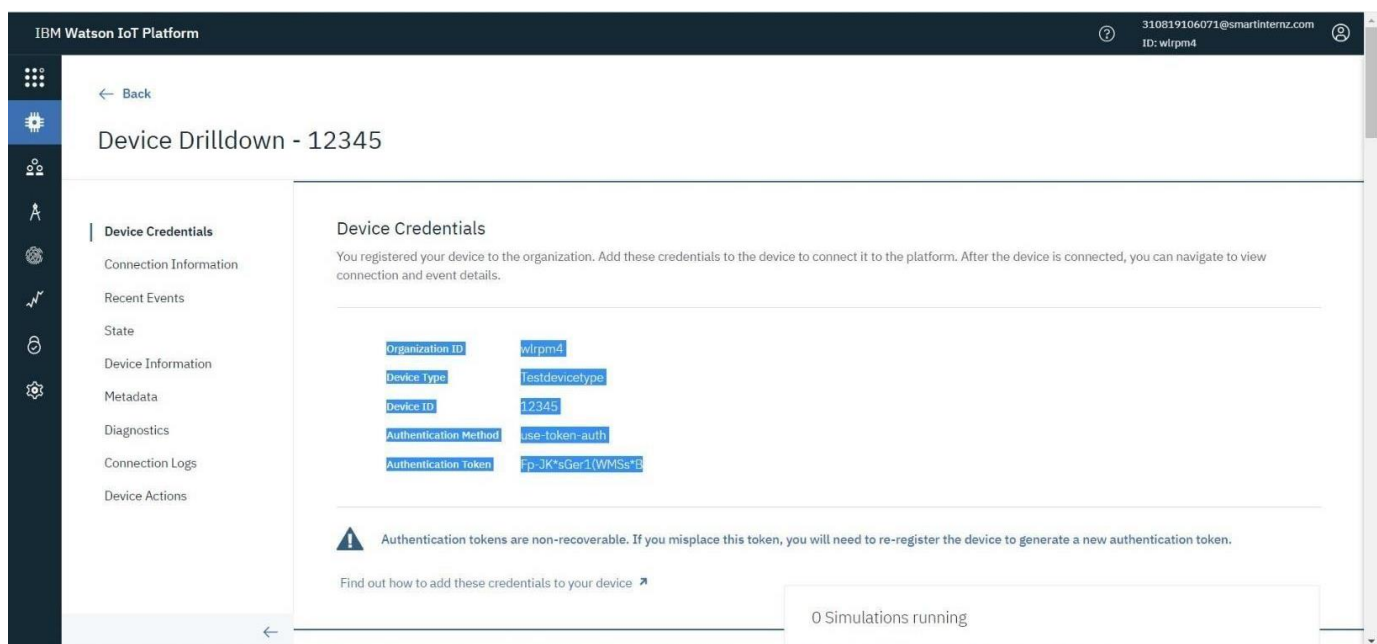
Step 19: Give the device name which you have created and give Device ID.



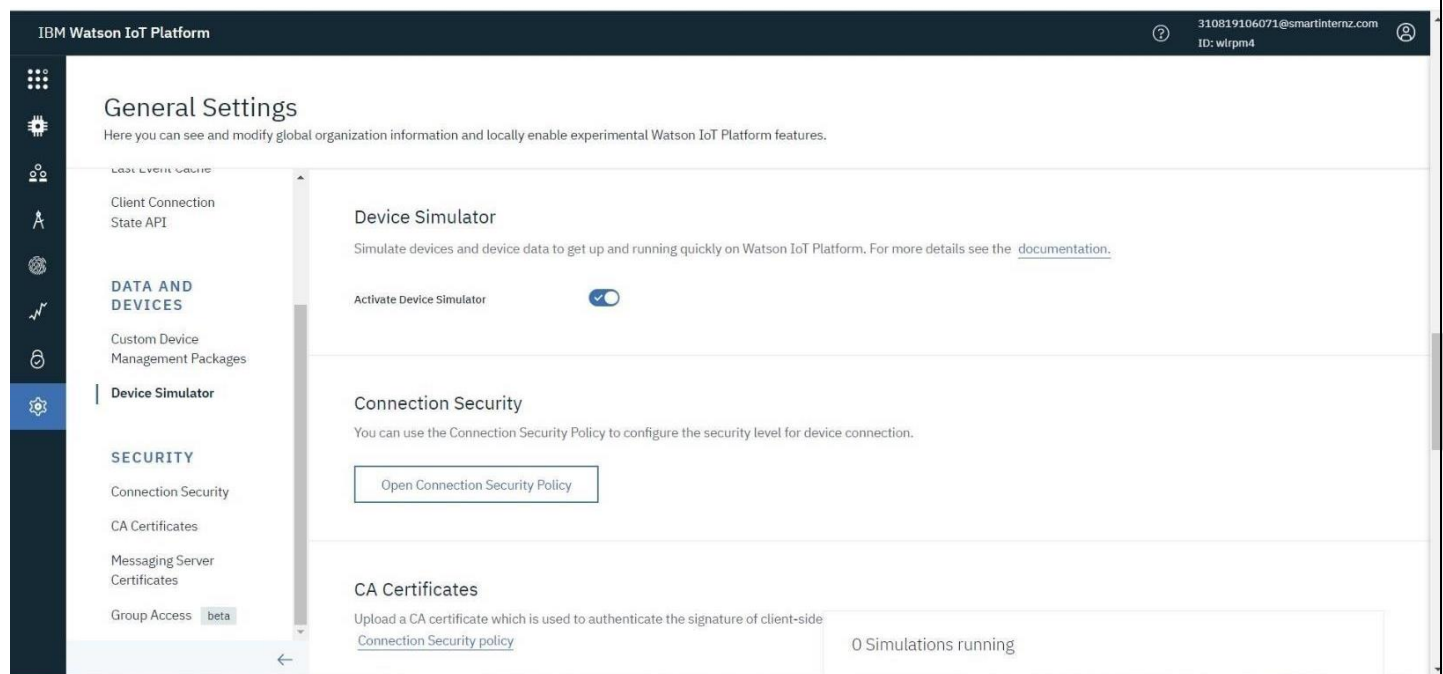
Step 20: After giving all the data, Click on Finish.



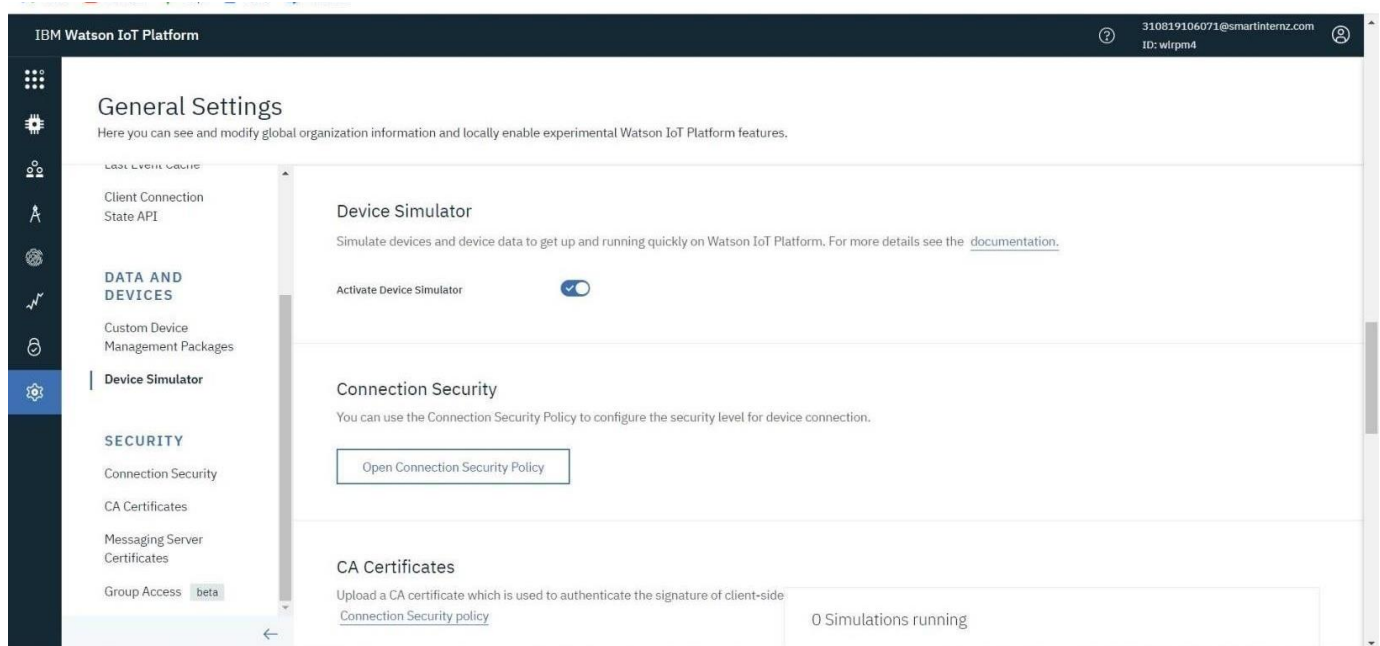
Step 21: After creating the device, Copy the Device Credentials.



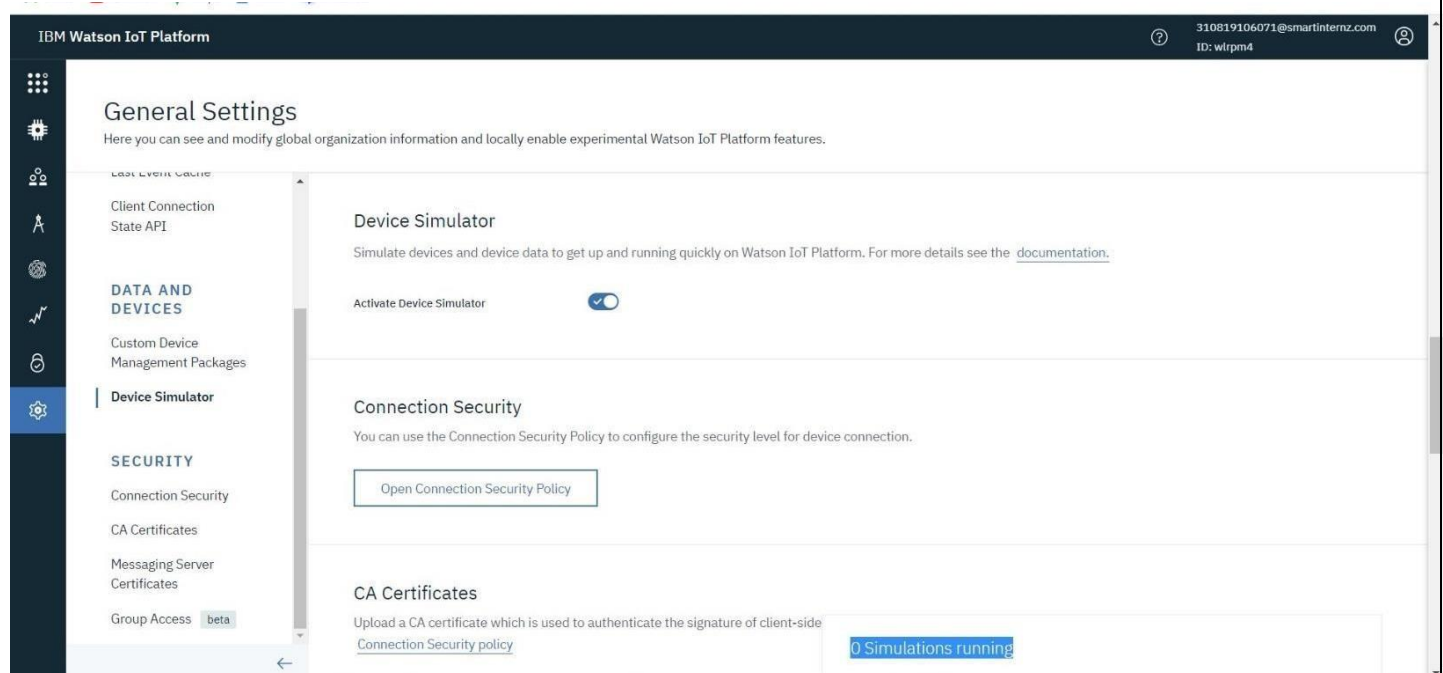
Step 22: Go to Setting, click on Data and Devices.



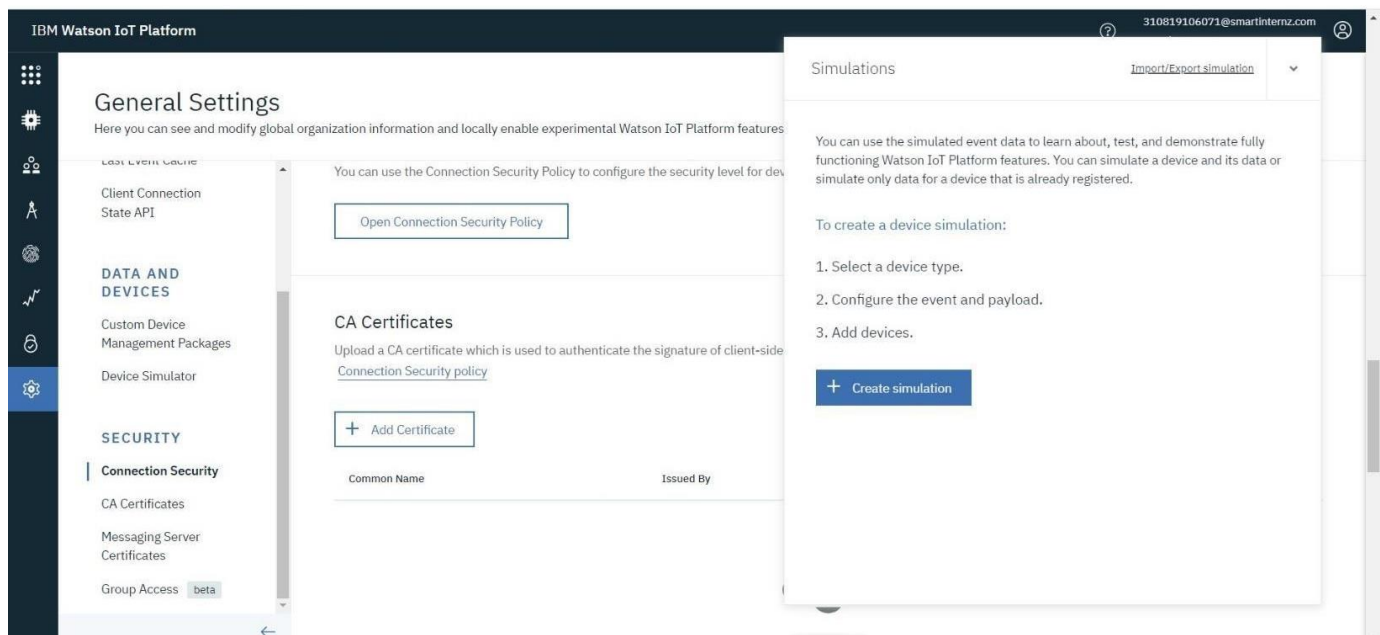
Step 23: Then click on Device Simulator and Activate Device Simulator.



Step 24: Click on the pop-up screen on the right side.



Step 25: Click on Create Simulation.



Step 26: Choose the Device.

The screenshot shows the IBM Watson IoT Platform interface. The left sidebar contains navigation links for General Settings, DATA AND DEVICES, and SECURITY. The main content area is titled "General Settings" and includes sections for "CA Certificates" and "Connection Security". A "Simulations" modal is open on the right, providing instructions on how to create a device simulation. The modal lists three steps: 1. Select a device type, 2. Configure the event and payload, and 3. Add devices. A text input field labeled "Select or create a device type..." is visible within the modal.

IBM Watson IoT Platform

General Settings

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

Client Connection State API

Open Connection Security Policy

DATA AND DEVICES

Custom Device Management Packages

Device Simulator

SECURITY

Connection Security

CA Certificates

Messaging Server Certificates

Group Access beta

Simulations

Import/Export simulation

You can use the simulated event data to learn about, test, and demonstrate fully functioning Watson IoT Platform features. You can simulate a device and its data or simulate only data for a device that is already registered.

To create a device simulation:

1. Select a device type.
2. Configure the event and payload.
3. Add devices.

Select or create a device type...

Step 27: Type the code.

The screenshot shows the IBM Watson IoT Platform interface. The left sidebar contains navigation links for Browse, Action, Device Types, and Interfaces. The main content area is titled "Browse Devices" and includes a table of devices. A modal is open on the right, allowing configuration of events for a selected device. The modal includes fields for "Event type name" and "Frequency", a "Send" button, and a "Payload" section with a code editor. The code editor contains a JSON payload with "temperature" and "humidity" fields, each using a random function. A "Cancel" button and a "Save" button are at the bottom of the modal.

IBM Watson IoT Platform

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 ID	Status	Device Type	Class ID	Data
>	12345	Disconnected	Testdevicetype	Device	No
>	14325	Disconnected	Testdevicetype	Device	No

Items per page 50 | 1-2 of 2 items

Events 1

Event type name event_1 Frequency 20 x Every Minute Send

Payload

You can override field values in the event payload that is sent by this device. Specify the override values in the editor window.

```
0 {
1   "temperature": random(0, 100),
2   "humidity": random(0, 100)
3 }
4
```

What functions can I apply?

Cancel Save

Step 28: Click on Use Registered Device and choose the device and run it.

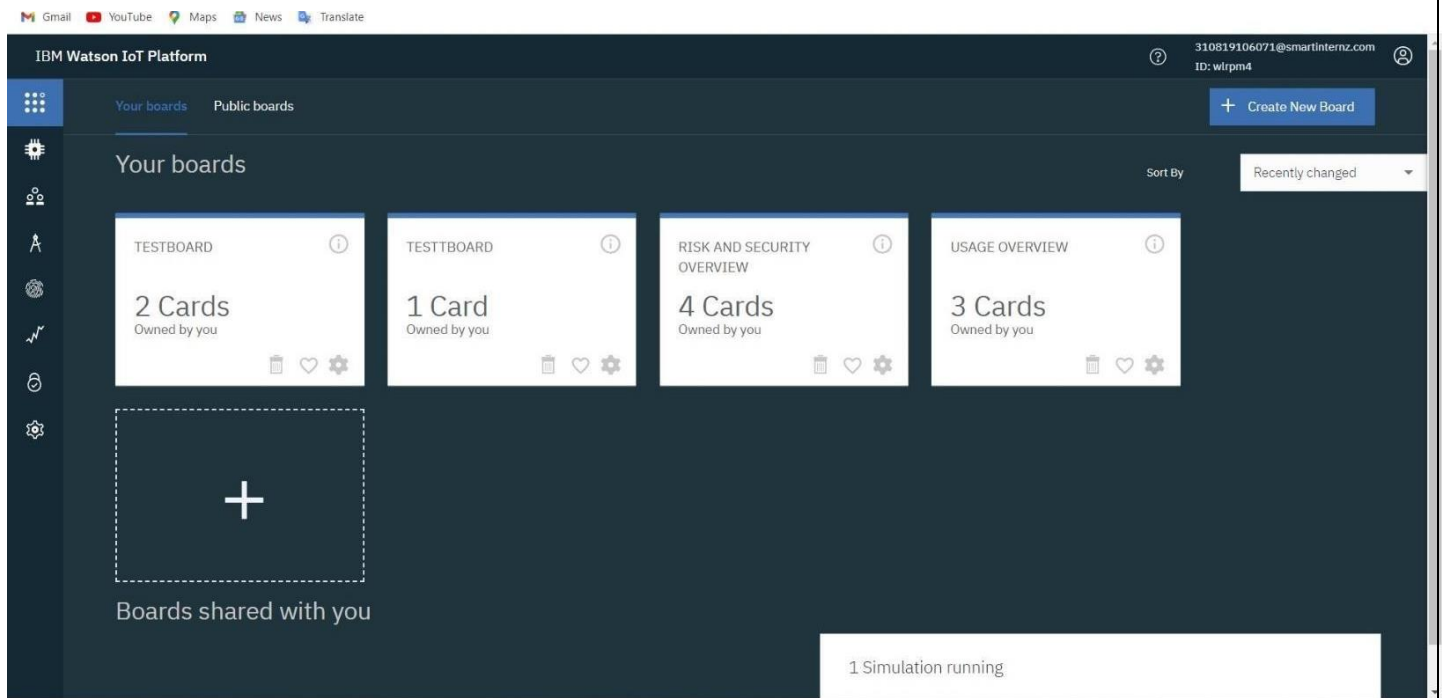
The screenshot shows the IBM Watson IoT Platform 'General Settings' page. The left sidebar contains navigation links for 'General Settings', 'DATA AND DEVICES', and 'SECURITY'. The main content area includes sections for 'Client Connection State API', 'CA Certificates', and 'Connection Security Policy'. An overlay window titled 'Simulations' is open on the right, showing '1/50 Simulations Running' and a list of devices. The device '12345' is selected, and the 'Use Registered Device' button is highlighted. The overlay also shows '2 events sent' and '76 bytes sent'.

Step 29: Go to devices then click on devices and check the recent events whether the code is running or not.

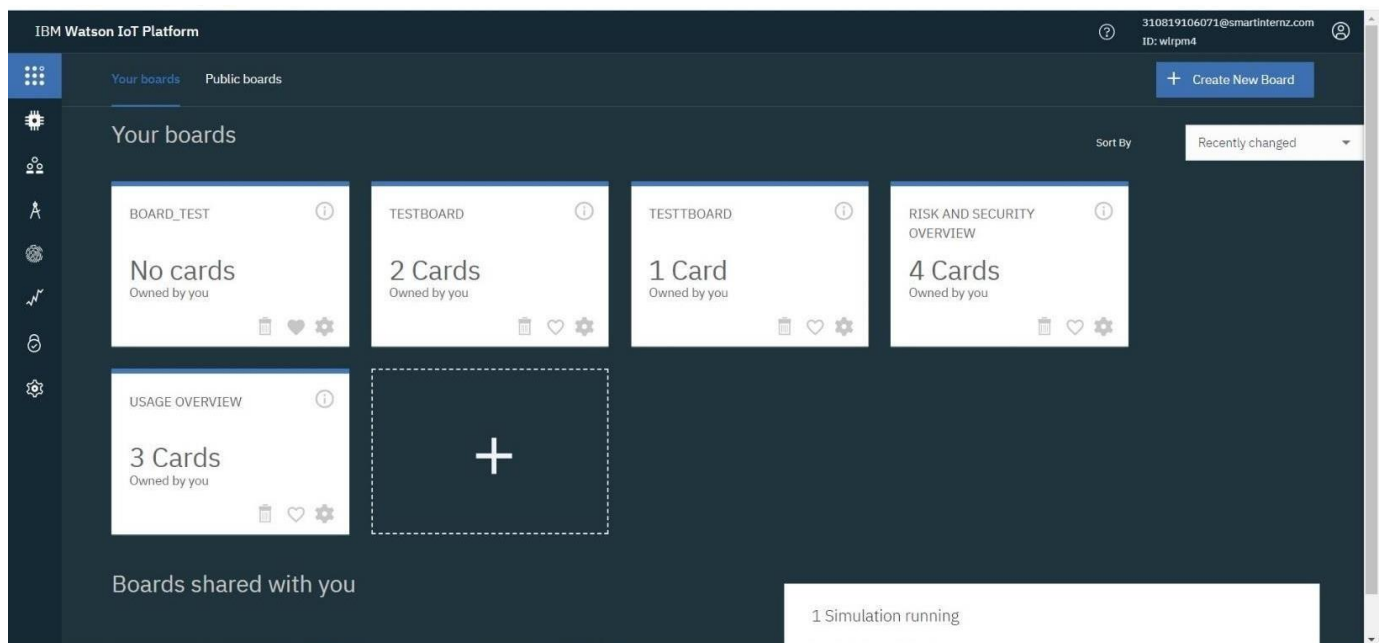
The screenshot shows the IBM Watson IoT Platform 'Devices' page. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. The main content area displays a table of devices. The device '12345' is selected, and its 'Recent Events' tab is active. The table shows four recent events, each with a timestamp of 'a few seconds ago'. A '1 Simulation running' notification is visible at the bottom right.

Event	Value	Format	Last Received
event_1	{\"temperature\":63,\"humidity\":8}	json	a few seconds ago
event_1	{\"temperature\":56,\"humidity\":9}	json	a few seconds ago
event_1	{\"temperature\":40,\"humidity\":76}	json	a few seconds ago
event_1	{\"temperature\":61,\"humidity\":36}	json	a few seconds ago

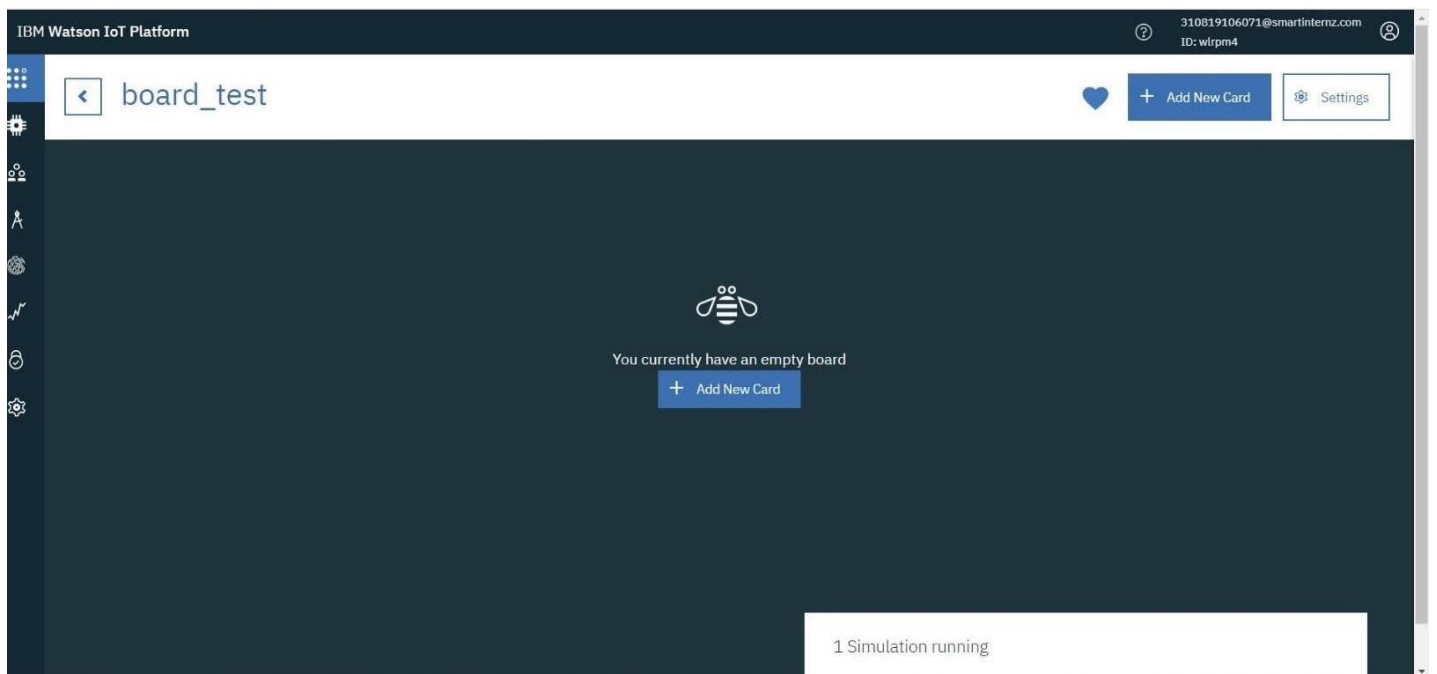
Step 30: Go to Board and click on + Create New Board, fill the details and create a board.



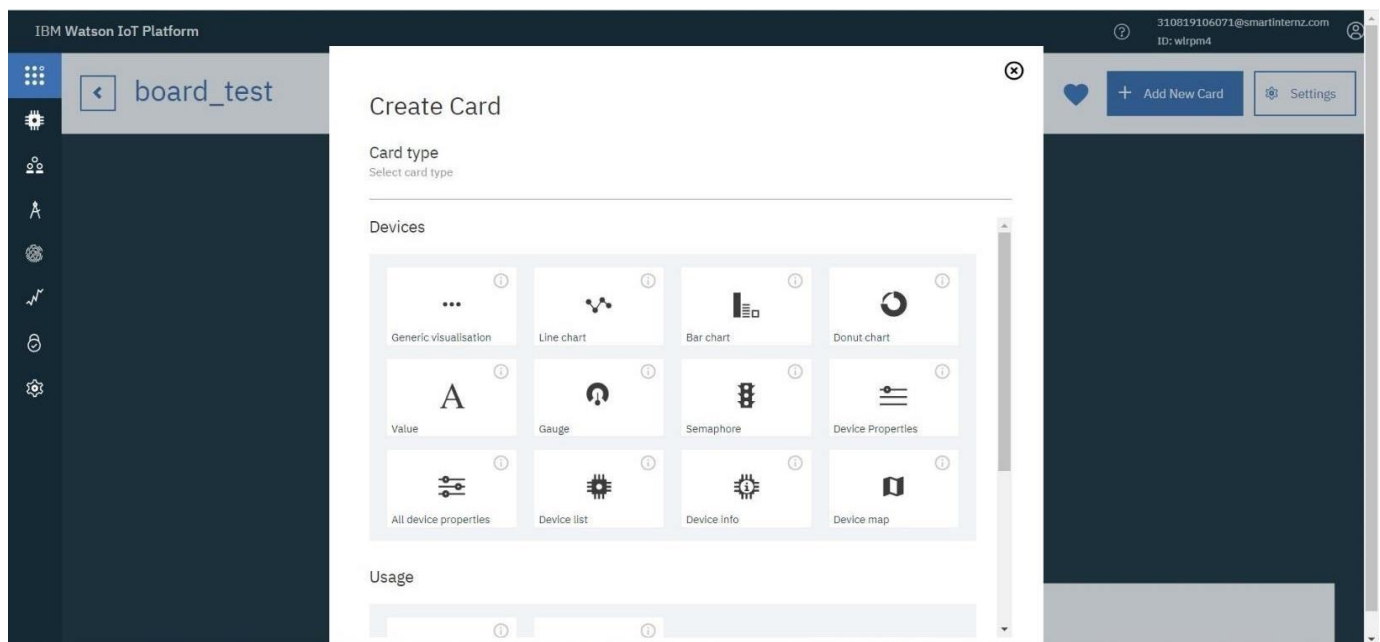
Step 31: Click on the board which is created.



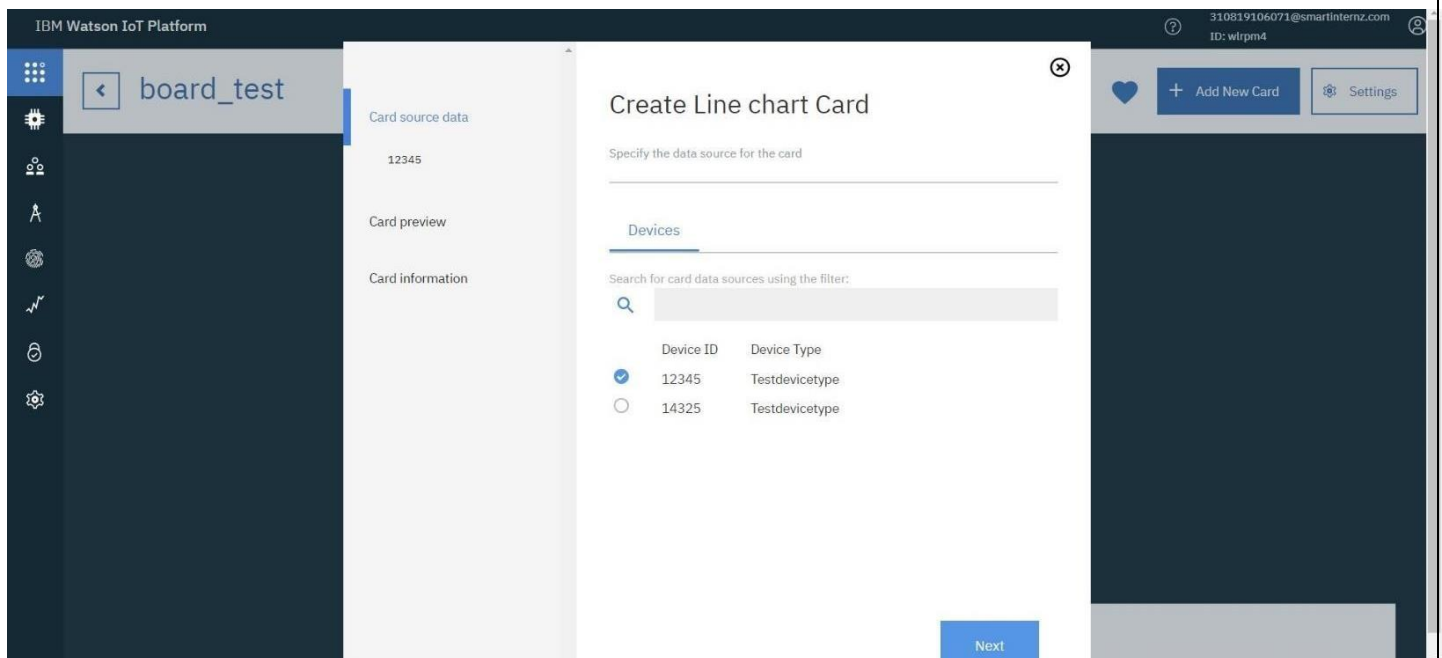
Step 32: Go Add New Card.



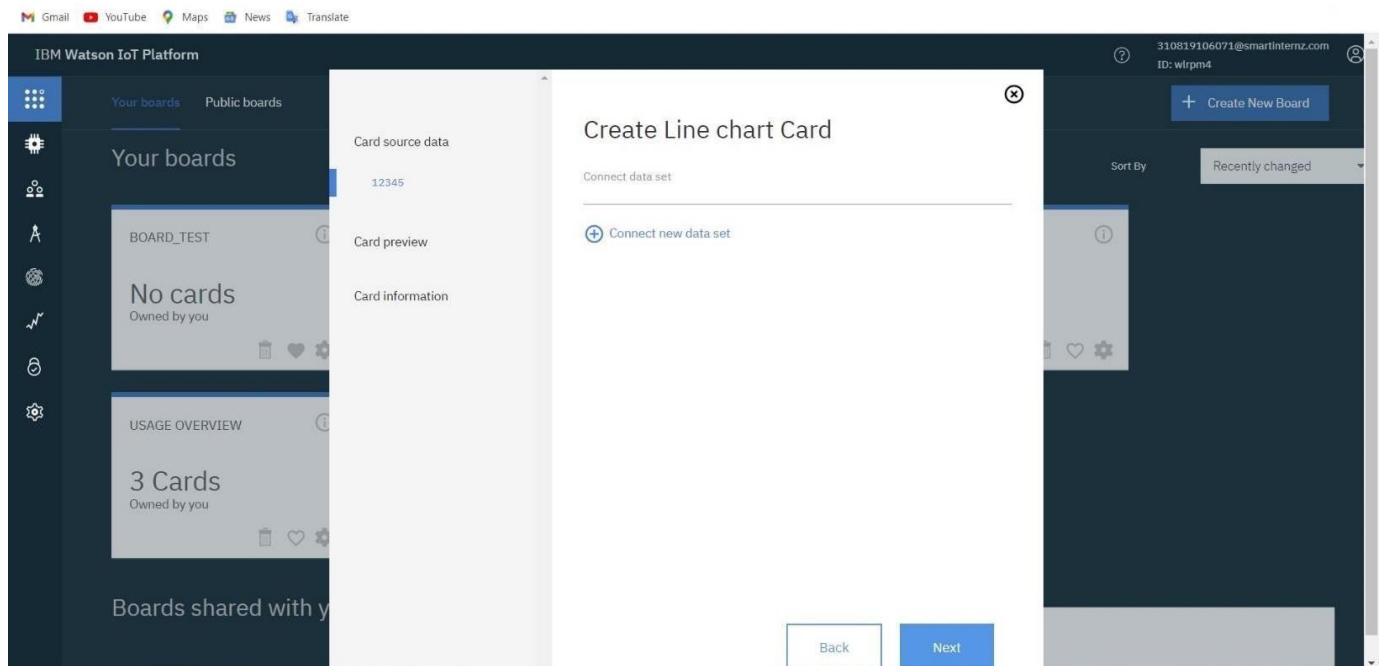
Step 33: Choose the Card Type.



Step 34: Choose the device.



Step 35: Click on Connect new data set.



Step 36: Fill the details to get Temperature graph.

IBM Watson IoT Platform

board_test

Card source data

12345

Card preview

Card information

Create Line chart Card

Connect data set

temperature

Event

event_1

Property

temperature

Name

temperature

Type

Number

Unit

°C

Min

0

Max

100

Back

Next

Step 37: Choose the Colour.

IBM Watson IoT Platform

Your boards

Public boards

BOARD_TEST

No cards

Owned by you

USAGE OVERVIEW

3 Cards

Owned by you

Boards shared with you

Card source data

12345

Card preview

Card information

Create Line chart Card

Enter title and description of the card

Title

Line chart

Color scheme

A line chart to display time series information with historic and live data

Back

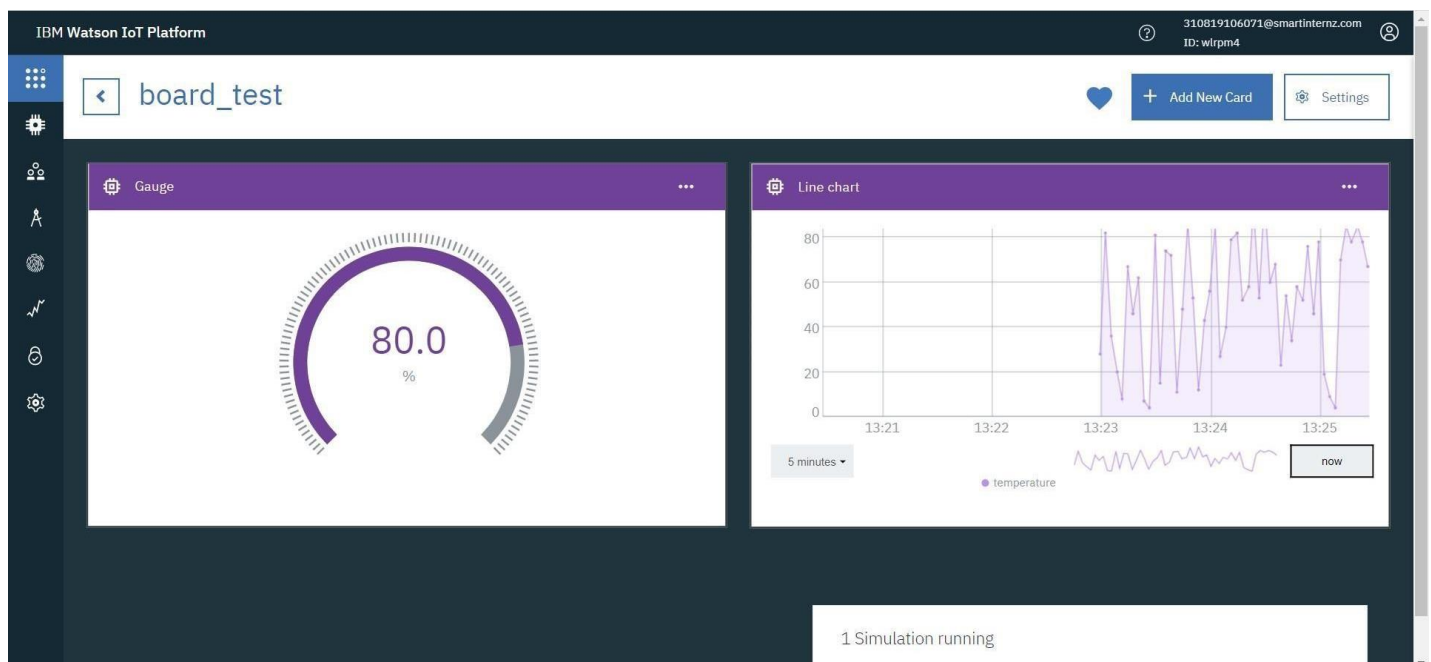
Submit

Step 38: Repeat the same process again to get the Humidity graph.

The screenshot shows the IBM Watson IoT Platform interface. On the left, a sidebar contains icons for various functions. The main area displays a 'board_test' dashboard with a 'Line chart' card. A 'Create Gauge Card' dialog is open, showing a 'Devices' table with two entries: '12345' and '14325', both of type 'Testdevicetype'. The '12345' entry is selected. A 'Next' button is at the bottom right of the dialog.

Device ID	Device Type
<input checked="" type="radio"/> 12345	Testdevicetype
<input type="radio"/> 14325	Testdevicetype

Step 39: Here is the Final graph.



Result:

An IBM Watson cloud for IoT and a device is created successfully.