

CREATING AND CONFIGURING IBM WATSON IOT PLATFORM AND CREATING A DEVICE

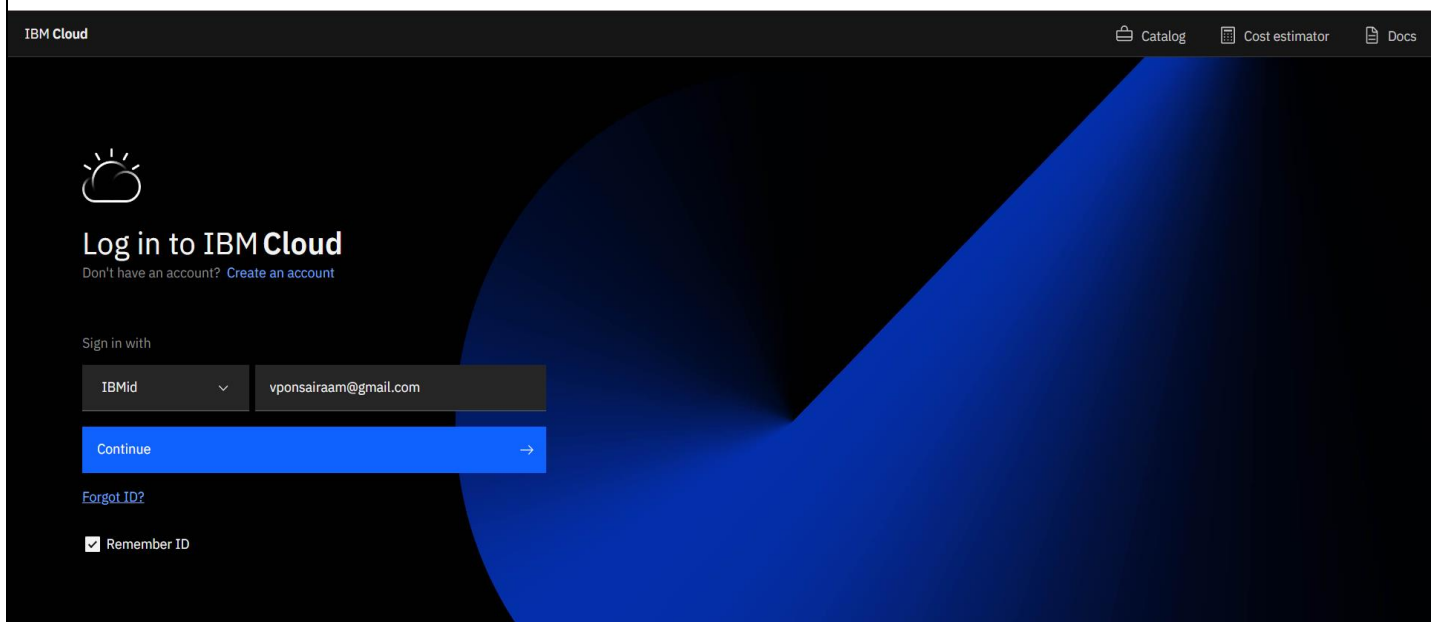
Date	11 November 2022
Team ID	PNT2022TMID53629
Project Name	Gas leakage monitoring and alerting system for industries

AIM:

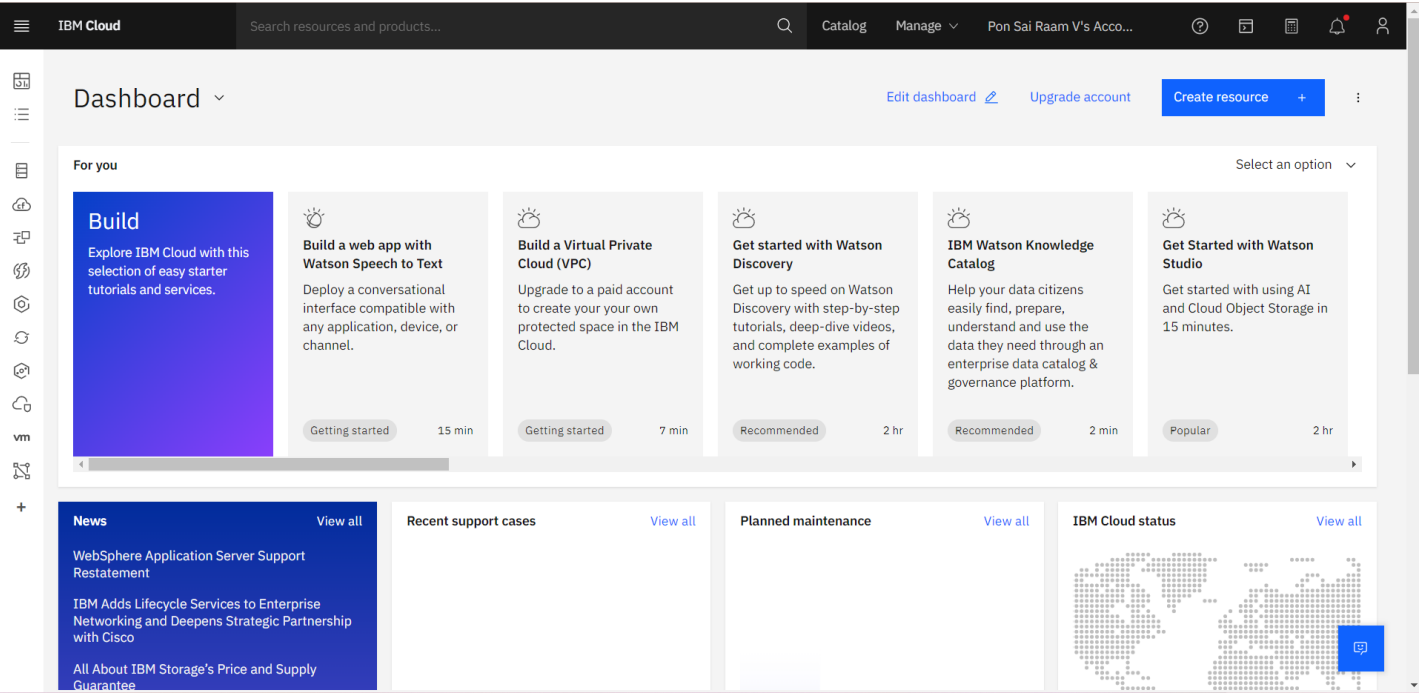
To create and configure the IBM Watson IoT platform and create a device.

Steps to be followed

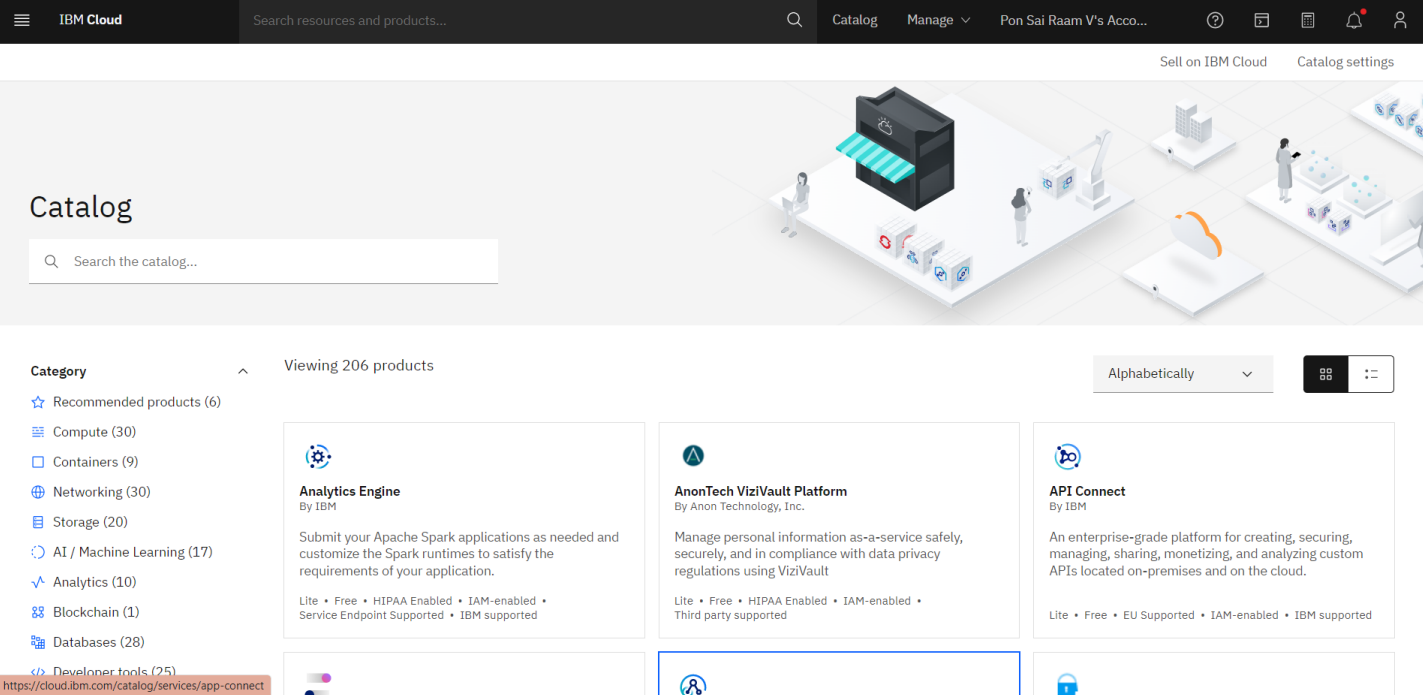
Step 1: Create an IBM cloud account with IBM id and password



Step 2: Go to Home page of IBM cloud.



Step 3: Click on the catalog on the top.



Step 4: Click on IoT in the category mentioned.

IBM Cloud

Search resources and products...

Q

Catalog

Manage

Pon Sai Raam V's Acco...

?

Sell on IBM CloudCatalog settings

Category ^ Viewing 206 products

Alphabetically

Recommended products (6)

Compute (30)

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)

Security (25)

Mobile (1)

Analytics Engine

By IBM

Submit your Apache Spark applications as needed and customize the Spark runtimes to satisfy the requirements of your application.

Lite • Free • HIPAA Enabled • IAM-enabled • Service Endpoint Supported • IBM supported

AnonTech ViziVault Platform

By Anon Technology, Inc.

Manage personal information as-a-service safely, securely, and in compliance with data privacy regulations using ViziVault

Lite • Free • HIPAA Enabled • IAM-enabled • Third party supported

API Connect

By IBM

An enterprise-grade platform for creating, securing, managing, sharing, monetizing, and analyzing custom APIs located on-premises and on the cloud.

Lite • Free • EU Supported • IAM-enabled • IBM supported

App Configuration

By IBM

Centralized, in-flight configuration for web and mobile applications and distributed environments.

Lite • Free • IAM-enabled • Service Endpoint Supported • IBM supported

App Connect

By IBM

Connect your applications, automate tasks, and improve productivity

Lite • Free • IBM supported

App ID

By IBM

User Authentication and User Profiles for your apps.

Lite • Free • EU Supported • Financial Services Validated • HIPAA Enabled • IAM-enabled • IBM supported

Step 5: Click on Internet of Things Platform.

IBM Cloud

Search resources and products...

Q

Catalog

Manage

Pon Sai Raam V's Acco...

?

Sell on IBM CloudCatalog settings

Internet of Things X

Internet of Things

Alphabetically

Type ⓘ ^ Viewing 1 product

Filters: Internet of Things X Clear all

All

Services

Software

Professional services

Provider

IBM (1)

Pricing plan ⓘ ^

Lite

Free

Compliance

IAM-enabled

Internet of Things Platform

By IBM

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.

Lite • Free • IAM-enabled • IBM supported

https://cloud.ibm.com/catalog/services/internet-of-things-platform

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

IBM Cloud

Search resources and products...

Q

Catalog

Manage

Pon Sai Raam V's Acco...

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 apps can access their live and historical data.

Create

About

Type
Service

Provider
IBM

Last updated
08/15/2022

Category
Internet of Things

Compliance
IAM-enabled

Location
Frankfurt
London
Dallas
Washington DC

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

Select a location

London (eu-gb)

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	Free

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.

Summary

Internet of Things Platform

Free

Location: London

Plan: Lite

Service name: Internet of Things Platform-cm

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.

IBM Cloud

Search resources and products...

Q

Catalog

Manage

Pon Sai Raam V's Acco...

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 apps can access their live and historical data.

Create

About

Type
Service

Provider
IBM

Last updated
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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.

IBM Cloud

Search resources and products...

Q

Catalog

Manage

Pon Sai Raam V's Acco...

?

Resource list /

Internet of Things Platform-Ibm

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.

Free

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.

Starts at \$500 per month

Production

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

Includes IBM Service & Support

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

internetofthings.ibmcloud.com

IBM Watson IoT Platform

Sign in

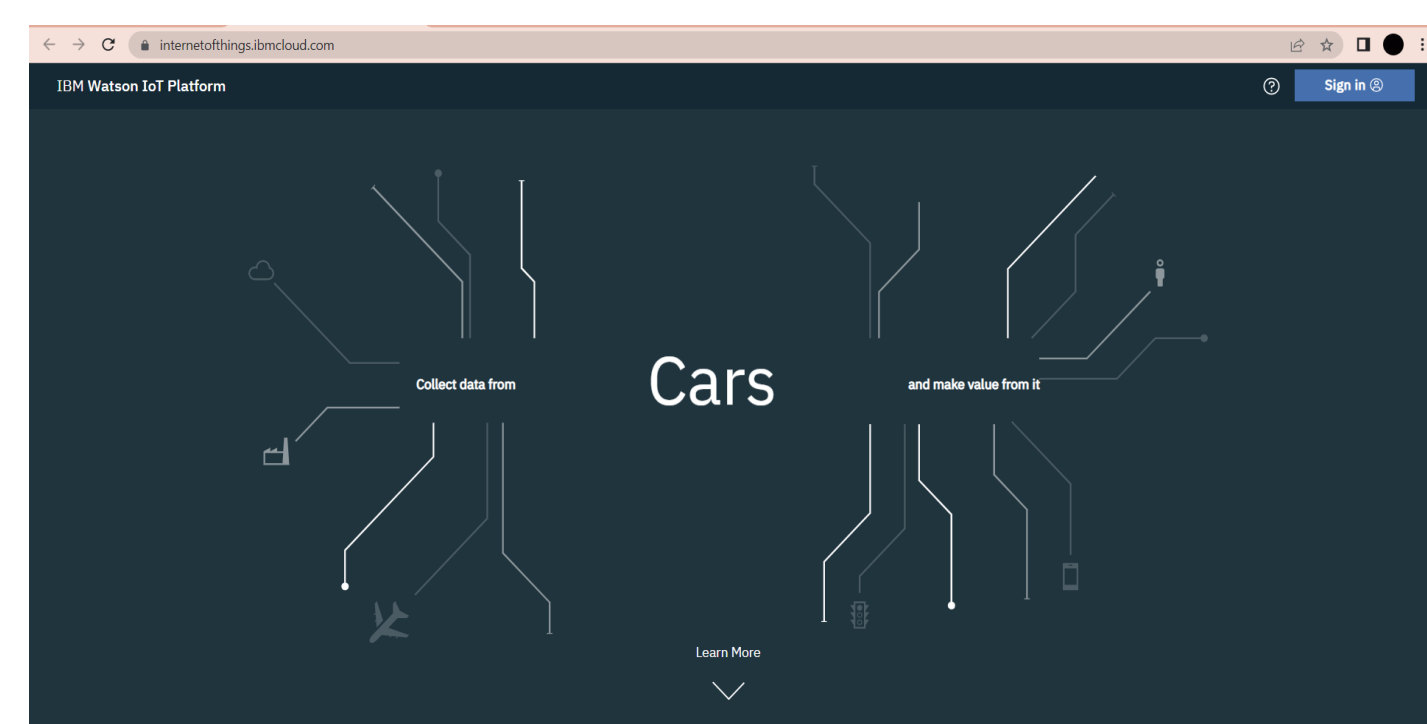
Collect data from

Cars

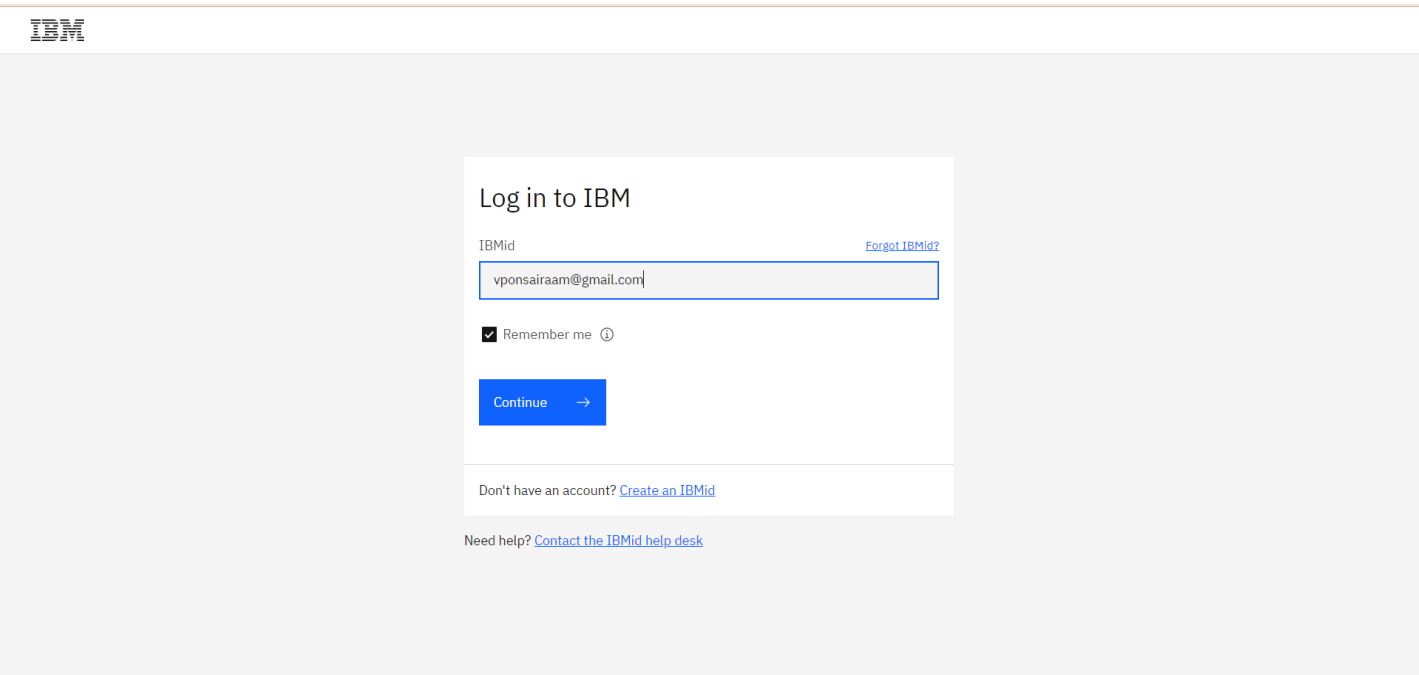
and make value from it

Learn More

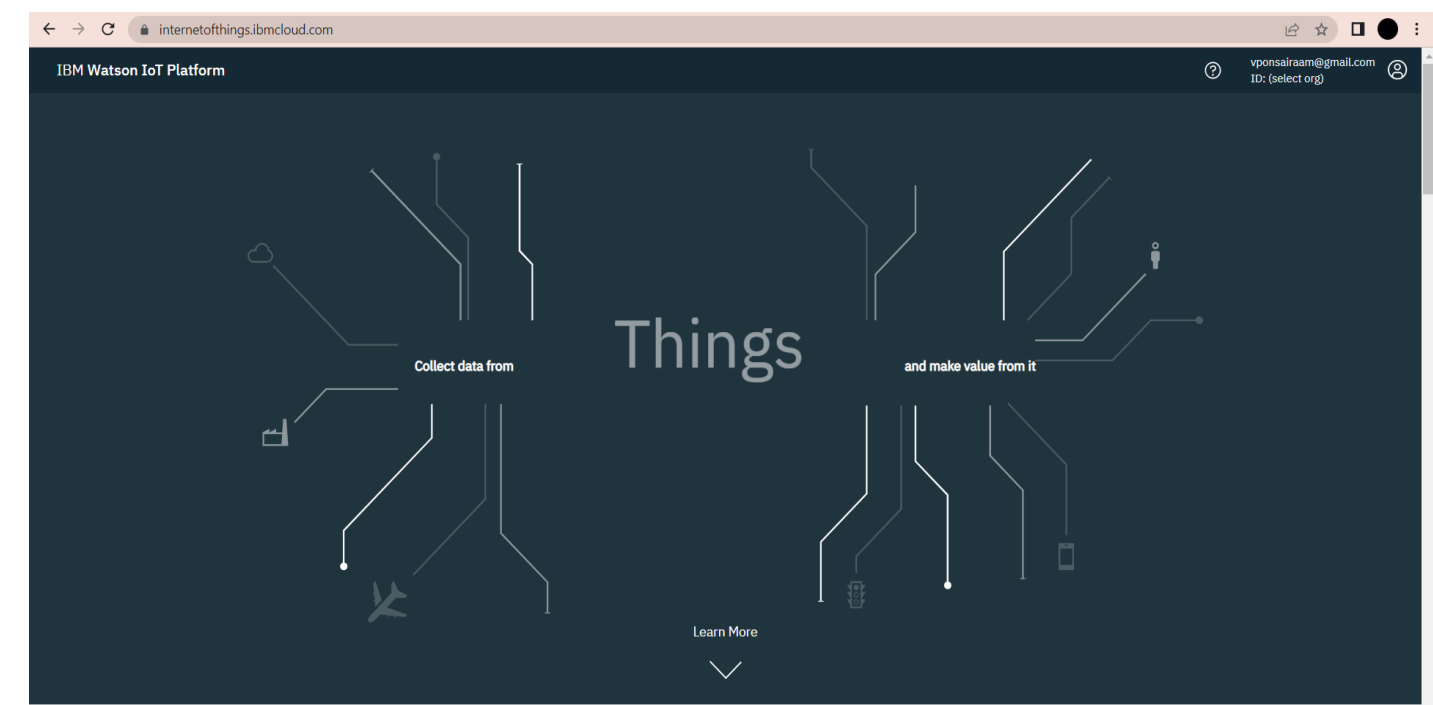
Step 10: Click on Sign in.



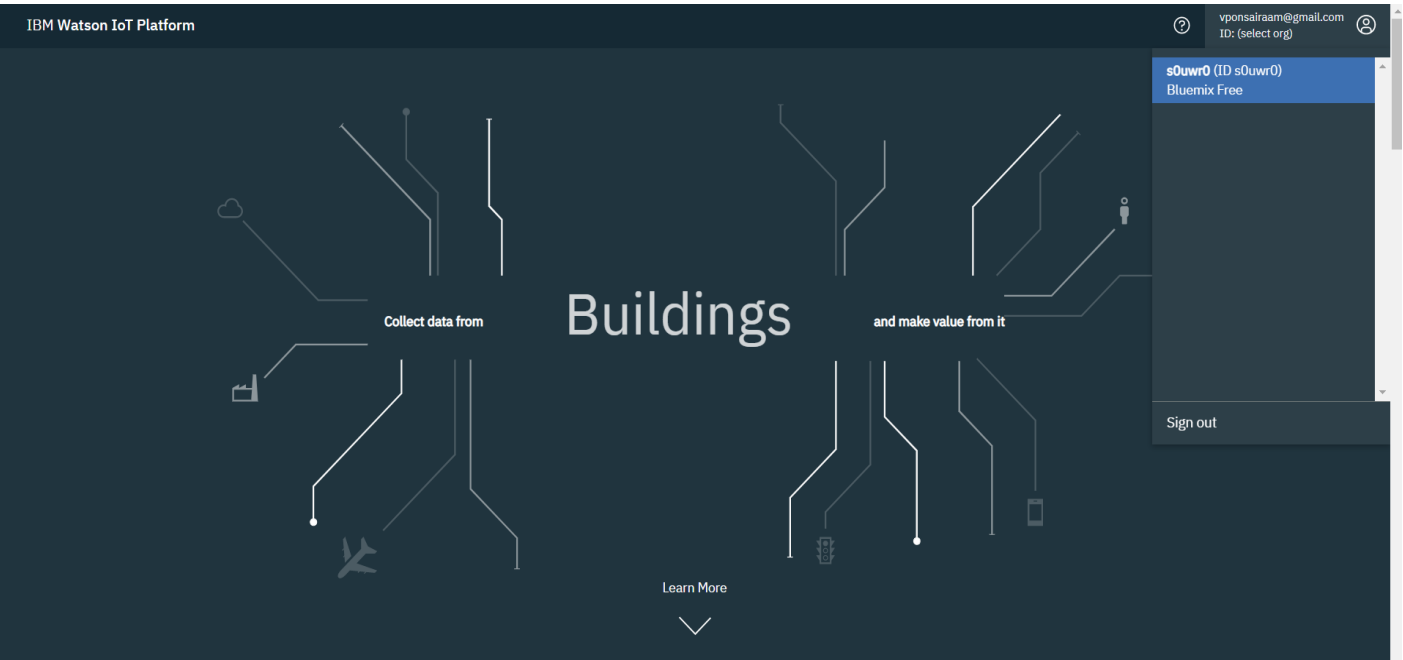
Step 11: Fill the login details.



Step 12: Sign in on progress.



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



IBM Watson IoT Platform

vponsalraam@gmail.com
ID: s0uwr0

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⚙️

🔧

👤

👤

🔍

📊

⚙️

Browse

Action

Device Types

Interfaces

Add Device +

Browse Devices

All DevicesDiagnose

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"/>	vpsr_weather	🔌 Disconnected	weather_device	Device	Nov 12, 2022 7:14 PM	

Items per page 50 | 1-1 of 1 item

1 of 1 page < 1 >

0 Simulations running

Step 15: Click on Add Device.

IBM Watson IoT Platform

?

vponsairam@gmail.com

ID: s0uwr0

?

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

	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
>	<div></div> <div>vpsr_weather</div>	<div></div> <div>Disconnected</div>	weather_device	Device	Nov 12, 2022 7:14 PM	

Items per page 50

1-1 of 1 item

1 of 1 page

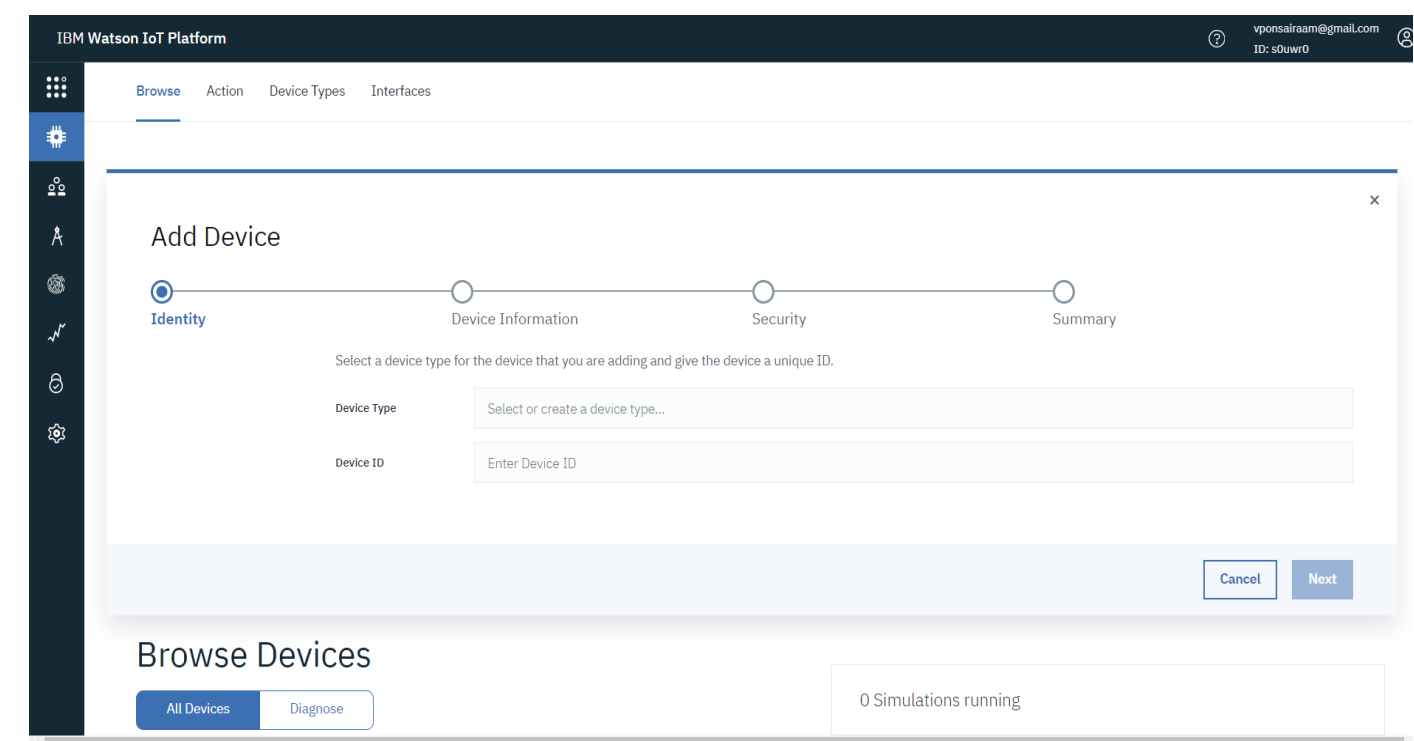
<

1

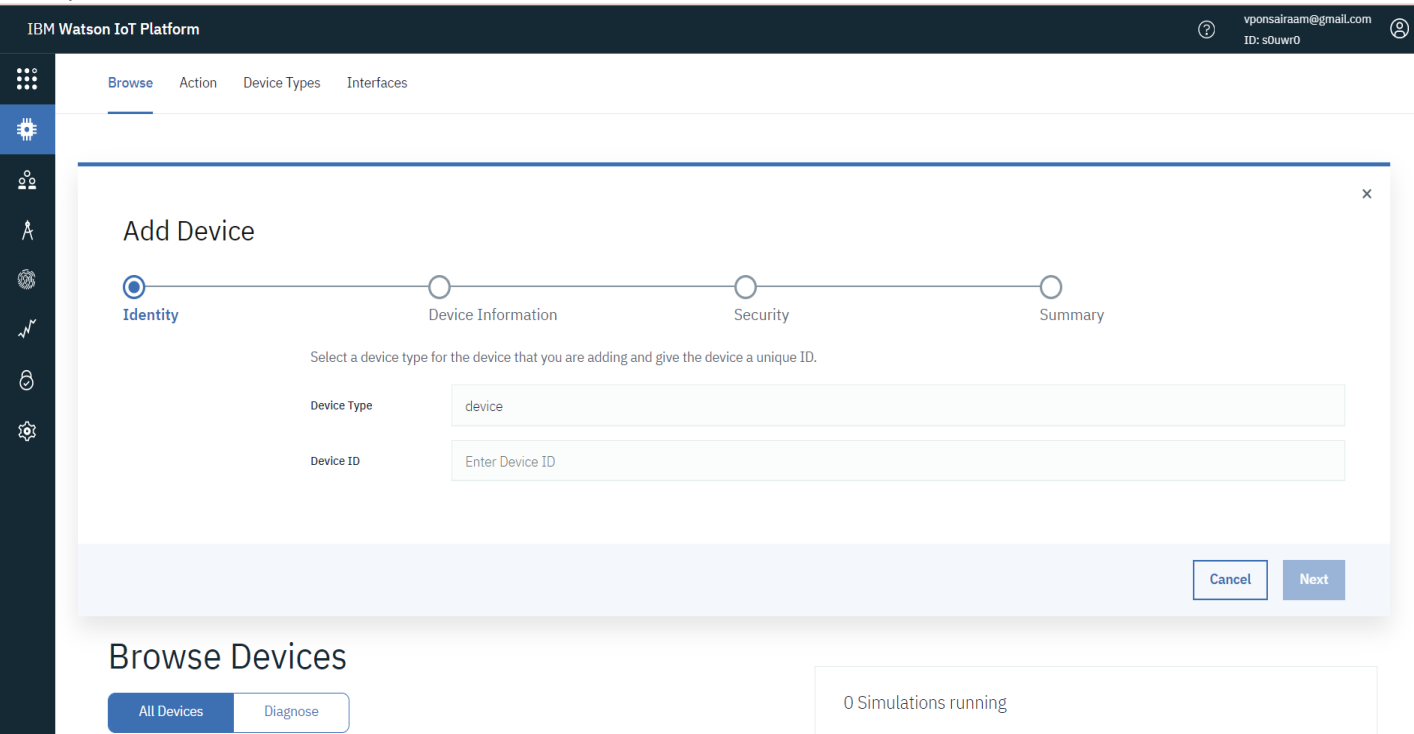
>

0 Simulations running

Step 16: Click on Device Type.



Step 17: Fill the details.



Step 18: Click on Register Devices.

IBM Watson IoT Platform

vpnsairaam@gmail.com
ID: s0uwr0

Browse

Action

Device Types

Interfaces

Add Device Type +

Device Types

This table lists all device types that are defined. You can filter the list and search for the name and description. You can modify and configure existing device types and add new device types.

Q

Type the name to search f...

101

<input type="checkbox"/>	Name	Description	Number of Devices	Class ID	Date Added
> <input type="checkbox"/>	vpsr_weather		0	Device	Nov 11, 2022 6:23 PM
> <input type="checkbox"/>	weather_device		1	Device	Oct 28, 2022 1:27 PM

Items per page 10 | 1-2 of 2 Items

1 of 1 page < 1 >

0 Simulations running

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

Browse

Action

Device Types

Interfaces

Add Device

Identity

Device Information

Security

Summary

Select a device type for the device that you are adding and give the device a unique ID.

Device Type

Testdevicetype

Device ID

12345

Cancel

Next

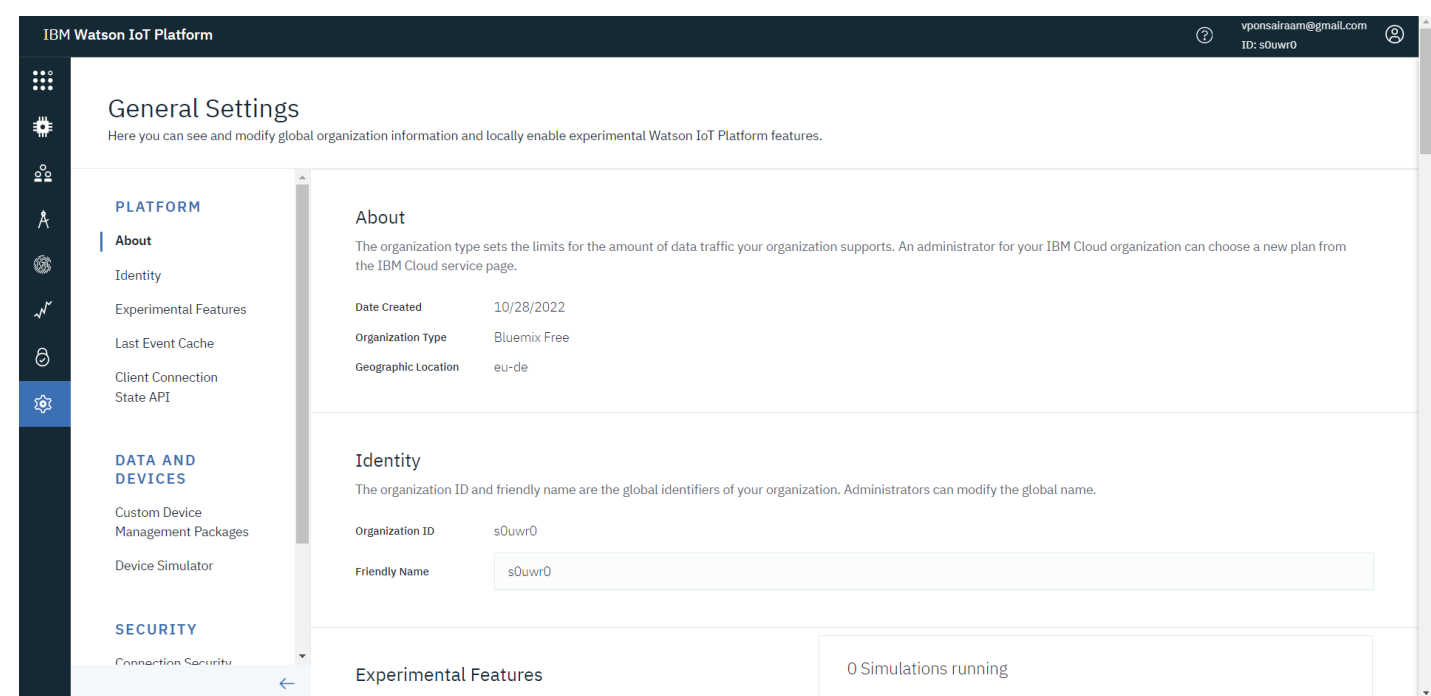
Browse Devices

0 Simulations running

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.

IBM Watson IoT Platform

?

vponsairaam@gmail.com

ID: s0uwr0

General Settings

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

PLATFORM

About

Identity

Experimental Features

Last Event Cache

Client Connection

State API

DATA AND DEVICES

Custom Device Management Packages

Device Simulator

SECURITY

Connection Security

Device Simulator

Simulate devices and device data to get up and running quickly on Watson IoT Platform. For more details see the [documentation](#).

Activate Device Simulator ☒

Connection Security

You can use the Connection Security Policy to configure the security level for device connection.

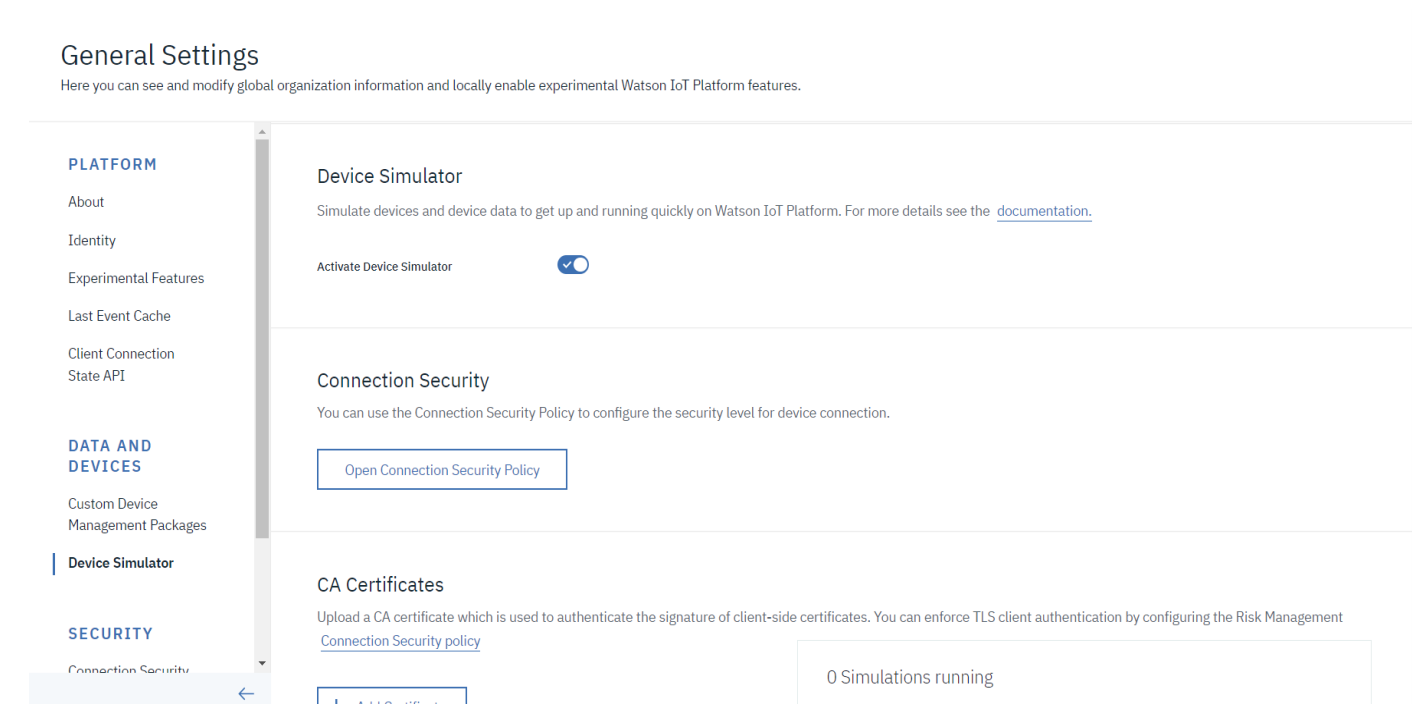
Open Connection Security Policy

CA Certificates

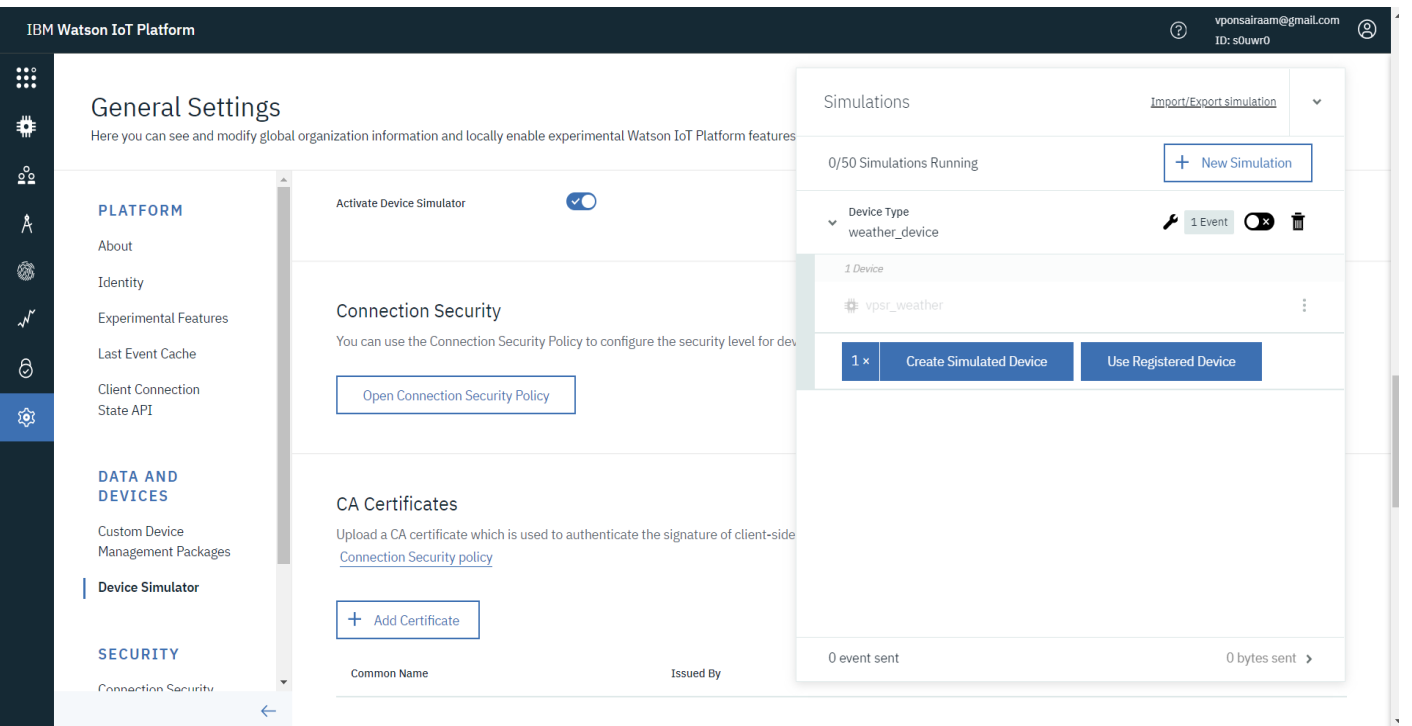
Upload a CA certificate which is used to authenticate the signature of client-side certificates. You can enforce TLS client authentication by configuring the Risk Management [Connection Security policy](#)

0 Simulations running

Step 24: Click on “0 simulations running” on the bottom - 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 PLATFORM, DATA AND DEVICES, and SECURITY. The main content area is titled 'General Settings' and includes sections for 'Activate Device Simulator' (which is turned on), 'Connection Security', and 'CA Certificates'. A modal window titled 'Simulations' is open on the right. It shows '1/50 Simulations Running' and a '+ New Simulation' button. Below this, it lists the 'Device Type' as 'weather_device' with '1 Event' and a '1 Device' entry named 'vpsr_weather'. At the bottom of the modal, it indicates '5 events sent' and '412 bytes sent'.

Step 27: Type the code.

This screenshot shows the same IBM Watson IoT Platform interface as the previous one, but with a different modal open. The 'Device Type: weather_device' modal is displayed, showing 'Events 1' and a 'New event type +' button. The 'Event type name' is 'event_1'. The 'Schedule' is set to '20' 'Every Minute'. The 'Payload' section contains a JSON array of gas names and random values:

```
0 {
1   "Propane": random(0, 2000),
2   "Carbon_Monoxide": random(0, 100),
3   "LPG": random(0, 2000),
4   "Methane": random(0, 1000),
5   "Hydrogen": random(0, 5000)
6 }
7
```

 The modal has 'Cancel' and 'Save' buttons at the bottom.

Step 28 : Go to devices then click on devices and check the recent events whether the code is running or not.

[Browse](#)[Action](#)[Device Types](#)[Interfaces](#)

Add Device +

IdentityDevice InformationRecent EventsStateLogs

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
event_1	{"Propane":231,"Carbon_Monoxide":86,"LPG":1...	json	a few seconds ago
event_1	{"Propane":1804,"Carbon_Monoxide":54,"LPG":...	json	a few seconds ago
event_1	{"Propane":1231,"Carbon_Monoxide":86,"LPG":...	json	a few seconds ago
event_1	{"Propane":794,"Carbon_Monoxide":31,"LPG":1...	json	a few seconds ago
event_1	{"Propane":701,"Carbon_Monoxide":45,"LPG":5...	json	a few seconds ago

Items per page 50 | 1-1 of 1 item

1 of 1 page<1>

Result:

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