

## DELIVERY OF SPRINT-2

(PUBLISHING THE DATA TO THE IBM CLOUD)

Team ID	PNT2022TMID43411
Team Members	JOTHI KRISHNA T - 715519106018 KARTHIKEYAN A - 715519106020 NITHIYANANTH S - 715519106031 VIPIN L - 715519106059
Project Title	Gas Leakage Monitoring And Alerting System For Industries

The data has to be published to the IBM cloud. In the python script, the values for the gas, temperature, humidity and fire have been generated and published to IBM cloud platform. This is achieved by importing the required libraries in the python script and also specifying the organization, deviceType, deviceid, authMethod and authToken to integrate with the specific cloud account, so that the data will be published to IBM cloud platform. A threshold value has been fixed for each module and if any value exceeds this threshold value, then an alert message has been generated.

In order to send the data from the python script to the cloud , the cloud account has been created for each team members.

### IBM Cloud Services:

IBM is one of the large cloud computing providers on the planet. The [“IBM Cloud”](#) label is an umbrella category that encompasses its hardware, software and services for helping enterprises build private clouds. Protecting the company’s data is critical. Cloud storage with automated backup is scalable, flexible and provides peace of mind.

## IBM Cloud Accounts:

**VIPIN L – 715519106059**

The screenshot shows the IBM Cloud dashboard for user VIPIN L. The top navigation bar includes the IBM Cloud logo, a search bar, and links to Catalog, Manage, and the user's account. The dashboard is divided into several sections:

- Dashboard:** A dropdown menu with options to Edit dashboard and Upgrade account.
- For you:** A section with five cards: Build, Get Started with Watson Studio, Explore IBM Cloud Shell, Get Started with the CLI, and Get started with Watson Discovery. Each card includes a brief description and a 'Getting started' button with a time estimate.
- News:** A section with a card titled 'All About IBM Storage's Price and Supply Guarantee' and a 'View all' link.
- Recent support cases:** A section with a 'View all' link.
- Planned maintenance:** A section with a 'View all' link.
- IBM Cloud status:** A section with a 'View all' link and a status indicator.

The right sidebar shows the user's profile, login options, privacy settings, and a 'Log out' button.

**JOTHI KRISHNA T – 715519106018**

The screenshot shows the IBM Cloud dashboard for user JOTHI KRISHNA T. The top navigation bar includes the IBM Cloud logo, a search bar, and links to Catalog, Manage, and the user's account. The dashboard is divided into several sections:

- Dashboard:** A dropdown menu with options to Edit dashboard and Upgrade account.
- For you:** A section with five cards: Build, Explore IBM Cloud Shell, Create and deploy an application, Visit the IBM Cloud catalog, and Set up your IBM Cloud account. Each card includes a brief description and a 'Getting started' button with a time estimate.
- News:** A section with a card titled 'All About IBM Storage's Price and Supply Guarantee' and a 'View all' link.
- Recent support cases:** A section with a 'View all' link.
- Planned maintenance:** A section with a 'View all' link.
- IBM Cloud status:** A section with a 'View all' link and a status indicator.

The right sidebar shows the user's profile, login options, privacy settings, and a 'Log out' button.

## KARTHIKEYAN A – 715519106020

The screenshot shows the IBM Cloud Dashboard for user KARTHIKEYAN A. The top navigation bar includes the IBM Cloud logo, a search bar, and links to Catalog, Manage, and the user's account. The dashboard is titled "Dashboard" and includes links to "Edit dashboard" and "Upgrade account".

**For you**

- Build**: Explore IBM Cloud with this selection of easy starter tutorials and services. (Getting started, 5 min)
- Create and deploy an application**: Browse our starter kits, and then select one to jump start the process to create and deploy your app. (Getting started, 10 min)
- Set up your IBM Cloud account**: Learn how to set up your IBM Cloud account, manage your account settings, organize resources, and control access to those resources. (Getting started, 10 min)
- Get Started with Watson Studio**: Get started with using AI and Cloud Object Storage in 15 minutes. (Popular, 2 hr)
- Build a web app with Watson Speech to Text**: Deploy a conversational interface compatible with any application, device, or channel. (Getting started, 15 min)

**Right sidebar (KARTHIKEYAN A)**:

- Profile
- Log in to CLI and API
- Privacy
- Change theme
- Log out →

**Bottom section**:

- News**: All About IBM Storage's Price and Supply Guarantee, IBM Tech Now: November 7, 2022, Unified Key Orchestrator Now Supports Easy Multicloud Key Management for Google KMS, TrustRadius Best Software: Five IBM Offerings. (View all)
- Recent support cases**: (View all)
- Planned maintenance**: (View all)
- IBM Cloud status**: (View all)

## NITHIYANANTH S – 715519106031

The screenshot shows the IBM Cloud Dashboard for user NITHIYANANTH S. The top navigation bar includes the IBM Cloud logo, a search bar, and links to Catalog, Manage, and the user's account. The dashboard is titled "Dashboard" and includes links to "Edit dashboard" and "Upgrade account".

**For you**

- Build**: Explore IBM Cloud with this selection of easy starter tutorials and services. (Getting started, 10 min)
- Set up your IBM Cloud account**: Learn how to set up your IBM Cloud account, manage your account settings, organize resources, and control access to those resources. (Getting started, 10 min)
- Build a Virtual Private Cloud (VPC)**: Upgrade to a paid account to create your own protected space in the IBM Cloud. (Getting started, 7 min)
- IBM Push Notifications**: Send real-time and personalized notifications to mobile and web applications via a unified push service. (Recommended, 2 min)
- IBM Watson Knowledge Catalog**: Help your data citizens easily find, prepare, understand and use the data they need through an enterprise data catalog & governance platform. (Recommended, 2 min)

**Right sidebar (Nithiyananth S)**:

- Profile
- Log in to CLI and API
- Privacy
- Change theme
- Log out →

**Bottom section**:

- News**: All About IBM Storage's Price and Supply Guarantee, IBM Tech Now: November 7, 2022, Unified Key Orchestrator Now Supports Easy Multicloud Key Management for Google KMS. (View all)
- Recent support cases**: (View all)
- Planned maintenance**: (View all)
- IBM Cloud status**: (View all)

# Publish Data To The IBM Cloud

The output obtained from the python code is:

```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
{'Gas': 80, 'Temp': 89, 'Hum': 30, 'Fire': 44}
published Gas 80
published Temp 89
published Hum 30
published Fire 44
{'Gas': 54, 'Temp': 82, 'Hum': 89, 'Fire': 60}
published Gas 54
published Temp 82
published Hum 89
published Fire 60
{'Gas': 19, 'Temp': 50, 'Hum': 96, 'Fire': 8}
published Gas 19
published Temp 50
published Hum 96
published Fire 8
{'Gas': 47, 'Temp': 76, 'Hum': 14, 'Fire': 77}
published Gas 47
published Temp 76
published Hum 14
published Fire 77
{'Gas': 86, 'Temp': 89, 'Hum': 55, 'Fire': 63}
published Gas 86
published Temp 89
published Hum 55
published Fire 63
{'Gas': 68, 'Temp': 46, 'Hum': 54, 'Fire': 29}
published Gas 68
published Temp 46
published Hum 54
published Fire 29
```

The data has been published to the IBM cloud. Thus in the python script, the values for the gas, temperature, humidity and fire have been generated and published to IBM cloud platform.

This is achieved by importing the required libraries in the python script and also specifying the organization, deviceType, deviceid, authMethod and authToken to integrate with the specific cloud account, so that the data will be published to IBM cloud platform.

**VIPIN L - 715519106059**

The screenshot displays the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar is present with the text 'Search by Device ID'. The main content area shows details for a device with ID '789456', which is 'Connected' and of type 'ESP32'. The 'Recent Events' tab is selected, showing a table of live data events. The table has columns for 'Event', 'Value', 'Format', and 'Last Received'. The events are JSON objects containing sensor data. A sidebar on the right contains links for 'Service Status', 'Terms', 'Privacy', 'Support', 'Blog', and 'Sign Out'. The bottom status bar indicates '0 Simulations running'.

Event	Value	Format	Last Received
IoTSensor	{"Gas":10,"Temp":89,"Hum":59,"Fire":27}	json	a few seconds ago
IoTSensor	{"Gas":28,"Temp":8,"Hum":31,"Fire":77}	json	a few seconds ago
IoTSensor	{"Gas":45,"Temp":88,"Hum":15,"Fire":56}	json	a few seconds ago
IoTSensor	{"Gas":58,"Temp":31,"Hum":4,"Fire":24}	json	a few seconds ago
IoTSensor	{"Gas":17,"Temp":62,"Hum":49,"Fire":98}	json	a few seconds ago

## JOTHI KRISHNA T – 715519106018

IBM Watson IoT Platform

?

tjothikrishna@gmail.com  
ID: m070oj

m070oj  
ID: m070oj  
Bluemix Free

[Service Status](#)  
[Terms](#)  
[Privacy](#)  
[Support](#)  
[Blog](#)  
[Sign Out](#)

Browse Action Device Types Interfaces

Q Search by Device ID

Device S

Device ID

Status

Device Type

Class ID

Date Added

Descriptive Location

1234

Connected

Esp32

Device

3 Nov 2022 10:55

Identity

Device Information

Recent Events

State

Logs

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

Event	Value	Format	Last Received
IoTSensor	{"Gas":73,"Temp":45,"Hum":59,"Fire":36}	json	a few seconds ago
IoTSensor	{"Gas":58,"Temp":88,"Hum":55,"Fire":52}	json	a few seconds ago
IoTSensor	{"Gas":78,"Temp":6,"Hum":75,"Fire":67}	json	a few seconds ago
IoTSensor	{"Gas":87,"Temp":33,"Hum":87,"Fire":46}	json	a few seconds ago
IoTSensor	{"Gas":8,"Temp":19,"Hum":33,"Fire":36}	json	a few seconds ago

## KARTHIKEYAN A – 715519106020

IBM Watson IoT Platform

?

karthikeyan31032001@gmail.com  
ID: griwxv

griwxv  
ID: griwxv  
Bluemix Free

[Service Status](#)  
[Terms](#)  
[Privacy](#)  
[Support](#)  
[Blog](#)  
[Sign Out](#)

Browse Action Device Types Interfaces

Q

Device ID

Status

Device Type

Class ID

Date Added

Descriptive Location

12345678

Connected

ESP32

Device

Nov 3, 2022 11:19 AM

Identity

Device Information

Recent Events

State

Logs

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

Event	Value	Format	Last Received
IoTSensor	{"Gas":7,"Temp":26,"Hum":44,"Fire":9}	json	a few seconds ago
IoTSensor	{"Gas":19,"Temp":30,"Hum":97,"Fire":69}	json	a few seconds ago
IoTSensor	{"Gas":52,"Temp":55,"Hum":24,"Fire":82}	json	a few seconds ago
IoTSensor	{"Gas":15,"Temp":38,"Hum":3,"Fire":17}	json	a few seconds ago
IoTSensor	{"Gas":38,"Temp":48,"Hum":23,"Fire":55}	json	a few seconds ago

0 Simulations running

**NITHIYANANTH S – 715519106031**

IBM Watson IoT Platform

Browse

Action

Device Types

Interfaces

Q

Search by Device ID

Device S

Device ID

Status

Device Type

Class ID

Date Added

Descriptive Location

▼

123456

Connected

ESP32

Device

2 Nov 2022 20:09

Identity

Device Information

Recent Events

State

Logs

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

Event	Value	Format	Last Received
IoTSensor	{"Gas":39,"Temp":74,"Hum":72,"Fire":85}	json	a few seconds ago
IoTSensor	{"Gas":100,"Temp":10,"Hum":71,"Fire":89}	json	a few seconds ago
IoTSensor	{"Gas":21,"Temp":64,"Hum":80,"Fire":91}	json	a few seconds ago
IoTSensor	{"Gas":91,"Temp":90,"Hum":61,"Fire":35}	json	a few seconds ago
IoTSensor	{"Gas":53,"Temp":37,"Hum":19,"Fire":79}	json	a few seconds ago

93elj1

ID: 93elj1

Bluemix Free

[Service Status](#)
[Terms](#)
[Privacy](#)
[Support](#)
[Blog](#)

[Sign Out](#)