

Sprint - 1

Team Id	PNT2022TMID43363
Title	Hazardous Area Monitoring for Industrial Plant using IoT

Configuring the IBM cloud services

IBM Watson Platform

IBM Cloud

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Jaganaath A's Account

?

Resource list /

IoT Platform-i7

Active

Add tags


Details

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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
- 200 MB data-transfer limit
- 500 application bindings limit

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
- Capacity limit based on device type
- Optional Analytics Service and Blockchain

Production

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

- Includes IBM Service & Support
- Pricing based on number of devices per device type

IBM Watson IoT Platform

jagangogulna@gmail.com

ID: 4wj0mx

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
>	ESp32_sensor	Disconnected	ESP_Controller	Device	18 Nov 2022 6:33 PM	
>	IoT001	Disconnected	NodeMCU	Device	8 Nov 2022 5:24 PM	
>	TH-01	Disconnected	TempAndHumid	Device	18 Nov 2022 5:38 PM	

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Node Red Configuration

IBM Cloud

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Resource list / App details /

Node RED YENDV 2022-11-10

Add tags

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App URL

Source

Resource group

Deployment target

Created

Services

Cloudant

Open dashboard

Documentation

API reference

Credentials

Connect existing services

Create service

Deployment Automation

Name

Location

Tool integrations

Delivery Pipelines

Name

Status

Name

Status

Getting started quickly

Configuring your app

To connect services and DevOps toolchains to your app:

1. Use the **Services** card to connect a service to your app. Select an existing service instance, or create a new one. [Learn more.](#)

2. If you want to view the code before your app is deployed, click **Download code** to obtain the .zip file.

3. Click **Deploy your app** in the **Deployment Automation** card to select the deployment target and configure the Continuous Delivery service. The deployment begins automatically.

4. After the deployment begins, you can view the status of the deployment, modify your app, view your repo, or view the app's URL.

5. If you make any changes to your app, be sure to deploy it again.

Cloudant dB

Resource list /

node-red-yendv-2022--cloudant-1668085203840

Active

Add tags

Details

Actions...

Manage

Overview

Capacity

Docs

Service credentials

Plan

Connections

Deployment details

CRN

Location

External endpoint

External endpoint (preferred)

Authentication methods

Activity Tracker event types

Disk encryption

Capacity details

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Databases

Database name ▾

Create Database

{ } JSON

📖

🔔

Your Databases

Name	Size	# of Docs	Partitioned	Actions
industryiot	138.7 KB	795	No	🔄 🔒 🗑️
nodered	27.1 KB	4	No	🔄 🔒 🗑️

Log Out

Showing 1–2 of 2 databases. Databases per page 20 ▾

« 1 »

Generation of Python code for publishing the random sensor data to the IBM IoT Platform.

Python Script IOT.py - C:\Users\91934\Downloads\Python Script IOT.py (3.7.0)

File Edit Format Run Options Window Help

```
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random

#Provide your IBM Watson Device Credentials
organization = "4wj0mx"
deviceType = "NodeMCU"
deviceId = "IoT001"
authMethod = "token"
authToken = "1234567890"

# Initialize GPIO
def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status == "motoron":
        print("motor in on")
    else :
        print ("motor is off")
try:
    deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method": authMethod, "auth-token": authToken}
    deviceCli = ibmiotf.device.Client(deviceOptions)
    #.....
except Exception as e:
    print("Caught exception connecting device: %s" % str(e))
    sys.exit()

# Connect and send a datapoint "hello" with value "world" into the cloud as an event of type "greeting" 10 times
deviceCli.connect()

while True:
    #Get Sensor Data from DHT11
    temp=random.randint(0,100)
    humid=random.randint(0,100)
    data = {'temp' : temp, 'humid' : humid}
    #print data
    def myOnPublishCallback():
        print ("Published Temperature = %s C" % temp, "Humidity:%s" %humid)

    success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0, on_publish=myOnPublishCallback)
    if not success:
        print("Not connected to IoTF")
        time.sleep(1)
    deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud
deviceCli.disconnect()
```

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Random Temperature and humidity values generated and published to IBM IoT platform

```
===== RESTART: C:\Users\91934\Downloads\Python Script IOT.py =====
2022-11-18 20:59:00,384 ibmiotf.device.Client INFO Connected successfully: d:4wj0mx:NodeMCU:IoT001
Published Temperature = 7 C Humidity:71
Published Temperature = 96 C Humidity:20
Published Temperature = 69 C Humidity:8
Published Temperature = 32 C Humidity:11
Published Temperature = 64 C Humidity:26
Published Temperature = 94 C Humidity:71
Published Temperature = 51 C Humidity:10
Published Temperature = 58 C Humidity:46
Published Temperature = 94 C Humidity:27
Published Temperature = 93 C Humidity:52
Published Temperature = 85 C Humidity:63
Published Temperature = 55 C Humidity:44
Published Temperature = 36 C Humidity:76
Published Temperature = 34 C Humidity:54
Published Temperature = 35 C Humidity:34
Published Temperature = 60 C Humidity:14
Published Temperature = 77 C Humidity:18
Published Temperature = 69 C Humidity:73
Published Temperature = 32 C Humidity:80
Published Temperature = 41 C Humidity:89
Published Temperature = 93 C Humidity:57
```

IoT001

Connected

NodeMCU

Device

8 Nov 2022 5:24 PM

Identity

Device Information

Recent Events

State

Logs

Device ID

IoT001

Device Type

NodeMCU

Date Added

8 Nov 2022 5:24 PM

Added By

jagangogulnla@gmail.com

Connection Status

Connected

IoT001

Connected

NodeMCU

Device

8 Nov 2022 5:24 PM

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	{"temp":67,"humid":61}	json	a few seconds ago
IoTSensor	{"temp":20,"humid":88}	json	a few seconds ago
IoTSensor	{"temp":51,"humid":91}	json	a few seconds ago
IoTSensor	{"temp":59,"humid":7}	json	a few seconds ago
IoTSensor	{"temp":65,"humid":8}	json	a few seconds ago

Data stored in Database

Monitoring

Databases

Replication

Active Tasks

Account

Support

Documentation

industryiot > 000245d59da9ac61433e5f634f503b51

Save Changes

Cancel

Upload Attachment

Clone Document

Delete

1

2

3

4

5

6

7

8

9

10

11

12

13

```
{
  "_id": "000245d59da9ac61433e5f634f503b51",
  "_rev": "1-9519887f3ae96d2d0163cd576f90e893",
  "topic": "iot-2/type/NodeMCU/id/IoT001/evt/IoTSensor/fmt/json",
  "payload": {
    | "temp": 30,
    | "humid": 24
  },
  "deviceId": "IoT001",
  "deviceType": "NodeMCU",
  "eventType": "IoTSensor",
  "format": "json"
}
```

IBM Cloudant

Log Out

IBMId-6610044C12