

## SPRINT 2

Team ID	PNT2022TMID30378
Project Title	Hazardous Area Monitoring for Industrial Plant Powered By IOT

### Device Creation using IoT Watson platform with credentials:

- The IBM Watson IoT platform was created to serve as a bridge between the web application and the IoT device.
- We must first build a device in the IBM Watson IoT platform and obtain the device credentials before we can connect the IoT device to the IBM cloud.
- To set up the connection security and generate API keys for the Node-RED service to use when connecting to the IBM 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 Simulator

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
Temperature_today	Disconnected	Temperature_device	Device	23 Oct 2022 13:21	
hazard_report	Connected	hazardous_monitoring	Device	6 Nov 2022 19:37	

Items per page: 50 | 1-2 of 2 items

1 of 1 page

1 Simulation running

Browse

Action

Device Types

Interfaces

Add Device

Temperature\_today

Disconnected

Temperature\_device

Device

23 Oct 2022 13:21

hazard\_report

Connected

hazardous\_monitoring

Device

6 Nov 2022 19:37

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":6,"humidity":31,"oxygen":17]	json	a few seconds ago
IoTSensor	["temp":71,"humidity":25,"oxygen":92]	json	a few seconds ago
IoTSensor	["temp":47,"humidity":58,"oxygen":68]	json	a few seconds ago
IoTSensor	["temp":14,"humidity":19,"oxygen":22]	json	a few seconds ago
IoTSensor	["temp":77,"humidity":72,"oxygen":80]	json	a few seconds ago

1 Simulation running

## Required Performance of device using Local Node-Red Platform:

Node-RED

filter nodes

common

function

function

switch

change

range

template

delay

trigger

filter

OpenWhisk

network

mqtt in

mqtt out

Flow 1

Flow 2

Hello Node-RED!

msg.payload

debug

all nodes

temp: 64, humidity: 22, oxygen: 28

11/8/2022, 4:05:41 PM node: cd0cee7c5ea14b31

iot-2/hyperhazardous\_monitoring/hazard\_report/vkIoTSENS

msg.payload: Object

temp: 55, humidity: 98, oxygen: 2

11/8/2022, 4:05:42 PM node: cd0cee7c5ea14b31

iot-2/hyperhazardous\_monitoring/hazard\_report/vkIoTSENS

msg.payload: Object

temp: 29, humidity: 23, oxygen: 48

11/8/2022, 4:05:43 PM node: cd0cee7c5ea14b31

iot-2/hyperhazardous\_monitoring/hazard\_report/vkIoTSENS

msg.payload: Object

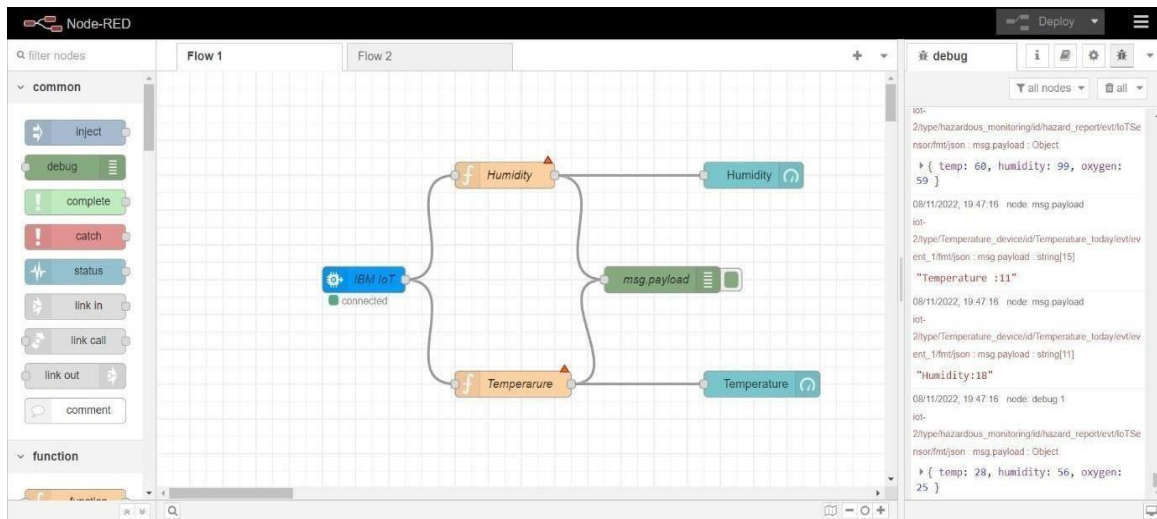
temp: 95, humidity: 83, oxygen: 39

11/8/2022, 4:05:44 PM node: cd0cee7c5ea14b31

iot-2/hyperhazardous\_monitoring/hazard\_report/vkIoTSENS







msg.payload: Object

temp: 45, humidity: 18, oxygen: 7



**Cloudant DB is used to create a database to store the location data.**

The screenshot shows the Cloudant Databases interface. At the top, there's a 'Databases' header with a 'Database name' dropdown, a 'Create Database' button, and icons for JSON, a table, and a notification bell. Below the header, there's a table titled 'Your Databases' with the following columns: Name, Size, # of Docs, Partitioned, and Actions.

Name	Size	# of Docs	Partitioned	Actions
hazard	14 bytes	1	No	  
noderedmfcnc20221108	25.7 KB	4	No	  

At the bottom right, there's a status bar that says 'Showing 1-2 of 2 databases. Databases per page 20' with a dropdown arrow and a page number '1' with a right arrow.