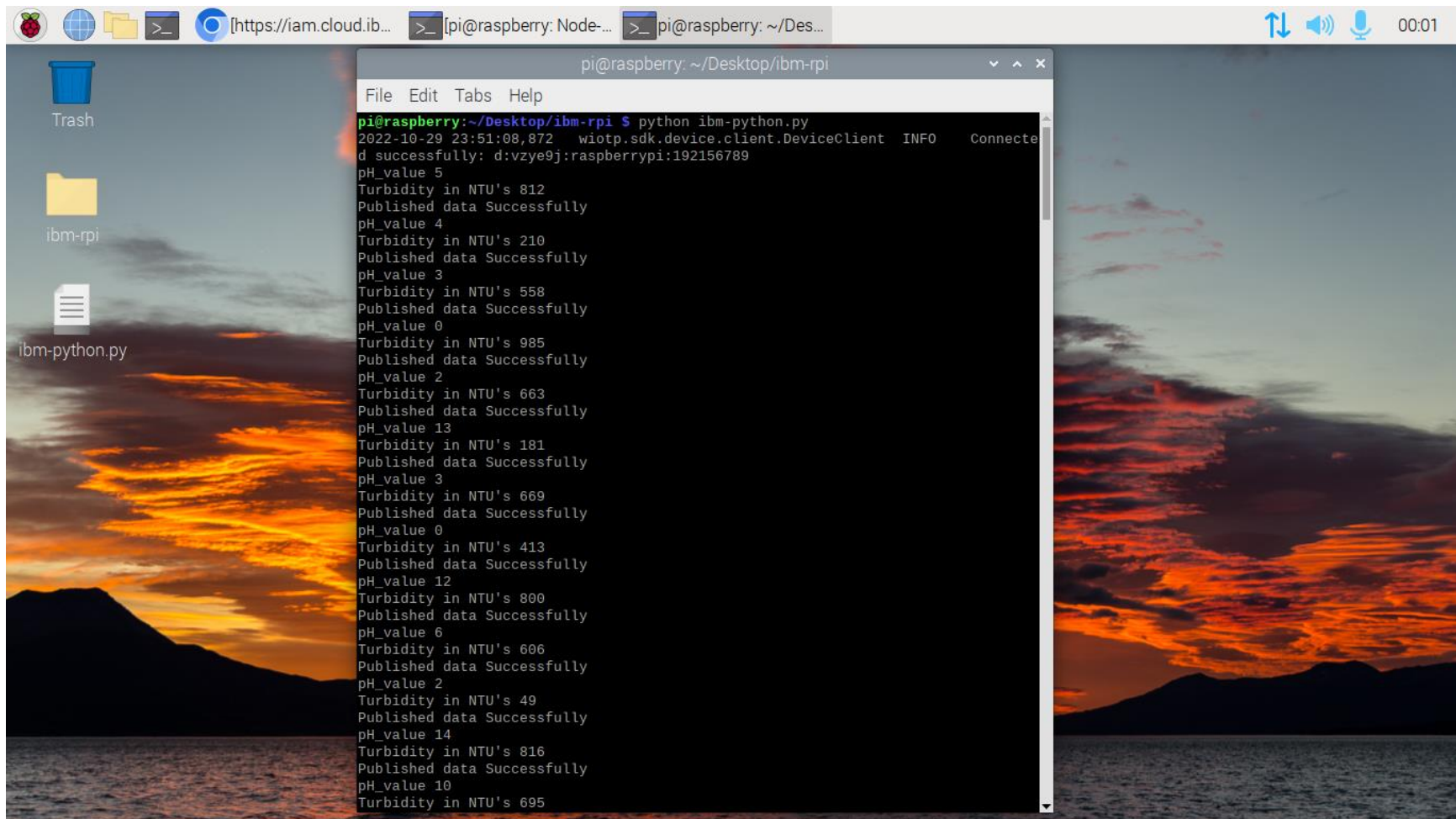


# BUILDING MOBILE APP

**Configure The Application to Receive the Data From Cloud:**

<b>DATE</b>	<b>15 Nov. 22</b>
<b>TEAM ID</b>	<b>PNT2022TMID40953</b>
<b>PROJECT NAME</b>	<b>REAL TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM</b>
<b>MAXIMM MARK</b>	<b>4 MARKS</b>



IBM Watson IoT Platform - Chromium

IBM Cloud x IBM Wats: x IBM Wats: x Node-RED x Cloudant x Node-RED x MIT App li x IBM x

https://iam.cloud.ibm.com/... [pi@raspberrypi: ~/Des...

00:02

← → ↻ vzye9j.internetofthings.ibmcloud.com/dashboard/devices/browse

IBM Watson IoT Platform 611819106042@smartinternz.com ID: 66bbzq

⋮

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⚙️

Browse Action Device Types Interfaces

Add Device +

Event	Value	Format	Last Received
data	{"pH_value":10,"Turbidity":395}	json	a few seconds ago
data	{"pH_value":4,"Turbidity":20}	json	a few seconds ago
data	{"pH_value":9,"Turbidity":123}	json	a few seconds ago
data	{"pH_value":13,"Turbidity":959}	json	a few seconds ago
data	{"pH_value":1,"Turbidity":655}	json	a few seconds ago

> ☐

192164156

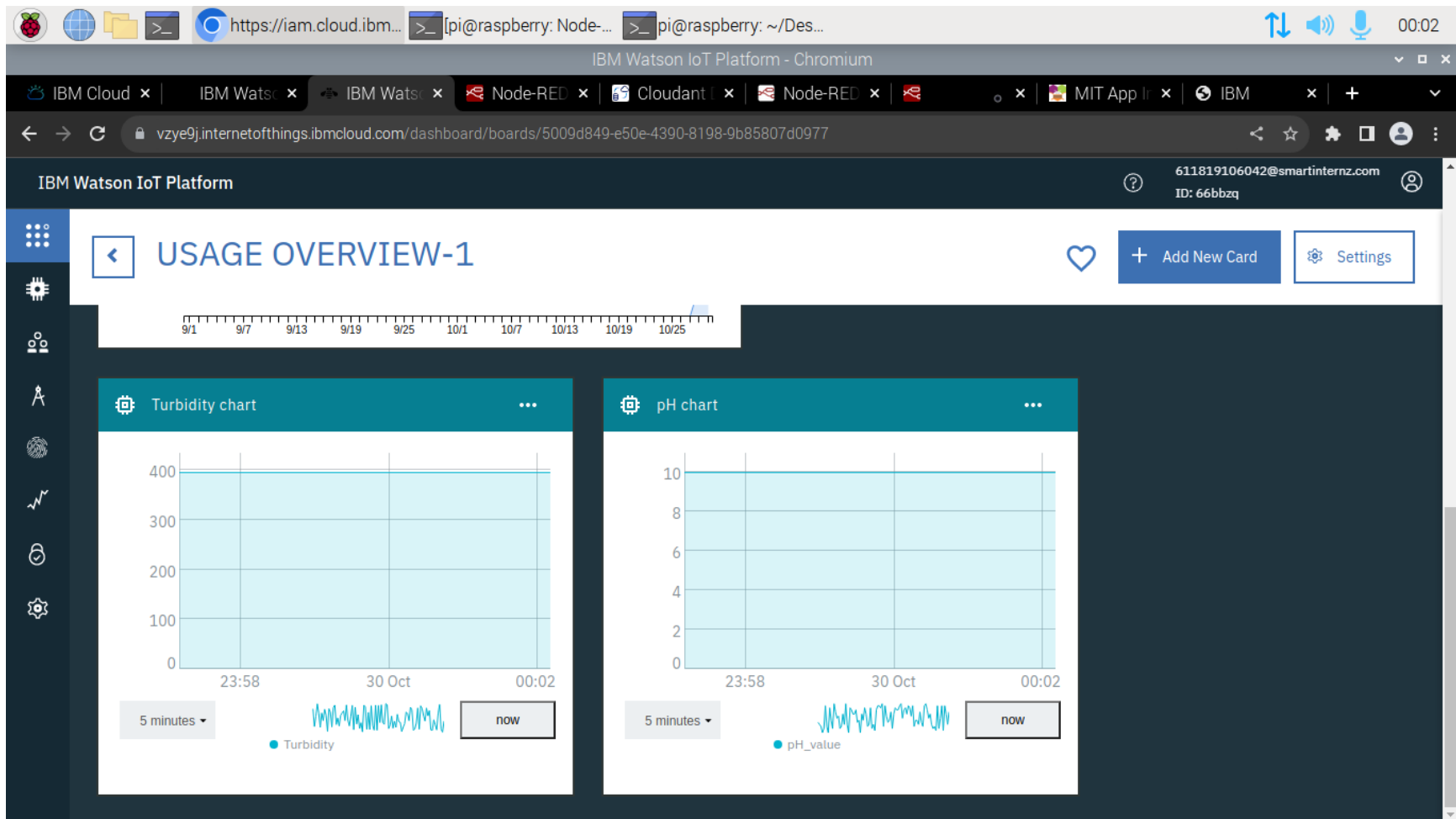
Disconnected

esp32

Device

Oct 28, 2022 8:25 PM

Items per page 50 | 1-2 of 2 items 1 of 1 page < 1 >



Node-RED interface running in a Chromium browser window. The browser address bar shows the URL: `https://iam.cloud.ibm.com/.../1880/#flow/5d23ce68fb9bf675`.

The Node-RED workspace contains the following nodes and connections:

- cloudant-db** tab is selected.
- node-dashboard** tab is active.
- button-control-ibm** tab is visible.
- common** nodes: inject, debug, complete, catch, status, link in, link call, link out, comment.
- function** nodes: function.

The flow diagram shows the following connections:

- IBM IoT** node (connected) connects to **Turbidity** and **pH\_value** function nodes.
- Turbidity** function node connects to **Turbidity** output node.
- pH\_value** function node connects to **pH** output node.
- debug 2** node is connected to the output of the **Turbidity** function node.
- [get] /data** node connects to **web page data** function node.
- web page data** function node connects to **http** output node.

The **debug** console on the right shows the following log entries:

```
20
10/29/2022, 11:54:38 PM node: debug 2
iot-2/type/raspberrypi/id/192156789/evt/data/fmt/json :
msg.payload : number
4
10/29/2022, 11:54:38 PM node: debug 2
iot-2/type/raspberrypi/id/192156789/evt/data/fmt/json :
msg.payload : Object
{ pH_value: 10, Turbidity: 395 }
10/29/2022, 11:54:38 PM node: debug 2
iot-2/type/raspberrypi/id/192156789/evt/data/fmt/json :
msg.payload : number
395
10/29/2022, 11:54:38 PM node: debug 2
iot-2/type/raspberrypi/id/192156789/evt/data/fmt/json :
msg.payload : number
10
10/29/2022, 11:54:38 PM node: debug 1
iot-2/type/raspberrypi/id/192156789/evt/data/fmt/json :
msg.payload : Object
{ pH_value: 10, Turbidity: 395 }
```

System tray icons: Raspberry Pi, Network, File Manager, Terminal, Browser, Volume, Microphone, 00:02

880/data - Chromium

Taskbar: IBM Cloud x IBM Wats: x IBM Wats: x Node-RED x Cloudant x Node-RED x x MIT App li x IBM x +

Address bar: < > ↻ Not secure | 1880/data < ☆ ⚙ □ 👤 ⋮

```
{"pH":10,"Turbidity":395}
```

MIT App Inventor - Chromium

Not secure | ai2.appinventor.mit.edu/#5141946700791808

00:03

**Palette**

Search Components...

**User Interface**

Layout

Media

Drawing and Animation

Maps

Charts

**Sensors**

- AccelerometerSensor
- BarcodeScanner
- Barometer
- Clock**
- GyroscopeSensor
- Hygrometer
- LightSensor
- LocationSensor
- MagneticFieldSensor
- NearField
- OrientationSensor
- Pedometer
- ProximitySensor
- Thermometer

**Viewer**

☐ Display hidden components in Viewer

Phone size (505,320)

Screen1

**Water Quality Monitor**

pH\_value :

Turbidity :

**Non-visible components**

- Web1
- Clock1

**Components**

- Screen1
  - VerticalArrangement1
    - HorizontalArrangement1
      - Label1
    - HorizontalArrangement2
      - Label2
    - HorizontalArrangement3
      - TextBox1
    - HorizontalArrangement4
      - Label3
    - HorizontalArrangement5
      - TextBox2
  - Web1
  - Clock1

**Properties**

**TextBox1**

BackgroundColor: Default

Enabled: ☒

FontBold: ☐

FontItalic: ☐

FontSize: 16

FontTypeface: default

Height: Fill parent...

Width: Fill parent...

Hint:

MultiLine: ☐

NumbersOnly: ☒

ReadOnly: ☒

Text:

TextAlignment: left: 0

TextColor: Default

**Media**

Upload File ...

MIT App Inventor - Chromium

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Water\_Quality\_Monitor

Screen1 ▾ Add Screen ... Remove Screen Publish to Gallery

Designer Blocks

Built-in

- Control
- Logic
- Math
- Text
- Lists
- Dictionaries
- Colors
- Variables
- Procedures

Screen1

- VerticalArrangement1
  - HorizontalArrangement
    - Label1
    - HorizontalArrangement
      - Label2

Viewer

when Clock1.Timer

do

- set Web1.Url to "http://:1880/data"
- call Web1.Get

when Web1.GotText

url responseCode responseType responseContent

do

- set TextBox1.Text to
- get responseType pairs key "pH"
- call Web1.JsonTextDecode jsonText get responseContent
- set responseType to
- set TextBox2.Text to
- look up in pairs key "Turbidity"
- call Web1.JsonTextDecode jsonText get responseContent
- notFound "not found"
- notFound "not found"

Show Warnings

0 0



3:52 0.73 KB/s Vo LTE 74

Screen1

## Water Quality Monitor

pH\_value :

Turbidity :

11:45 1.00 KB/s Vo LTE 34

Screen1

## Water Quality Monitor

pH\_value :

Turbidity :

