

Project Development Phase Sprint-2

Team ID	PNT2022TMID02419
Project Name	Real-Time River Water Quality Monitoring and Control System

The screenshot displays the IBM Watson IoT Platform interface. The main dashboard shows a list of recent events for a device, with columns for 'Event' and 'Value'. The events are labeled 'event_1' and contain JSON payloads with sensor data like pH, conductivity, temperature, and oxygen levels.

On the right, a modal window titled 'Device Type: NodeMCU' is open, showing the configuration for a new event type. The 'Event type name' is 'event_1'. The 'Schedule' is set to 'Every Minute'. The 'Payload' is defined as a JSON object with random values for various sensors:

```
0 {  
1   "pH": random(0, 100),  
2   "conductivity": random(0, 100),  
3   "T": random(0, 100),  
4   "oxygen": random(0, 100),  
5   "turbidity": random(0, 100)  
6 }  
7
```

Node-RED interface showing a flow named "Flow 1". The flow consists of an "IBM IoT" node connected to a "msg.payload" node. The left sidebar shows the "filter nodes" pane with categories: common, function, network, input, output, sequence, parser, storage, IBM Watson, and dashboard. The "input" category is expanded, showing "Watson IoT" and "ibmiot in" nodes. The right sidebar shows the "debug" console with a log of messages received from the IBM IoT node, including timestamps and JSON payloads.

```
12/11/2022, 14:29:30 node:12f2649a.0d0d98
iot-2/type/NodeMCUID/19141/ev/event_1/fmt/json :
msg.payload : Object
{
  pH: 42, conductivity: 37, T: 42,
  oxygen: 11, turbidity: 28
}
12/11/2022, 14:29:53 node:12f2649a.0d0d98
iot-2/type/NodeMCUID/19141/ev/event_1/fmt/json :
msg.payload : Object
{
  pH: 70, conductivity: 26, T: 18,
  oxygen: 21, turbidity: 19
}
12/11/2022, 14:30:55 node:12f2649a.0d0d98
iot-2/type/NodeMCUID/19141/ev/event_1/fmt/json :
msg.payload : Object
{
  pH: 48, conductivity: 4, T: 38,
  oxygen: 63, turbidity: 49
}
12/11/2022, 14:31:55 node:12f2649a.0d0d98
iot-2/type/NodeMCUID/19141/ev/event_1/fmt/json :
msg.payload : Object
{
  pH: 88, conductivity: 60, T: 44,
  oxygen: 8, turbidity: 48
}
12/11/2022, 14:32:55 node:12f2649a.0d0d98
iot-2/type/NodeMCUID/19141/ev/event_1/fmt/json :
msg.payload : Object
{
  pH: 80, conductivity: 5, T: 35,
  oxygen: 60, turbidity: 45
}
```

Node-RED interface showing a flow named "Flow 1". The flow consists of an "IBM IoT" node connected to a "msg.payload" node. The left sidebar shows the "filter nodes" pane with categories: dropdown, switch, slider, numeric, text input, date picker, colour picker, form, text, gauge, chart, audio out, notification, and ui control. The "numeric" category is expanded, showing "pH", "conductivity", "T", "oxygen", and "turbidity" nodes. The right sidebar shows the "dashboard" pane with a "Layout" tab selected, displaying a "river water quality monitor" group and a "Group 2" group. A message at the bottom indicates: "There is 1 widget not in a group. Click here to create the missing groups".

Shared with x Baradwaj ses x Session 10,11 x Application E x Node-RED: r x Node-RED D x IBM Watson x Python Reles x +

node-red-kzuut-2022-10-10-us-east.mybluemix.net/red/#flow/96c0ea422e46ed53

Apps Most Popular Music... Current weather an... MQTT Websocket C... evaluator mentor

Node-RED

Flow 1

filter nodes

udp in

udp out

input

ibmiot in

ibmiot out

output

OpenWhisk

sequence

split

join

sort

batch

Light on

Light off

ibmiot out node

Delete Cancel Done

Properties

Authentication API Key

API Key api key

Output Type Device Command

Device Type abcd

Device Id 1234

Command Type cmd

Format json

Data data

QoS 0

Enabled

dashboard

Layout Site Theme

Tabs & Links

Smart Home

Garden moisture

Hall AC

Smart switch Board

30°C Cloudy 3:10 PM

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Node-RED

Flow 1

filter nodes

ibmiot in

ibmiot out

ibmiot out node

button

dropdown

switch

slider

numeric

text input

date picker

colour picker

form

Light ON

optional tooltip

optional text/icon color

optional background color

When clicked, send:

Payload { } {"command":"lighton"}

Topic msg. topic

If msg arrives on input, emulate a button click: ☐

Class Optional CSS class name(s) for widget

Enabled

dashboard

Layout Site Theme

Tabs & Links

Smart Home

Garden moisture

Hall AC

Smart switch Board

30°C Cloudy 3:08 PM

