

REAL TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM

AIM:-

To create device in the IOT Watson Platform and Configure Node Red Services.

REQUIREMENT:-

IBM cloud, IBM IOT WATSON PLATFORM, NODE RED SERVICES.

WORKFLOW:-

STEP 1:

Log on to IBM cloud and create IBM Watson IOT Platform from IBM cloud Dashboard.

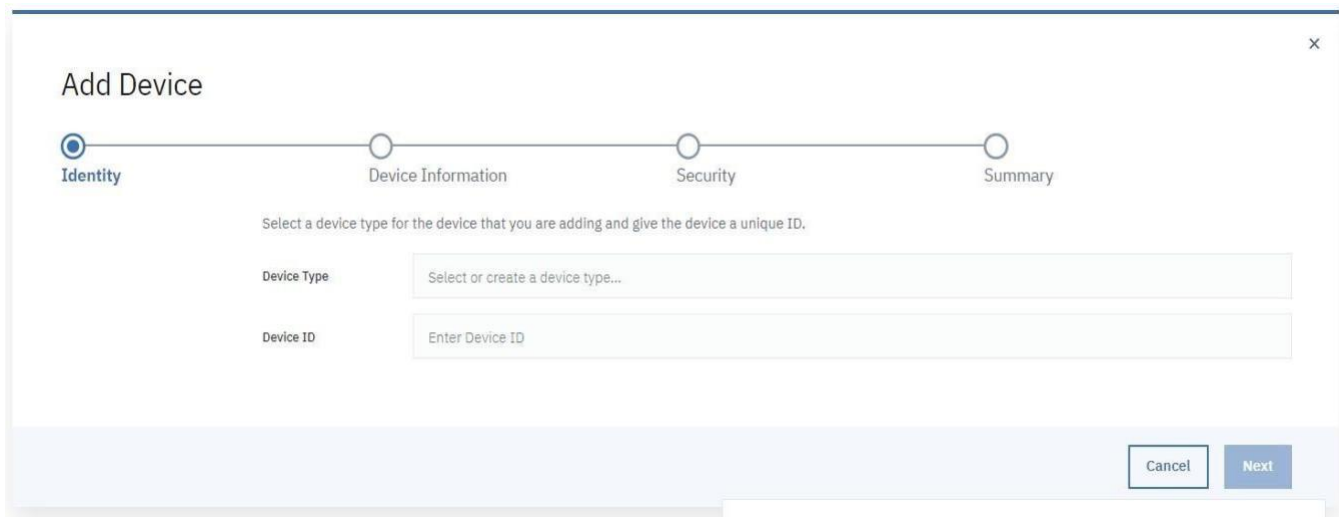
STEP 2:

After Creating IBM Watson IOT Platform, create an Organization (ex.84708c ID: 84708c Bluemix Free)

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
1111	Disconnected	Event_2	Device	Nov 19, 2022 5:11 PM	
1112	Disconnected	Event_2	Device	Nov 19, 2022 5:10 PM	
1113	Disconnected	Event_2	Device	Nov 19, 2022 5:12 PM	
1114	Disconnected	Event_2	Device	Nov 19, 2022 5:12 PM	
1115	Disconnected	Event_2	Device	Nov 19, 2022 5:12 PM	

STEP 3:

Create a device IBM IOT PLATFORM.



TYPE THE REQUIRED FIELDS (TYPE: DATA63, ID: 1111) GIVE AUTH-TOKEN.

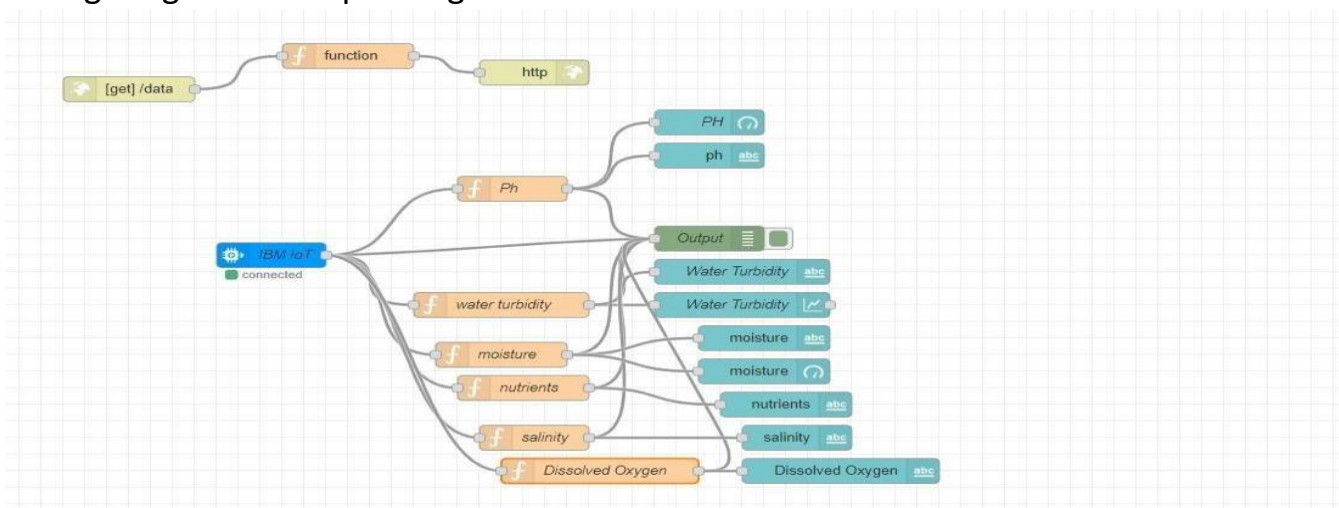
STEP 4:

NODE RED SERVICE

- INSTALL IBM IOT IN MANGE PALETTE.
- INSTALL NODE RED DASHBOARD.

STEP 5:

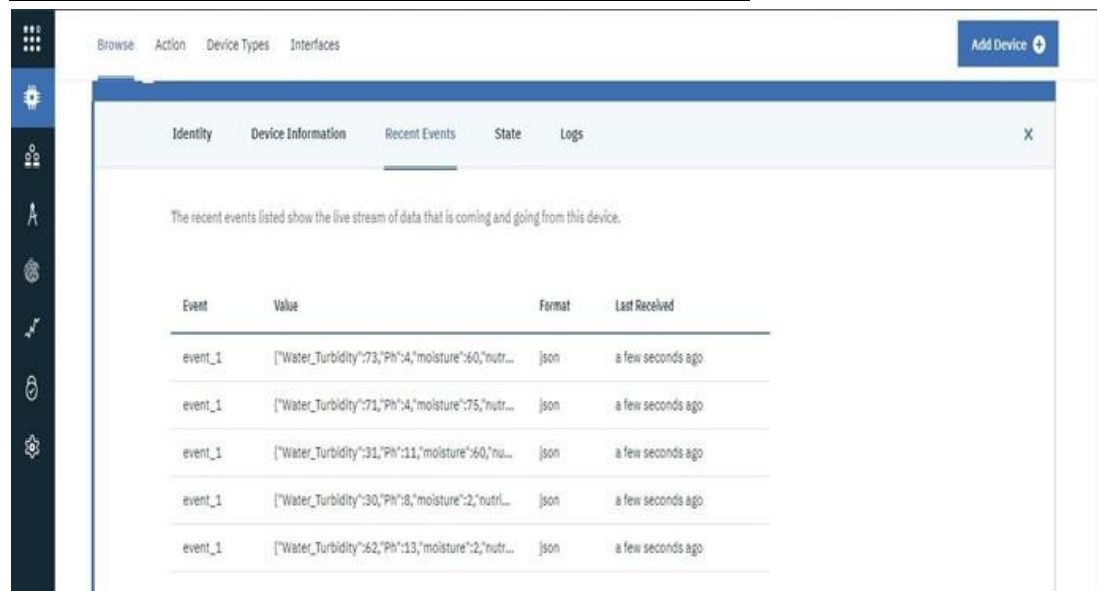
Configuring the corresponding nodes



STEP 6:

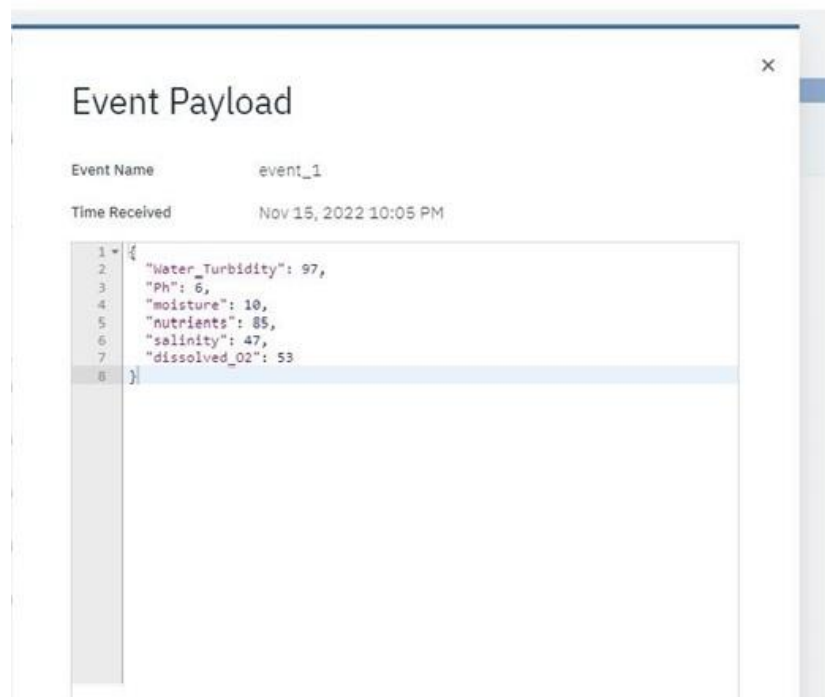
Deploy the Services and verify the output values.

OUTPUT IN IBM WATSON IOT PLATFORM:



The screenshot shows the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A sidebar on the left contains various icons. The main content area is titled 'Recent Events' and displays a table of events. The table has four columns: 'Event', 'Value', 'Format', and 'Last Received'. The events are listed as 'event_1' with various JSON payloads. A note above the table states: 'The recent events listed show the live stream of data that is coming and going from this device.'

Event	Value	Format	Last Received
event_1	["Water_Turbidity":73,"Ph":4,"moisture":60,"nutr...	json	a few seconds ago
event_1	["Water_Turbidity":71,"Ph":4,"moisture":75,"nutr...	json	a few seconds ago
event_1	["Water_Turbidity":31,"Ph":11,"moisture":60,"nu...	json	a few seconds ago
event_1	["Water_Turbidity":30,"Ph":8,"moisture":2,"nutr...	json	a few seconds ago
event_1	["Water_Turbidity":62,"Ph":13,"moisture":2,"nutr...	json	a few seconds ago



The screenshot shows the 'Event Payload' dialog box. It displays the event name 'event_1' and the time received 'Nov 15, 2022 10:05 PM'. The payload is shown as a JSON object with the following fields: 'Water_Turbidity', 'Ph', 'moisture', 'nutrients', 'salinity', and 'dissolved_o2'.

```
1 {  
2   "Water_Turbidity": 97,  
3   "Ph": 6,  
4   "moisture": 10,  
5   "nutrients": 85,  
6   "salinity": 47,  
7   "dissolved_o2": 53  
8 }
```