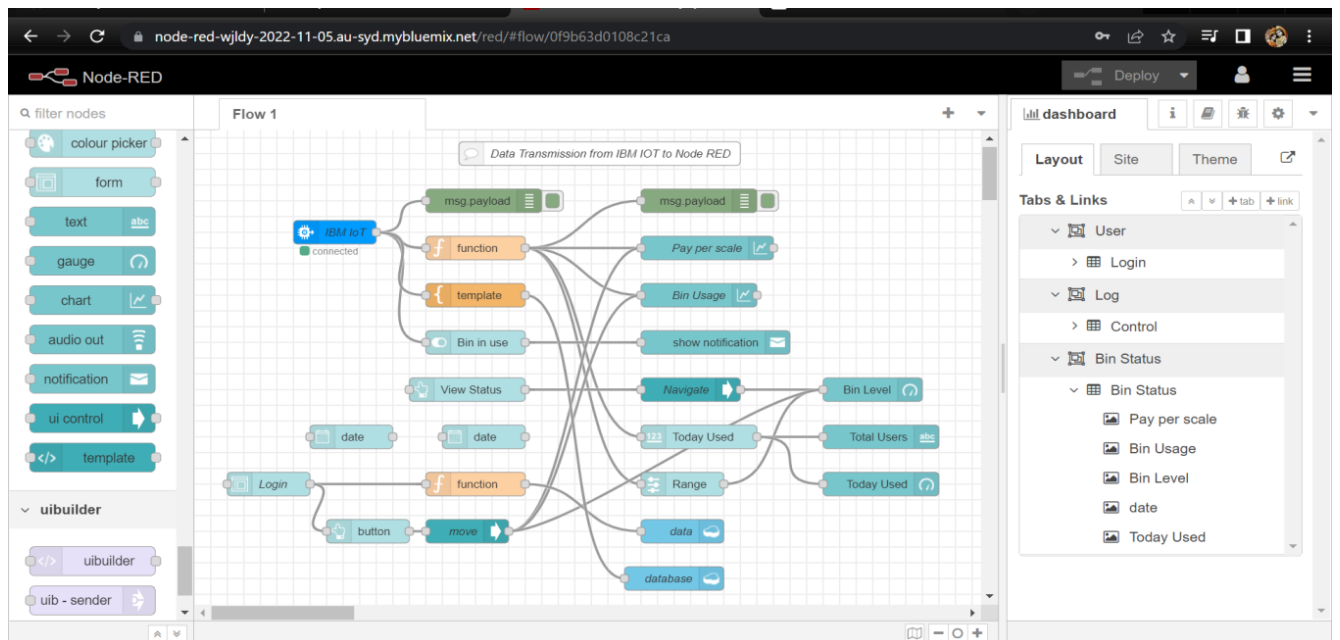
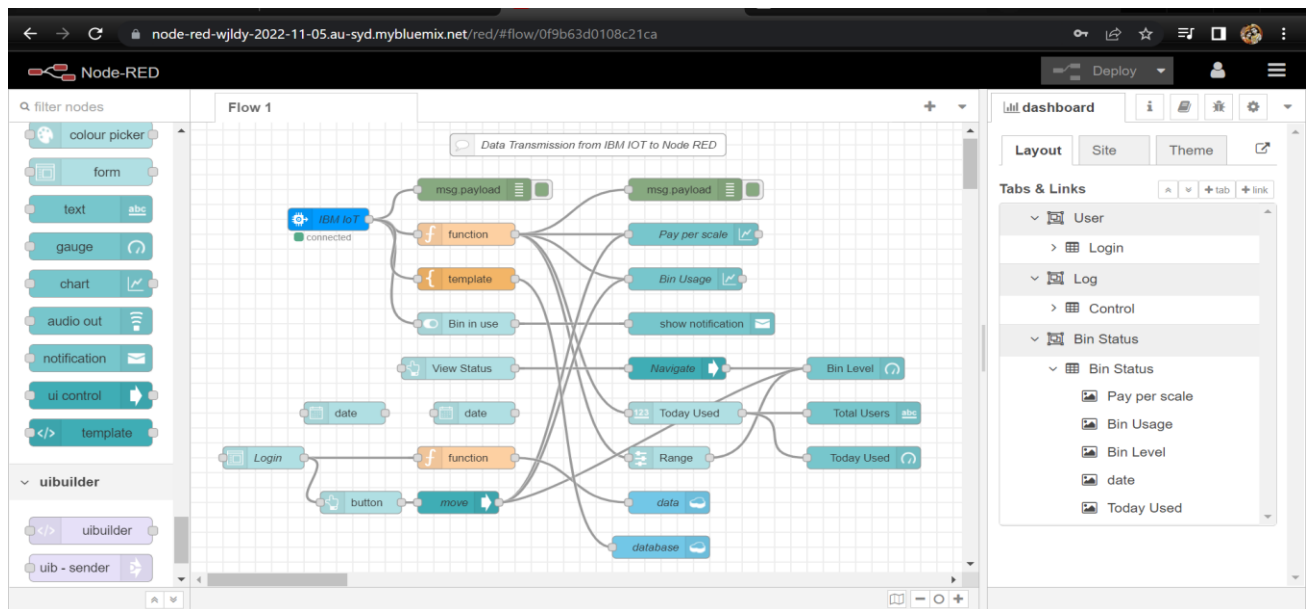


## Node Red Connection to IBM Cloudant

Date	5 November 2022
Team ID	PNT2022TMID17577
Project Name	Smart Waste Management for Metropolitan Cities - IOT

1. Node-RED Connection setup for data transmission from IBM Watson IOT platform to Node-RED dashboard.



2. Simulate Wokwi connection to transmit data from wokwi account to IBM Watson IOT platform and then to Node Red dashboard.

```
177
178
179
180
181
182 if(cm <= 25)
183 {
184   digitalWrite(21,HIGH);
185   String payload = "{\"High_Alert\":\"";
186   payload += cm;
187   payload += " }";
188   Serial.print("\n");
189   Serial.print("Sending payload: ");
190   Serial.println(payload);
191
192   if (client.publish(publishTopic, (char*) payload.c_str())) // if
193   {
194     Serial.println("Publish OK");
195   }
196 }
197 if(cm <= 50)
198 {
199   digitalWrite(22,HIGH);
200   String payload = "{\"Warning\":\"";
201   payload += cm;
202   payload += " }";
203   Serial.print("\n");
```

Simulation

PIR Motion Sensor  
Simulate motion

Sending distance: 26.94  
Publish OK  
Motion Detected  
Lid Opened  
High Alert!!!, Trash bin is about to be full  
Lid Closed

3. Data transfer to Watson IOT platform.

IBM Watson IoT Platform

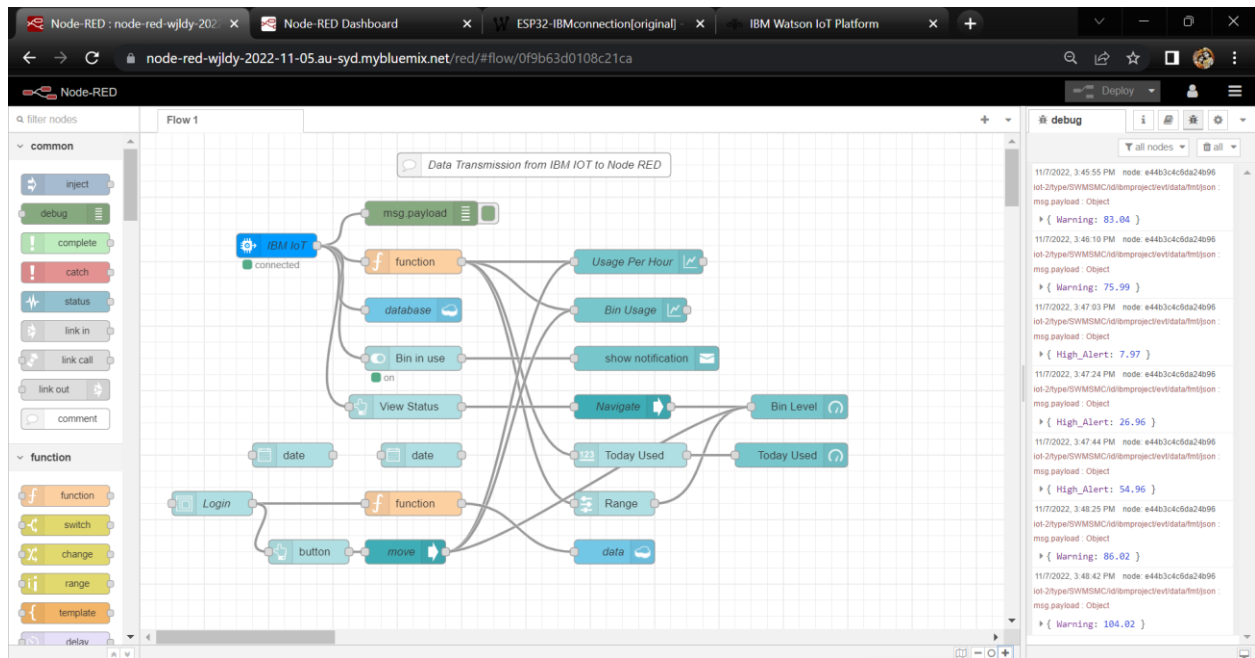
962319104024@students.amrita.edu.in  
ID: 9gbe4w

Browse Action Device Types Interfaces

The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
data	{"Warning":28.95}	json	a few seconds ago
data	{"Warning":28.95}	json	a few seconds ago
data	{"Warning":49.98}	json	a minute ago
data	{"Warning":49.98}	json	a minute ago
data	{"Warning":11.03}	json	a minute ago

#### 4.Data transfer from IBM Watson IOT platform and wokwi to Node red.



#### 5.Storing database in IBM cloudant DB.

The screenshot shows the IBM Cloudant Databases dashboard. It displays a table of databases with columns: Name, Size, # of Docs, Partitioned, and Actions. The table lists four databases: login\_credentials, noderedwjldy20221105, sample, and sensor\_data. The bottom of the dashboard shows pagination information: "Showing 1-4 of 4 databases. Databases per page 20".

Name	Size	# of Docs	Partitioned	Actions
login_credentials	13.7 KB	111	No	[Icons]
noderedwjldy20221105	37.4 KB	4	No	[Icons]
sample	59.4 KB	351	No	[Icons]
sensor_data	15.7 KB	90	No	[Icons]

Document ID

Options

{ } JSON

Create Document

id	key	value
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-cde2dd17c519394df...
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-d26c5b40891e13c6c...
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-cde2dd17c519394df...
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-f96eb0460bc16cfab0...
1a921f21cbe229b86f599acb45...	1a921f21cbe229b86f599acb45...	{ "rev": "1-7226f08794cd47b7c...
1a921f21cbe229b86f599acb45...	1a921f21cbe229b86f599acb45...	{ "rev": "1-1bdd9a985bd56cf9...
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-7226f08794cd47b7c...
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-3ad288ecad57f039e...
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-1bdd9a985bd56cf9...
298ed6fbd9b3b815f5ac7c061e...	298ed6fbd9b3b815f5ac7c061e...	{ "rev": "1-4e7240f6e5307a1h9...

Showing document 1 - 20. Documents per page: 20

## 6.Data is stored in JSON format

sensor\_data > 0198213c192cb2c244cc2433f1802b91

{ } JSON

Save Changes Cancel

Upload Attachment Clone Document Delete

```

1 {
2   "_id": "0198213c192cb2c244cc2433f1802b91",
3   "_rev": "1-cde2dd17c519394df774738c495f8b",
4   "topic": "iot-2/type/SWMSMC/id/ibmproject/evt/data/fmt/json",
5   "payload": {
6     | "Warning!!!": "244.971eft"
7   },
8   "deviceId": "ibmproject",
9   "deviceType": "SWMSMC",
10  "eventType": "data",
11  "format": "json"
12 }

```

Log Out

