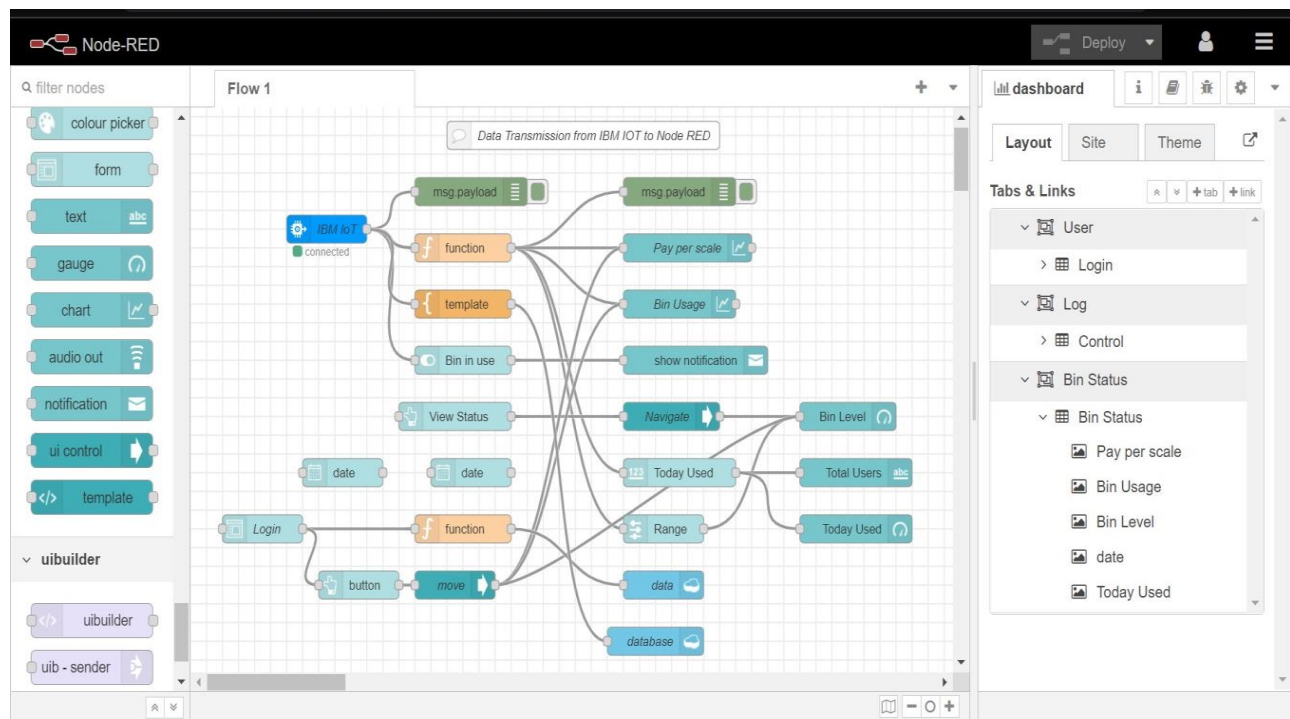


Delivery of Sprint – 4

Web UI Design and Deploy

Date	19 November 2022
Team ID	PNT2022TMID04566
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.



3. Data transfer to Watson IOT platform.

```
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

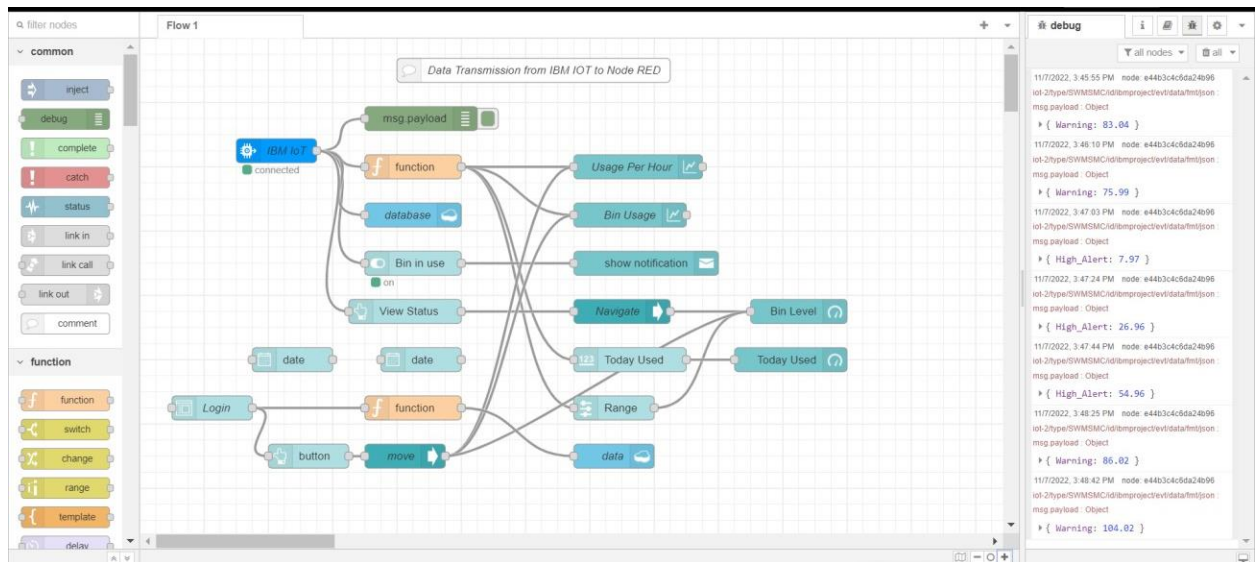
Simulate motion

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

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 'Databases' management page in IBM Cloudant. A sidebar on the left contains navigation icons. The main area has a 'Database name' dropdown, a 'Create Database' button, and icons for JSON, documents, and notifications. Below this is a table titled 'Your Databases' with columns: Name, Size, # of Docs, Partitioned, and Actions. The table lists four databases: login_credentials, noderedwjldy20221105, sample, and sensor_data. Each row has three action icons: a document icon, a lock icon, and a delete icon. At the bottom, it says 'Showing 1-4 of 4 databases. Databases per page: 20'.

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

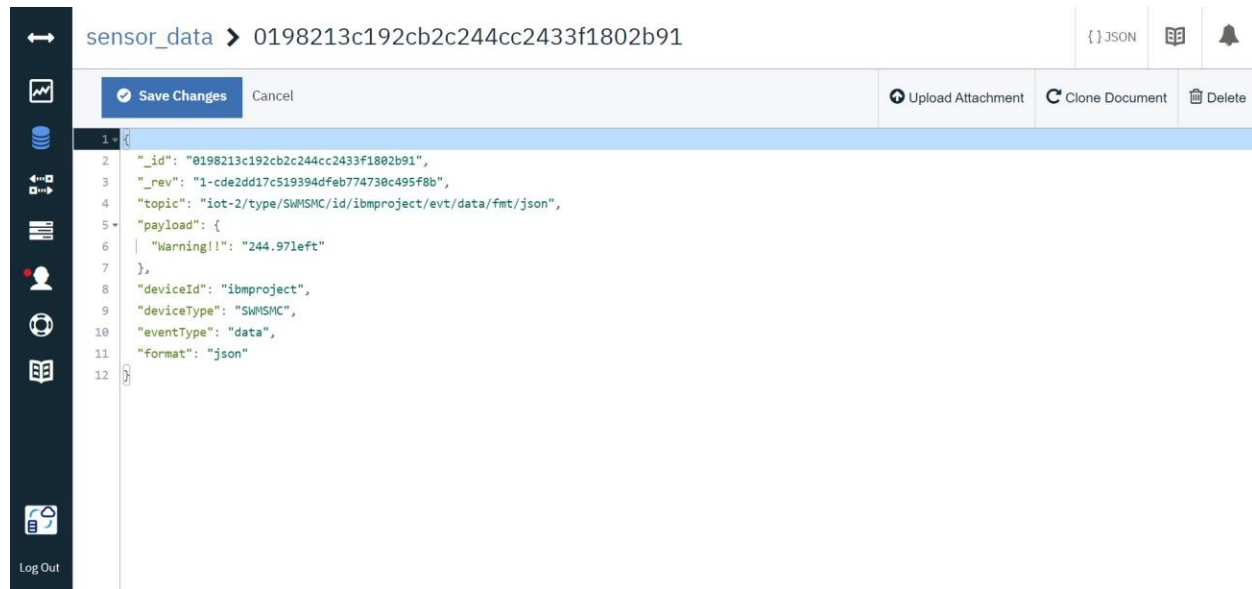
Showing 1-4 of 4 databases. Databases per page: 20

The screenshot shows the document view for the 'sensor_data' database. The sidebar on the left has a 'sensor_data' dropdown and icons for documents, query, permissions, changes, and design documents. The main area has a 'Document ID' dropdown, 'Options', 'JSON', and a 'Create Document' button. Below this is a table with columns: id, key, and value. The table displays a list of documents with their IDs, keys, and values. At the bottom, it says 'Showing document 1 - 20. Documents per page: 20'.

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": "1-1bbdd9a985bd56cf9..." }
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-7226f08794cd47b7c..." }
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-3ad288ecad57f039e..." }
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-1bbdd9a985bd56cf9..." }
298ed6fhd9h3b815f5ac7c061e...	298ed6fhd9h3b815f5ac7c061e...	{ "rev": "1-4e72d0f6e5307a1h9..." }

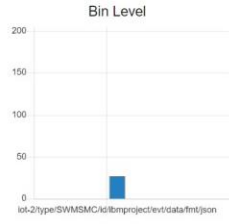
Showing document 1 - 20. Documents per page: 20

6. Data is stored in JSON format



7. Web UI

Bin Status



date 06/11/2022

