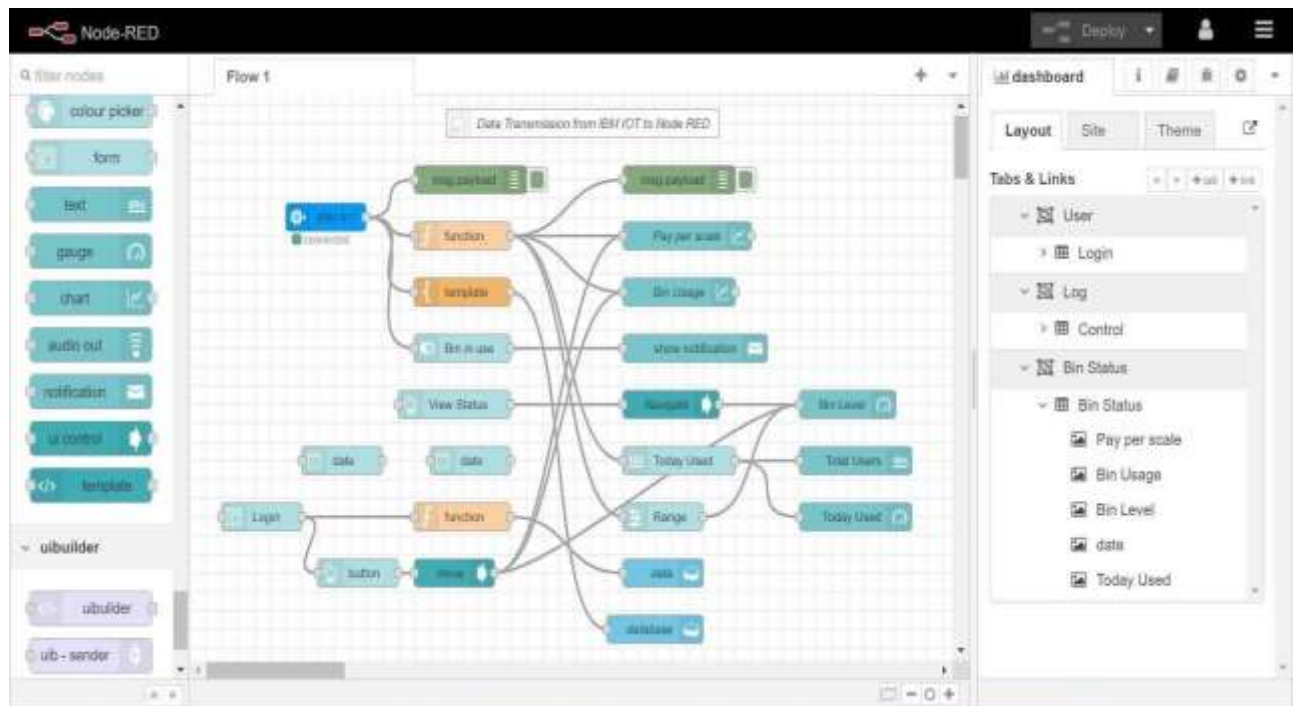
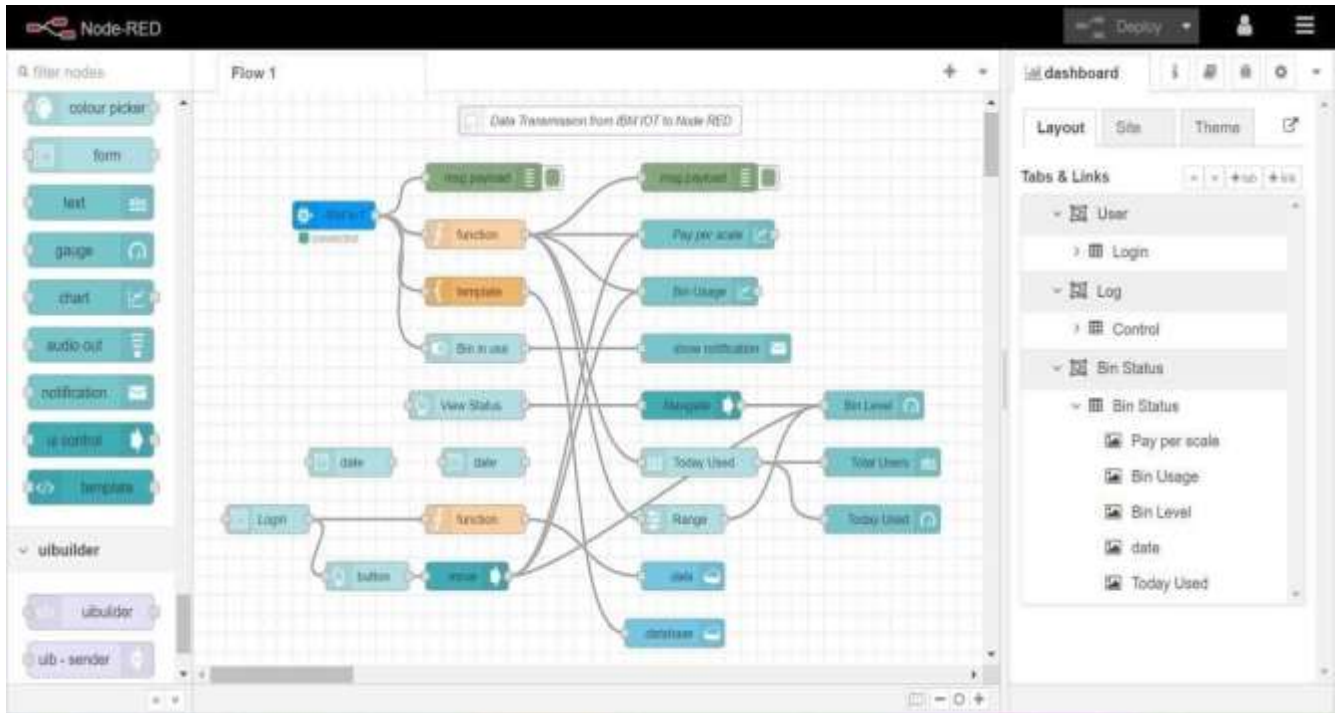


## Web UI Design and Deploy

<b>Date</b>	<b>09 November 2022</b>
<b>Team ID</b>	<b>PNT2022TMID53722</b>
<b>Project Name</b>	<b>Smart Waste Management for Metropolitan Cities</b>

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.

```

esp32-blink.ino  diagram.json  libraries.txt  Library Manager
177
178
179
180
181
182   if(cm <= 25)
183   {
184     digitalWrite(22,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.println("\n");
  
```

**Simulation**

00:35.846 99%

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.

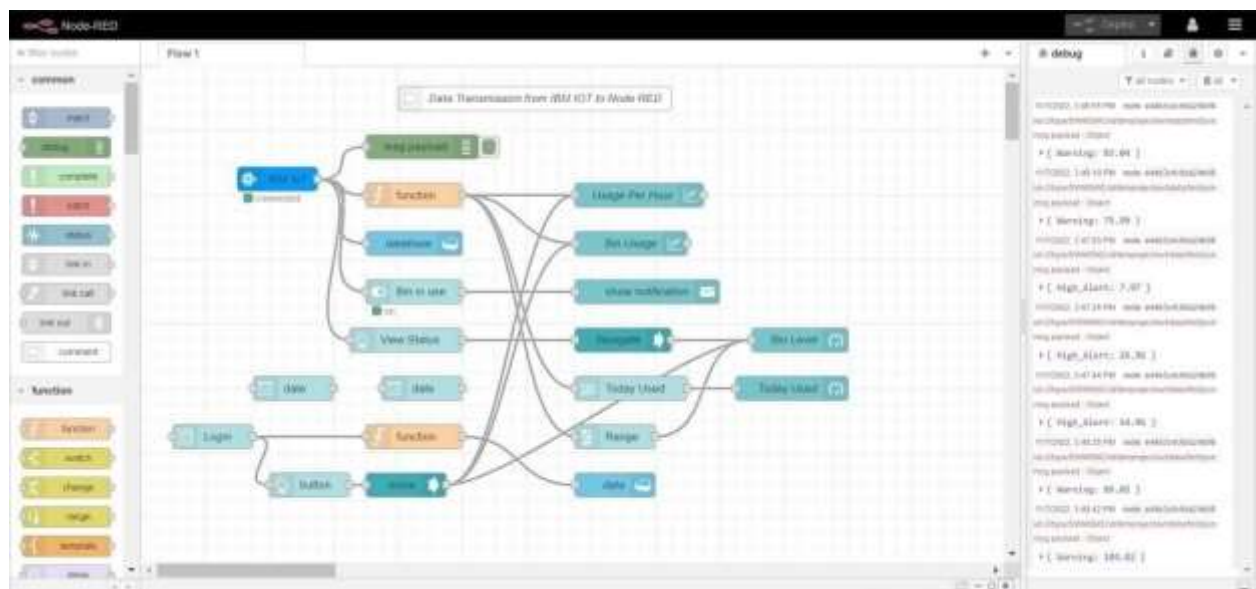
BrowseActionDevice TypesInterfaces

Add Device

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":49.99}]	json	a minute ago
data	[{"Warning":11.83}]	json	a minute ago

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

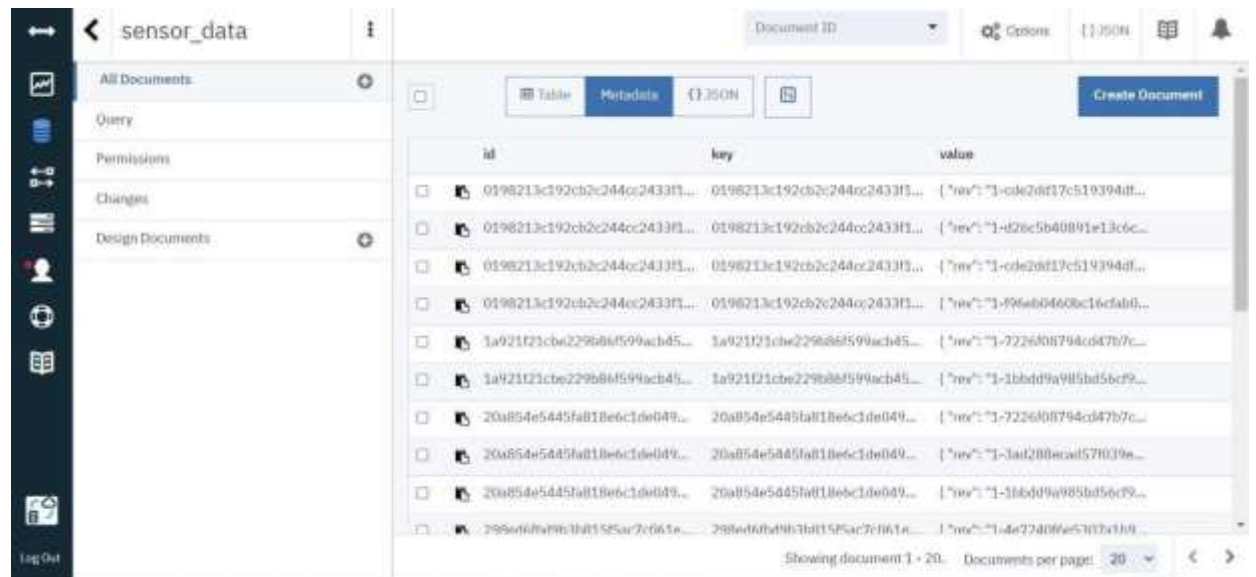


## 5 . Storing database in IBM cloudant DB.



The screenshot shows the IBM Cloudant Databases interface. On the left is a sidebar with navigation icons. The main area is titled 'Databases' and contains a table of existing databases. The table has columns for Name, Size, # of Docs, Partitioned, and Actions. There are four databases listed: login\_credentials, nodemdedwidy20221105, sample, and sensor\_data. Each database has a size, a number of documents, and is marked as 'No' for partitioned. The Actions column contains icons for editing, deleting, and other operations. 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	[Icons]
nodemdedwidy20221105	37.4 KB	4	No	[Icons]
sample	59.4 KB	351	No	[Icons]
sensor_data	15.7 KB	90	No	[Icons]



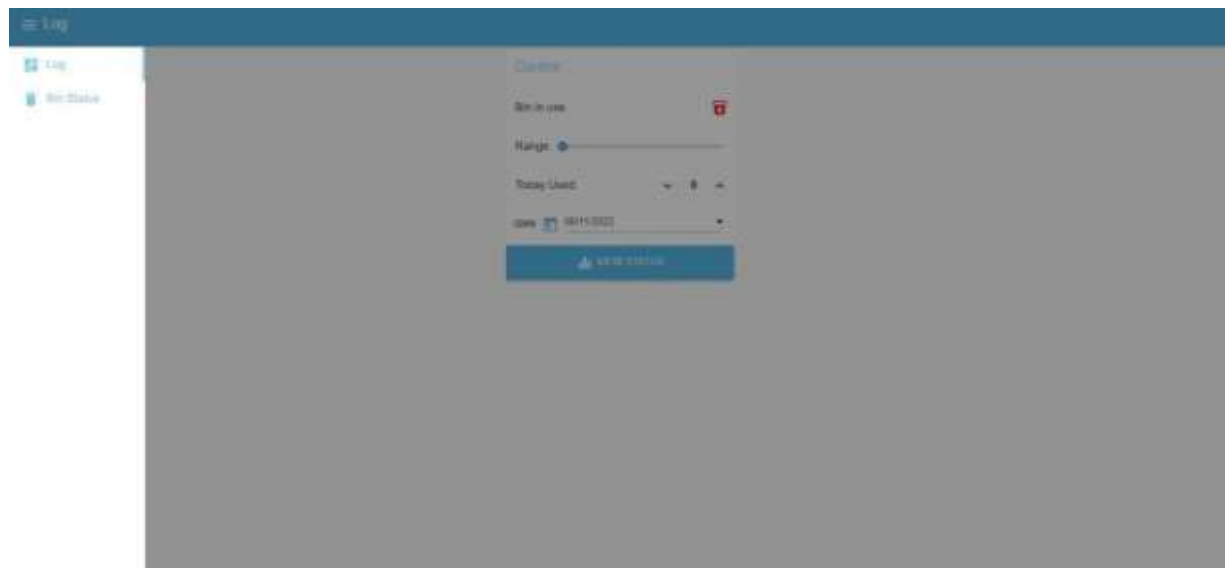
The screenshot shows the IBM Cloudant interface for the 'sensor\_data' database. The left sidebar has a 'sensor\_data' header and a menu with options like All Documents, Query, Permissions, Changes, and Design Documents. The main area shows a list of documents in JSON format. The table has columns for id, key, and value. Each row represents a document with a unique id and key, and a JSON value. The value is truncated in the screenshot. At the bottom, it says 'Showing document 1 - 20. Documents per page: 20'.

id	key	value
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-cde2df17c519394df...
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-d26c5b40891e13c6c...
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-cde2df17c519394df...
0198213c192cb2c244cc2433f1...	0198213c192cb2c244cc2433f1...	{ "rev": "1-f96eb04608c16cfab0...
1a921f21cbe229686f599achd5...	1a921f21cbe229686f599achd5...	{ "rev": "1-7226d08794cd47b7c...
1a921f21cbe229686f599achd5...	1a921f21cbe229686f599achd5...	{ "rev": "1-1bbdd9a9b5bd56cf9...
20a854e5445fab18e6c1de049...	20a854e5445fab18e6c1de049...	{ "rev": "1-7226d08794cd47b7c...
20a854e5445fab18e6c1de049...	20a854e5445fab18e6c1de049...	{ "rev": "1-3a1200acaf57039e...
20a854e5445fab18e6c1de049...	20a854e5445fab18e6c1de049...	{ "rev": "1-1f6dd09a985bd56cf9...
298e6f6bd9b3bd15f5ac7c061e...	298e6f6bd9b3bd15f5ac7c061e...	{ "rev": "1-4e72d09e5303c1b0...

## 6. Data is stored in JSON format



## 7. Web UI



Log

Control

Bin in use

Range

Today Used

date 05/11/2022

VIEW STATUS

