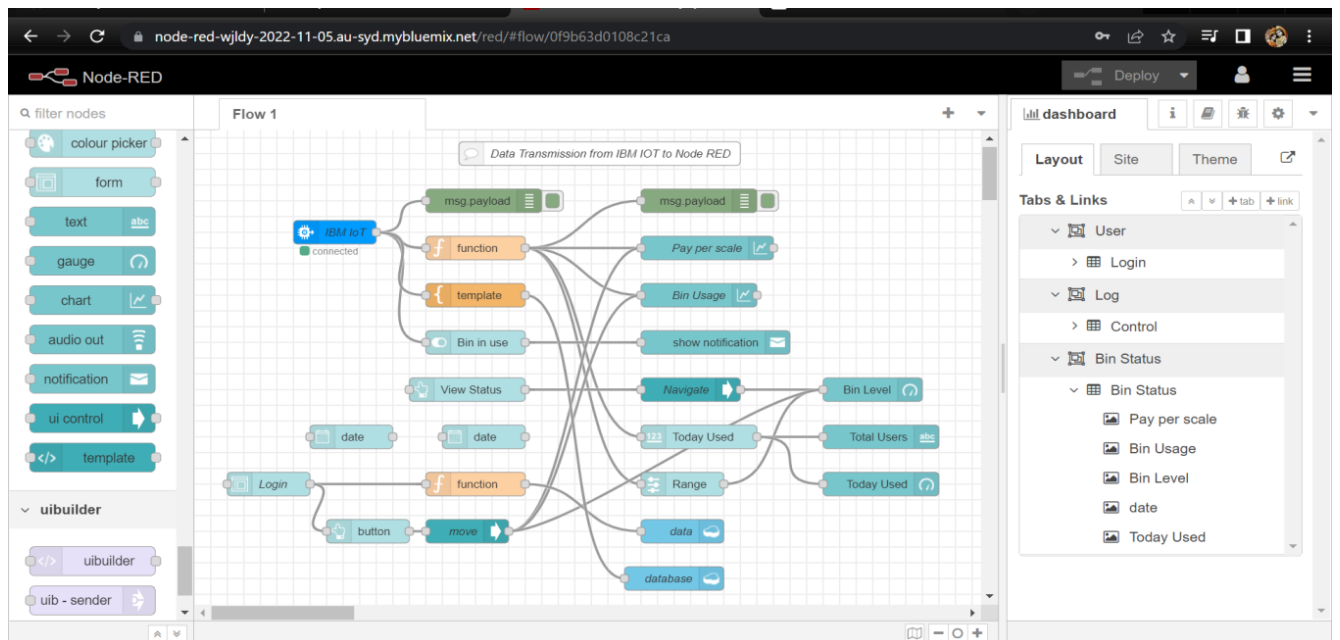
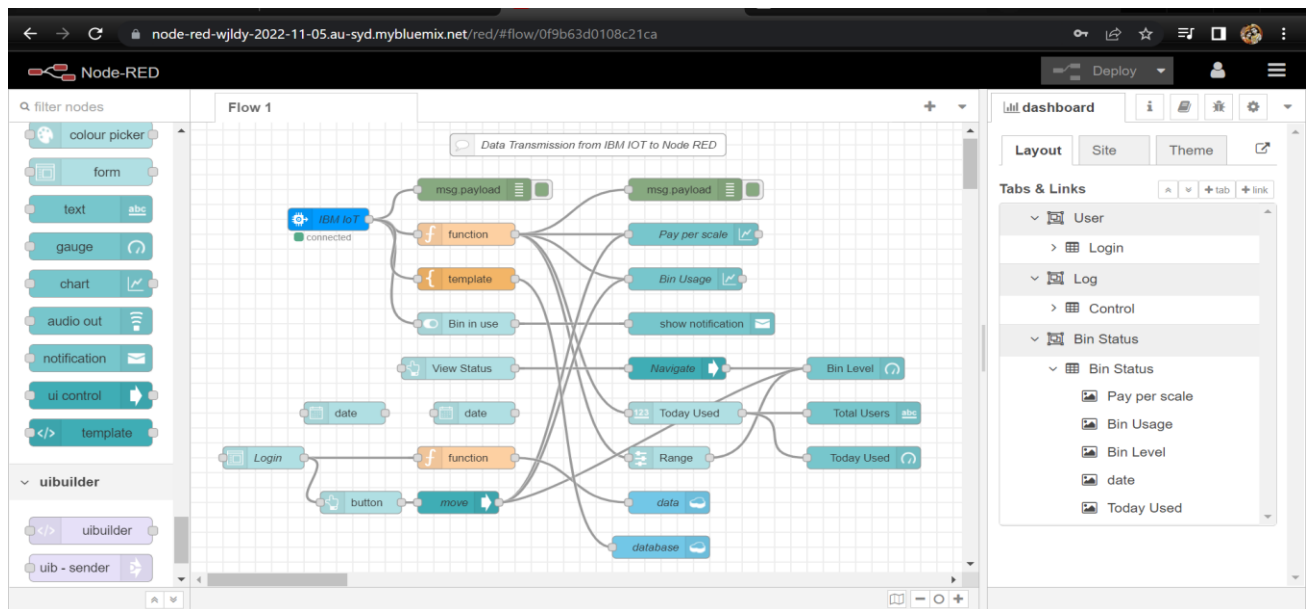


Node Red Connection to IBM Cloudant

Date	5 November 2022
Team ID	PNT2022TMID51935
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.

The screenshot shows the Wokwi IDE interface. On the left, the 'esp32-blink.ino' file is open, displaying C++ code for an ESP32. The code includes logic for a PIR motion sensor, sending distance data, and publishing to an MQTT topic. On the right, the 'Simulation' window shows a 3D model of the ESP32 board with a PIR sensor and an LCD display. Below the simulation, a log window displays the following output:

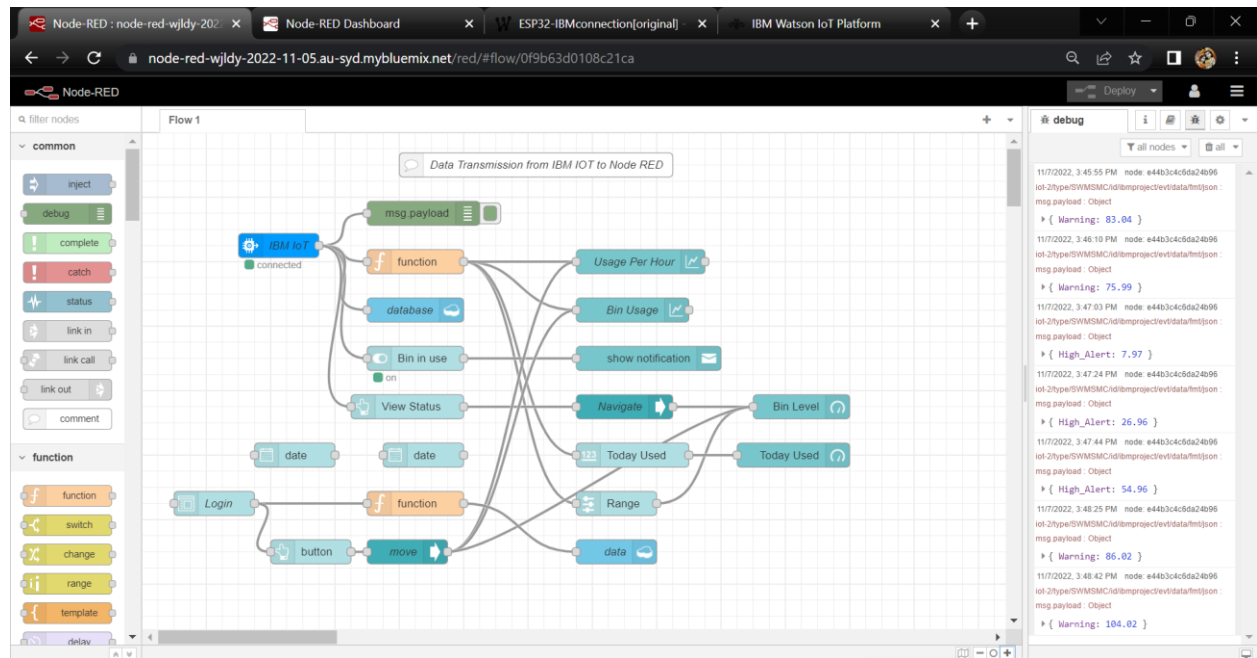
```
Sending distance: 26.94
Publish OK
Motion Detected
Lid Opened
High Alert!!!,Trash bin is about to be full
Lid Closed
```

3. Data transfer to Watson IOT platform.

The screenshot shows the IBM Watson IoT Platform dashboard. The 'Browse' tab is selected, displaying a table of recent events for a device. The table has four columns: Event, Value, Format, and Last Received. The events are as follows:

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.

Databases

Database name ▼ Create Database { } JSON 📖 🔔

Your Databases

Name	Size	# of Docs	Partitioned	Actions
login_credentials	13.7 KB	111	No	↔️ 🔒 🗑️
noderedwjlidy20221105	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 ▼ « 1 »

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": "1-1bbdd9a985bd56cf9...
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-7226f08794cd47b7c...
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-3ad288ecad57f039e...
20a854e5445fa818e6c1de049...	20a854e5445fa818e6c1de049...	{ "rev": "1-1bbdd9a985bd56cf9...
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-cde2dd17c519394df774730c495f8b",
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

