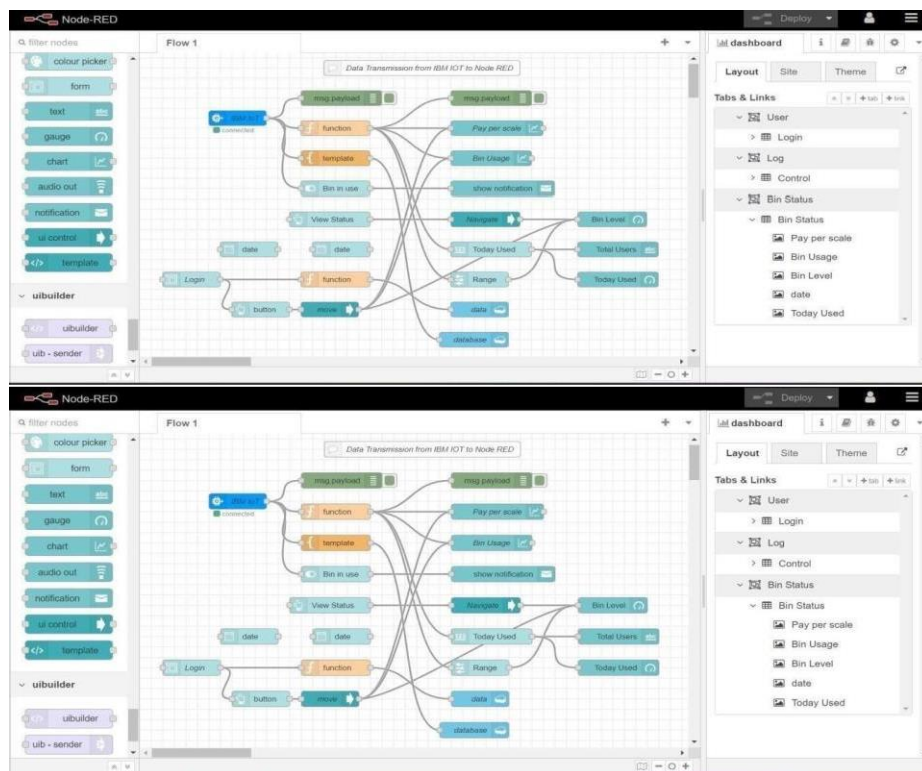


Node Red Connection to IBM Cloudant

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



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

esp32-blink.ino

diagram.json

libraries.txt

Library Manager

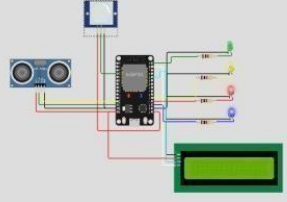
```
177
178
179
180
181
182     if(cm <= 25)
183     {
184         digitalWrite(21,HIGH);
185         String payload = "{\"High_Alert\":\"";
186         payload += cm;
187         payload += " }";
188         Serial.print("\n");
189         Serial.print("Sending payload: ");
190         Serial.println(payload);
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

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

✓

⏸

🗑

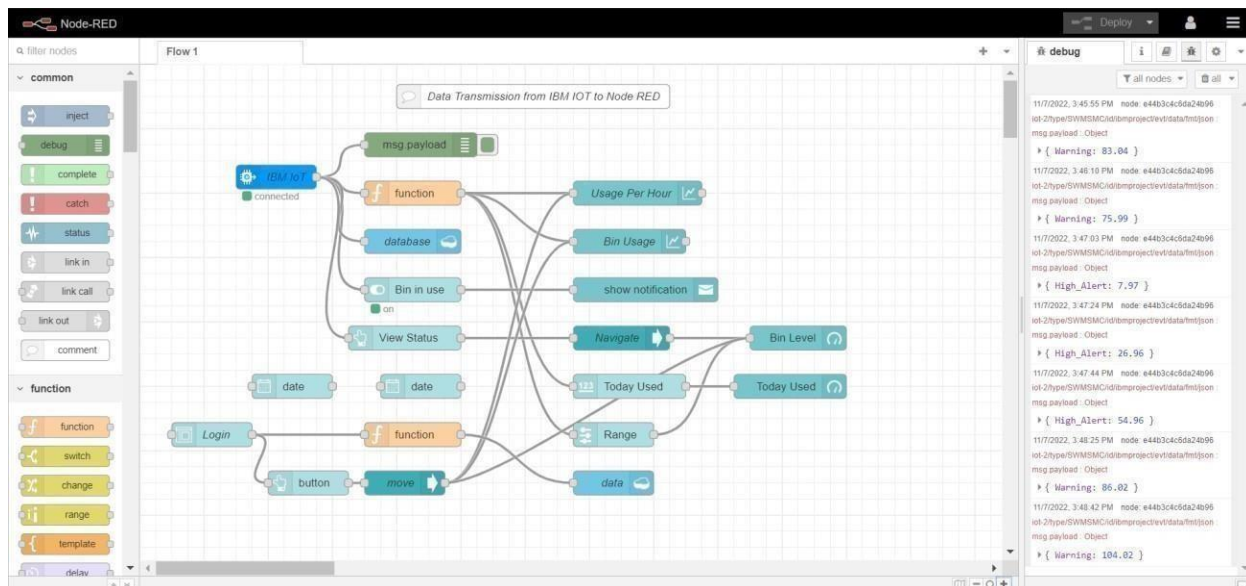
2. Data transfer to Watson IOT platform.

Browse Action Device Types Interfaces
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":49.98} | json | a minute ago |
| data | {"Warning":11.03} | json | a minute ago |

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



4. Storing database in IBM cloudant DB.

←

→

Database name

Create Database

{ } JSON

Your Databases

| Name | Size | # of Docs | Partitioned | Actions |
|----------------------|---------|-----------|-------------|--|
| login_credentials | 13.7 KB | 111 | No | <div>↔</div> <div>🔒</div> <div>🗑</div> |
| noderedwjldy20221105 | 37.4 KB | 4 | No | <div>↔</div> <div>🔒</div> <div>🗑</div> |
| sample | 59.4 KB | 351 | No | <div>↔</div> <div>🔒</div> <div>🗑</div> |
| sensor_data | 15.7 KB | 90 | No | <div>↔</div> <div>🔒</div> <div>🗑</div> |

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

Log Out

←

sensor_data

Document ID

Options

{ } JSON

All Documents

Query

Permissions

Changes

Design Documents

Table

Metadata

{ } JSON

Create Document

| | id | key | value |
|--------------------------|-------------------------------|-------------------------------|-----------------------------------|
| <input type="checkbox"/> | 0198213c192cb2c244cc2433f1... | 0198213c192cb2c244cc2433f1... | { "rev": "1-cde2dd17c519394df... |
| <input type="checkbox"/> | 0198213c192cb2c244cc2433f1... | 0198213c192cb2c244cc2433f1... | { "rev": "1-d26c5b40891e13c6c... |
| <input type="checkbox"/> | 0198213c192cb2c244cc2433f1... | 0198213c192cb2c244cc2433f1... | { "rev": "1-cde2dd17c519394df... |
| <input type="checkbox"/> | 0198213c192cb2c244cc2433f1... | 0198213c192cb2c244cc2433f1... | { "rev": "1-f96eb0460bc16cfab0... |
| <input type="checkbox"/> | 1a921f21cbe229b86f599acb45... | 1a921f21cbe229b86f599acb45... | { "rev": "1-7226f08794cd47b7c... |
| <input type="checkbox"/> | 1a921f21cbe229b86f599acb45... | 1a921f21cbe229b86f599acb45... | { "rev": "1-1bbdd9a985bd56cf9... |
| <input type="checkbox"/> | 20a854e5445fa818e6c1de049... | 20a854e5445fa818e6c1de049... | { "rev": "1-7226f08794cd47b7c... |
| <input type="checkbox"/> | 20a854e5445fa818e6c1de049... | 20a854e5445fa818e6c1de049... | { "rev": "1-3ad288ecad57f039e... |
| <input type="checkbox"/> | 20a854e5445fa818e6c1de049... | 20a854e5445fa818e6c1de049... | { "rev": "1-1bbdd9a985bd56cf9... |
| <input type="checkbox"/> | 298ed6fbd9b3b815f5ac7c061e... | 298ed6fbd9b3b815f5ac7c061e... | { "rev": "1-4e7240f6e5307a1h9... |

Showing document 1 - 20. Documents per page: 20 < >

Log Out

5. Data is stored in JSON format

