

Develop The Web Application Using Node-RED

TEAM ID	PNT2022TMID48692
PROJECT TITLE	REAL TIME RIVER WATER QUALITY MONITORING AND CONTROL SYSTEM

Step 1: Sending data to the IBM Watson

The screenshot shows the IBM Watson IoT Platform interface. A device with ID 12345 is listed as 'Connected'. The 'Recent Events' tab is active, showing a table of data points:

Event	Value	Format	Last Received
status	{"ph":13,"turbidity":4}	json	a few seconds ago
status	{"ph":7,"turbidity":1}	json	a few seconds ago
status	{"ph":9,"turbidity":2}	json	a few seconds ago
status	{"ph":1,"turbidity":3}	json	a few seconds ago
status	{"ph":13,"turbidity":0}	json	a few seconds ago

Step2: Configure the IBM IOT in the Node-red

The screenshot shows the Node-RED interface with a flow configuration. The 'IBM IoT' node is connected to 'ph' and 'turbidity' nodes. The 'Properties' panel on the right shows the configuration for the 'ibmiot' node:

- Name: lot api
- API Key: a-ij64y3-w7zkatzbl9
- API Token:
- Server-Name: ij64y3.messaging.internetofthings.ibmcloud.com
- Scalable: ☐
- Application ID:
- Keep Alive: 60 Seconds
- Use Clean Session: ☒

Step 3: Configure the Device in IOT in

The screenshot shows a flow editor interface with a canvas on the left and a configuration panel on the right. The canvas displays a flow named 'Flow 1' with a 'Cloudant' node connected to three function nodes labeled 'ph', 'turbidity', and 'http req'. The 'http req' node is connected to a '[get] /sensor_data' node. The configuration panel is titled 'Edit ibmiot in node' and contains the following settings:

- Authentication:** API Key
- API Key:** lot api
- Input Type:** Device Event
- Device Type:** All or +
- Device Id:** All or device id e.g. ab12cd231a21
- Event:** All or +
- Format:** All or json
- QoS:** 0
- Name:** IBM IoT
- Service:** registered

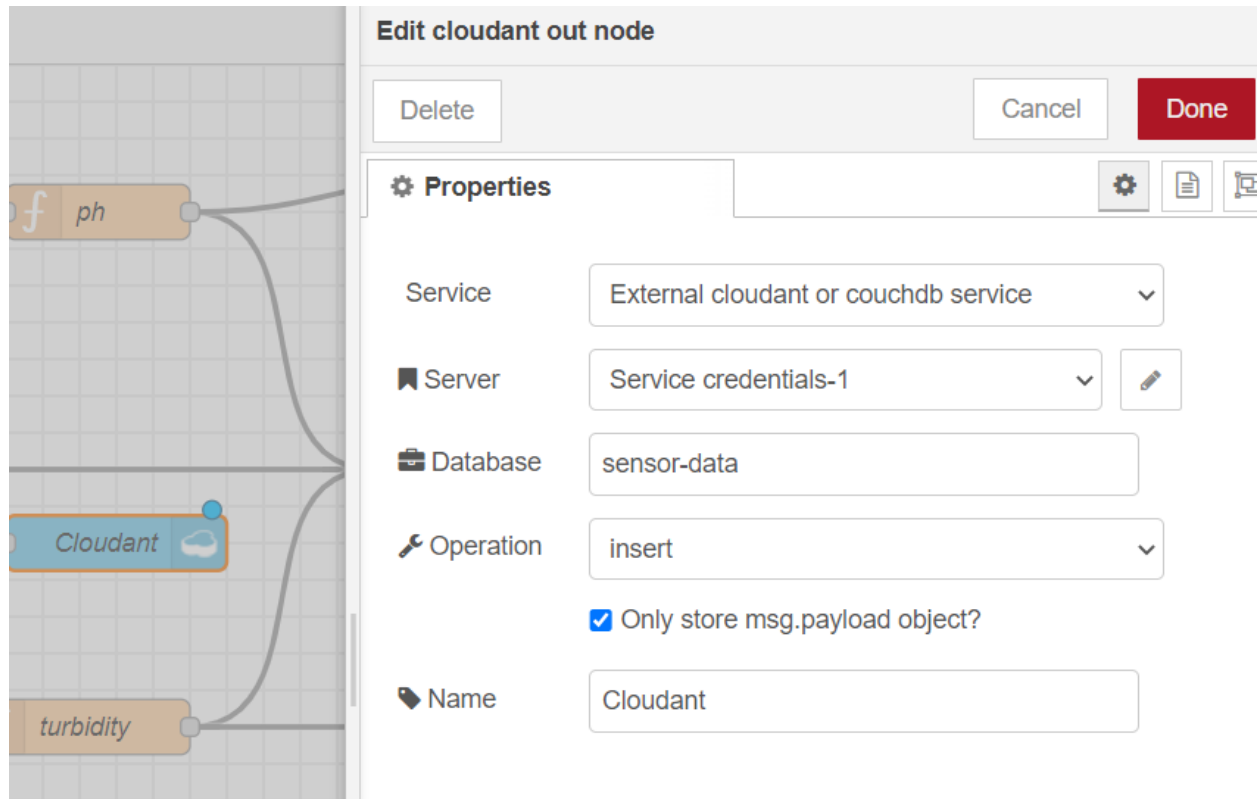
A yellow note at the bottom of the panel states: 'Use the Input Type property to configure this node to receive Events sent by IoT Devices, Commands sent to IoT Devices, Status Messages referring to IoT Devices, or Status Messages referring to IoT Applications.'

Step 4: Configure the Host and Username in the IBM Cloudant

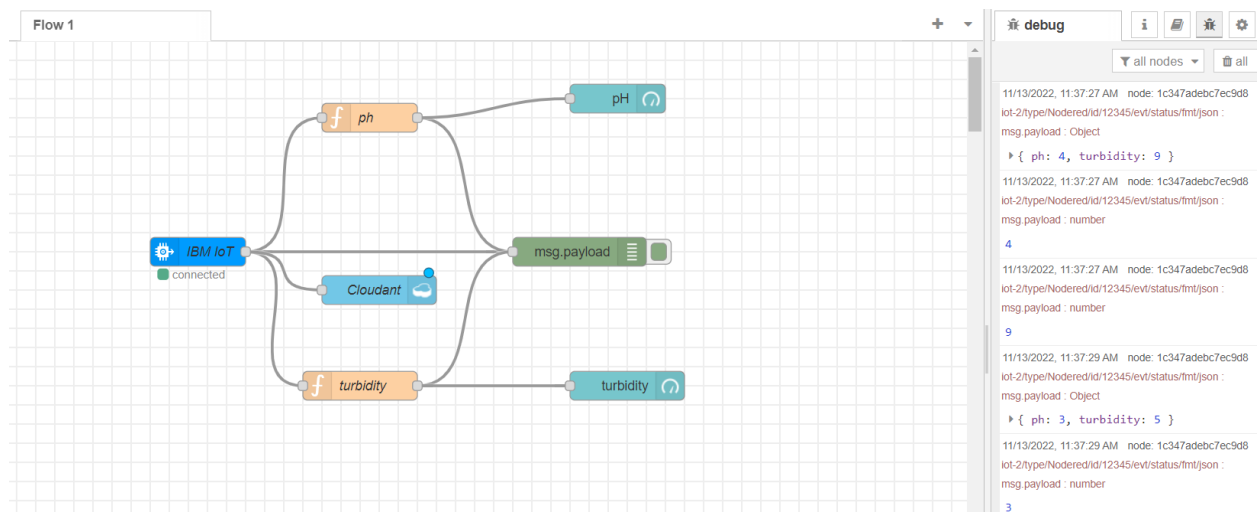
The screenshot shows a flow editor interface with a canvas on the left and a configuration panel on the right. The canvas displays a flow with a 'Cloudant' node connected to three function nodes labeled 'ph', 'turbidity', and 'http req'. The configuration panel is titled 'Edit Cloudant in node' and contains the following settings:

- Host:** https://apikey-v2-1qahn1go9eja4qf24hvp05tous
- Username:** apikey-v2-1qahn1go9eja4qf24hvp05tousbized0:
- Password:**
- Name:** Service credentials-1

Step 5 : Edit the Cloudant out node and set the database where the data is need to be stored



Step 6: Configure all nodes and deploy the Node-red



Finally we can able to the store the sensor data and we can view in the data in the Cloudata Dashboard

[illegible]

sensor-data ➤ 010fe061191ab4d557357902c09708b6

Save Changes Cancel

```
1 {
2   "_id": "010fe061191ab4d557357902c09708b6",
3   "_rev": "1-7ec49537df45a74402eaf02e1ef6b84d",
4   "ph": 4,
5   "turbidity": 5
6 }
```