

## **Create The IBM Watson IoT Platform And A Device**

<b>Project Title</b>	SmartFarmer – IoT Enabled Smart Farming Application
<b>Team ID</b>	PNT2022TMID25425
<b>Content</b>	Node-RED

## STEP 1:

Login into IBM Cloud and Open your node-red app.

The screenshot shows a web browser window with multiple tabs. The active tab is 'Node-RED : node', displaying the URL 'node-red-zgrak-2022-11-17.eu-gb.mybluemix.net/red/#flow/99402e60734c93d7'. The Node-RED interface is visible, featuring a left sidebar with 'common' and 'function' node categories, a central workspace with a 'Hello Node-RED!' node connected to a 'msg.payload' node, and a right sidebar with 'info' and 'flows' panels. A modal dialog box is centered on the screen, titled 'Welcome to Node-RED 2.2!', with the text 'Let's take a moment to discover the new features in this release.' and a 'Start >' button. The Windows taskbar at the bottom shows the search bar, several application icons, and system information including the date '11/17/2022' and time '1:04 PM'.

## STEP 2:

For IBM Cloud connection you need certain nodes which can be installed by going to Manage Palette and then install required nodes.

The screenshot displays the Node-RED web interface in a browser. The address bar shows the URL: `node-red-zgrak-2022-11-17.eu-gb.mybluemix.net/red/#flow/021d3ff2ab39ad9b`. The interface is divided into several panels:

- Left Panel (Manage Palette):** Contains a search bar and two main categories: **function** and **network**. Under **function**, nodes like `function`, `switch`, `change`, `range`, `template`, `delay`, `trigger`, `filter`, and `OpenWhisk` are visible. Under **network**, `mqtt in` and `mqtt out` are visible.
- Center Panel:** Shows the **User Settings** dialog with a **Nodes** tab. It lists installed and available nodes:
  - node-red** (2.2.2): 44 nodes, in use.
  - node-red-contrib-ibm-db2** (0.3.3): 3 nodes, disable all.
  - node-red-node-cf-cloudant** (0.2.17): 3 nodes, disable all.
  - node-red-node-openwhisk** (0.3.4): 3 nodes, in use.
  - node-red-node-watson** (0.10.3): 0 nodes, in use.
- Right Panel:** Shows the **Flow 1** editor with a search bar and a list of flows and subflows. The current flow is `"021d3ff2ab39ad9b"`.

The bottom of the image shows the Windows taskbar with the search bar and various application icons.

## STEP 3:

Now you can connect your cloud by entering API Credentials and enter device details.

The screenshot displays the Node-RED web interface. On the left, the 'common' nodes palette is visible, including 'inject', 'debug', 'complete', 'catch', 'status', 'link in', 'link call', 'link out', and 'comment'. The 'function' nodes palette is also partially visible. The main workspace shows a flow named 'Flow 1' with an 'IBM IoT' node (labeled 'connected') connected to three function nodes: 'Humidity', 'temp', and 'Soil Moisture'. Below these, there are three more function nodes: 'Motor ON', 'Motor OFF', and 'Motor for 30 minutes', all connected to another 'IBM IoT' node (labeled 'connected'). On the right, the 'Edit ibmiot in node' dialog is open, showing the following configuration:

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

At the bottom of the dialog, there is a radio button for 'Enabled'.

## STEP 4:

Create your flow by drag and drop the elements.

The screenshot displays the Node-RED web interface in a browser window. The address bar shows the URL: `node-red-zgrak-2022-11-17.eu-gb.mybluemix.net/red/`. The interface is divided into several sections:

- Left Panel (Node Palette):** Contains a search bar and two categories of nodes: "speech to text" (green), "text to speech" (green), "tone analyzer v3" (blue), and "dashboard" (light blue). The "dashboard" category includes "button", "dropdown", "switch", and "slider".
- Flow Canvas:** Shows a flow named "Flow 1". It starts with an "IBM IOT" node (blue) on the left. This node connects to four function nodes: "Humidity", "temp", and "Soil Moisture" (all orange). Each function node is connected to a "msg.debug 2" node (green). Below these, three "button" nodes (light blue) are connected to an "IBM IOT" node (blue) on the right.
- Right Panel (Dashboard):** Contains a "dashboard" section with tabs for "Layout", "Site", and "Theme". Below these are "Tabs & Links" with a "Home" link and a "Link 2" link with the URL `http://`.

The bottom of the image shows a Windows taskbar with various application icons and system information, including the date and time: 7:05 PM, 11/17/2022.

## STEP 5:

You can see web ui by adding ui after your url.



