

### DEVELOP THE WEB APPLICATION USING NODE-RED SERVICE

<b>Date</b>	12 November 2022
<b>Team ID</b>	PNT2022TMID05193
<b>Project Name</b>	Smart Waste Management System For Metropolitan Cities
<b>Maximum Marks</b>	8 Marks

**Node-RED** is a [flow-based](#) development tool for [visual programming](#) developed originally by [IBM](#) for wiring together hardware devices, [APIs](#) and [online services](#) as part of the [Internet of Things](#).

Node-RED provides a [web browser](#)-based flow editor, which can be used to create [JavaScript](#) functions. Elements of applications can be saved or shared for re-use. The runtime is built on [Node.js](#). The flows created in Node-RED are stored using [JSON](#). Since version 0.14, [MQTT](#) nodes can make properly configured [TLS](#) connections.

Node-RED

Deploy

filter nodes

Flow 1

common

inject

debug

complete

catch

status

link in

link call

link out

comment

function

switch

Test

msg payload

debug

all nodes

all

11/5/2022, 3:02:28 PM node: f2f2649a.0d0d98  
msg payload : string[15]  
"Hello Node-RED!"

11/5/2022, 3:02:38 PM node: f2f2649a.0d0d98  
msg payload : string[15]  
"Hello Node-RED!"

11/5/2022, 3:02:48 PM node: f2f2649a.0d0d98  
msg payload : string[15]  
"Hello Node-RED!"

11/5/2022, 3:02:58 PM node: f2f2649a.0d0d98  
msg payload : string[15]  
"Hello Node-RED!"

11/5/2022, 3:03:08 PM node: f2f2649a.0d0d98  
msg payload : string[15]  
"Hello Node-RED!"

11/5/2022, 3:03:18 PM node: f2f2649a.0d0d98  
msg payload : string[15]  
"Hello Node-RED!"

11/5/2022, 3:03:28 PM node: f2f2649a.0d0d98  
msg payload : string[15]  
"Hello Node-RED!"

Node-RED

Deploy

filter nodes

Flow 1

tcp in

tcp out

tcp request

udp in

udp out

input

ibmiot in

output

OpenWhisk

ibmiot out

sequence

split

ibmiot IoT

connected

msg payload

debug

all nodes

all

iot-2/type/123/id/123\_1/evt/eventtest/mt/json :  
msg payload : Object  
{ randomNumber: 17, temp: 33, hum: 84 }  
11/5/2022, 3:31:22 PM node: f2f2649a-0d0d98  
iot-2/type/123/id/123\_2/evt/eventtest/mt/json :  
msg payload : Object  
{ randomNumber: 36, temp: 37, hum: 85 }  
11/5/2022, 3:31:22 PM node: f2f2649a-0d0d98  
iot-2/type/123/id/123\_456/evt/eventtest/mt/json :  
msg payload : Object  
{ randomNumber: 33, temp: 43, hum: 85 }  
11/5/2022, 3:31:22 PM node: f2f2649a-0d0d98  
iot-2/type/123/id/123\_3/evt/eventtest/mt/json :  
msg payload : Object  
{ randomNumber: 87, temp: 61, hum: 97 }  
11/5/2022, 3:31:22 PM node: f2f2649a-0d0d98  
iot-2/type/123/id/123\_1/evt/eventtest/mt/json :  
msg payload : Object  
{ randomNumber: 66, temp: 44, hum: 81 }

Node-RED

Deploy

filter nodes

Flow 1

common

inject

debug

complete

catch

status

link in

link call

link out

comment

function

switch

IBM IoT

connected

Temp

Humidity

Moisture

msg payload

debug

all nodes

all

94

11/5/2022, 3:52:00 PM node: f2f2649a.0d0d98  
iot-2/type/123/id/123\_3/evt/eventtest/!mt/json :  
msg payload : number  
81

11/5/2022, 3:52:01 PM node: f2f2649a.0d0d98  
iot-2/type/123/id/123\_2/evt/eventtest/!mt/json :  
msg payload : Object  
{ randomNumber: 19, temp: 13, hum: 100 }

11/5/2022, 3:52:01 PM node: f2f2649a.0d0d98  
iot-2/type/123/id/123\_2/evt/eventtest/!mt/json :  
msg payload : number  
13

11/5/2022, 3:52:01 PM node: f2f2649a.0d0d98  
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msg payload : number  
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11/5/2022, 3:52:01 PM node: f2f2649a.0d0d98  
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IBM IoT  
connected

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Humidity

Moisture

msg payload

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