

DEVELOP THE WEB APPLICATION USING NODE-RED SERVICE

Date	15 November 2022
Team ID	PNT2022TMID18889
Project Name	Smart Waste Management System For Metropolitan Cities
Maximum Marks	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 service](#) 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

function

switch

Test </>

msg.payload

debug

all nodes

all

11/5/2022, 3:02:28 PM node: f20649a.0d0d98
msg.payload : string[15]
"Hello Node-RED!"

11/5/2022, 3:02:38 PM node: f20649a.0d0d98
msg.payload : string[15]
"Hello Node-RED!"

11/5/2022, 3:02:48 PM node: f20649a.0d0d98
msg.payload : string[15]
"Hello Node-RED!"

11/5/2022, 3:02:58 PM node: f20649a.0d0d98
msg.payload : string[15]
"Hello Node-RED!"

11/5/2022, 3:03:08 PM node: f20649a.0d0d98
msg.payload : string[15]
"Hello Node-RED!"

11/5/2022, 3:03:18 PM node: f20649a.0d0d98
msg.payload : string[15]
"Hello Node-RED!"

11/5/2022, 3:03:28 PM node: f20649a.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

mqtt in

output

OpenWhisk

mqtt out

sequence

split

IBM IoT

connected

msg payload

debug

all nodes

all

msg payload: Object

{ randomNumber: 17, temp: 33, hum: 84 }

11/5/2022, 3:31:22 PM node: f2c649a-0d0d98

iot-2/type/123/id/123_2/evt/eventtest/mnt/json

msg payload: Object

{ randomNumber: 36, temp: 37, hum: 65 }

11/5/2022, 3:31:22 PM node: f2c649a-0d0d98

iot-2/type/123/id/123456/evt/eventtest/mnt/json

msg payload: Object

{ randomNumber: 33, temp: 43, hum: 85 }

11/5/2022, 3:31:22 PM node: f2c649a-0d0d98

iot-2/type/123/id/123_3/evt/eventtest/mnt/json

msg payload: Object

{ randomNumber: 87, temp: 61, hum: 97 }

11/5/2022, 3:31:22 PM node: f2c649a-0d0d98

iot-2/type/123/id/123_1/evt/eventtest/mnt/json

msg payload: Object

{ randomNumber: 66, temp: 44, hum: 81 }

Node-RED

Flow 1

common

- inject
- debug
- complete
- catch
- status
- link in
- link call
- link out
- comment

function

- 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/123hd/123_2/evt/eventtest/ind/json
msg.payload : number

81

11/5/2022, 3:52:01 PM node: f2f2649a-0d0d98
iot-2/type/123hd/123_2/evt/eventtest/ind/json
msg.payload : Object

{ randomNumber: 19, temp: 13, hum: 100 }

11/5/2022, 3:52:01 PM node: f2f2649a-0d0d98
iot-2/type/123hd/123_2/evt/eventtest/ind/json
msg.payload : number

13

11/5/2022, 3:52:01 PM node: f2f2649a-0d0d98
iot-2/type/123hd/123_2/evt/eventtest/ind/json
msg.payload : number

100

11/5/2022, 3:52:01 PM node: f2f2649a-0d0d98
iot-2/type/123hd/123_2/evt/eventtest/ind/json
msg.payload : number

19