

DEVELOP THE WEB APPLICATION USING NODE-RED SERVICE

Date	12 November 2022
Team ID	PNT2022TMID19022
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 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

desktop in

output

OpenWhisk

function out

sequence

split

iot to i

connected

msg payload

debug

all nodes

all

11/5/2022, 3:31:22 PM node: f2f2649a-0d0d98
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/eventtest/mnt/json
msg payload: Object
{ randomNumber: 36, temp: 37, hum: 65 }

11/5/2022, 3:31:22 PM node: f2f2649a-0d0d98
iot-2/type/123/id/123456/eventtest/mnt/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/eventtest/mnt/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/eventtest/mnt/json
msg payload: Object
{ randomNumber: 66, temp: 44, hum: 81 }

Node-RED

Deploy

Flow 1

filter nodes

common

function

inject

debug

complete

catch

status

link in

link call

link out

comment

function

switch

IoT IoT

connected

Temp

Humidity

Moisture

msg payload

debug

all nodes

all

94

11/5/2022, 3:52:00 PM node: f2f2649a-0d0d96
iot-2/type/123/id/123_3/evt/venttest/tnl/json
msg payload : number

81

11/5/2022, 3:52:01 PM node: f2f2649a-0d0d96
iot-2/type/123/id/123_2/evt/venttest/tnl/json
msg payload : Object

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

11/5/2022, 3:52:01 PM node: f2f2649a-0d0d96
iot-2/type/123/id/123_2/evt/venttest/tnl/json
msg payload : number

13

11/5/2022, 3:52:01 PM node: f2f2649a-0d0d96
iot-2/type/123/id/123_2/evt/venttest/tnl/json
msg payload : number

100

11/5/2022, 3:52:01 PM node: f2f2649a-0d0d96
iot-2/type/123/id/123_3/evt/venttest/tnl/json
msg payload : number

19

IoT IoT
connected

Temp

Humidity

Moisture

msg payload

debug

all nodes

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19