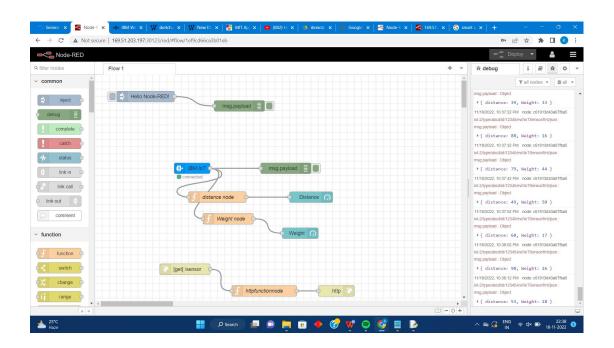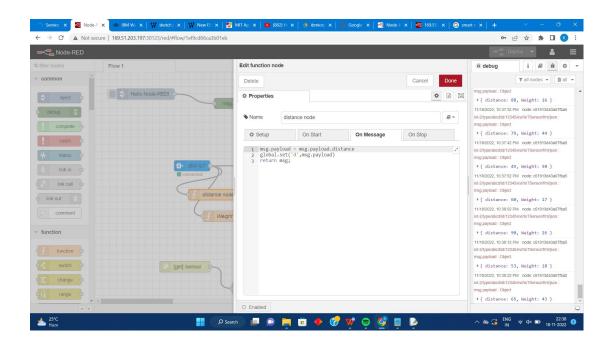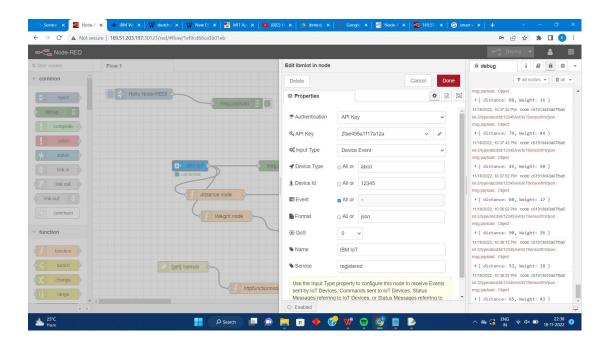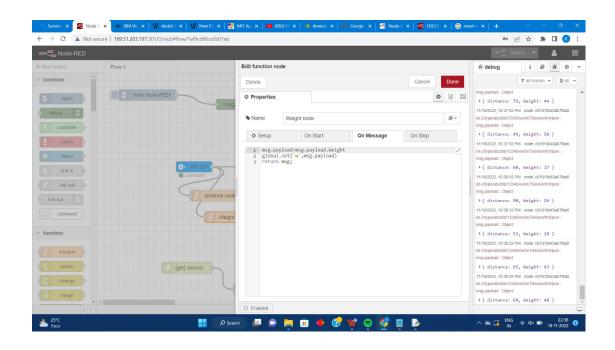## Sprint-3

Date	18-11-2022
Team id	PNT2022TMID48397
Project Name	Smart Waste Management for Metropolitan Cities

INJECTING FLOWS AND DEPLOYING IN NODE-RED:

Screenshot 1 — Edit function node

Node-RED

Flow 1

Hello Node-RED!

Edit function node

Delete   Cancel   Done

⚙ Properties

🏷 Name   distance node

Setup | On Start | On Message | On Stop

```
1  msg.payload = msg.payload.distance
2  global.set('d',msg.payload)
3  return msg;
```

IBM IoT
connected

distance node

Weight

[get] /sensor

☐ Enabled

debug

all nodes | all

msg.payload : Object
▶{ distance: 88, Weight: 16 }
11/18/2022, 10:37:32 PM node: c619l3d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 79, Weight: 44 }
11/18/2022, 10:37:42 PM node: c619l3d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 49, Weight: 50 }
11/18/2022, 10:37:52 PM node: c619l3d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 60, Weight: 17 }
11/18/2022, 10:38:02 PM node: c619l3d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 90, Weight: 26 }
11/18/2022, 10:38:12 PM node: c619l3d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 53, Weight: 18 }
11/18/2022, 10:38:22 PM node: c619l3d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 65, Weight: 43 }

25°C Haze

Screenshot 2 — Edit ibmiot in node

Node-RED

Flow 1

Hello Node-RED!

msg.payload

Edit ibmiot in node

Delete   Cancel   Done

⚙ Properties

Authentication   API Key
API Key   2fae495a1117a12a
Input Type   Device Event
Device Type   ☐ All or   abcd
Device Id   ☐ All or   12345
Event   ☑ All or   +
Format   ☐ All or   json
QoS   0
Name   IBM IoT
Service   registered

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

IBM IoT
connected

distance node

Weight node

[get] /sensor

httpfunctionnod

☐ Enabled

debug

all nodes | all

msg.payload : Object
▶{ distance: 88, Weight: 16 }
11/18/2022, 10:37:32 PM node: c619l3d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 79, Weight: 44 }
11/18/2022, 10:37:42 PM node: c619l3d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 49, Weight: 50 }
11/18/2022, 10:37:52 PM node: c619l3d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 60, Weight: 17 }
11/18/2022, 10:38:02 PM node: c619l3d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 90, Weight: 26 }
11/18/2022, 10:38:12 PM node: c619l3d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 53, Weight: 18 }
11/18/2022, 10:38:22 PM node: c619l3d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
▶{ distance: 65, Weight: 43 }

25°C Haze

Not secure | 169.51.203.197:30123/red/#flow/1ef9cd66ca3b01eb

Node-RED

Deploy

Flow 1

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

function
- function
- switch
- change
- range

msg.payload

IBM IoT
connected

[get] /control → http

command function node

debug | all nodes | all

```
msg.payload : Object
▶ { distance: 90, Weight: 26 }
11/18/2022, 10:38:12 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶ { distance: 53, Weight: 18 }
11/18/2022, 10:38:22 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶ { distance: 65, Weight: 43 }
11/18/2022, 10:38:32 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶ { distance: 64, Weight: 48 }
11/18/2022, 10:38:42 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶ { distance: 100, Weight: 33 }
11/18/2022, 10:38:52 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶ { distance: 70, Weight: 11 }
11/18/2022, 10:39:02 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶ { distance: 79, Weight: 38 }
```

25°C Haze

Edit function node

Delete | Cancel | Done

⚙ Properties

🏷 Name: httpfunctionnode

Setup | On Start | **On Message** | On Stop

```
1  msg.payload={"dist":global.get("d"),"weight":global.get("w")}
2  return msg;
```

○ Enabled

IBM IoT
connected

distance node

Weight

[get] /sensor

debug | all nodes | all

```
msg.payload : Object
▶ { distance: 60, Weight: 17 }
11/18/2022, 10:38:02 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶ { distance: 90, Weight: 26 }
11/18/2022, 10:38:12 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶ { distance: 53, Weight: 18 }
11/18/2022, 10:38:22 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶ { distance: 65, Weight: 43 }
11/18/2022, 10:38:32 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶ { distance: 64, Weight: 48 }
11/18/2022, 10:38:42 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶ { distance: 100, Weight: 33 }
11/18/2022, 10:38:52 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶ { distance: 70, Weight: 11 }
```

Edit http in node

Delete   Cancel   Done

⚙ Properties

▤ Method   GET
⊕ URL   /sensor
🏷 Name   Name

○ Enabled

debug
▼ all nodes   🗑 all

msg.payload : Object
▸{ distance: 60, Weight: 17 }
11/18/2022, 10:38:02 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▸{ distance: 90, Weight: 26 }
11/18/2022, 10:38:12 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▸{ distance: 53, Weight: 18 }
11/18/2022, 10:38:22 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▸{ distance: 65, Weight: 43 }
11/18/2022, 10:38:32 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▸{ distance: 64, Weight: 48 }
11/18/2022, 10:38:42 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▸{ distance: 100, Weight: 33 }
11/18/2022, 10:38:52 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▸{ distance: 70, Weight: 11 }

Node-RED — Flow 1

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

function
function
switch
change
range

IBM IoT — connected — msg.payload
distance node
Weight node
[get] /sensor
httpfunctionnode

25°C Haze   ENG IN   22:38 18-11-2022

Edit gauge node

Delete   Cancel   Done

⚙ Properties

▤ Group   [weather] monitoring
▣ Size   auto
▤ Type   Level
Ⅰ Label   Weight
Ⅰ Value format {{value}}
Ⅰ Units   kg
Range   min 0   max 100
</> Class   Optional CSS class name(s) for widget
🏷 Name

○ Enabled

debug
▼ all nodes   🗑 all

msg.payload : Object
▸{ distance: 49, Weight: 50 }
11/18/2022, 10:37:52 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▸{ distance: 60, Weight: 17 }
11/18/2022, 10:38:02 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▸{ distance: 90, Weight: 26 }
11/18/2022, 10:38:12 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▸{ distance: 53, Weight: 18 }
11/18/2022, 10:38:22 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▸{ distance: 65, Weight: 43 }
11/18/2022, 10:38:32 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▸{ distance: 64, Weight: 48 }
11/18/2022, 10:38:42 PM node: c61913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▸{ distance: 100, Weight: 33 }

Node-RED — Flow 1

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

function
function
switch
change
range

Hello Node-RED!   msg.payload
IBM IoT — connected — msg.p
distance node
Weight node
[get] /sensor
httpfunctionnode

25°C Haze   ENG IN   22:38 18-11-2022

Top window — Node-RED editor

Node-RED

Not secure | 169.51.203.197:30123/red/#flow/1ef9cd66ca3b01eb

Deploy

filter nodes

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

function
- function
- switch
- change
- range

Flow 1

Hello Node-RED!

msg.payload

IBM IoT
connected

msg.p

distance node

Weight node

[get] /sensor

httpfunctionnode

Edit gauge node

Delete   Cancel   Done

⚙ Properties

▦ Group	[weather] monitoring
Size	auto
☰ Type	Level
Label	Distance
Value format	{{value}}
Units	cm
Range	min 0 max 100
</> Class	Optional CSS class name(s) for widget
🏷 Name	

○ Enabled

debug — all nodes

msg.payload : Object
▶{ distance: 49, Weight: 50 }
11/18/2022, 10:37:52 PM node: c51913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 60, Weight: 17 }
11/18/2022, 10:38:02 PM node: c51913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 90, Weight: 26 }
11/18/2022, 10:38:12 PM node: c51913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 53, Weight: 18 }
11/18/2022, 10:38:22 PM node: c51913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 65, Weight: 43 }
11/18/2022, 10:38:32 PM node: c51913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 64, Weight: 48 }
11/18/2022, 10:38:42 PM node: c51913d43a07fba5
iot-2/type/abcd/id/12345/evt/IoTSensor/fmt/json :
msg.payload : Object
▶{ distance: 100, Weight: 33 }

25°C Haze   Search   ENG IN   22:38 18-11-2022

Bottom window — browser

Not secure | 169.51.203.197:30123/sensor

{"dist":54,"weight":11}

25°C Haze   Search   ENG IN   22:40 18-11-2022