

Date	14-11-2022	
Team ID	PNT2022TMID17542	
Project name	Signs with smart connectivity for better road safety	
Maximum marks	20 marks	
Sprint-2	US-I	Configure the connection security and create API keys that are used in the Node-RED service for accessing the IBM IoT Platform.
Sprint-2	US-2	Create a Node-RED service.

US-I Configure the connection security and create API keys that are used in the Node-red service for accessing the IBM IOT platform

IBM Watson IoT Platform

412719106014@smartinternz.com
ID: fvh76j

Browse IBM Cloud Apps

The API key has been added.

Authentication tokens are non-recoverable. If you misplace this token, you will need to re-register the API key to generate a new authentication token.

Generated Details

API Key

a-fvh76j-j6zjbkmebe

Authentication Token

pXEZxqoWhsWHXxyFVx

⚠

Make a note of the generated authentication token. Lost authentication tokens cannot be recovered. If you lose the token, you must reregister the API to generate a new token.

API Key Information

Description

-

Role

Visualization Application

Expires

Never

1 Simulation running

US-2 Create a Node-red service

WhatsApp

Your Platform temp...

IBM

Service Details - IB...

IBM Watson IoT Pl...

Node-RED

127.0.0.1:1880/#flow/ca7873236f11c525

mail

YouTube

Maps

Google

Meet - sbg-rxqq-gvc

Refresh

Meet

Zoho Simple and C...

New Tab

Your Platform temp...

IBM

Untitled mural - IOT

Node-RED

Deploy

nodes

Flow 1

IBM IoT

debug 1

inject

debug

complete

catch

status

link in

link call

link out

comment

action

debug

all nodes

all

11/14/2022, 4:54:07 PM node: debug 1

iot-2/type/alert_distance/id/12345/evt/event_1/fmt/json :

msg.payload - Object

{ alert_distance: 5, temp: 81, hum: 91, North: 18, South: 82 ... }

11/14/2022, 4:54:07 PM node: msg.payload

iot-2/type/alert_distance/id/12345/evt/event_1/fmt/json :

msg.payload - Object

{ alert_distance: 5, temp: 81, hum: 91, North: 18, South: 82 ... }

11/14/2022, 4:54:08 PM node: msg.payload

iot-2/type/alert_distance/id/12345/evt/event_1/fmt/json :

msg.payload - number

81

11/14/2022, 4:54:09 PM node: msg.payload

iot-2/type/alert_distance/id/12345/evt/event_1/fmt/json :

msg.payload - undefined

undefined

11/14/2022, 4:54:10 PM node: msg.payload

Reset zoom (ctrl-0)

Fig: Monitoring the sensor values- temperature, humidity, rain.

The screenshot shows the Node-RED web interface. On the left, a flow named 'Flow 1' contains an 'IBM IoT' node (connected) followed by three function nodes labeled 'Temperature', 'Humidity', and 'Rain'. The 'Edit button node' panel is open, showing the following properties:

- Group: [Smart Road Safety] [weather]road s
- Size: auto
- Icon: optional icon
- Label: Temperature
- Tooltip: optional tooltip
- Color: optional text/icon color
- Background: optional background color
- When clicked, send: ☐ Enabled

The debug console on the right shows the following messages:

```
11/14/2022, 4:54:07 PM node: debug 1
iot-2/type/alert_distance/id/12345/evt/event_1/fmt/json :
msg.payload : Object
  { alert_distance: 5, temp: 81, hum: 91, North: 18, South: 82 ... }

11/14/2022, 4:54:07 PM node: msg.payload
iot-2/type/alert_distance/id/12345/evt/event_1/fmt/json :
msg.payload : Object
  { alert_distance: 5, temp: 81, hum: 91, North: 18, South: 82 ... }

11/14/2022, 4:54:08 PM node: msg.payload
iot-2/type/alert_distance/id/12345/evt/event_1/fmt/json :
msg.payload : number
81

11/14/2022, 4:54:09 PM node: msg.payload
iot-2/type/alert_distance/id/12345/evt/event_1/fmt/json :
msg.payload : undefined
undefined

11/14/2022, 4:54:10 PM node: msg.payload
```

The screenshot shows the Node-RED web interface. On the left, a flow named 'Flow 1' contains an 'IBM IoT' node (connected) followed by three function nodes labeled 'Temperature', 'Humidity', and 'randomNumber'. The 'Edit chart node' panel is open, showing the following properties:

- Group: [Smart Road Safety] [weather]road s
- Size: auto
- Label: chart
- Type: Line chart (enlarge points: ☐)
- X-axis: last 5 minute: OR 1000 points
- X-axis Label: HH:mm:ss (as UTC: ☐)
- Y-axis: min max
- Legend: None Interpolate linear
- Enabled: ☐

The debug console on the right shows the following messages:

```
11/14/2022, 4:54:07 PM
node: debug 1
iot-2/type/alert_distance/id/12345/evt/event_1/fmt/json :
msg.payload : Object
  { alert_distance: 5, temp: 81, hum: 91, North: 18, South: 82 ... }

11/14/2022, 4:54:07 PM
node: msg.payload
iot-2/type/alert_distance/id/12345/evt/event_1/fmt/json :
msg.payload : Object
  { alert_distance: 5, temp: 81, hum: 91, North: 18, South: 82 ... }
```

Node-RED

Deploy

filter nodes

Flow 1

exec

filter

network

mqtt in

mqtt out

http in

http response

http request

websocket in

websocket out

tcp in

tcp out

tcp request

udp in

udp out

input

inject

output

debug console

comment

debug 1

temperature

humidity

rain

light on

light off

msg.payload

debug 2

debug

view event, show json - msg.payload - Object

{ temperature: 4, humidity: 65, rain: 47 }

11/7/2022, 8:21:45 PM node debug 1

on

21typePNT2022TMD474850PNT2022TMD474850

view event, show json - msg.payload - Object

{ temperature: 41, humidity: 44, rain: 97 }

11/7/2022, 8:21:48 PM node debug 1

on

21typePNT2022TMD474850PNT2022TMD474850

view event, show json - msg.payload - Object

{ temperature: 83, humidity: 96, rain: 5 }

11/7/2022, 8:21:51 PM node debug 1

on

21typePNT2022TMD474850PNT2022TMD474850

view event, show json - msg.payload - Object

{ temperature: 91, humidity: 91, rain: 11 }

11/7/2022, 8:21:54 PM node debug 1

on

21typePNT2022TMD474850PNT2022TMD474850

view event, show json - msg.payload - Object

{ temperature: 77, humidity: 35, rain: 83 }

11/7/2022, 8:21:57 PM node debug 1

on

21typePNT2022TMD474850PNT2022TMD474850

view event, show json - msg.payload - Object

{ temperature: 2, humidity: 42, rain: 64 }

11/7/2022, 8:22:00 PM node debug 1

on

21typePNT2022TMD474850PNT2022TMD474850

view event, show json - msg.payload - Object

{ temperature: 8, humidity: 82, rain: 47 }

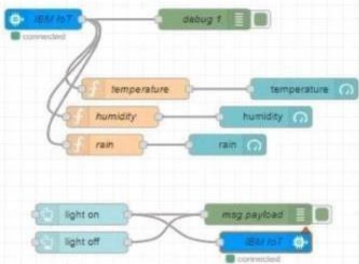


Fig: output from recent events



MIT APP INVERTER TO DESIGN THE APP:

MIT App Inventor
Director Hal
Abetsonhasdedic
atedhiscareer
App Inventories Cloud-based: <httpswappinventor.mit.edu>
MIT App Inventor
Get Started

Welcome to App Inventor 2

1. To go directly to designing
and budding apps With
Inventor

App Inventor for
Android <

2.App Inventor

Computer
program

