

Sprint-2

Date	31 October 2022
Team ID	PNT2022TMID27105
Project Name	Project - SmartFarmer-IoT Enabled Smart Farming Application

create device in the iot watson platform:

The screenshot displays the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. The 'Browse' tab is active, showing the 'Browse Devices' page. A sidebar on the left contains various icons for navigation. The main content area features a 'Browse Devices' section with 'All Devices' and 'Diagnose' buttons. Below this, a table lists the devices. The table has columns for Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location. A single device is listed with ID 12345, status 'Disconnected', and device type 'sudharshanlaptop'. The table also includes a search bar, a 'Device Simulator' toggle, and a '0 Simulations running' status. The bottom of the page shows a Windows taskbar with various application icons and system tray information.

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
12345	Disconnected	sudharshanlaptop	Device	Oct 30, 2022 11:52 AM	

NODE RED CONNECTION DETAILS: IBM WATSON NODE:

The screenshot shows the Node-RED web interface in a browser. The main workspace displays a flow named 'smartfarming'. The flow starts with an 'IBM IoT' node (labeled 'connected') which connects to three function nodes: 'Soil moisture', 'humidity', and 'Temperature'. These function nodes connect to a 'switch' node. The 'switch' node has two outputs: one leading to an 'http request' node (labeled 'requesting') and another leading to a '[get] /data' node. The 'http request' node connects to a 'data' node, which then connects to a 'Motor on' node. The '[get] /data' node connects to a 'Motor off' node. The 'Motor on' and 'Motor off' nodes both connect to a 'gauge' node. The 'gauge' node is currently being edited, with the 'Edit gauge node' dialog box open. The dialog shows the following properties: Group: '[SOIL MOISTURE] smartfarming', Size: 'auto', Type: 'Gauge', Label: 'temperature', Value format: '{{value}}', Units: '°C', Range: 'min 0 max 100', Colour gradient: a gradient from green to yellow to red, Sectors: '0 optional optional 100', Class: 'Optional CSS class name(s) for widget', and Name: (empty). The 'debug' console on the right shows a series of messages, all of which are 'No url specified'.

GET COMMAND NODE:

The screenshot shows the Node-RED web interface in a browser. The main workspace displays a flow named 'smartfarming'. The flow starts with a 'switch' node. The 'switch' node has two outputs: one leading to an 'http request' node (labeled 'requesting') and another leading to a '[get] /data' node. The 'http request' node connects to a 'data' node, which then connects to a 'Motor on' node. The '[get] /data' node connects to a 'Motor off' node. The 'Motor on' and 'Motor off' nodes both connect to a '[get] /command' node. The '[get] /command' node is currently being edited, with the 'Edit http in node' dialog box open. The dialog shows the following properties: Method: 'GET', URL: '/command', and Name: 'Name'. The 'debug' console on the right shows a series of messages, all of which are 'No url specified'.

ANOTHER IBM IOT NODE:

Node-RED interface showing a flow named "smartfarming". The flow includes a switch node, an http request node, a [get]/data node, a data node, a Motor on node, a Motor off node, and a [get]/command node. The "Edit ibmiot out node" dialog is open, showing properties for an IBM IoT node. The properties include:

- Authentication: API Key
- API Key: newapi
- Output Type: Device Command
- Device Type: sudharshanlaptop
- Device Id: 12345
- Command Type: cmd
- Format: json
- Data: data
- QoS: 0
- Name: IBM IoT
- Service: registered

The debug console shows multiple messages with the error "No url specified".

FUNCTION NODES:

Node-RED interface showing a flow named "smartfarming". The flow includes a switch node, an http request node, a [get]/data node, a data node, a Motor on node, a Motor off node, and a [get]/command node. The "Edit function node" dialog is open, showing properties for a function node. The properties include:

- Name: Temperature
- Setup: On Start, On Message, On Stop

The function code is:

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

The debug console shows multiple messages with the error "No url specified".

Node-RED : node-red x Node-RED Dashboard x MIT App Inventor x WhatsApp x sprint development.p x IBM x IBM Watson IoT Plat x

node-red-vqrml-2022-11-07-eu-gb.mybluemix.net/red/#flow/adb7c9a940d39755

Node-RED

Flow 1 smartfarming

common

function

IBM IoT

connected

Soil

hum

Temp

switch

http

[get] /data

data

Motor on

Motor off

25°C Raining now

12:55 11-11-2022

node-red-vqrml-2022-11-07-eu-gb.mybluemix.net/red/#flow/adb7c9a940d39755

node-red-vqrml-2022-11-07-eu-gb.mybluemix.net/red/#flow/adb7c9a940d39755

Node-RED

Flow 1 smartfarming

common

function

IBM IoT

connected

Soil

hum

Temp

switch

http

[get] /data

data

Motor on

Motor off

25°C Raining now

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node-red-vqrml-2022-11-07-eu-gb.mybluemix.net/red/#flow/adb7c9a940d39755

Edit function node

Properties

Name humidity

Setup On Start On Message On Stop

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

debug

all nodes

11/11/2022, 12:54:03 PM node: e14b95c6fa1070b0 msg: string[16] "No url specified"

11/11/2022, 12:54:07 PM node: e14b95c6fa1070b0 msg: string[16] "No url specified"

11/11/2022, 12:54:39 PM node: e14b95c6fa1070b0 msg: string[16] "No url specified"

11/11/2022, 12:54:46 PM node: e14b95c6fa1070b0 msg: string[16] "No url specified"

11/11/2022, 12:55:08 PM node: e14b95c6fa1070b0 msg: string[16] "No url specified"

11/11/2022, 12:55:18 PM node: e14b95c6fa1070b0 msg: string[16] "No url specified"

11/11/2022, 12:55:25 PM node: e14b95c6fa1070b0 msg: string[16] "No url specified"

11/11/2022, 12:55:27 PM node: e14b95c6fa1070b0 msg: string[16] "No url specified"

Node-RED

Flow 1 smartfarming

Edit function node

Properties

Name: Soil moisture

Setup On Start On Message On Stop

```

1 global.set('moist', msg.payload.soil_moisture)
2 msg.payload=msg.payload.soil_moisture
3 return msg;

```

debug

11/11/2022, 12:53:05 PM node: e14b95c6fa1070b0 msg: string[16]
 "No url specified"
 11/11/2022, 12:53:25 PM node: e14b95c6fa1070b0 msg: string[16]
 "No url specified"
 11/11/2022, 12:54:03 PM node: e14b95c6fa1070b0 msg: string[16]
 "No url specified"
 11/11/2022, 12:54:07 PM node: e14b95c6fa1070b0 msg: string[16]
 "No url specified"
 11/11/2022, 12:54:39 PM node: e14b95c6fa1070b0 msg: string[16]
 "No url specified"
 11/11/2022, 12:54:46 PM node: e14b95c6fa1070b0 msg: string[16]
 "No url specified"
 11/11/2022, 12:55:08 PM node: e14b95c6fa1070b0 msg: string[16]
 "No url specified"
 11/11/2022, 12:55:18 PM node: e14b95c6fa1070b0 msg: string[16]
 "No url specified"

Node-RED

Flow 1 smartfarming

Edit ibmiot node

Properties

Authentication: API Key

API Key: newapi

Input Type: Device Event

Device Type: All or +

Device Id: All or device id e.g. ab12cd231a21

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

debug

11/11/2022, 12:52:55 PM node: e14b95c6fa1070b0 msg: string[16]
 "No url specified"
 11/11/2022, 12:53:05 PM node: e14b95c6fa1070b0 msg: string[16]
 "No url specified"
 11/11/2022, 12:53:25 PM node: e14b95c6fa1070b0 msg: string[16]
 "No url specified"
 11/11/2022, 12:54:03 PM node: e14b95c6fa1070b0 msg: string[16]
 "No url specified"
 11/11/2022, 12:54:07 PM node: e14b95c6fa1070b0 msg: string[16]
 "No url specified"
 11/11/2022, 12:54:39 PM node: e14b95c6fa1070b0 msg: string[16]
 "No url specified"
 11/11/2022, 12:54:46 PM node: e14b95c6fa1070b0 msg: string[16]
 "No url specified"
 11/11/2022, 12:55:08 PM node: e14b95c6fa1070b0 msg: string[16]
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