

ECE 3502 – IoT Domain Analyst

Week 3

Name-Tanmay Mahajan

Reg. no.-19bce1735

Prof.- Dr. Sriramalakshmi P

Aim: Create a Automation Systems using node-red and Thingsboard

Procedure:

Step 1) Create Thingsboard Account.

Step 2) Create Device.

Step 3) Get Access Key

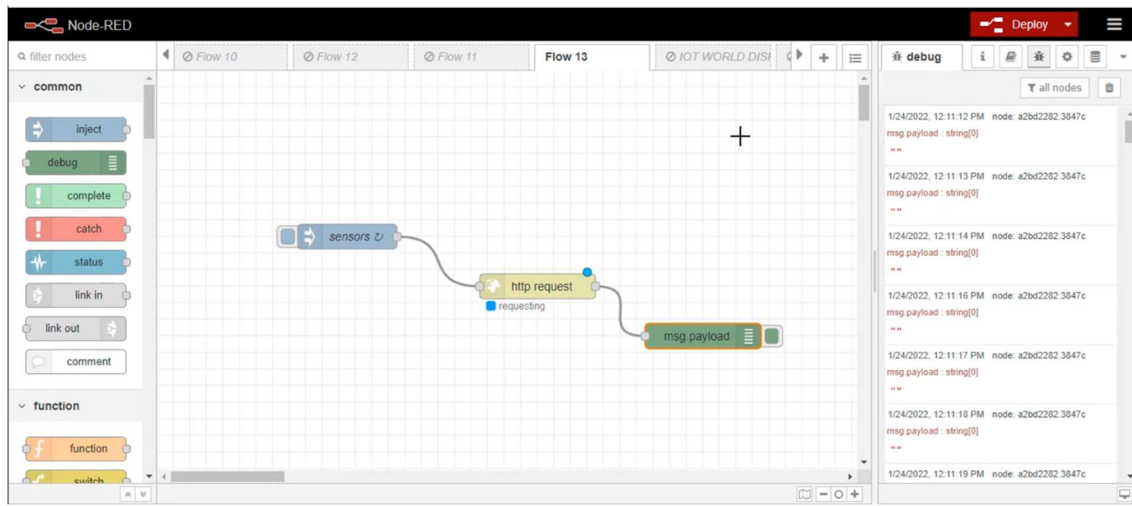
Step 4) Create Node Red Flow

Step 5) Deploy the Node and Click Inject Node

Step 6) Track the telemetry

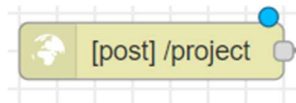
Step 7) Add widgets to Dashboard.

Screenshots of Flow:



Node:

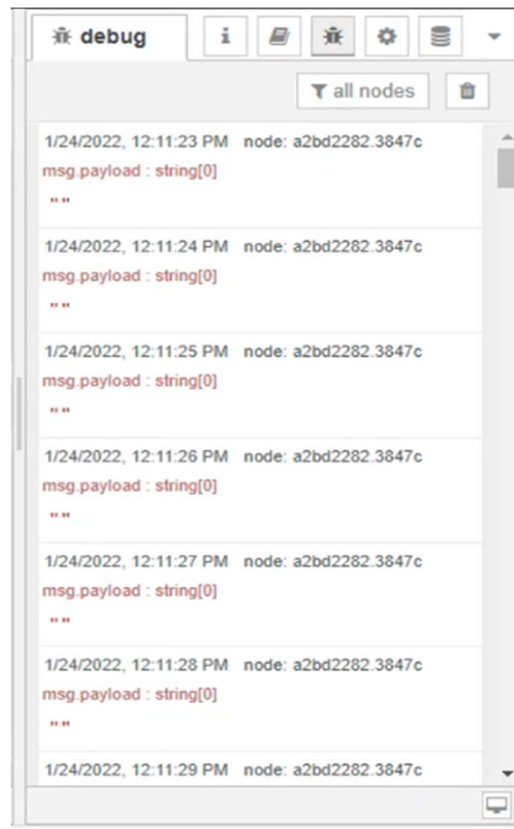
Http Node:



Debug Node:



Debug Window-



Node Property Window

Edit http request node

Delete Cancel Done

⚙ Properties

Method POST

URL <http://demo.thingsboard.io/api/v1/nlTRGR8n2lvr>

☐ Enable secure (SSL/TLS) connection

☒ Use authentication

Type basic authentication

Username

Password

☐ Enable connection keep-alive

☐ Use proxy

Enabled

Edit inject node

Delete

Cancel

Done

⚙ Properties

📌 Name

sensors

≡ msg. payload

=

▼ {}

Temperature":21,"CO2":9,"humidity":...

✕

≡ msg. topic

=

▼ a_z

✕

+ add

☒ Inject once after

0.1

seconds, then

🔄 Repeat

interval

▼

every

1

▼

seconds

▼

☐ Enabled

Edit inject node > JSON editor

Cancel

Done

Edit JSON

Visual editor

format JSON

1 {

2 "Temperature": 21,

3 "CO2": 9,

4 "humidity": 8

5 }

I

Output-

Humidity sensor

Device details

?

✕

<

Details

Attributes

Latest telemetry

Alarms

Events

Relations

>

Open details page

Make device public

Assign to customer

Manage credentials

Delete device

📄

Copy device Id

📄

Copy access token

Name

Humidity sensor

Device profile

default

Label

humidity

Assigned firmware

1 device selected

<div>☑</div>	Created time ↓	Name	Device profile	Label	Customer	Public	Is gateway	
<div>☑</div>	2022-01-24 12:02:59	Humidity sensor	default	humidity		<div><input type="checkbox"/></div>	<div><input type="checkbox"/></div>	<div>🔗</div> <div>👤</div> <div>🔑</div> <div>🔒</div> <div>🔄</div> <div>🗑</div>
<div><input type="checkbox"/></div>	2022-01-24 09:16:03	home automation	default	climate		<div><input type="checkbox"/></div>	<div><input type="checkbox"/></div>	<div>🔗</div> <div>👤</div> <div>🔑</div> <div>🔒</div> <div>🔄</div> <div>🗑</div>
<div><input type="checkbox"/></div>	2022-01-24 08:55:00	Charging Port 2	Charging port		Demo Customer	<div><input type="checkbox"/></div>	<div><input type="checkbox"/></div>	<div>🔗</div> <div>👤</div> <div>🔑</div> <div>🔒</div> <div>🔄</div> <div>🗑</div>
<div><input type="checkbox"/></div>	2022-01-24 08:55:00	Charging Port 1	Charging port		Demo Customer	<div><input type="checkbox"/></div>	<div><input type="checkbox"/></div>	<div>🔗</div> <div>👤</div> <div>🔑</div> <div>🔒</div> <div>🔄</div> <div>🗑</div>
<div><input type="checkbox"/></div>	2022-01-24 08:55:00	Air Quality Sensor T1	Air Quality Sensor			<div><input type="checkbox"/></div>	<div><input type="checkbox"/></div>	<div>🔗</div> <div>👤</div> <div>🔑</div> <div>🔒</div> <div>🔄</div> <div>🗑</div>
<div><input type="checkbox"/></div>	2022-01-24 08:55:00	Air Quality Sensor C1	Air Quality Sensor		Demo Customer	<div><input type="checkbox"/></div>	<div><input type="checkbox"/></div>	<div>🔗</div> <div>👤</div> <div>🔑</div> <div>🔒</div> <div>🔄</div> <div>🗑</div>

Items per page: 10

1 - 10 of 19

<

<

>

>

1 device selected

Created time ↓

Name

Device pro

☐

2022-01-24 12:02:59

Humidity sensor

default

☒

2022-01-24 09:16:03

home automation

default

☐

2022-01-24 08:55:00

Charging Port 2

Charging

☐

2022-01-24 08:55:00

Charging Port 1

Charging

☐

2022-01-24 08:55:00

Air Quality Sensor T1

Air Quality Sensor

☐

2022-01-24 08:55:00

Air Quality Sensor C1

Air Quality Sensor

home automation

Device details

?

×

<

Details

Attributes

Latest telemetry

Alarms

Events

Relations

>

Latest telemetry

☐

Last update time

Key ↑

Value

☐

2022-01-24 12:08:57

CO2

9

☐

2022-01-24 12:08:57

humidity

8

☐

2022-01-24 12:08:57

Temperature

21

Items per page: 10

1 - 3 of 3

<

<

>

>

home automation

Device details

?

×

<

Details

Attributes

Latest telemetry

Alarms

Events

Relations

>

Current bundle

Cards

System ▼

Add to dashboard

×

Timeseries table

🕒

Realtime - last minute

Timestamp ↓

CO2

2022-01-24 12:12:16

9

2022-01-24 12:12:15

9

2022-01-24 12:12:14

9

2022-01-24 12:12:13

9

2022-01-24 12:12:12

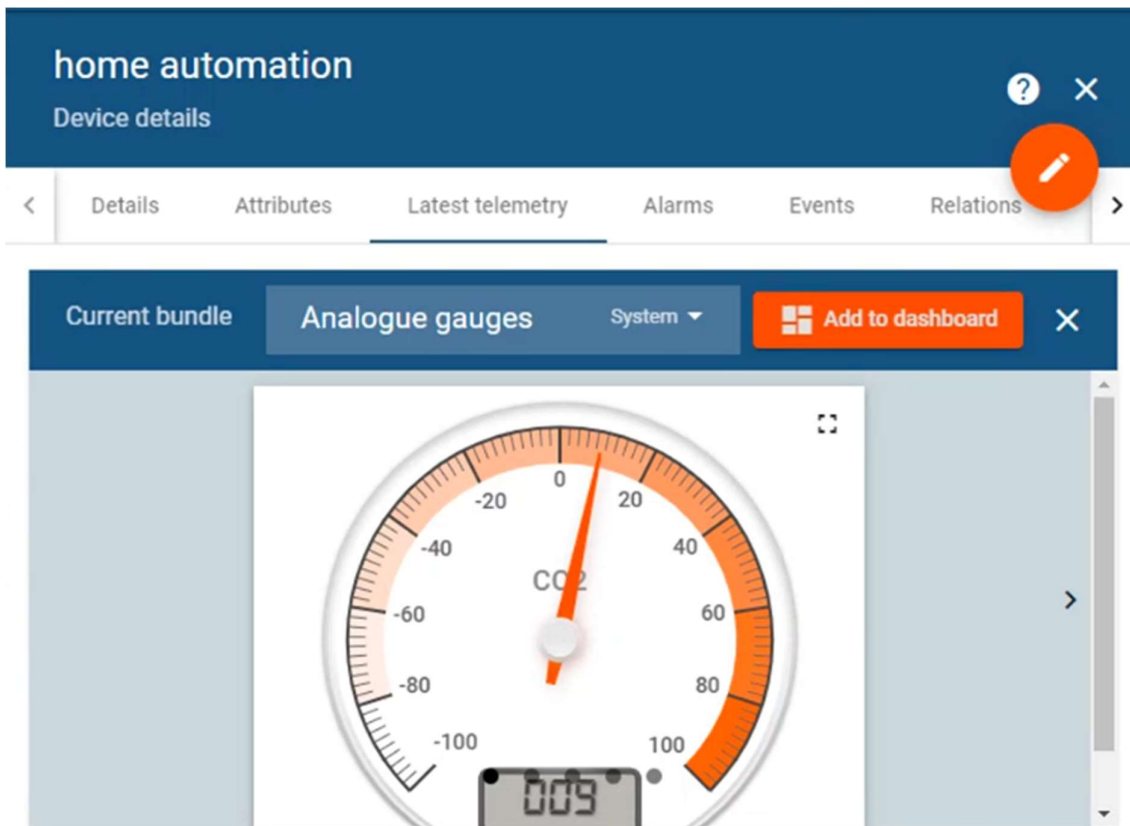
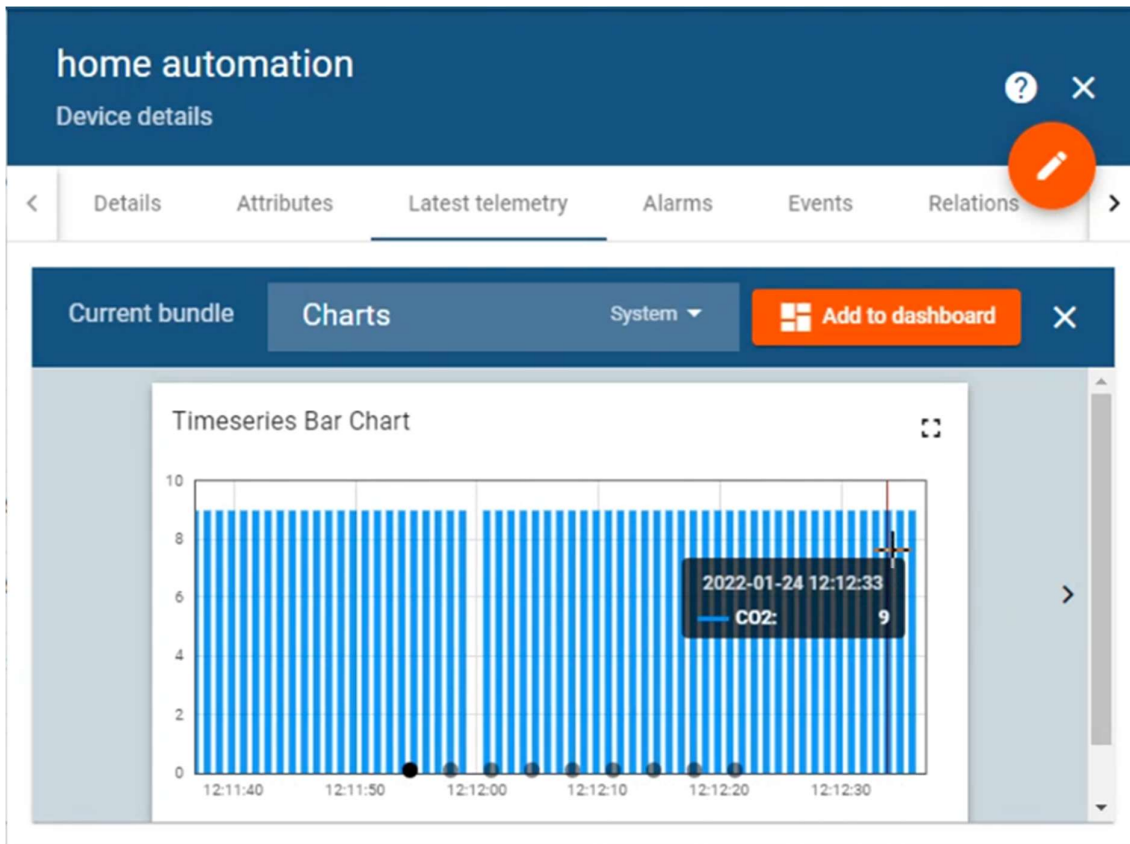
9

2022-01-24 12:12:11

9

2022-01-24 12:12:10

9



home automation

Device details



Details

Attributes

Latest telemetry

Alarms

Events

Relations



Current bundle

Digital gauges

System



Add to dashboard



800

60

-60

humidity