# Delivery Sprint-2

## Industry-Specific Intelligent Fire Management System

**TEAM ID: PNT2022TMID45189**

Create a smart fire management system that includes a Gas sensor, Flame sensor and temperature sensors to detect any changes in the environment. Based on the temperature readings and if any Gases are present the exhaust fans are powered ON. If any flame is detected the sprinklers will be switched on automatically. Emergency alerts are notified to the authorities and Fire station.

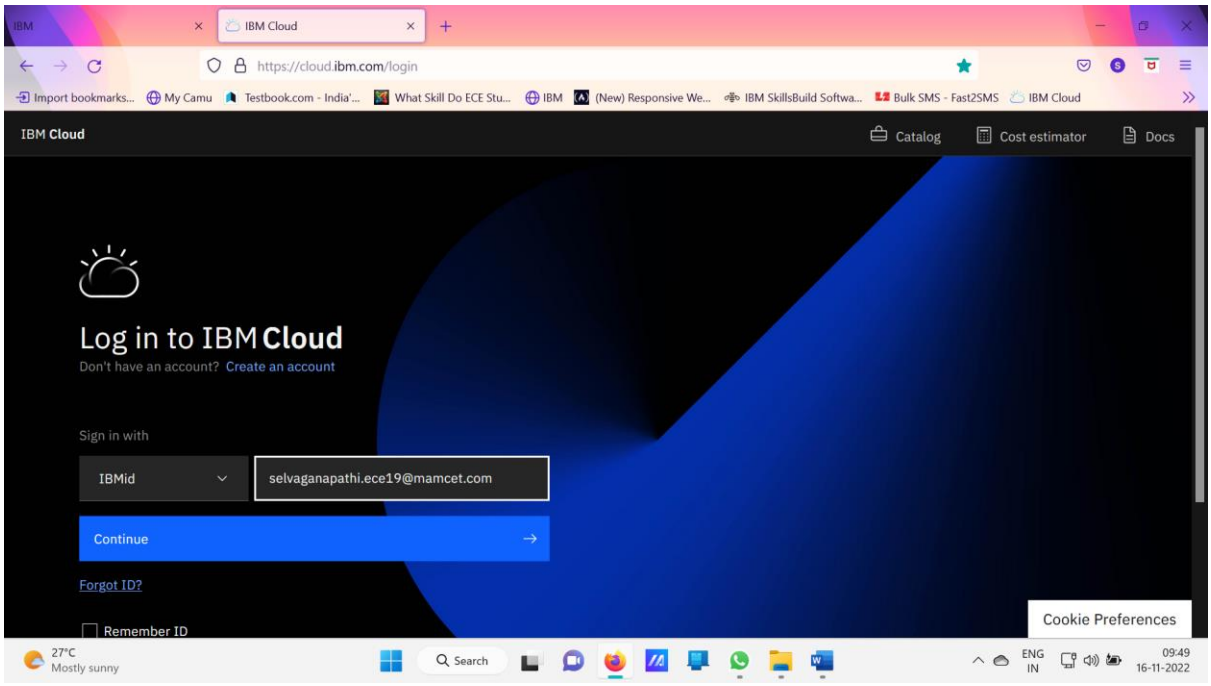
## Sprint-2

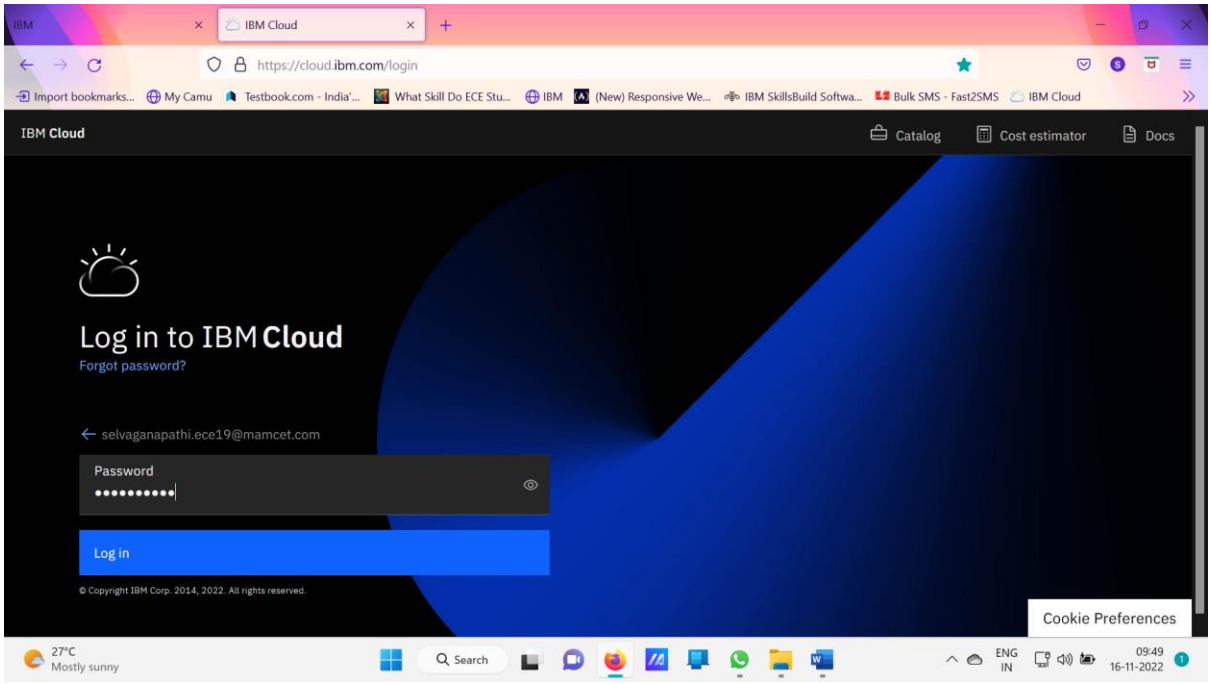
Software (Create device in the IoT Watson platform, workflow for IoT scenarios using Node-Red)

## STEPS

1) Create a IBM Cloud account using the instructions given by tutorial instructors / watching the manual in the Drive Documents.
2) Then Login to the IBM Cloud and it open to the Dashboard.
3) Create a IoT Service and save the individual credential shown in the display.
4) Launch the IBM IoT Watson Platform and Create a new device and save the credential for future references.
5) Add new device and code the program for the module / project and save it.
6) Finally Simulate using the device simulator and create the board to show the data's in output of the eventflow.
7) Then create a Node-Red flow using the required credential like shown in the tutorial as a reference.
8) Connect the Node-Red with IBM IoT Watson with the required API Key information and deploy the Node-Red for the Data to show.

# THE PROCESS


IBM Cloud
https://cloud.ibm.com/login
IBM Cloud
Catalog
Cost estimator
Docs
Log in to IBM Cloud
Don't have an account? Create an account
Sign in with
IBMid
selvaganapathi.ece19@mamcet.com
Continue
Forgot ID?
Remember ID
Cookie Preferences
27°C
Mostly sunny
Search
ENG
IN
09:49
16-11-2022


IBM Cloud
https://cloud.ibm.com/login
IBM Cloud
Catalog
Cost estimator
Docs
Log in to IBM Cloud
Forgot password?
selvaganapathi.ece19@mamcet.com
Password
Log in
© Copyright IBM Corp. 2014, 2022. All rights reserved.
Cookie Preferences
27°C
Mostly sunny
Search
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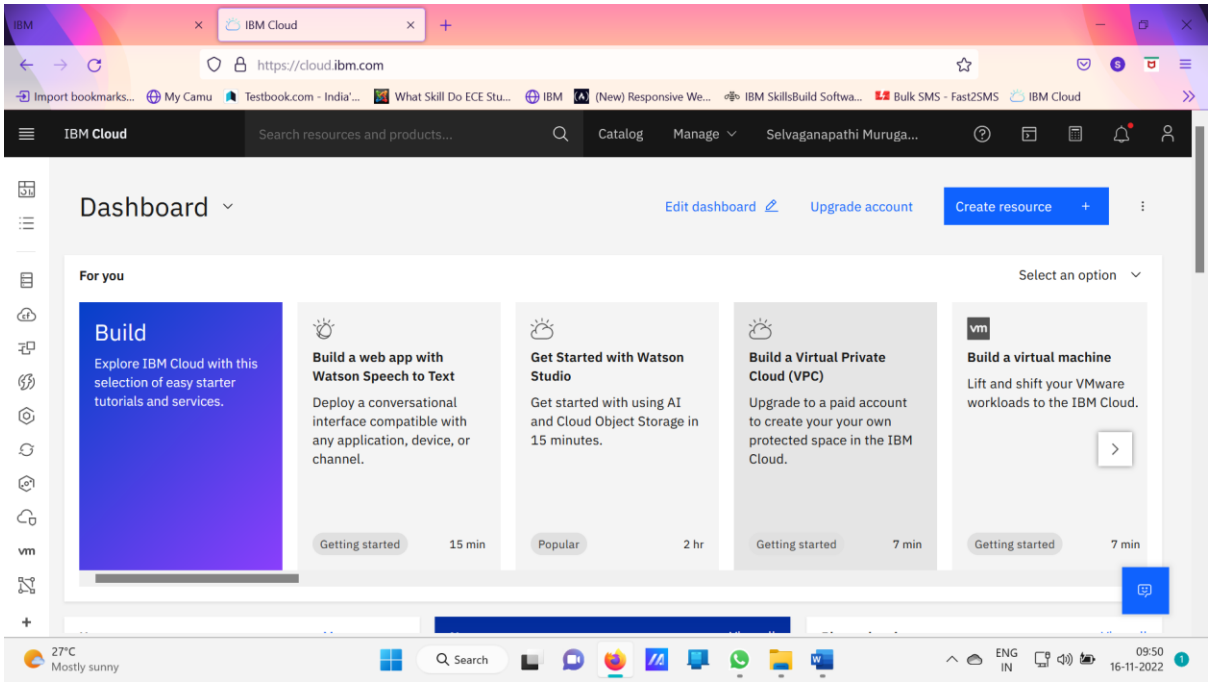
09:49
16-11-2022


IBM Cloud
https://cloud.ibm.com
IBM Cloud
Search resources and products...
Catalog
Manage
Selvaganapathi Muruga...
Dashboard
Edit dashboard
Upgrade account
Create resource
For you
Select an option
Build
Explore IBM Cloud with this selection of easy starter tutorials and services.
Build a web app with Watson Speech to Text
Deploy a conversational interface compatible with any application, device, or channel.
Getting started
15 min
Get Started with Watson Studio
Get started with using AI and Cloud Object Storage in 15 minutes.
Popular
2 hr
Build a Virtual Private Cloud (VPC)
Upgrade to a paid account to create your your own protected space in the IBM Cloud.
Getting started
7 min
Build a virtual machine
Lift and shift your VMware workloads to the IBM Cloud.
Getting started
7 min
27°C
Mostly sunny
Search
ENG
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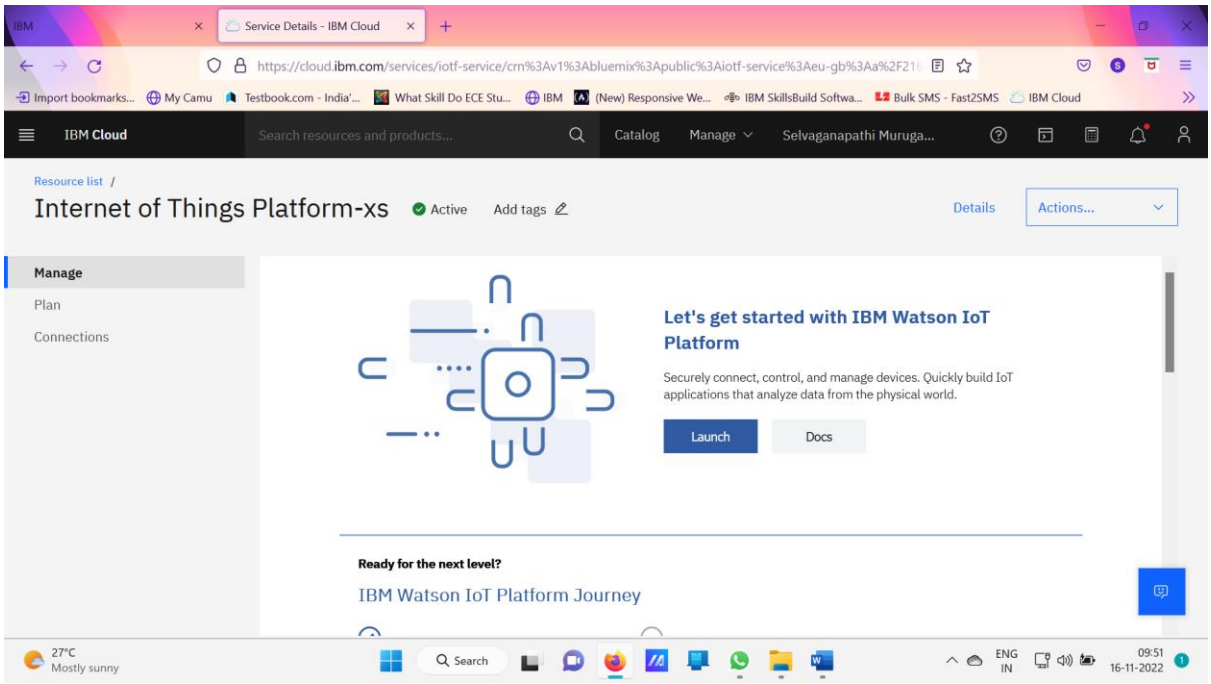
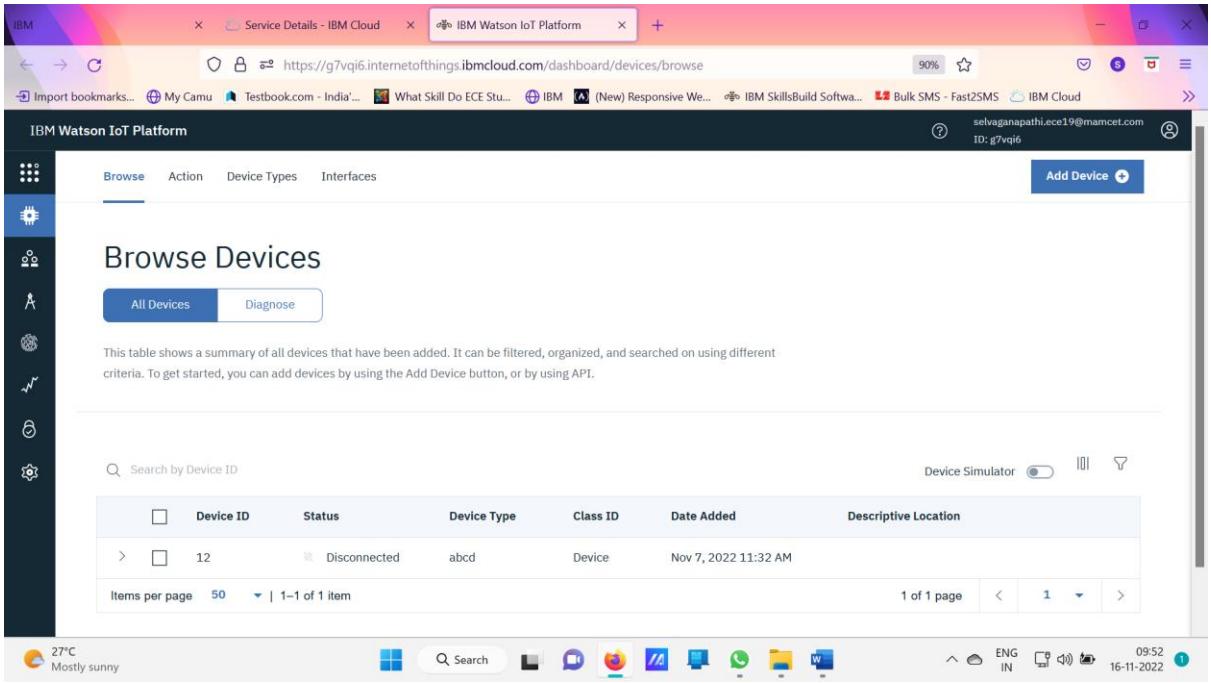
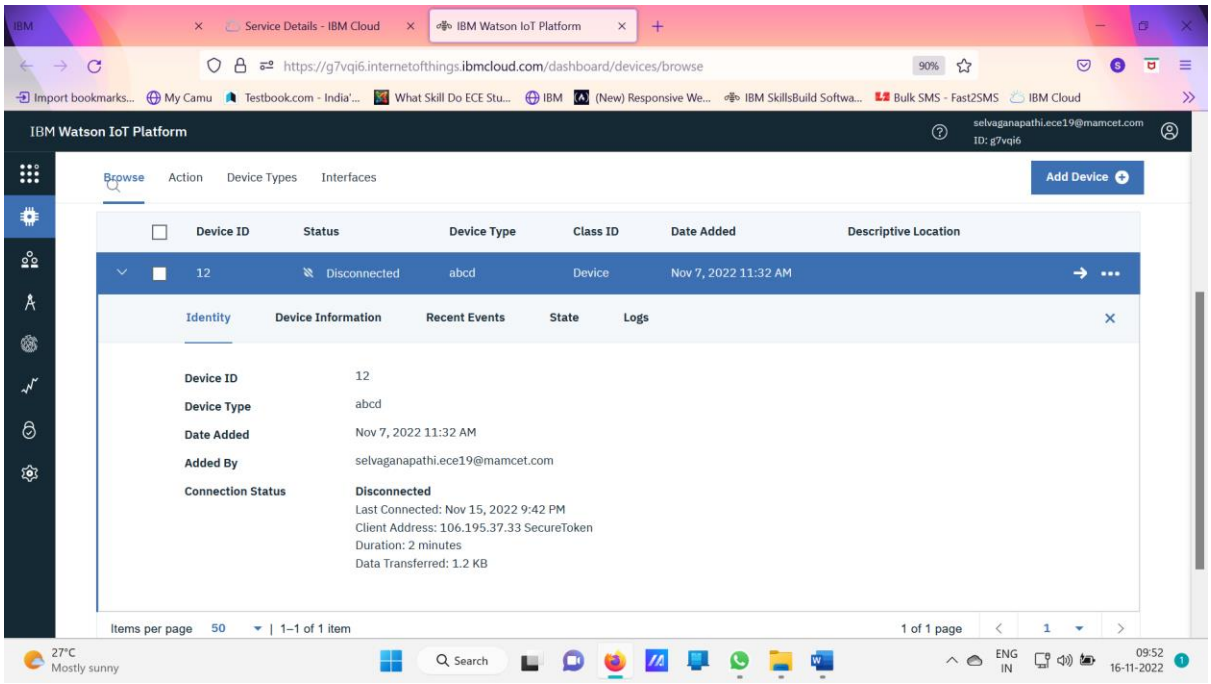
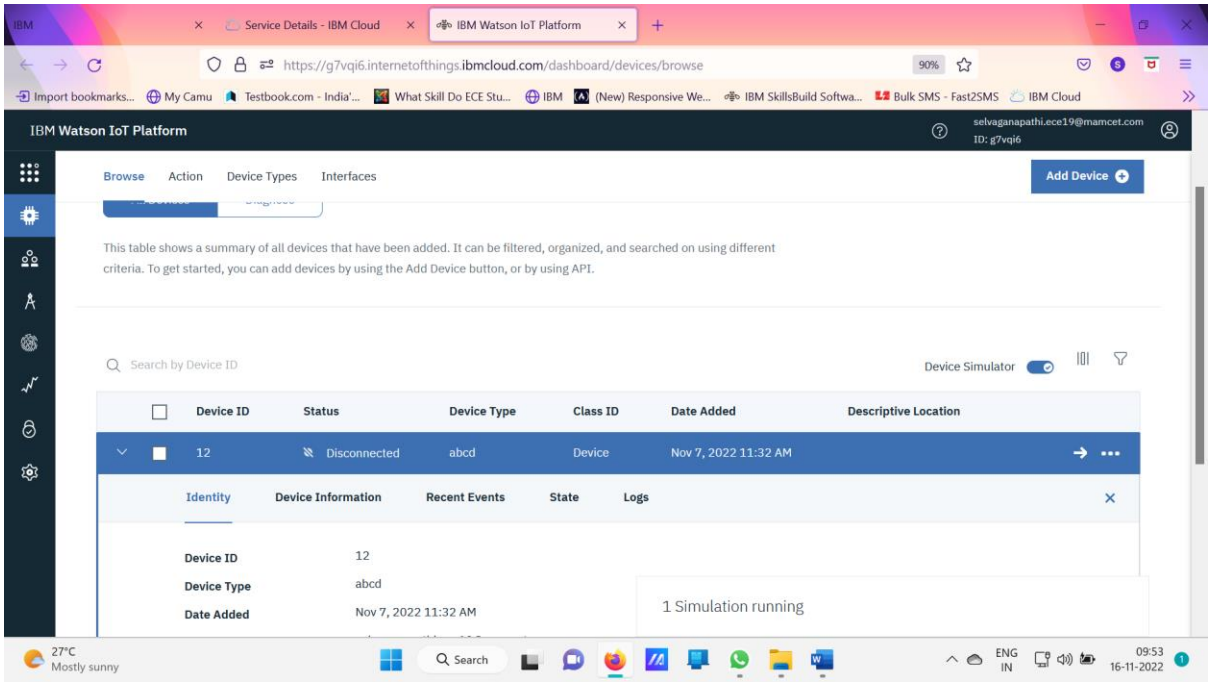
09:50
16-11-2022


Service Details - IBM Cloud
IBM Cloud
Search resources and products...
Catalog
Manage
Selvaganapathi Muruga...
Resource list /
Internet of Things Platform-xs
Active
Add tags
Details
Actions...
Manage
Plan
Connections
Let's get started with IBM Watson IoT Platform
Securely connect, control, and manage devices. Quickly build IoT applications that analyze data from the physical world.
Launch
Docs
Ready for the next level?
IBM Watson IoT Platform Journey
27°C
Mostly sunny
Search
ENG
IN
09:51
16-11-2022


Service Details - IBM Cloud
IBM Watson IoT Platform
https://g7vqi6.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
selvaganapathi.ece19@mamcet.com
ID: g7vqi6
Browse
Action
Device Types
Interfaces
Add Device
Browse Devices
All Devices
Diagnose
This table shows a summary of all devices that have been added. It can be filtered, organized, and searched on using different criteria. To get started, you can add devices by using the Add Device button, or by using API.
Search by Device ID
Device Simulator
Device ID
Status
Device Type
Class ID
Date Added
Descriptive Location
12
Disconnected
abcd
Device
Nov 7, 2022 11:32 AM
Items per page 50
1–1 of 1 item
1 of 1 page
27°C
Mostly sunny
Search
ENG
IN
09:52
16-11-2022


Service Details - IBM Cloud
IBM Watson IoT Platform
https://g7vqi6.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
selvaganapathi.ece19@mamcet.com
ID: g7vqi6
Browse
Action
Device Types
Interfaces
Add Device
Device ID
Status
Device Type
Class ID
Date Added
Descriptive Location
12
Disconnected
abcd
Device
Nov 7, 2022 11:32 AM
Identity
Device Information
Recent Events
State
Logs
Device ID
12
Device Type
abcd
Date Added
Nov 7, 2022 11:32 AM
Added By
selvaganapathi.ece19@mamcet.com
Connection Status
Disconnected
Last Connected: Nov 15, 2022 9:42 PM
Client Address: 106.195.37.33 SecureToken
Duration: 2 minutes
Data Transferred: 1.2 KB
Items per page 50
1–1 of 1 item
1 of 1 page
27°C
Mostly sunny
Search
ENG
IN
09:52
16-11-2022


Service Details - IBM Cloud
IBM Watson IoT Platform
https://g7vqi6.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
selvaganapathi.ece19@mamcet.com
ID: g7vqi6
Browse
Action
Device Types
Interfaces
Add Device
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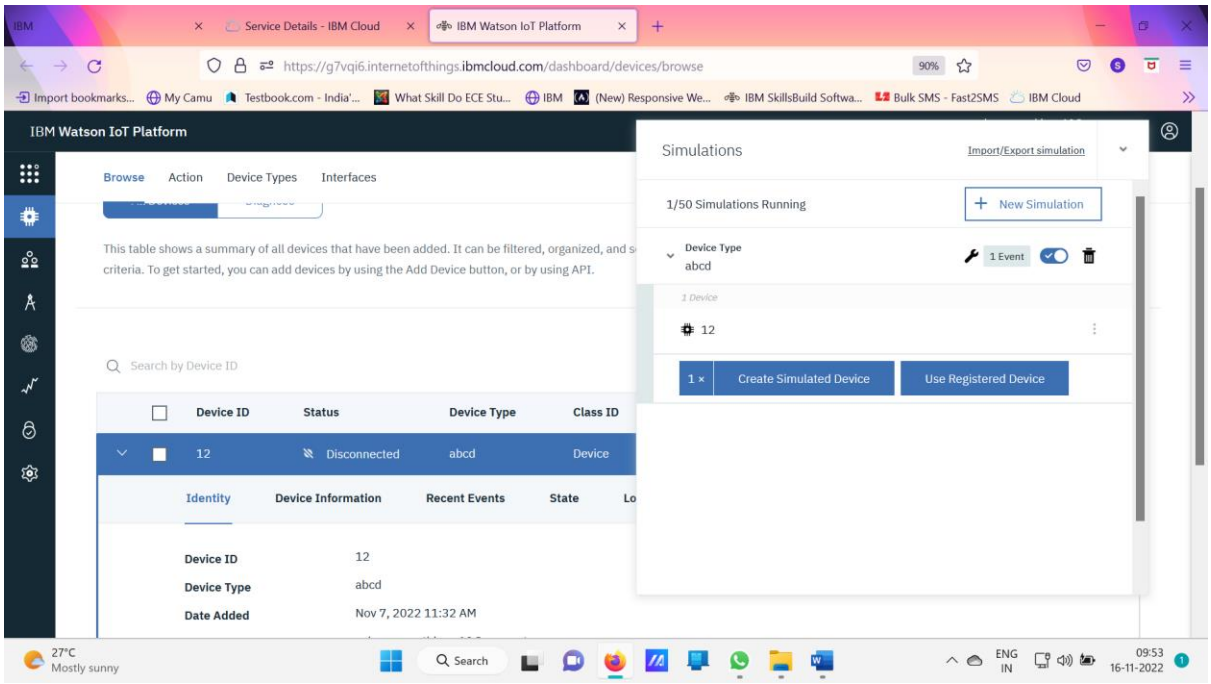
Search by Device ID
Device Simulator
Device ID
Status
Device Type
Class ID
Date Added
Descriptive Location
12
Disconnected
abcd
Device
Nov 7, 2022 11:32 AM
Identity
Device Information
Recent Events
State
Logs
Device ID
12
Device Type
abcd
Date Added
Nov 7, 2022 11:32 AM
1 Simulation running
27°C
Mostly sunny
Search
ENG
IN
09:53
16-11-2022


Service Details - IBM Cloud
IBM Watson IoT Platform
https://g7vqi6.internetofthings.ibmcloud.com/dashboard/devices/browse
IBM Watson IoT Platform
Simulations
Import/Export simulation
1/50 Simulations Running
New Simulation
Device Type
abcd
1 Event
1 Device
12
1 ×
Create Simulated Device
Use Registered Device
Browse
Action
Device Types
Interfaces
This table shows a summary of all devices that have been added. It can be filtered, organized, and
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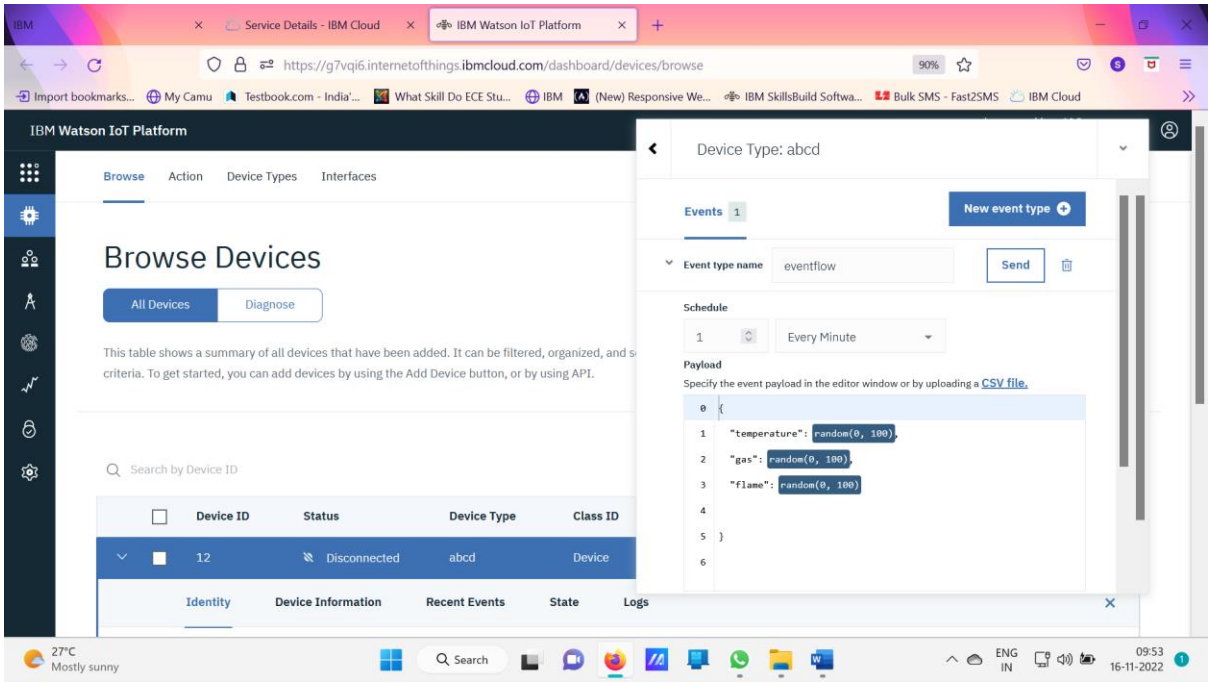
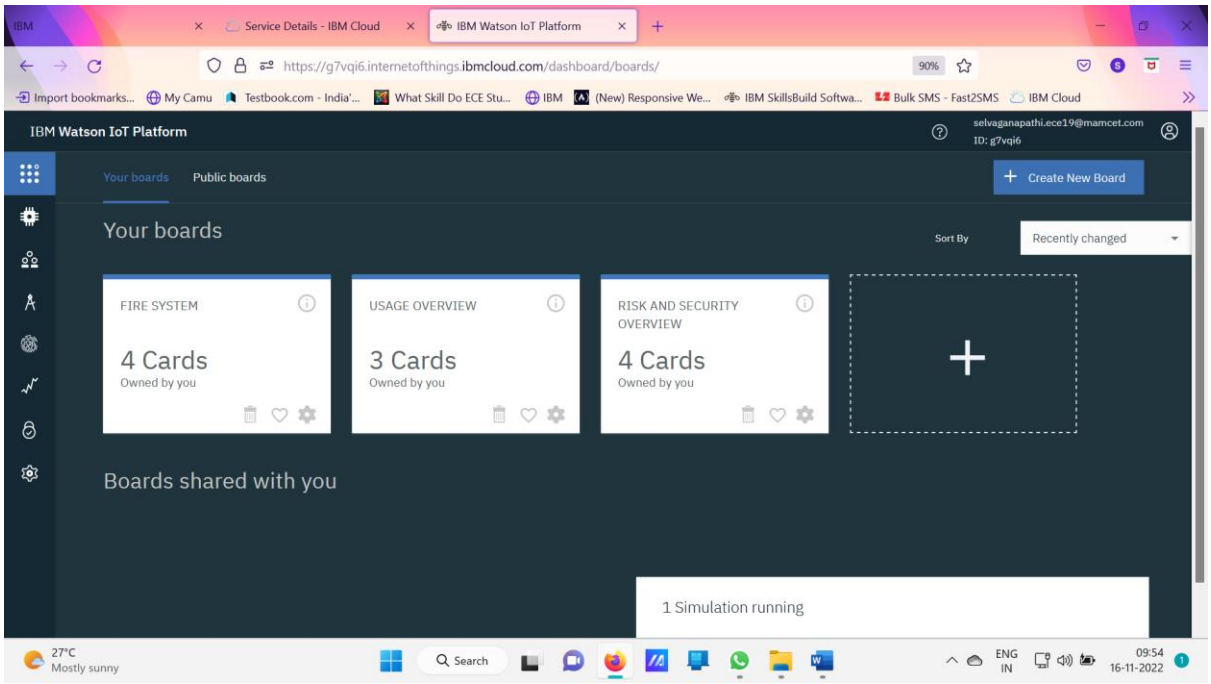
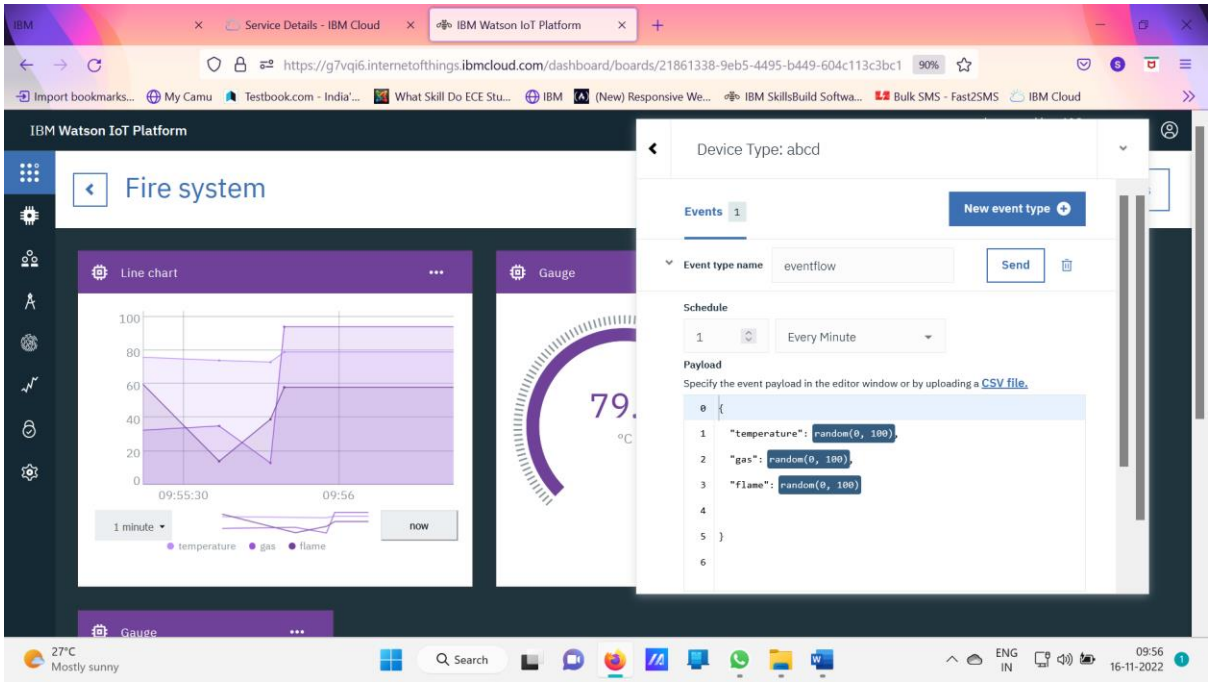
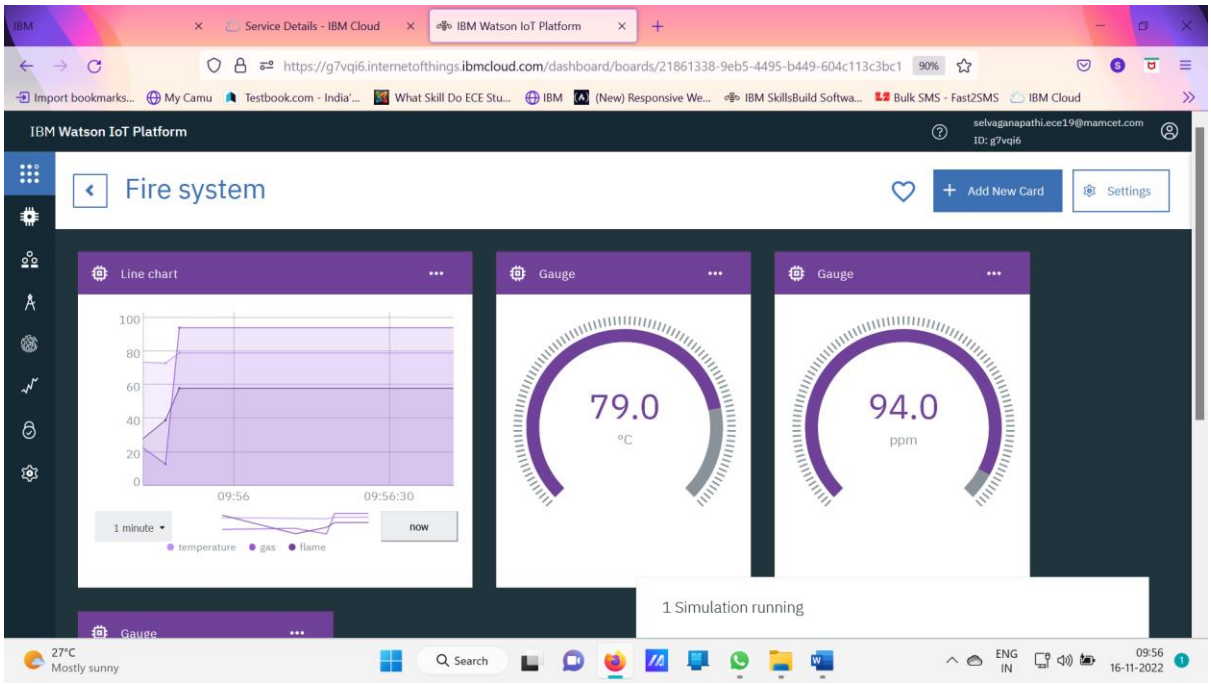
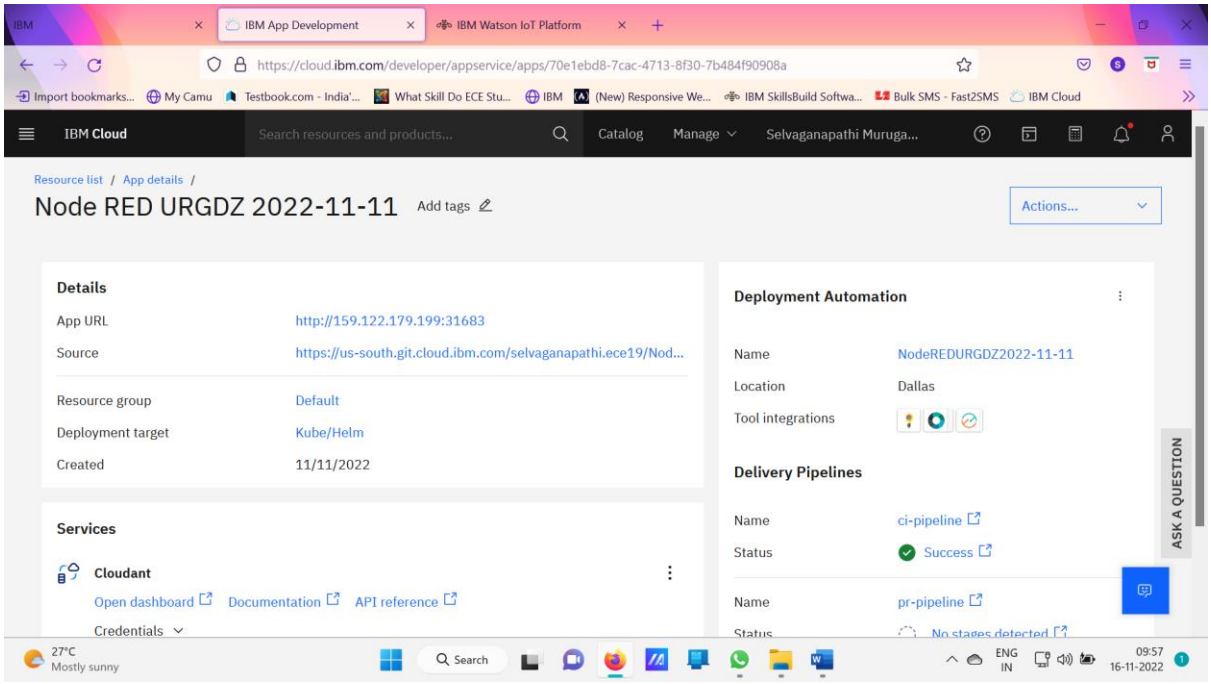
Search by Device ID
Device ID
Status
Device Type
Class ID
12
Disconnected
abcd
Device
Identity
Device Information
Recent Events
State
Device ID
12
Device Type
abcd
Date Added
Nov 7, 2022 11:32 AM
27°C
Mostly sunny
Search
ENG
IN
09:53
16-11-2022

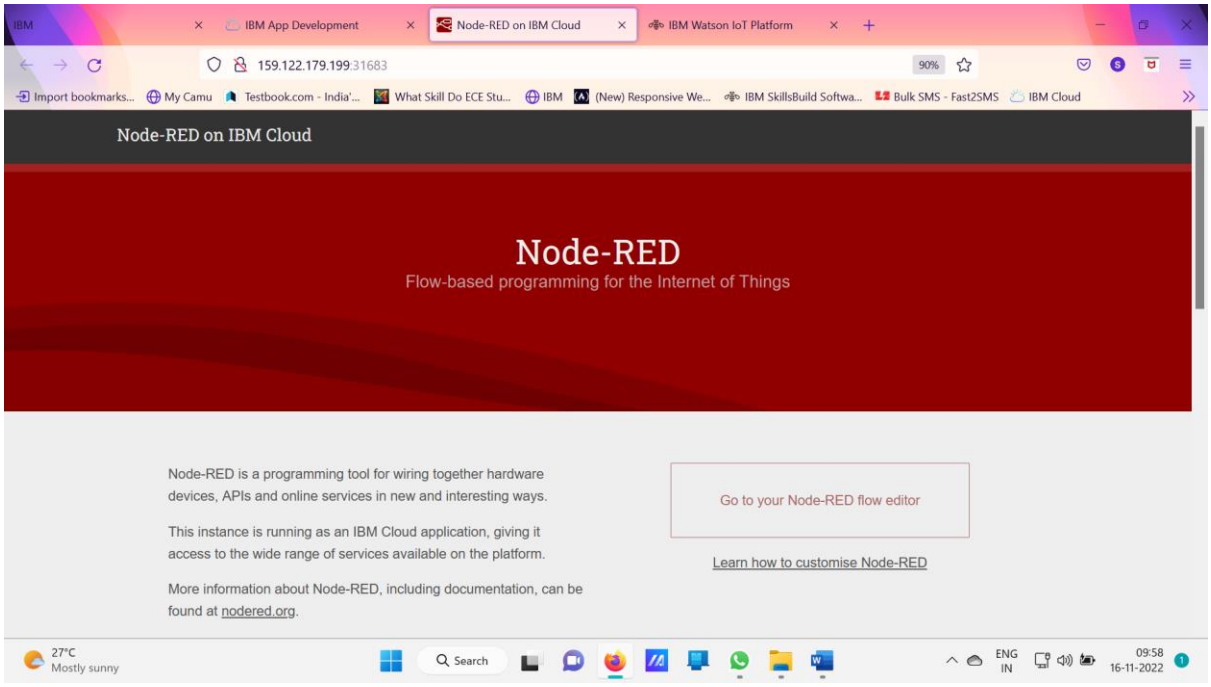

IBM Watson IoT Platform
Service Details - IBM Cloud
https://g7vqi6.internetofthings.ibmcloud.com/dashboard/devices/browse
Browse
Action
Device Types
Interfaces
Browse Devices
All Devices
Diagnose
Search by Device ID
Device ID
Status
Device Type
Class ID
12
Disconnected
abcd
Device
Identity
Device Information
Recent Events
State
Logs
Device Type: abcd
Events 1
New event type
Event type name
eventflow
Send
Schedule
Every Minute
Payload
Specify the event payload in the editor window or by uploading a CSV file.
"temperature": random(0, 100),
"gas": random(0, 100),
"flame": random(0, 100)
27°C
Mostly sunny
Search
ENG
IN
09:53
16-11-2022

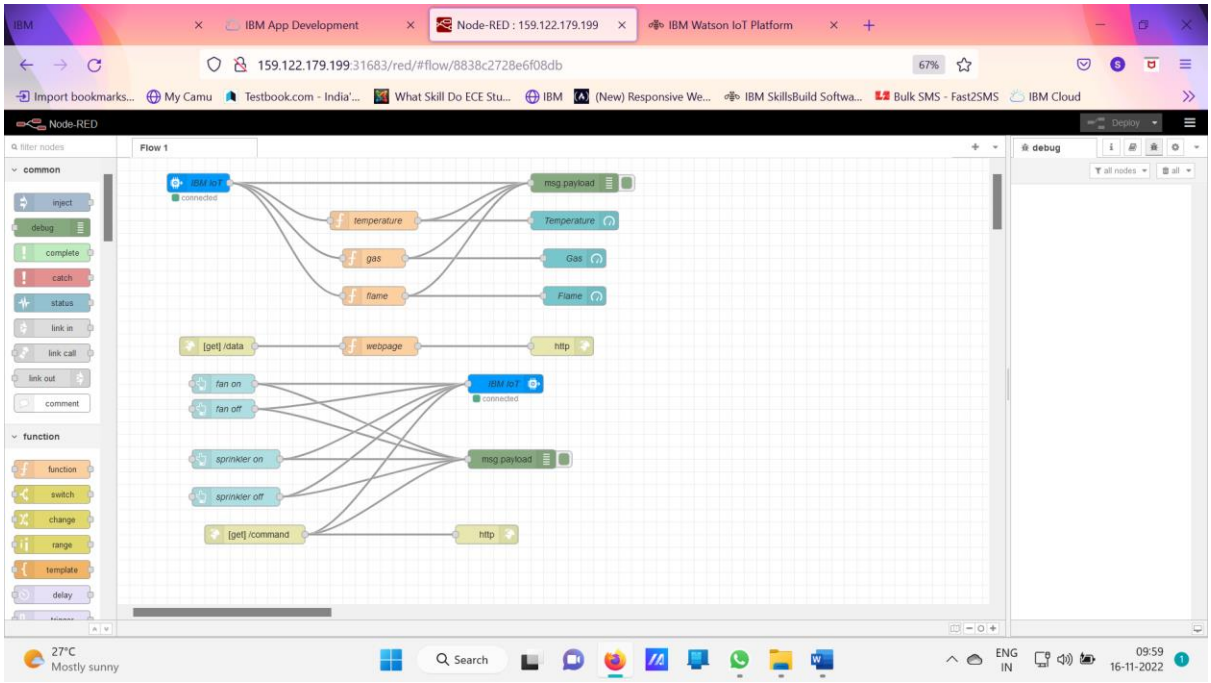

IBM Watson IoT Platform
Service Details - IBM Cloud
https://g7vqi6.internetofthings.ibmcloud.com/dashboard/boards/
selvaganapathi.ece19@mamcet.com
ID: g7vqi6
Your boards
Public boards
Create New Board
Your boards
Sort By
Recently changed
FIRE SYSTEM
4 Cards
Owned by you
USAGE OVERVIEW
3 Cards
Owned by you
RISK AND SECURITY OVERVIEW
4 Cards
Owned by you
Boards shared with you
1 Simulation running
27°C
Mostly sunny
Search
ENG
IN
09:54
16-11-2022

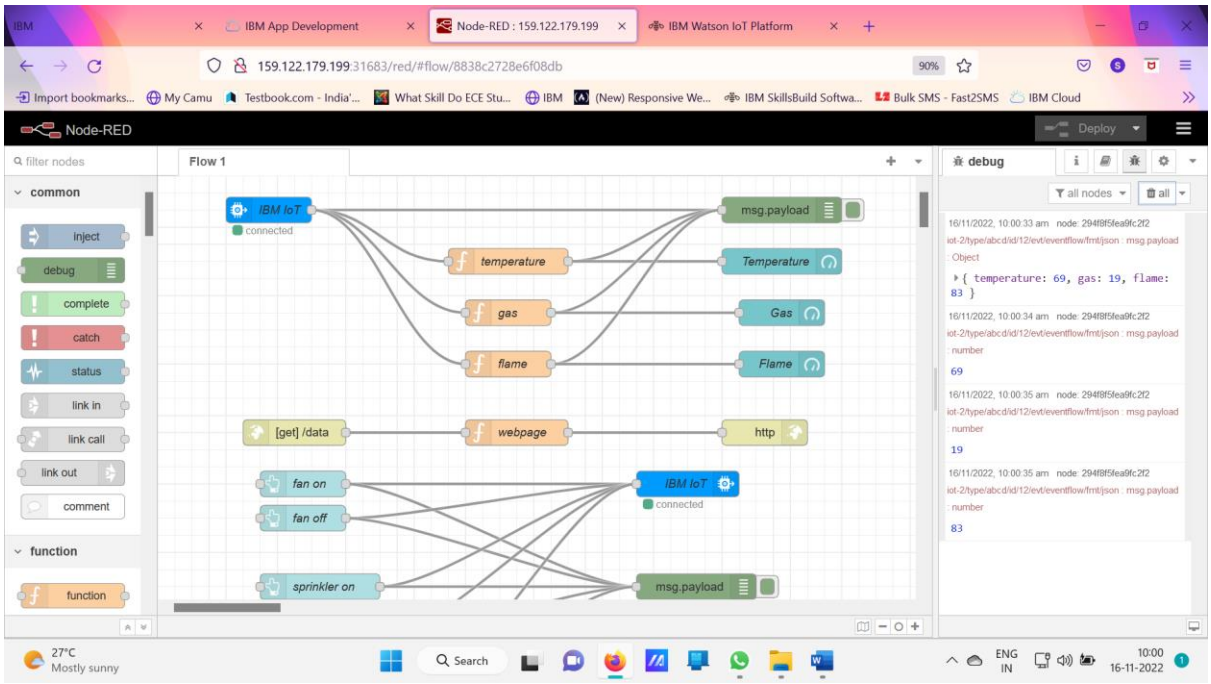

IBM Watson IoT Platform
Fire system
Line chart
Gauge
Device Type: abcd
Events 1
New event type
Event type name
eventflow
Send
Schedule
Every Minute
Payload
Specify the event payload in the editor window or by uploading a CSV file.
{
"temperature": random(0, 100),
"gas": random(0, 100),
"flame": random(0, 100)
}
1 minute
now
temperature
gas
flame
27°C
Mostly sunny
Search
ENG
IN
09:56
16-11-2022

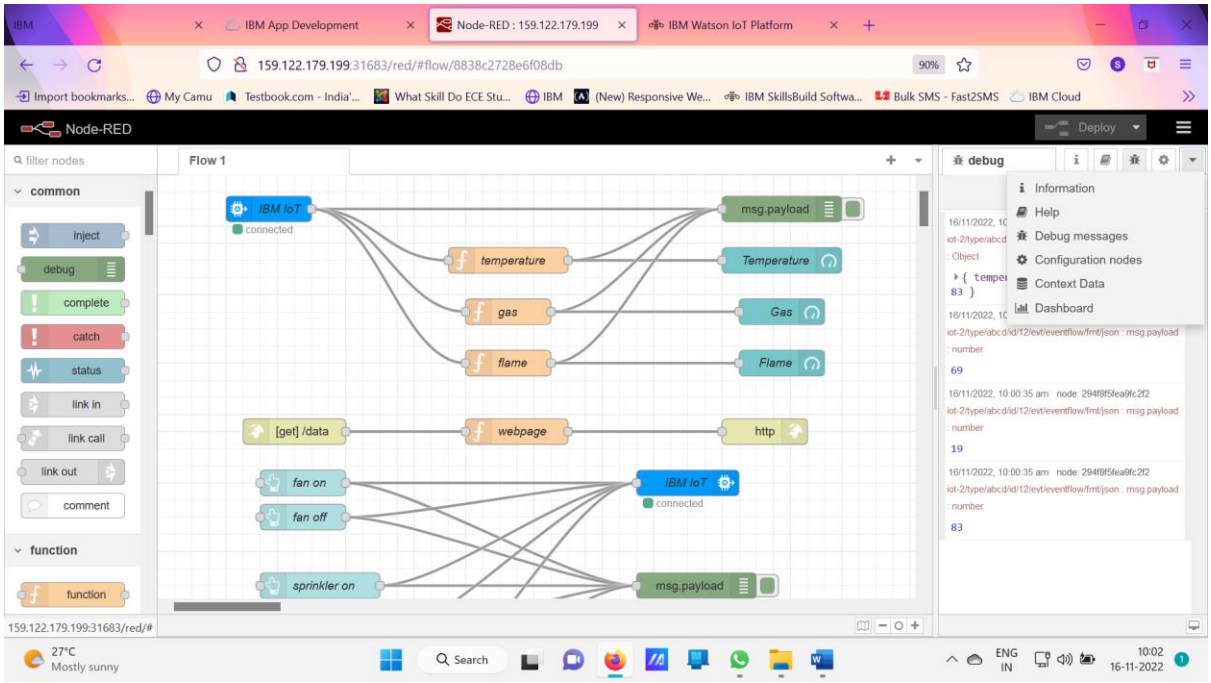

IBM Watson IoT Platform
selvaganapathi.ece19@mamcet.com
ID: g7vqi6
Fire system
Add New Card
Settings
Line chart
Gauge
Gauge
79.0
°C
94.0
ppm
1 minute
now
temperature
gas
flame
1 Simulation running
27°C
Mostly sunny
Search
ENG
IN
09:56
16-11-2022

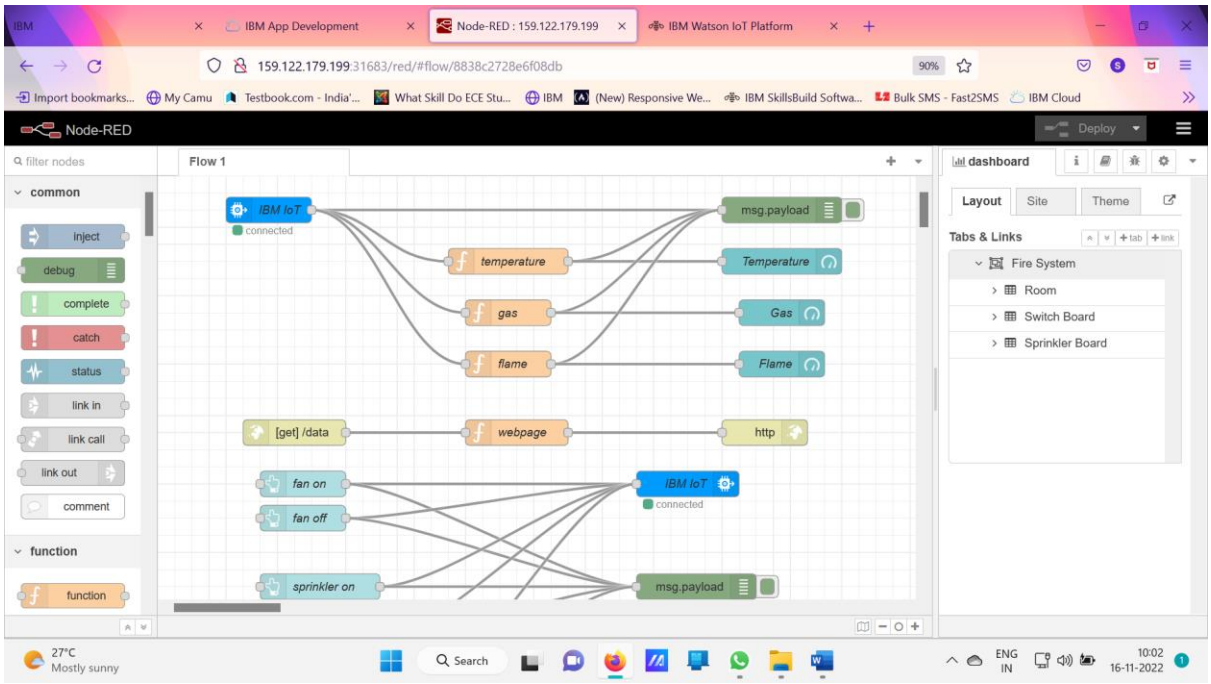

IBM App Development
IBM Watson IoT Platform
https://cloud.ibm.com/developer/appservice/apps/70e1ebd8-7cac-4713-8f30-7b484f90908a
IBM Cloud
Search resources and products...
Catalog
Manage
Selvaganapathi Muruga...
Resource list / App details /
Node RED URGDZ 2022-11-11
Add tags
Actions...
Details
App URL
http://159.122.179.199:31683
Source
https://us-south.git.cloud.ibm.com/selvaganapathi.ece19/Nod...
Resource group
Default
Deployment target
Kube/Helm
Created
11/11/2022
Services
Cloudant
Open dashboard
Documentation
API reference
Credentials
Deployment Automation
Name
NodeREDURGDZ2022-11-11
Location
Dallas
Tool integrations
Delivery Pipelines
Name
ci-pipeline
Status
Success
Name
pr-pipeline
ASK A QUESTION
27°C
Mostly sunny
Search
ENG
IN
09:57
16-11-2022

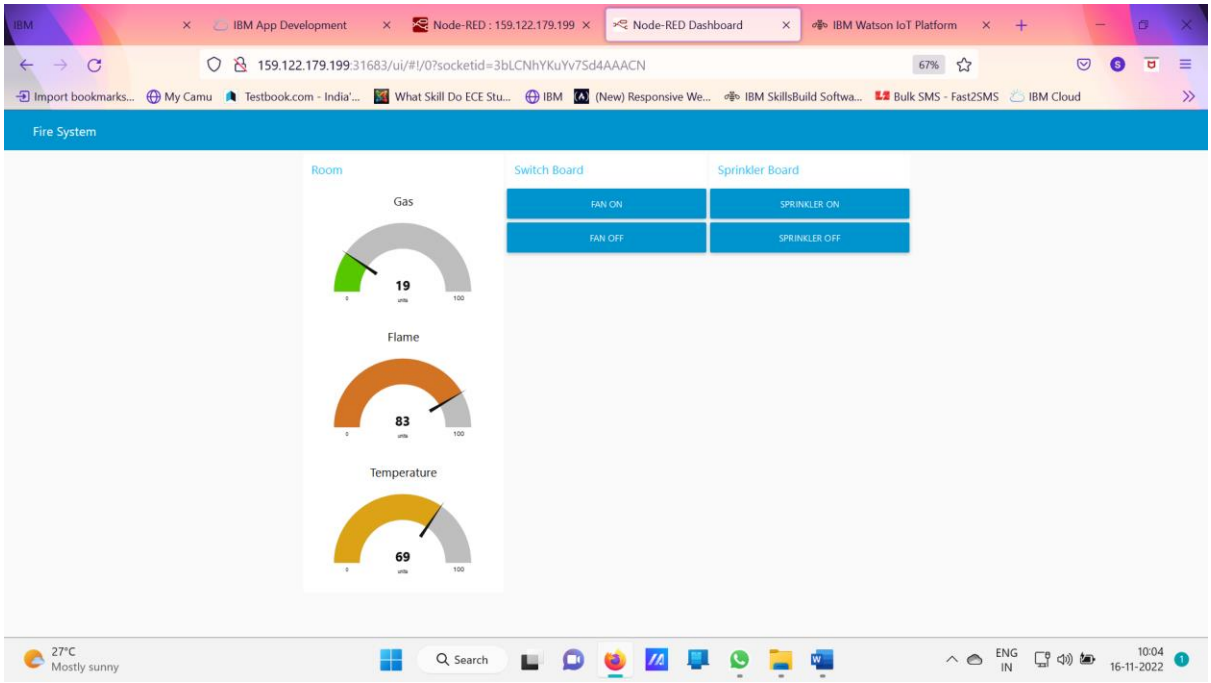

IBM App Development
Node-RED on IBM Cloud
IBM Watson IoT Platform
159.122.179.199:31683
90%
Node-RED on IBM Cloud
Node-RED
Flow-based programming for the Internet of Things
Node-RED is a programming tool for wiring together hardware devices, APIs and online services in new and interesting ways.
This instance is running as an IBM Cloud application, giving it access to the wide range of services available on the platform.
More information about Node-RED, including documentation, can be found at nodered.org.
Go to your Node-RED flow editor
Learn how to customise Node-RED
27°C
Mostly sunny
Search
ENG
IN
09:58
16-11-2022

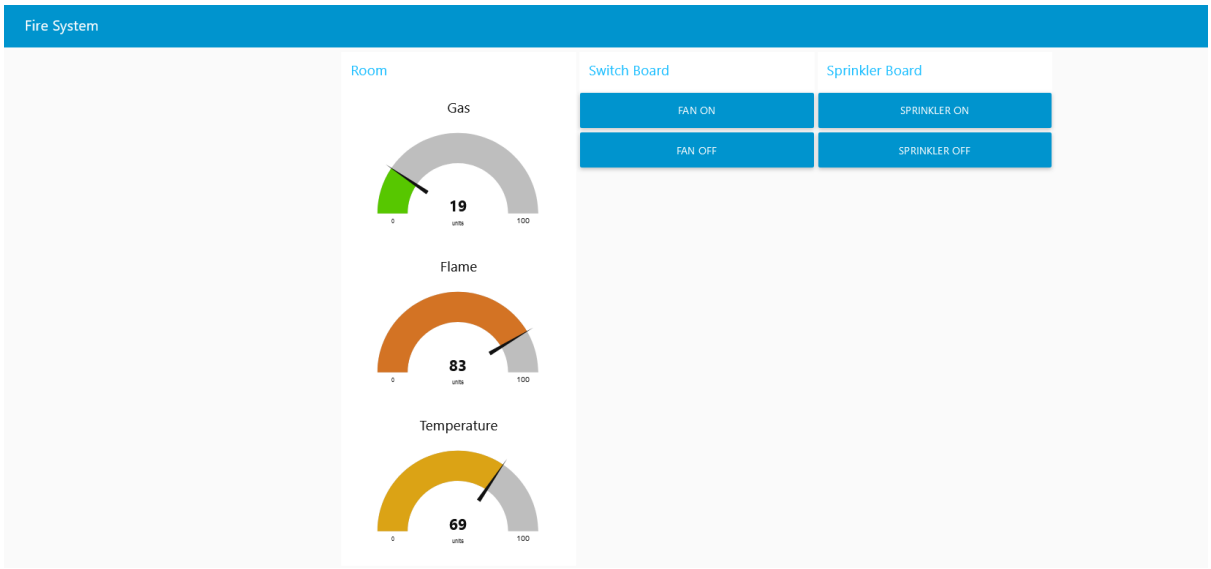

IBM App Development
Node-RED : 159.122.179.199
IBM Watson IoT Platform
159.122.179.199:31683/red/#flow/8838c2728e6f08db
Node-RED
Flow 1
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
switch
change
range
template
delay
IBM IoT
connected
temperature
gas
flame
msg.payload
Temperature
Gas
Flame
[get] /data
webpage
http
fan on
fan off
sprinkler on
sprinkler off
[get] /command
27°C
Mostly sunny
Search
ENG
IN
09:59
16-11-2022

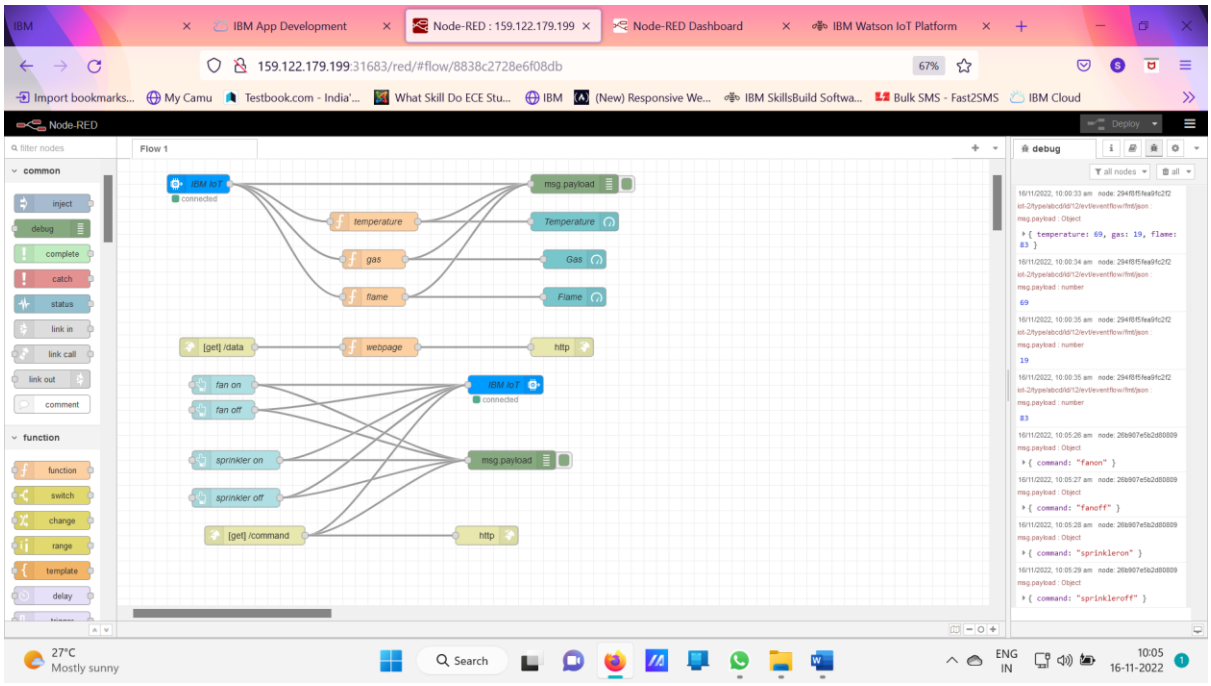

IBM App Development
Node-RED : 159.122.179.199
IBM Watson IoT Platform
159.122.179.199:31683/red/#flow/8838c2728e6f08db
Node-RED
Deploy
Flow 1
debug
all nodes
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
IBM IoT
connected
temperature
gas
flame
msg.payload
Temperature
Gas
Flame
[get] /data
webpage
http
fan on
fan off
sprinkler on
16/11/2022, 10:00:33 am node: 294f8f5fea9fc2f2
iot-2/type/abcd/id/12/evt/eventflow/fmt/json : msg.payload : Object
{ temperature: 69, gas: 19, flame: 83 }
16/11/2022, 10:00:34 am node: 294f8f5fea9fc2f2
iot-2/type/abcd/id/12/evt/eventflow/fmt/json : msg.payload : number
69
16/11/2022, 10:00:35 am node: 294f8f5fea9fc2f2
iot-2/type/abcd/id/12/evt/eventflow/fmt/json : msg.payload : number
19
16/11/2022, 10:00:35 am node: 294f8f5fea9fc2f2
iot-2/type/abcd/id/12/evt/eventflow/fmt/json : msg.payload : number
83
27°C
Mostly sunny
Search
ENG
IN
10:00
16-11-2022

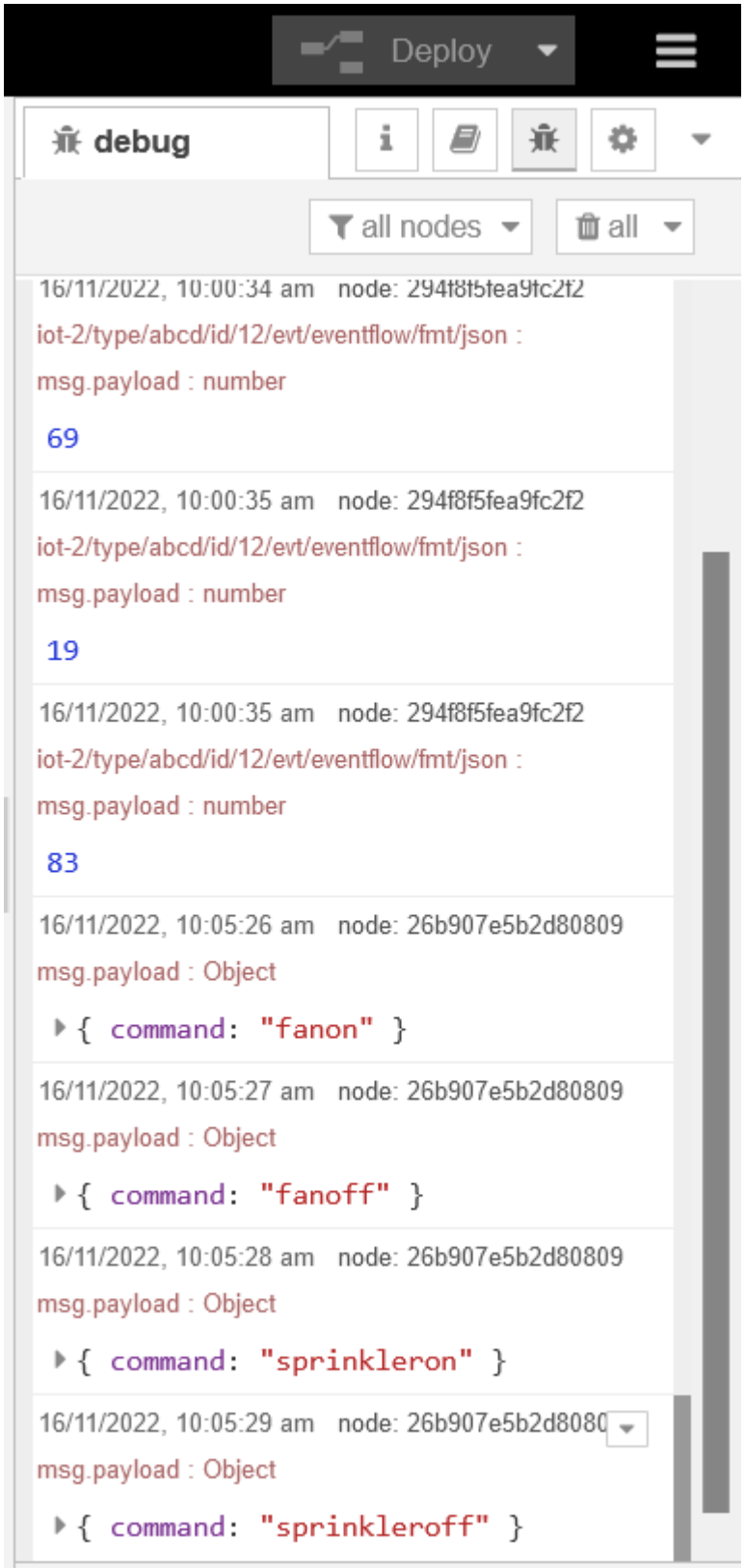

IBM App Development
Node-RED : 159.122.179.199
IBM Watson IoT Platform
159.122.179.199:31683/red/#flow/8838c2728e6f08db
Node-RED
Deploy
Flow 1
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
function
IBM IoT
connected
temperature
gas
flame
msg.payload
Temperature
Gas
Flame
[get] /data
webpage
http
fan on
fan off
sprinkler on
debug
Information
Help
Debug messages
Configuration nodes
Context Data
Dashboard
69
19
83
27°C
Mostly sunny
Search
ENG
IN
10:02
16-11-2022


IBM App Development
Node-RED : 159.122.179.199
IBM Watson IoT Platform
159.122.179.199:31683/red/#flow/8838c2728e6f08db
Node-RED
Deploy
Flow 1
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
function
IBM IoT
connected
temperature
gas
flame
msg.payload
Temperature
Gas
Flame
[get] /data
webpage
http
fan on
fan off
sprinkler on
dashboard
Layout
Site
Theme
Tabs & Links
Fire System
Room
Switch Board
Sprinkler Board
27°C
Mostly sunny
Search
ENG
IN
10:02
16-11-2022


IBM
IBM App Development
Node-RED : 159.122.179.199
Node-RED Dashboard
IBM Watson IoT Platform
159.122.179.199:31683/ui/#!/0?socketid=3bLCNhYKuYv7Sd4AAACN
67%
Import bookmarks...
My Camu
Testbook.com - India'...
What Skill Do ECE Stu...
IBM
(New) Responsive We...
IBM SkillsBuild Softwa...
Bulk SMS - Fast2SMS
IBM Cloud
Fire System
Room
Gas
19
Flame
83
Temperature
69
Switch Board
FAN ON
FAN OFF
Sprinkler Board
SPRINKLER ON
SPRINKLER OFF
27°C
Mostly sunny
Search
ENG
IN
10:04
16-11-2022


Fire System
Room
Gas
19
Flame
83
Temperature
69
Switch Board
FAN ON
FAN OFF
Sprinkler Board
SPRINKLER ON
SPRINKLER OFF


IBM
IBM App Development
Node-RED : 159.122.179.199
Node-RED Dashboard
IBM Watson IoT Platform
159.122.179.199:31683/red/#flow/8838c2728e6f08db
Node-RED
Deploy
Flow 1
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
function
switch
change
range
template
delay
IBM IoT
connected
temperature
gas
flame
msg.payload
Temperature
Gas
Flame
[get] /data
webpage
http
fan on
fan off
IBM IoT
connected
sprinkler on
sprinkler off
msg.payload
[get] /command
http
debug
27°C
Mostly sunny
Search
ENG
IN
10:05
16-11-2022


Deploy
debug
all nodes
all
16/11/2022, 10:00:34 am node: 294f8f5fea9fc2f2
iot-2/type/abcd/id/12/evt/eventflow/fmt/json :
msg.payload : number
69
16/11/2022, 10:00:35 am node: 294f8f5fea9fc2f2
iot-2/type/abcd/id/12/evt/eventflow/fmt/json :
msg.payload : number
19
16/11/2022, 10:00:35 am node: 294f8f5fea9fc2f2
iot-2/type/abcd/id/12/evt/eventflow/fmt/json :
msg.payload : number
83
16/11/2022, 10:05:26 am node: 26b907e5b2d80809
msg.payload : Object
{ command: "fanon" }
16/11/2022, 10:05:27 am node: 26b907e5b2d80809
msg.payload : Object
{ command: "fanoff" }
16/11/2022, 10:05:28 am node: 26b907e5b2d80809
msg.payload : Object
{ command: "sprinkleron" }
16/11/2022, 10:05:29 am node: 26b907e5b2d8080
msg.payload : Object
{ command: "sprinkleroff" }