Project Development Phase
Sprint-2

Date	12 November 2022
Team ID	PNT2022TMID21245
Project Name	Project - Industry-Specific Intelligent Fire Management System
Maximum Marks	20 Marks

SPRINT – 2 CONTAINS:

US 1 – Device creation in IBM IOT Watson.

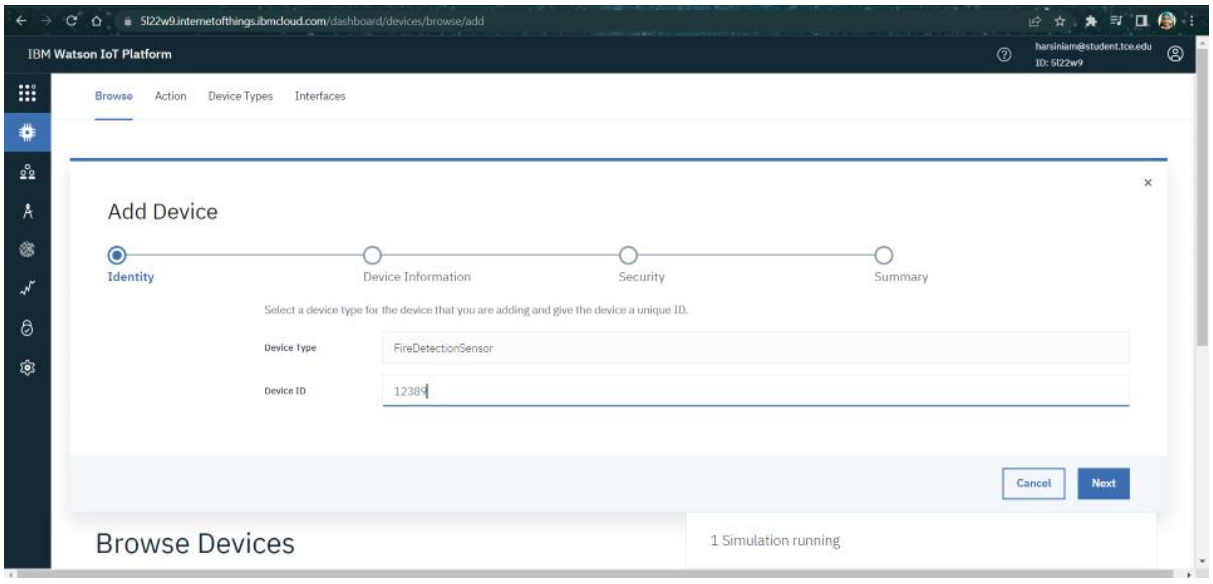
US 2 – Creating simulation for that device type and generating data.

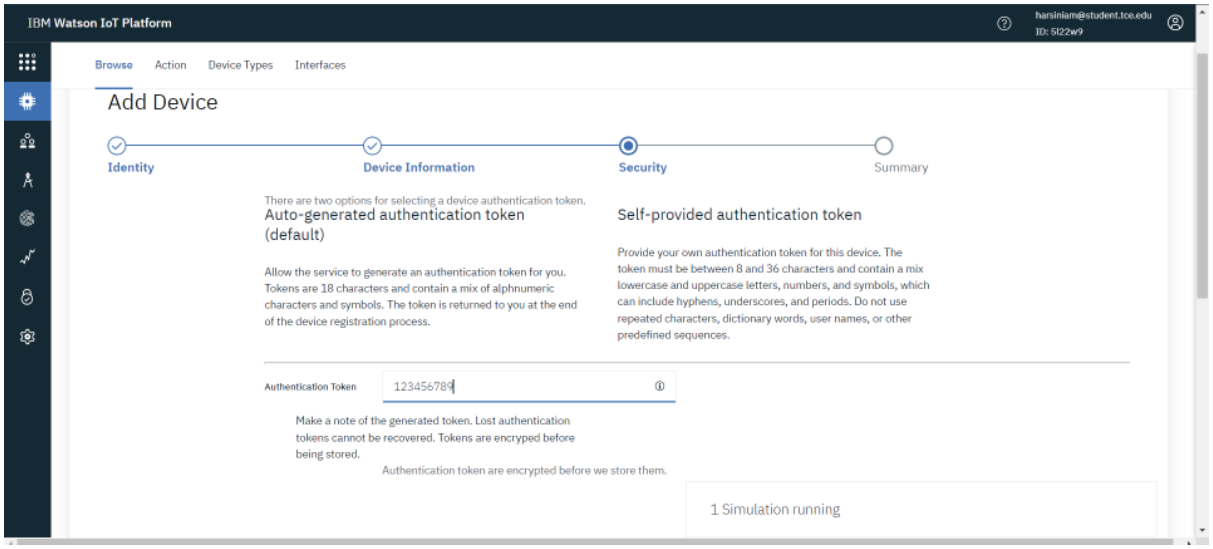
US 3 – Card creation in IBM Watson IOT platform.

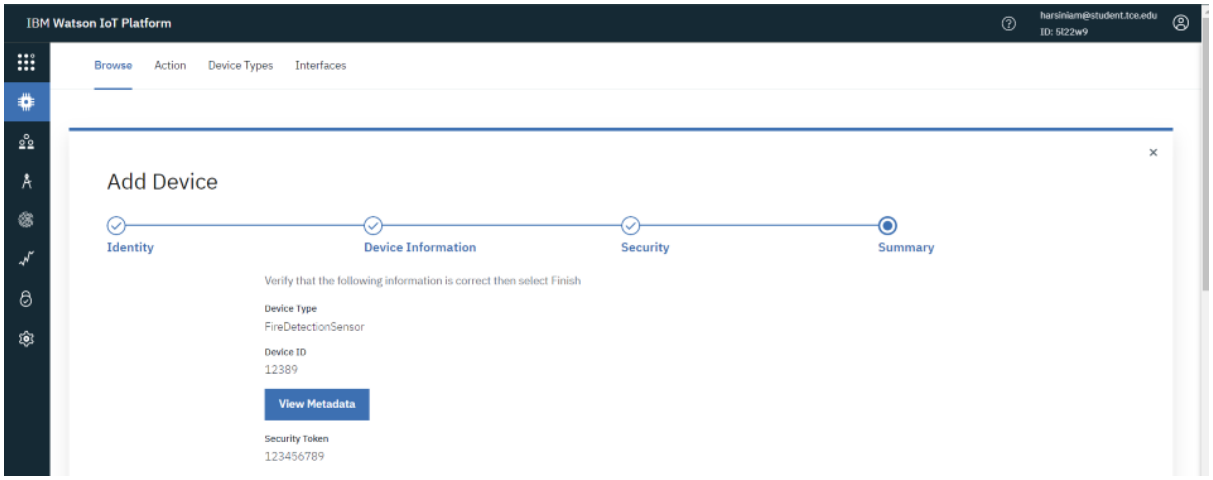
US 4 - Configure the connection security and create API keys that are used in the Node-RED service for accessing the IBM IoT Platform.

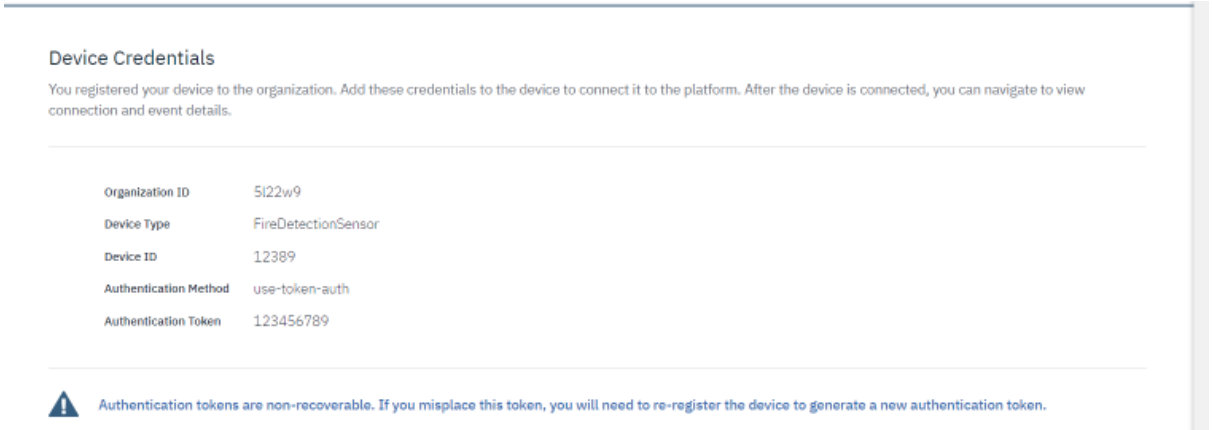
US 5 – Creating flows in Node-Red that collects data from IBM.

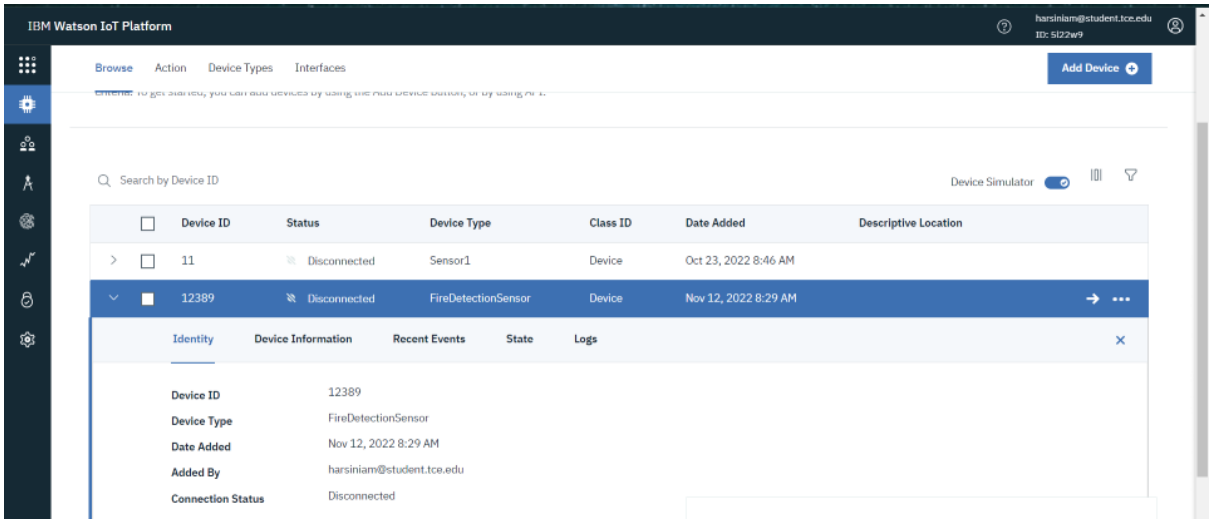
US 1 – Device creation in IBM IOT Watson.

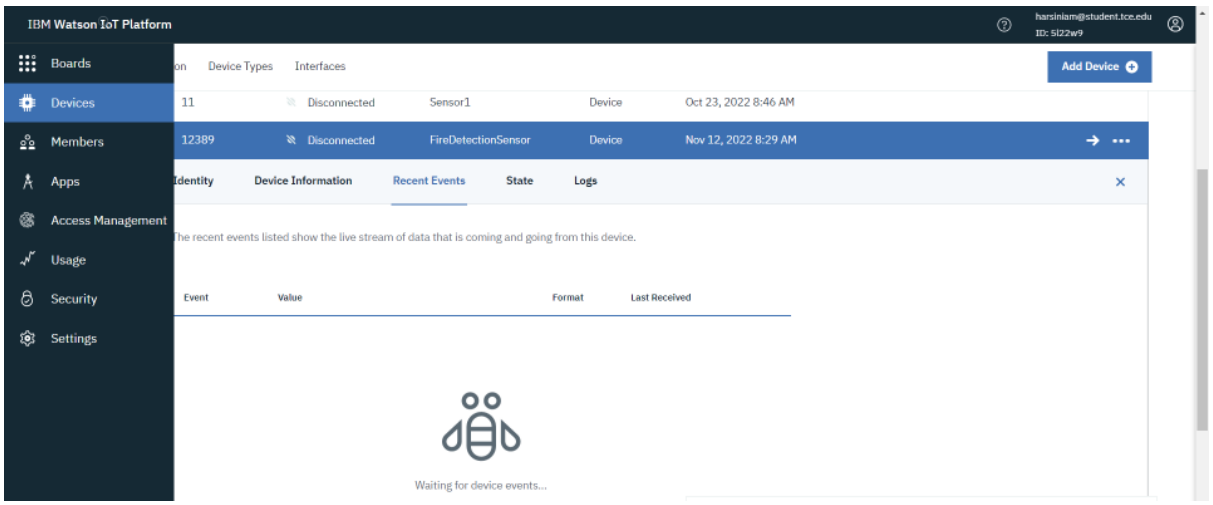



IBM Watson IoT Platform
harsiniam@student.tce.edu
ID: 5l22w9
Browse
Action
Device Types
Interfaces
Add Device
Identity
Device Information
Security
Summary
There are two options for selecting a device authentication token.
Auto-generated authentication token (default)
Allow the service to generate an authentication token for you. Tokens are 18 characters and contain a mix of alphnumeric characters and symbols. The token is returned to you at the end of the device registration process.
Self-provided authentication token
Provide your own authentication token for this device. The token must be between 8 and 36 characters and contain a mix lowercase and uppercase letters, numbers, and symbols, which can include hyphens, underscores, and periods. Do not use repeated characters, dictionary words, user names, or other predefined sequences.
Authentication Token
123456789
Make a note of the generated token. Lost authentication tokens cannot be recovered. Tokens are encryped before being stored.
Authentication token are encrypted before we store them.
1 Simulation running

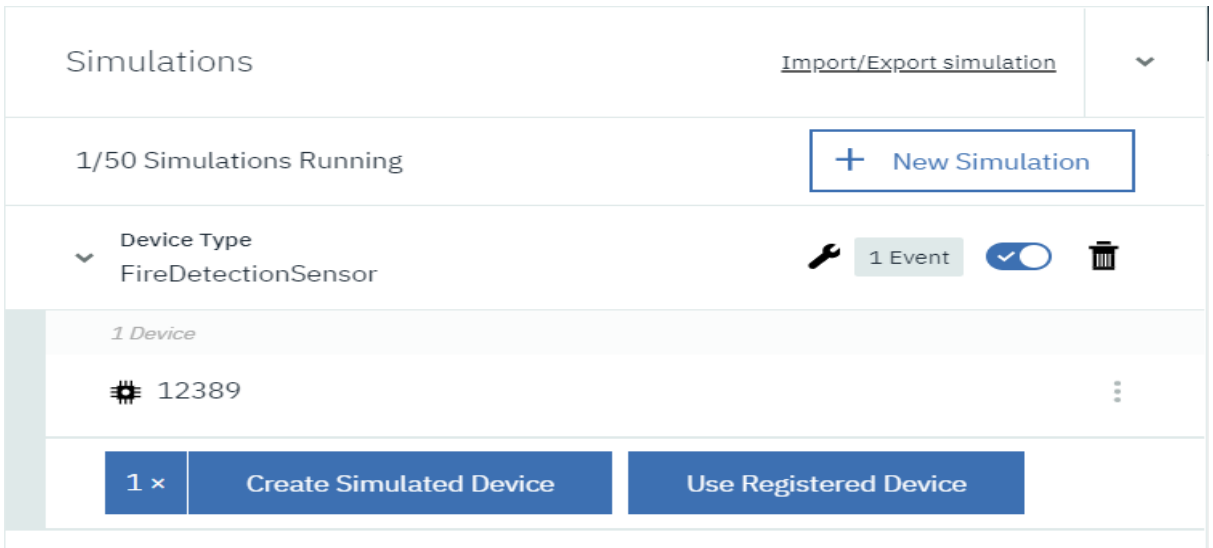

IBM Watson IoT Platform
harsiniam@student.tce.edu
ID: 5l22w9
Browse
Action
Device Types
Interfaces
Add Device
Identity
Device Information
Security
Summary
Verify that the following information is correct then select Finish
Device Type
FireDetectionSensor
Device ID
12389
View Metadata
Security Token
123456789

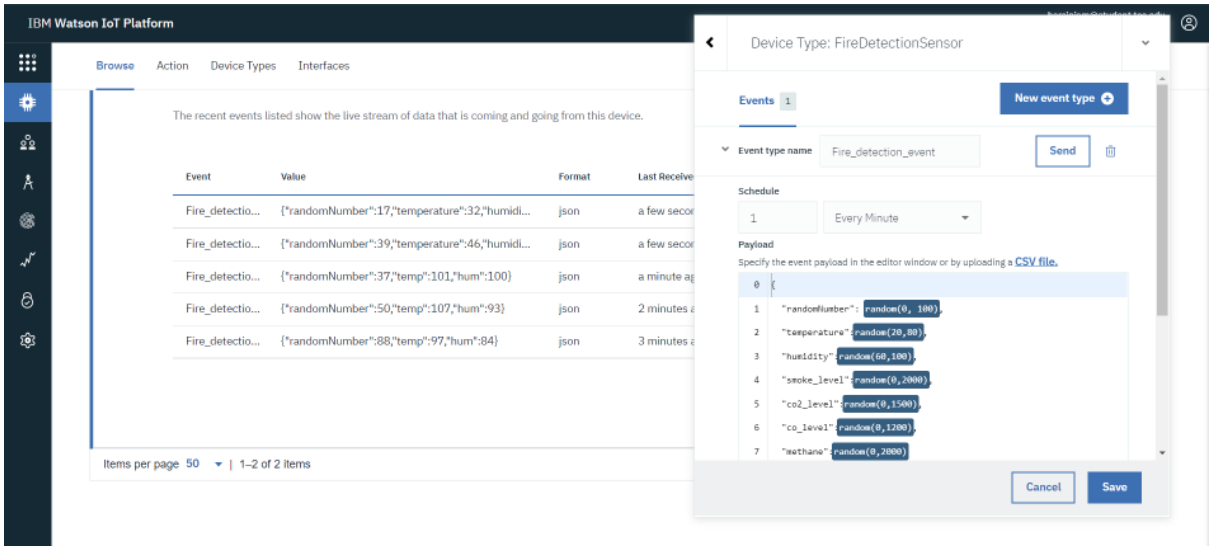

Device Credentials
You registered your device to the organization. Add these credentials to the device to connect it to the platform. After the device is connected, you can navigate to view connection and event details.
Organization ID
5l22w9
Device Type
FireDetectionSensor
Device ID
12389
Authentication Method
use-token-auth
Authentication Token
123456789
Authentication tokens are non-recoverable. If you misplace this token, you will need to re-register the device to generate a new authentication token.

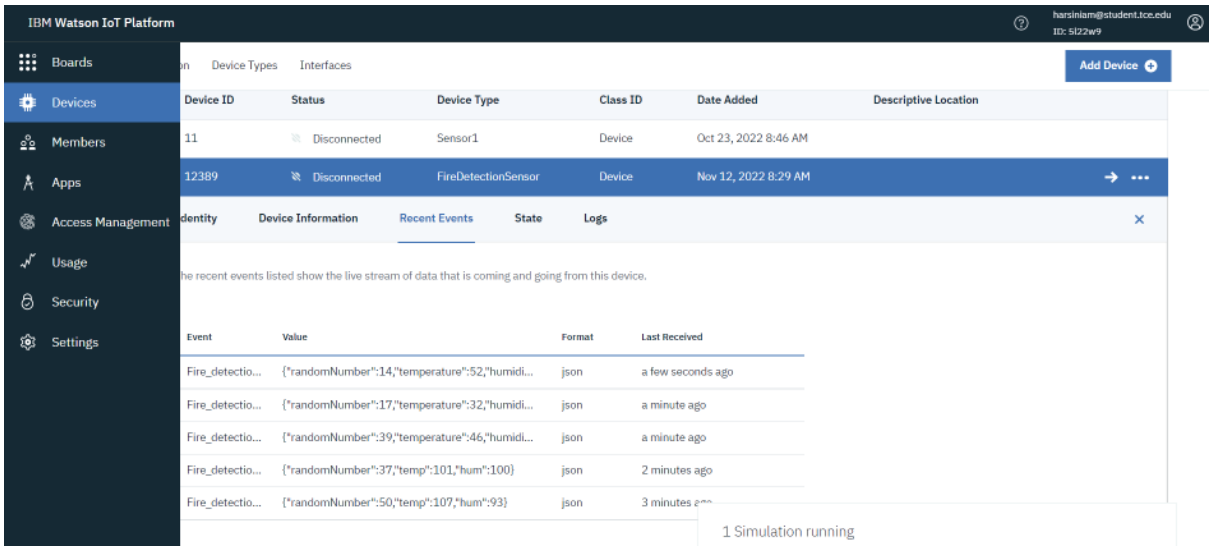




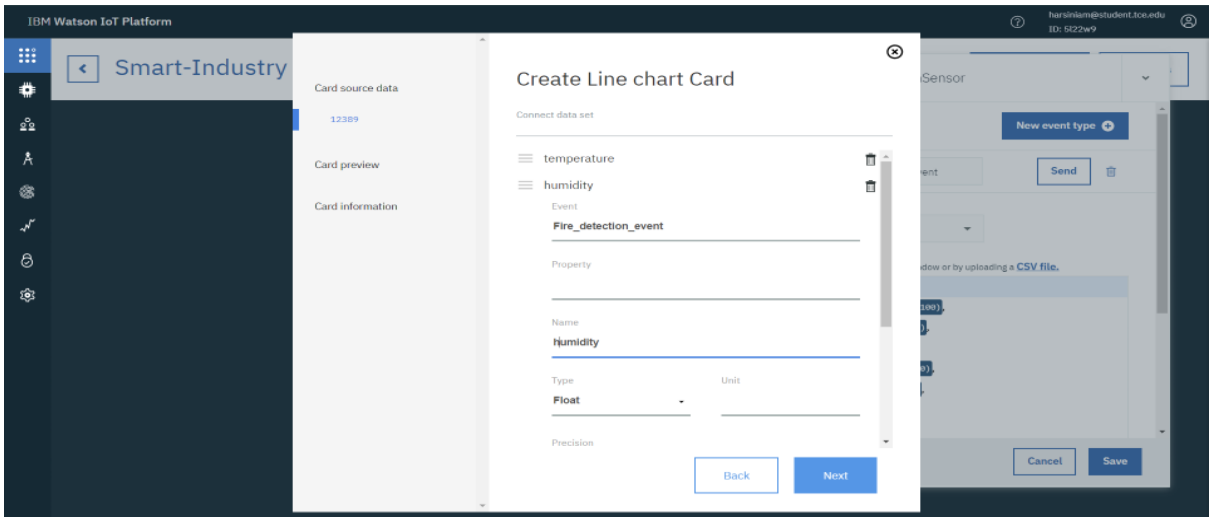
US 2 – Creating simulation for that device type and generating data.

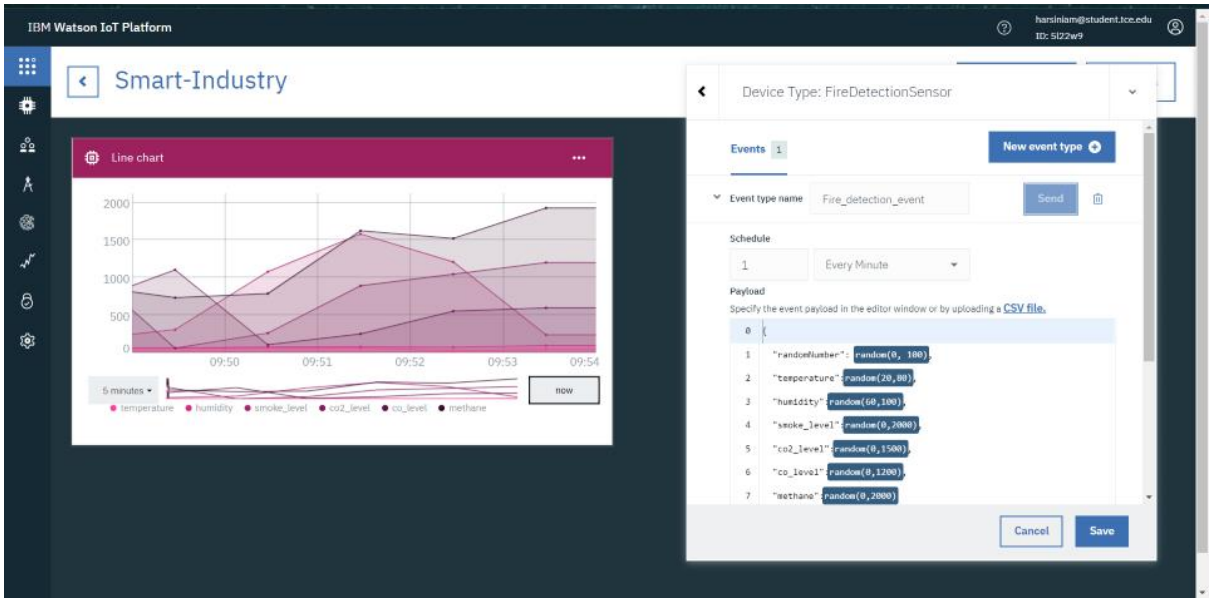




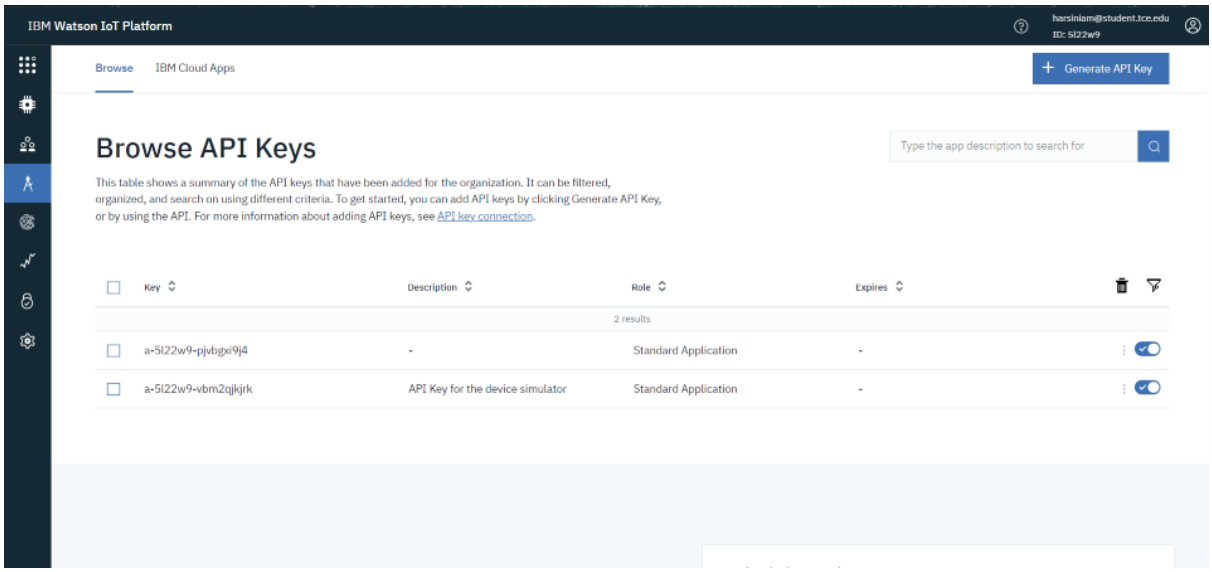


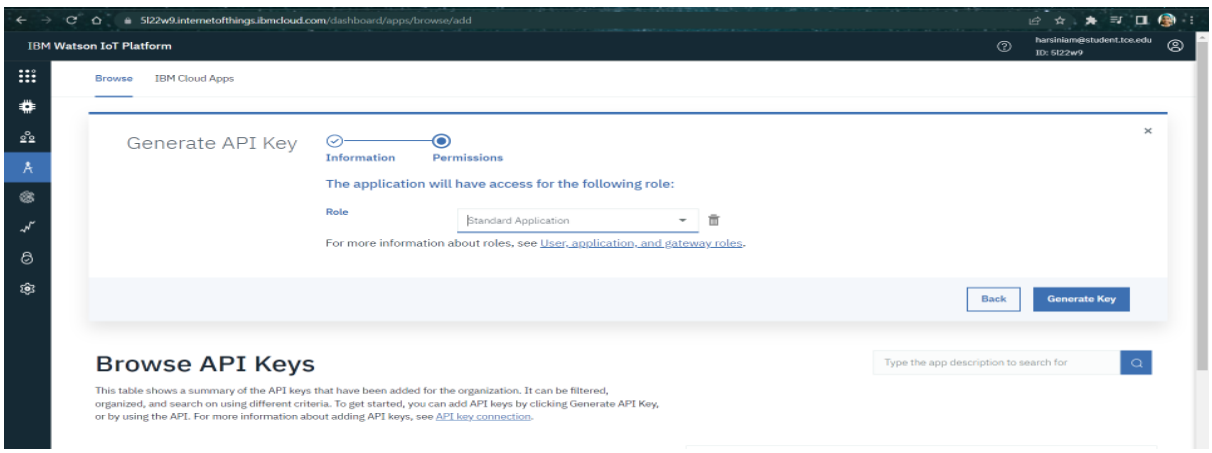
US 3 – Card creation in IBM Watson IOT platform.





US 4 - Configure the connection security and create API keys that are used in the Node-RED service for accessing the IBM IoT Platform.





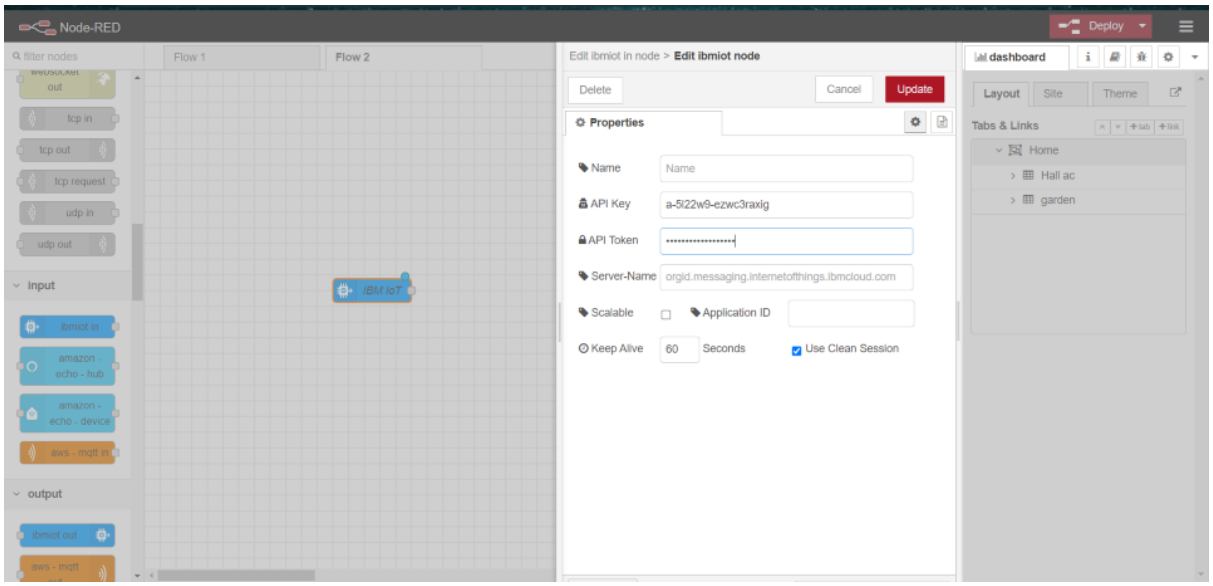
Api key: a-5l22w9-ezwc3raxig

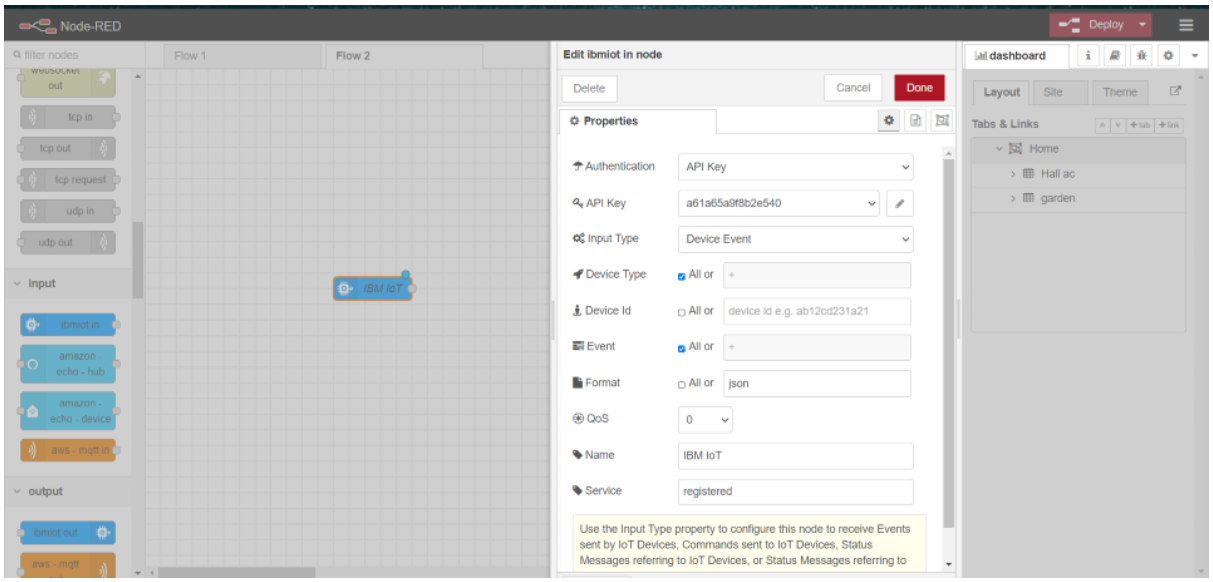
Aunthentication token : 8xGzVAJw0nr)99aL-&

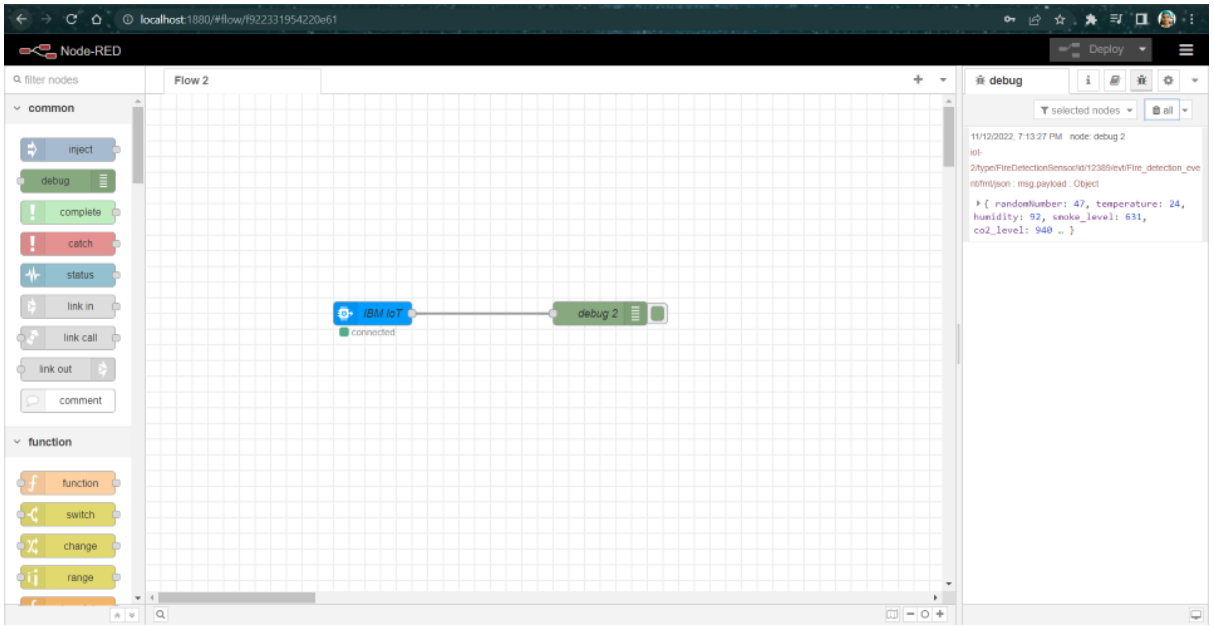
a-5l22w9-ezwc3raxig

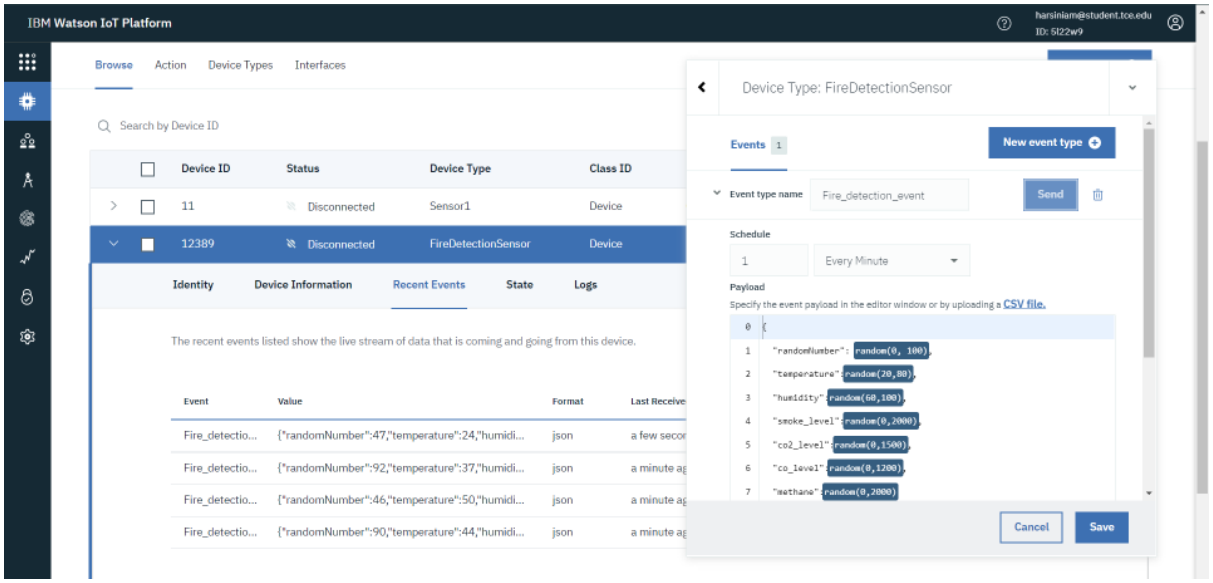
8xGzVAJw0nr)99aL-&

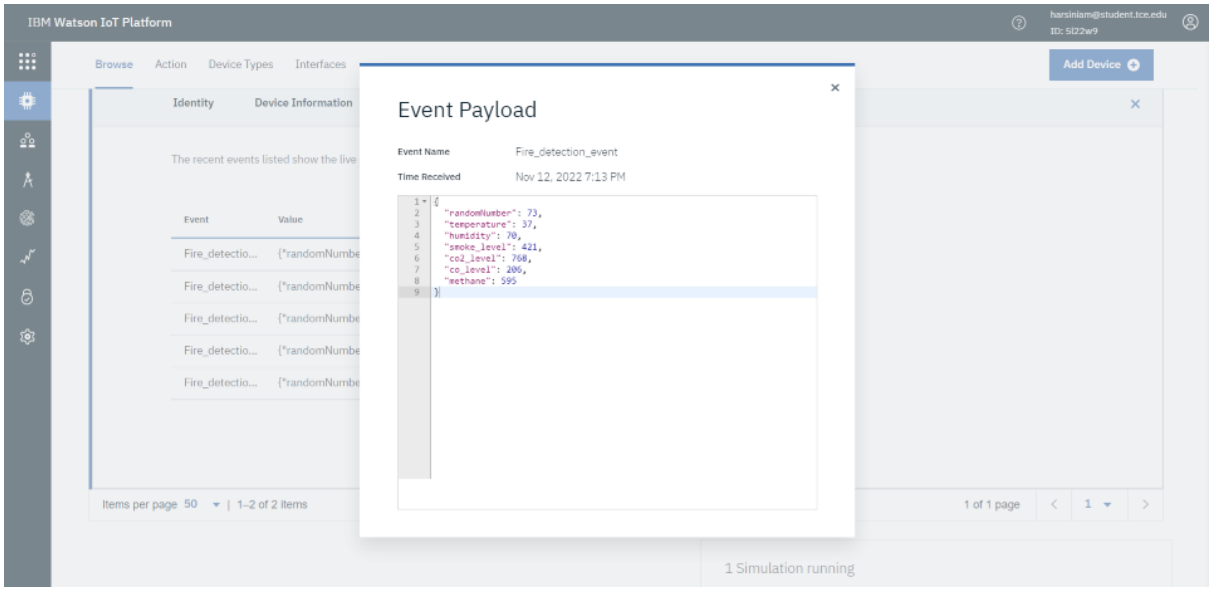
US 5 – Creating flows in Node-Red that collects data from IBM.

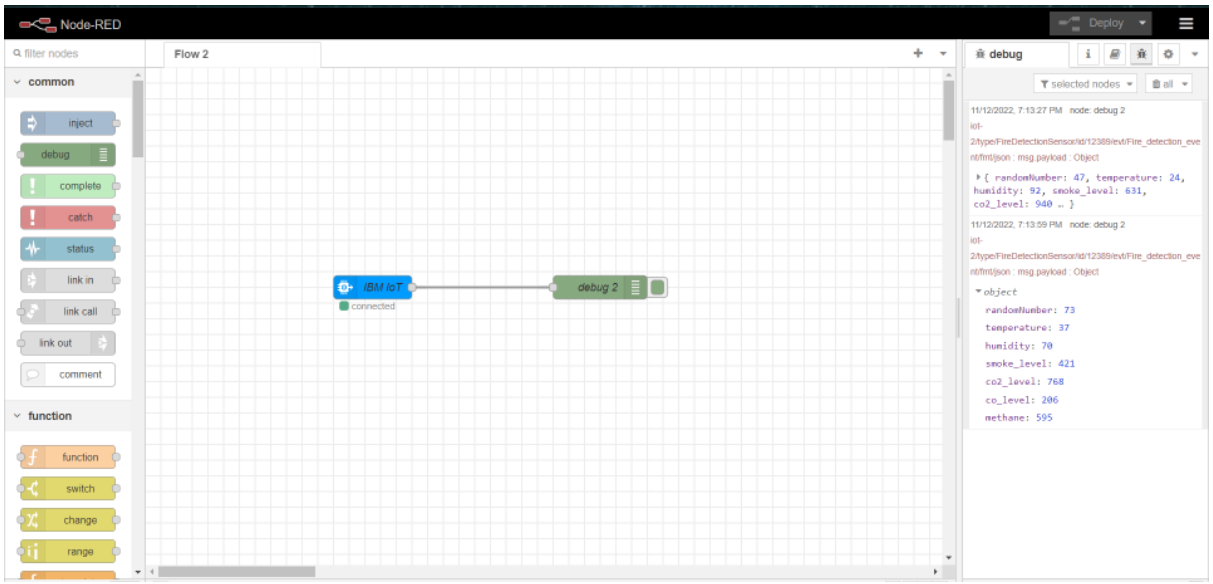





localhost:1880/#flow/f922331954220e61
Node-RED
Deploy
filter nodes
Flow 2
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
function
switch
change
range
IBM IoT
connected
debug 2
debug
selected nodes
all
11/12/2022, 7:13:27 PM node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : Object
{ randomNumber: 47, temperature: 24, humidity: 92, smoke_level: 631, co2_level: 940 … }


IBM Watson IoT Platform
harsiniam@student.tce.edu
ID: 5t22w9
Browse
Action
Device Types
Interfaces
Search by Device ID
Device ID
Status
Device Type
Class ID
11
Disconnected
Sensor1
Device
12389
Disconnected
FireDetectionSensor
Device
Identity
Device Information
Recent Events
State
Logs
The recent events listed show the live stream of data that is coming and going from this device.
Event
Value
Format
Last Receive
Fire_detectio...
{"randomNumber":47,"temperature":24,"humidi...
json
a few seco
Fire_detectio...
{"randomNumber":92,"temperature":37,"humidi...
json
a minute ag
Fire_detectio...
{"randomNumber":46,"temperature":50,"humidi...
json
a minute ag
Fire_detectio...
{"randomNumber":90,"temperature":44,"humidi...
json
a minute ag
Device Type: FireDetectionSensor
Events 1
New event type
Event type name
Fire_detection_event
Send
Schedule
1
Every Minute
Payload
Specify the event payload in the editor window or by uploading a CSV file.
{
"randomNumber": random(0, 100),
"temperature":random(20,80),
"humidity":random(60,100),
"smoke_level":random(0,2000),
"co2_level":random(0,1500),
"co_level":random(0,1200),
"methane":random(0,2000)
Cancel
Save


IBM Watson IoT Platform
harsiniam@student.tce.edu
ID: 5l22w9
Browse
Action
Device Types
Interfaces
Add Device
Identity
Device Information
Event
Value
Event Payload
Event Name
Fire_detection_event
Time Received
Nov 12, 2022 7:13 PM
{
"randomNumber": 73,
"temperature": 37,
"humidity": 70,
"smoke_level": 421,
"co2_level": 768,
"co_level": 206,
"methane": 595
}
Items per page 50
1–2 of 2 items
1 of 1 page
1 Simulation running


Node-RED
Deploy
filter nodes
Flow 2
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
function
switch
change
range
IBM IoT
connected
debug 2
debug
selected nodes
all
11/12/2022, 7:13:27 PM node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : Object
{ randomNumber: 47, temperature: 24, humidity: 92, smoke_level: 631, co2_level: 940 … }
11/12/2022, 7:13:59 PM node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : Object
object
randomNumber: 73
temperature: 37
humidity: 70
smoke_level: 421
co2_level: 768
co_level: 206
methane: 595