

SPRINT-2

Date	5 November 2022
Team ID	PNT2022TMID42300
Project Name	Personal Assistance for Seniors Who Are Self Reliant

TASK :-

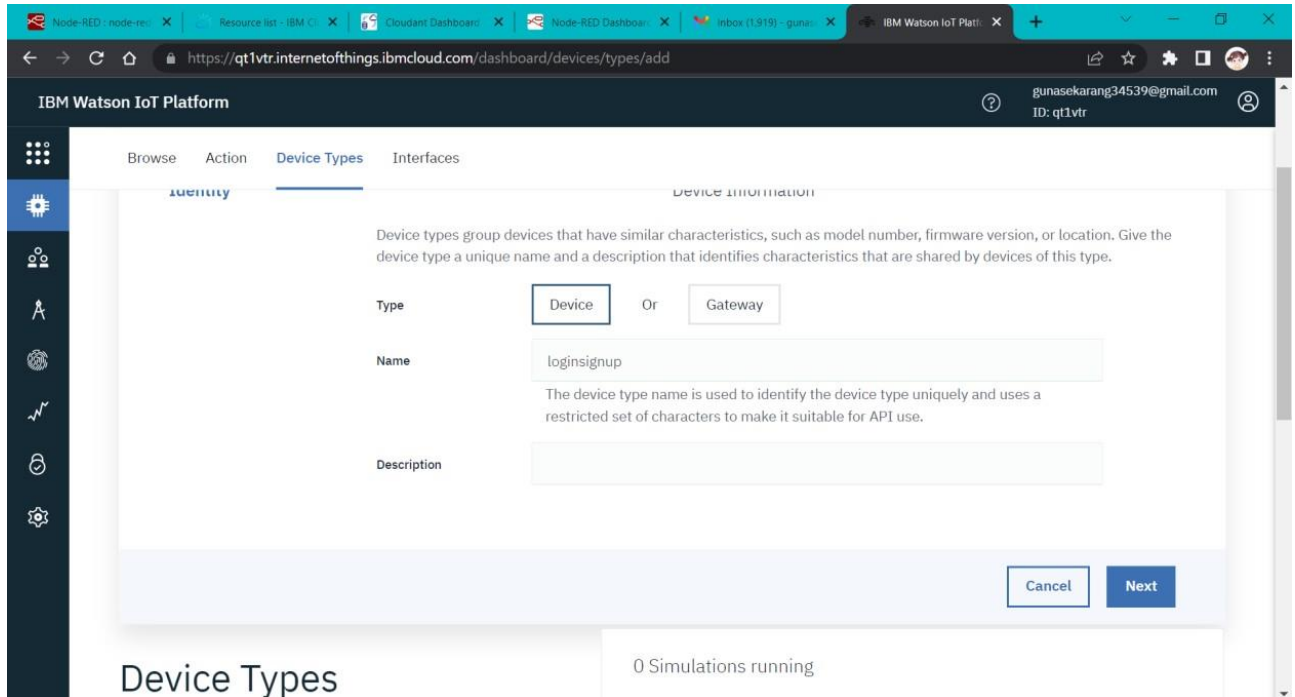
To create a device in the IOT Watson Platform, Workflow for IOT scenarios using Node-RED.

DESCRIPTION: -

- ❖ We have used **IoT Watson platform** for the creation of IoT device.
- ❖ The web application is built using **Node-RED** for collecting the medicine details from the users.
- ❖ We have used the **Cloudant DB** for storing the collected data.
- ❖ The web application will send the medicine details to the created IoT device.
- ❖ The IoT device on receiving the details, it make use of TTS to remind the user about the medicine.
- ❖ By using **TTS** (Text to Speech) service from the IBM platform, the medicinal information will be notified to the users in the form of voice commands.
- ❖ Following are the screenshots that demonstrate the device creation and workflow of the IoT scenarios.

1) IBM WATSON – DEVICE CREATION

DEVICE TYPE CREATION:



The screenshot shows the 'Add Device Type' form in the IBM Watson IoT Platform. The browser address bar indicates the URL: <https://qt1vtr.internetofthings.ibmcloud.com/dashboard/devices/types/add>. The user is logged in as 'gunasekarang34539@gmail.com' with ID 'qt1vtr'. The form is titled 'Device Information' and includes a description: 'Device types group devices that have similar characteristics, such as model number, firmware version, or location. Give the device type a unique name and a description that identifies characteristics that are shared by devices of this type.' The form has three fields: 'Type' (with a dropdown menu showing 'Device' and 'Gateway'), 'Name' (with the value 'loginsignup'), and 'Description' (empty). Below the fields are 'Cancel' and 'Next' buttons. The bottom of the screen shows a 'Device Types' section with '0 Simulations running'.

IBM Watson IoT Platform

Device Information

Device types group devices that have similar characteristics, such as model number, firmware version, or location. Give the device type a unique name and a description that identifies characteristics that are shared by devices of this type.

Type: Or

Name:

The device type name is used to identify the device type uniquely and uses a restricted set of characters to make it suitable for API use.

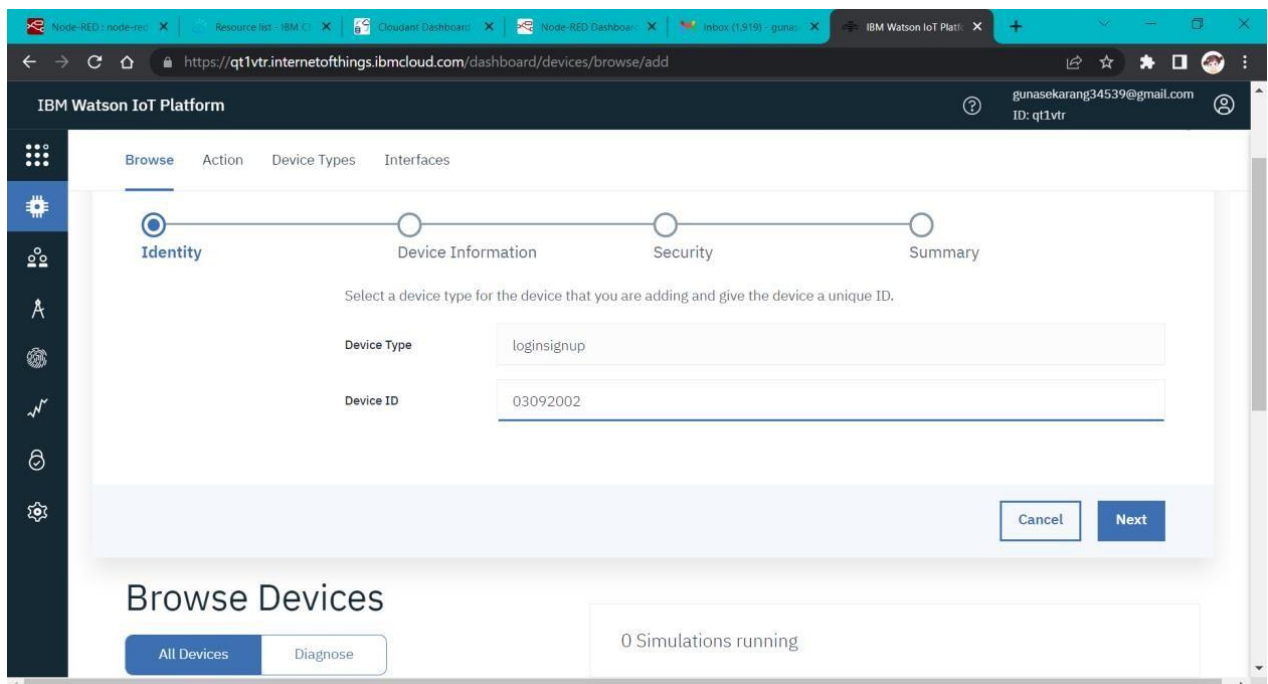
Description:

Cancel Next

Device Types

0 Simulations running

DEVICE CREATION:



The screenshot shows the 'Add Device' form in the IBM Watson IoT Platform. The browser address bar indicates the URL: <https://qt1vtr.internetofthings.ibmcloud.com/dashboard/devices/browse/add>. The user is logged in as 'gunasekarang34539@gmail.com' with ID 'qt1vtr'. The form is titled 'Device Information' and includes a description: 'Select a device type for the device that you are adding and give the device a unique ID.' The form has two fields: 'Device Type' (with the value 'loginsignup') and 'Device ID' (with the value '03092002'). Below the fields are 'Cancel' and 'Next' buttons. The bottom of the screen shows a 'Browse Devices' section with '0 Simulations running'.

IBM Watson IoT Platform

Device Information

Select a device type for the device that you are adding and give the device a unique ID.

Device Type:

Device ID:

Cancel Next

Browse Devices

0 Simulations running

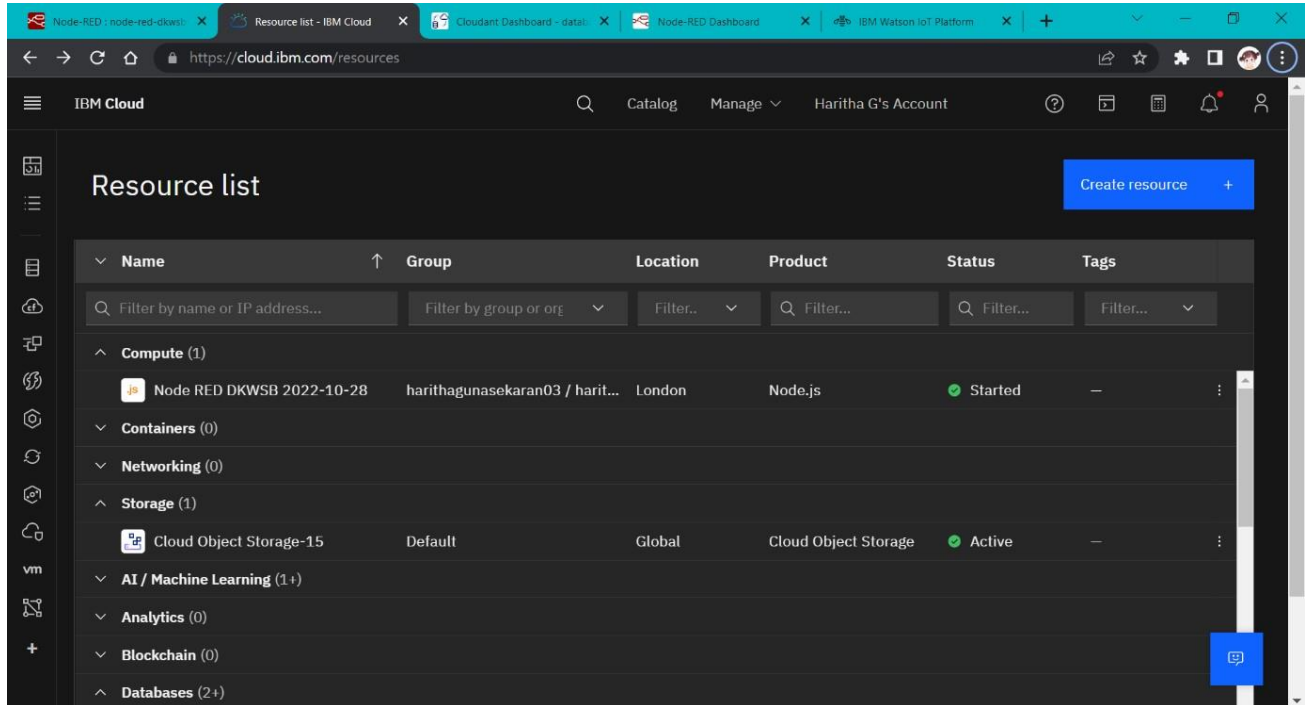
CONFIGURE SECURITY POLICY:

The screenshot shows the IBM Watson IoT Platform interface for configuring a security policy. The page title is "IBM Watson IoT Platform" and the URL is "https://qt1vtr.internetofthings.ibmcloud.com/dashboard/security/connection-security". A warning dialog box is displayed in the center, titled "Warning", with a megaphone icon. The text in the dialog reads: "TLS Optional does not force encryption of network communication when devices do not connect with TLS 1.1 or higher. Using non-TLS connections allows device credentials and sensitive data to be viewed by others on the network. The user is solely responsible for the protection of data it transmits over TLS Optional." There is an "OK" button at the bottom right of the dialog. In the background, the "Default Rule" section is visible, with a "Scope" dropdown set to "Default". The "Custom Rules" section is also visible, showing "0 Simulations running".

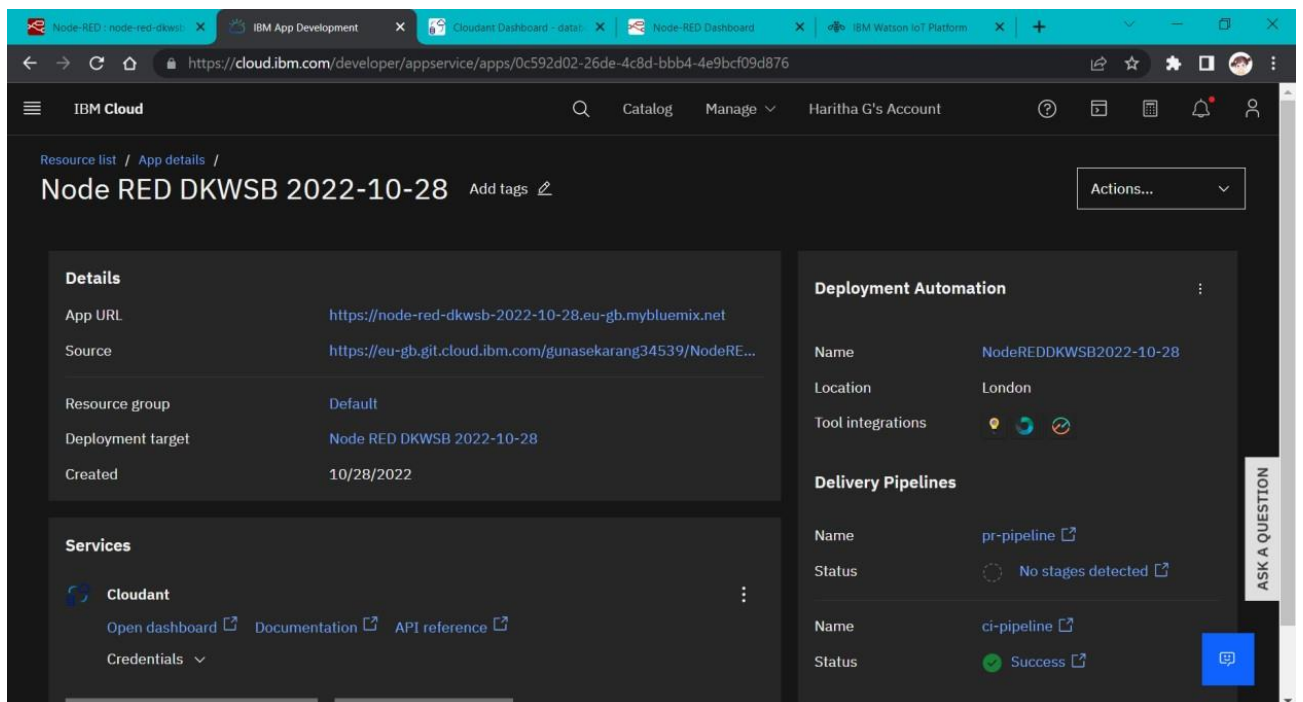
SIMULATE IOT DEVICE:

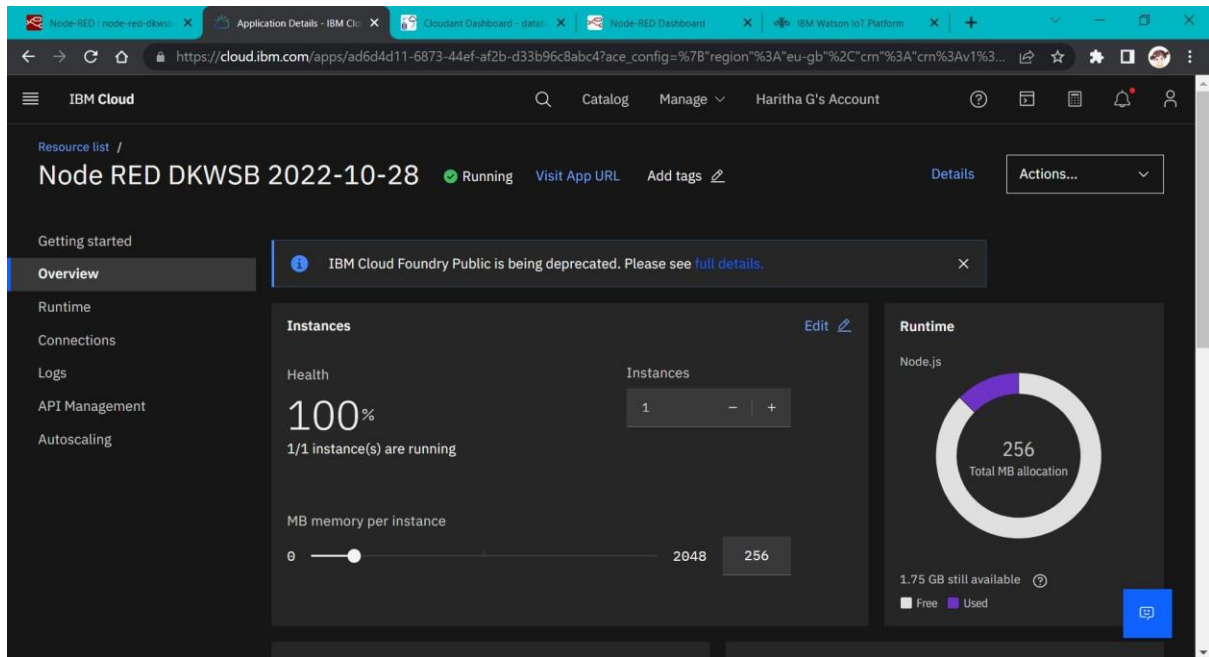
The screenshot shows the IBM Watson IoT Platform interface for simulating IoT devices. The page title is "IBM Watson IoT Platform" and the URL is "https://qt1vtr.internetofthings.ibmcloud.com/dashboard/devices/browse". The "Simulations" section is active, showing "1/50 Simulations Running". There are two device types listed: "loginsignup" and "medicinereminder". Each device type has a "1 Device" entry with a device ID (03092002 and 123456 respectively). Below each device ID, there are buttons for "Create Simulated Device" and "Use Registered Device". The "Browse Devices" section is also visible, showing a table of devices with columns for "Device ID", "Status", and "Device Type". The table shows one device with ID "03092002" and status "Connected".

2) NODE-RED CREATION:

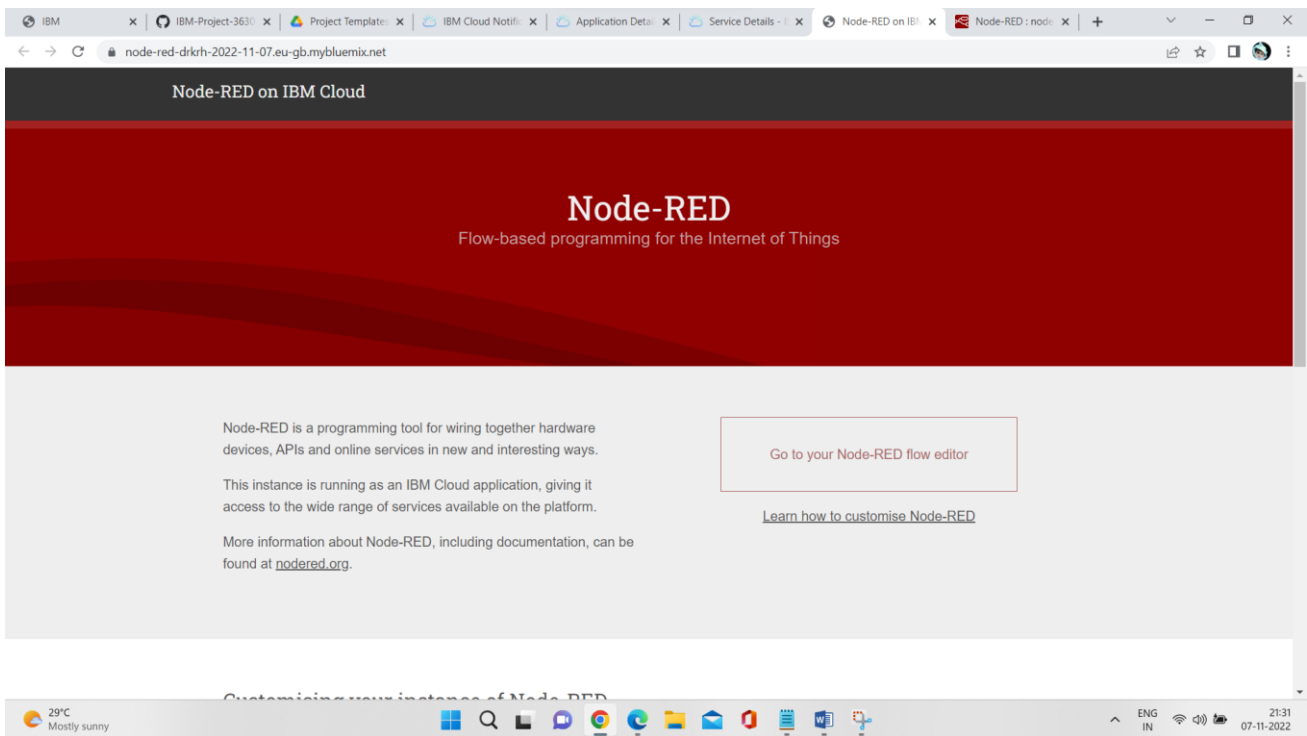


DEPLOYING NODE-RED WEB APP:





NODE-RED FLOW EDITOR:



[illegible]

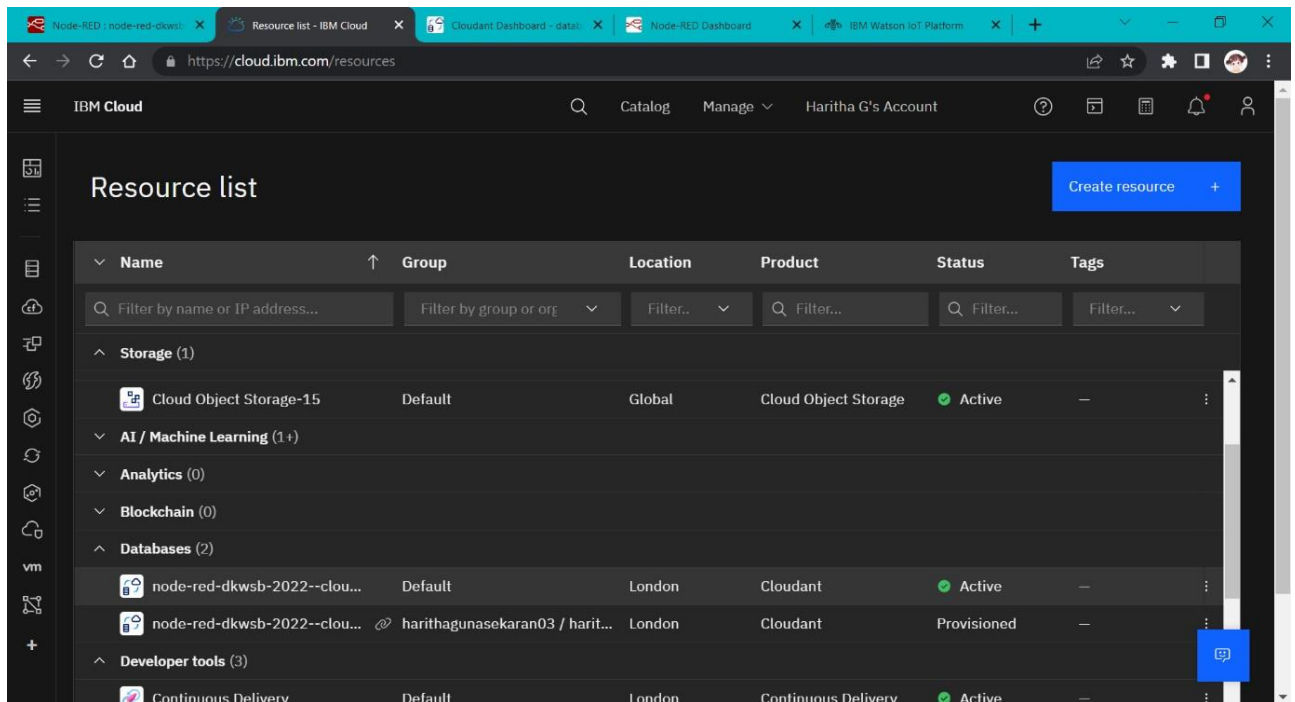
The screenshot shows the IBM Cloud console interface. At the top, there's a navigation bar with the IBM Cloud logo, search, and user account. Below it, a breadcrumb trail shows 'Resource list /'. The main header displays the instance name 'node-red-dkwsb-2022--cloudant-1666974514582' with a status of 'Active'. A sidebar on the left contains links for 'Manage', 'Service credentials', 'Plan', and 'Connections'. The main content area has tabs for 'Overview', 'Capacity', and 'Docs', with 'Overview' selected. Under 'Overview', there's a 'Deployment details' section with a table showing the CRN, Location (London), External endpoint, and External endpoint (preferred). At the bottom, the 'Authentication methods' section shows 'IBM Cloud IAM' and 'Cloudant credentials' with a 'Migrate to IAM Only' button.

Deployment details	
CRN	crn:v1:bluemix:public:cloudantnosqldb:eu-gb:a/6bd34af74dfc4e919b494a89d99a1279:2f422b8e-4c41-4348-b9fe-c1bb7cc9ef7c::
Location	London
External endpoint	https://e0ca5cfe-2984-4eb5-b604-dc654ceb3930-bluemix.cloudant.com
External endpoint (preferred)	https://e0ca5cfe-2984-4eb5-b604-dc654ceb3930-bluemix.cloudantnosqldb.appdomain.cloud

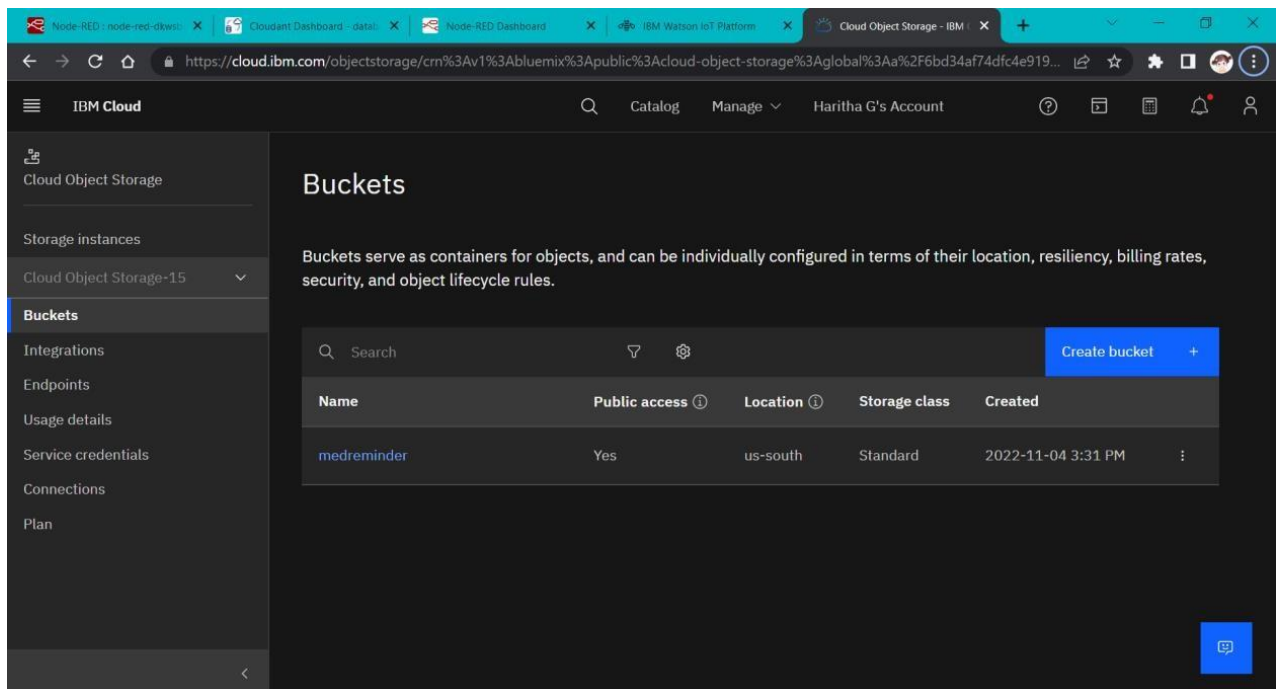
Authentication methods	
IBM Cloud IAM	Cloudant credentials

Migrate to IAM Only

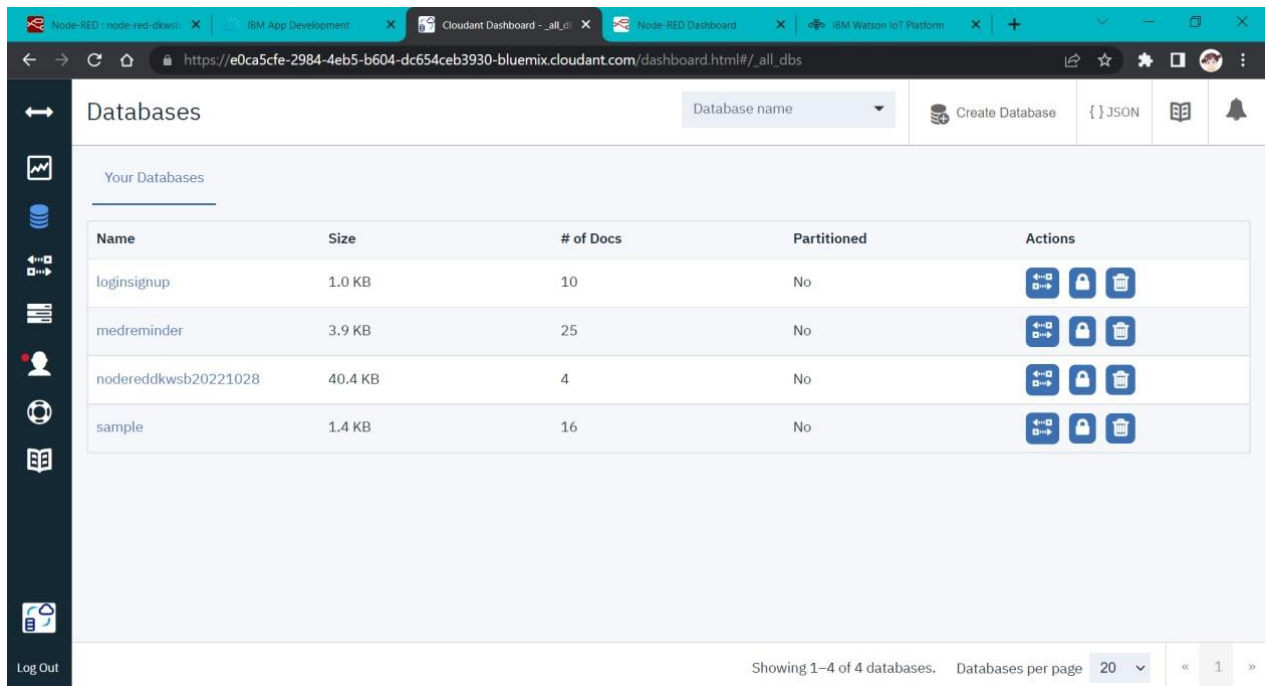
BUCKET CREATION:



❖ Here we created an bucket in as cloud object storage for our project.



4) DATABASE CREATION:



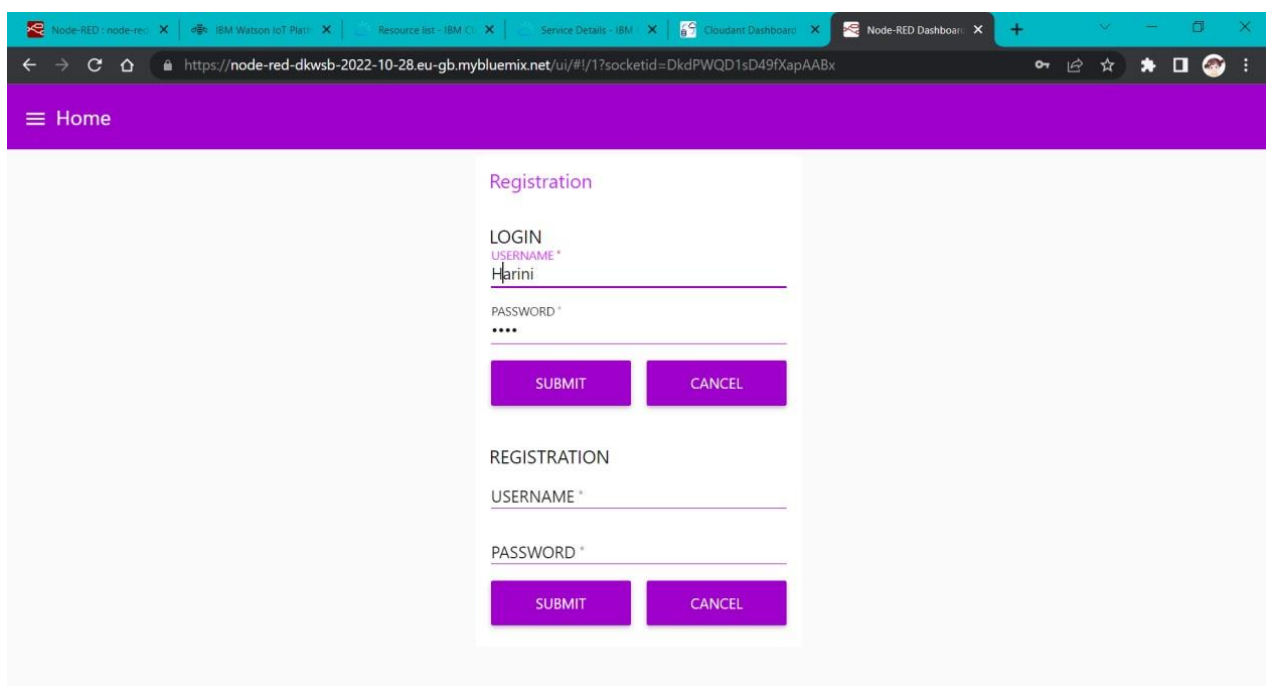
The screenshot shows the Cloudant Databases dashboard. The URL is https://e0ca5cfe-2984-4eb5-b604-dc654ceb3930-bluemix.cloudant.com/dashboard.html#/all_dbs. The dashboard displays a table of databases under the heading "Your Databases".

Name	Size	# of Docs	Partitioned	Actions
loginsignup	1.0 KB	10	No	[Icons for edit, lock, delete]
medreminder	3.9 KB	25	No	[Icons for edit, lock, delete]
nodereddkwsb20221028	40.4 KB	4	No	[Icons for edit, lock, delete]
sample	1.4 KB	16	No	[Icons for edit, lock, delete]

At the bottom, it says "Showing 1-4 of 4 databases. Databases per page 20".

FINAL EXECUTION:

- ❖ When the user enter the login credentials, it get stored in db.
- ❖ After successfull login user get redirected to the home scren.



The screenshot shows the Node-RED dashboard with the URL <https://node-red-dkwsb-2022-10-28.eu-gb.mybluemix.net/ui/#/1?socketid=DkdPWQD1sD49fXapAABx>. The dashboard has a purple header with a "Home" button. The main content area displays two forms: "LOGIN" and "REGISTRATION".

LOGIN

USERNAME *
Harini

PASSWORD *
....

SUBMIT CANCEL

REGISTRATION

USERNAME *

PASSWORD *

SUBMIT CANCEL

❖ The data are getting coming in the IOT device platform.

The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes tabs for 'Browse', 'Action', 'Device Types', and 'Interfaces'. A sidebar on the left contains various icons for navigation. The main content area displays a list of devices. One device, 'loginsignup', is selected, and its details are shown in a modal window. The modal has tabs for 'Identity', 'Device Information', 'Recent Events', 'State', and 'Logs'. The 'Recent Events' tab is active, showing a table of events. The table has columns for 'Event', 'Value', 'Format', and 'Last Received'. One event is listed: 'event_1' with a value of '{"username":"harini","password":"12@"}' in 'json' format, received 'a few seconds ago'. Below the modal, a list of other devices is visible, including '12345' (Disconnected, UltraSonDistance) and '123456' (Disconnected, medicin).

Event	Value	Format	Last Received
event_1	{"username":"harini","password":"12@"}	json	a few seconds ago

❖ Now, we can see the data are getting stored in DB.

The screenshot shows the Cloudant Dashboard. The top navigation bar includes tabs for 'Database', 'Documents', 'Indexes', and 'Tools'. A sidebar on the left contains various icons for navigation. The main content area displays a list of documents. One document, 'loginsignup', is selected, and its details are shown in a modal window. The modal has tabs for 'Document', 'JSON', and 'JSON-LD'. The 'JSON' tab is active, showing a JSON document. The document has a '_id' of '6999da3f69f9e3d0fb307bf60fc9f28b', a '_rev' of '1-dc21b1d2ad91369e8181ae4efe1a6680', and a 'payload' object containing 'user' information. The document is also associated with a 'socketid' of 'C9K09UYaqzLwHESMAABz'.

```
1 {
2   "_id": "6999da3f69f9e3d0fb307bf60fc9f28b",
3   "_rev": "1-dc21b1d2ad91369e8181ae4efe1a6680",
4   "payload": {
5     "user": {
6       "TYPE YOUR NAME": "Hartni",
7       "ENTER PASSWORD": "122@"
8     }
9   },
10  "socketid": "C9K09UYaqzLwHESMAABz"
11 }
```

RESULT:

At the end of the sprint 2, we created the software for our project and tested successfully...!