

SPRINT-2

Date	20 November 2022
Team ID	PNT2022TMID12172
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 Type' dialog box in the IBM Watson IoT Platform. The dialog has a progress bar with two steps: 'Identity' (selected) and 'Device Information'. Below the progress bar, there is a text area for 'Name' containing 'loginsignup' and a text area for 'Description' containing '19112022'. There are 'Cancel' and 'Next' buttons at the bottom right. A status bar at the bottom indicates '0 Simulations running'.

IBM Watson IoT Platform

73151921034@smartinternz.com
ID: zqbv7a

Browse Action Device Types Interfaces

Add Type

Identity 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

0 Simulations running

DEVICE CREATION:

The screenshot shows the 'Device Types' page in the IBM Watson IoT Platform. It features a table with columns: Device ID, Status, Device Type, Class ID, Date Added, and Descriptive Location. The table contains one device with ID '19112022', status 'Disconnected', and type 'loginsignup'. Below the table, there is a 'Device Information' section with details about the device. A status bar at the bottom indicates '0 Simulations running'.

IBM Watson IoT Platform

73151921034@smartinternz.com
ID: zqbv7a

Browse Action Device Types Interfaces

Add Device

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
19112022	Disconnected	loginsignup	Device	Nov 19, 2022 12:08 PM	

Identity Device Information Recent Events State Logs

Device ID 19112022

Device Type loginsignup

Date Added Nov 19, 2022 12:08 PM

Added By 73151921034@smartinternz.com

Connection Status Disconnected

0 Simulations running

CONFIGURE SECURITY POLICY:

IBM Watson IoT Platform

73151921034@smartinternz.com
ID: zgbv7a

← Back

Cancel Save

Use the Connection Security policy to set the default security level that is applied to all devices. You can then add custom rules for specific devices.

Default Rule

Define the default connection security level to use for all device types that do not have custom rules defined.

Scope	Security Level	# of Devices
Default	TLS with Token Authentication	0 devices

Custom Rules

You can define custom connection rules for specific device types. Custom rules overwrite the default rule for the specified device types.

Add Custom Rule

0 Simulations running

SIMULATE IOT DEVICE:

IBM Watson IoT Platform

73151921034@smartinternz.com
ID: zgbv7a

Browse Action Device Types Interfaces

Search by Device ID

Device ID	Status	Device Type	Class ID	Date
19112022	Disconnected	loginsignup	Device	Nov 19, 2022 12:08 PM

Identity Device Information Recent Events State Logs

Device ID 19112022

Device Type loginsignup

Date Added Nov 19, 2022 12:08 PM

Added By 73151921034@smartinternz.com

Connection Status Disconnected

Items per page 50 | 1-2 of 2 items

Simulations

Import/Export simulation

0/50 Simulations Running

Select or create a device type...

Device Type loginsignup

1 Event

No simulations are currently created for the device type.

1 × Create Simulated Device Use Registered Device

0 event sent

0 bytes sent

2)NODE-RED CREATION:

The screenshot shows the IBM Cloud 'Resource list' page. The browser tabs include 'IBM', 'Download file | iLove...', 'Resource list - IBM Cl...', 'ci-pipeline Dashboard', and 'IBM Cloud Account'. The URL is 'cloud.ibm.com/resources'. The page has a search bar and a 'Create resource' button. The resource list table shows one resource: 'Node RED JOSUG 2022-11-18' in the 'Compute' category, located in 'Sydney', with status 'Started'. The left sidebar shows various resource categories like Containers, Networking, Storage, AI / Machine Learning, Analytics, Blockchain, Databases, Developer tools, and Logging and monitoring.

Name	Group	Location	Product	Status	Tags
Node RED JOSUG 2022-11-18	Sowmiya73151921050 / Sowmiy...	Sydney	Node.js	Started	-

DEPLOYING NODE-RED WEB APP:

The screenshot shows the IBM Cloud 'App details' page for 'Node RED JOSUG 2022-11-18'. The browser tabs include 'IBM', 'Download file | iLove...', 'IBM App Development', 'ci-pipeline Dashboard', and 'IBM Cloud Account'. The URL is 'cloud.ibm.com/developer/appservice/apps/3bd495c4-28e3-43eb-ba3f-cdbc6d3a2702'. The page shows details for the app, including its URL, source, resource group, deployment target, and creation date. It also shows deployment automation and delivery pipelines. The 'Deployment Automation' section shows a successful deployment using the 'ci-pipeline' tool. The 'Delivery Pipelines' section shows a 'pr-pipeline' with no stages detected. The left sidebar shows the 'Services' section with 'Cloudant' and links to 'Open dashboard', 'Documentation', and 'API reference'.

Details	Value
App URL	https://node-red-josug-2022-11-18.au-syd.mybluemix.net
Source	https://us-south.git.cloud.ibm.com/73151921050/NodeREDJOSUG...
Resource group	Default
Deployment target	Node RED JOSUG 2022-11-18
Created	11/18/2022

Deployment Automation	Value
Name	NodeREDJOSUG2022-11-18
Location	Dallas
Tool integrations	[Icons for various tools]

Delivery Pipelines	Value
Name	ci-pipeline
Status	Success
Name	pr-pipeline
Status	No stages detected

NODE-RED FLOW EDITOR:

The screenshot shows a web browser window with the Node-RED interface. The browser's address bar displays the URL: `node-red-josug-2022-11-18.au-syd.mybluemix.net/?_ga=2.137695090.374488039.1668835439-1859572171.1666811055`. The browser tabs include "(no subject)", "IBM", "Download file", "Schematics", "ci-pipeline D...", "IBM Cloud Ac...", "IBM App Dev...", and "Node-RED on...".

The Node-RED interface has a dark header with the text "Node-RED on IBM Cloud". Below this is a large red banner with the text "Node-RED" and "Flow-based programming for the Internet of Things".

The main content area is light gray and contains the following text:

Node-RED is a programming tool for wiring together hardware devices, APIs and online services in new and interesting ways.

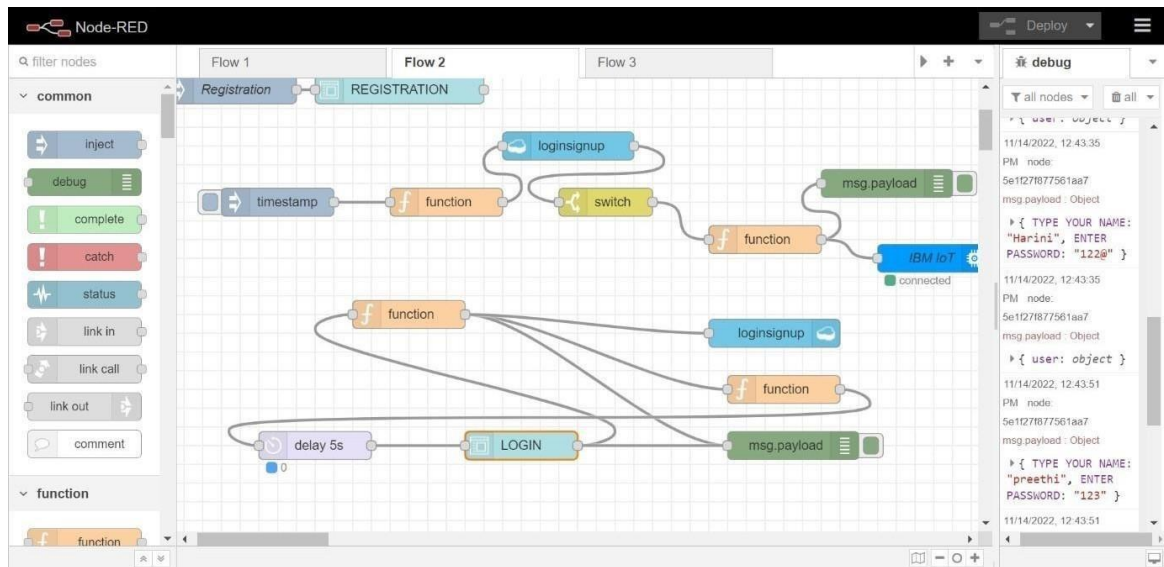
This instance is running as an IBM Cloud application, giving it access to the wide range of services available on the platform.

More information about Node-RED, including documentation, can be found at nodered.org.

On the right side, there is a button labeled "Go to your Node-RED flow editor" and a link labeled "Learn how to customise Node-RED".

The Windows taskbar at the bottom shows the search bar with the text "Type here to search", several application icons, and the system tray with the date "19-11-2022" and time "13:00".

CREATION OF NODES FOR THE WORKFLOW:



3) CLOUDANT CREATION:

IBM Cloud

Search resources and products...

Q

CatalogManagePavithra 73151921034...

?📅🔖👤

Resource list /
node-red-uwwgz-2022--cloudant-1668614027190ActiveAdd tags

DetailsActions...

ManageService credentialsPlanConnections

OverviewCapacityDocsLaunch Dashboard

Deployment details

CRN	crm:v1:bluemix:public:cloudantnosqldb:eu-gb:a/3106c1e9a4b44915b532426faa94f55a:70ac035f-f8bf-4dad-a337-949243baaa41::
Location	London
External endpoint	https://5b8c832a-3ad0-47cf-8af3-b8314d064341-bluemix.cloudant.com
External endpoint (preferred)	https://5b8c832a-3ad0-47cf-8af3-b8314d064341-bluemix.cloudantnosqldb.appdomain.cloud
Authentication methods	IBM Cloud IAM and Cloudant credentials <div>Migrate to IAM Only</div>
Activity Tracker event types ⓘ	ManagementSave
Disk encryption	Yes. Automatically generated disk encryption key.

BUCKET CREATION:

The screenshot shows the IBM Cloud 'Resource list' page. The left sidebar contains a navigation menu with icons for different resource categories. The main area displays a table of resources with columns: Name, Group, Location, Product, Status, and Tags. A 'Create resource' button is in the top right corner.

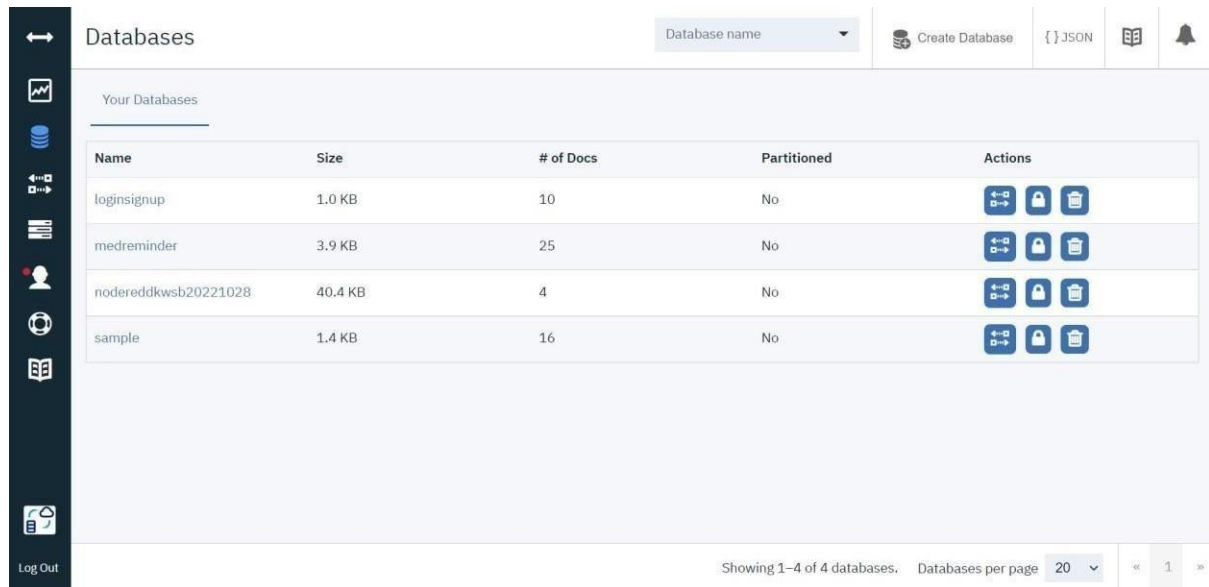
Name	Group	Location	Product	Status	Tags
Compute (1)					
Node RED UWWGZ 2022-11-16	Pavithra 73151921034 / Pavithra7315	Sydney	Node.js	Started	—
Containers (0)					
Networking (0)					
Storage (1)					
Cloud Object Storage-a0	Default	Global	Cloud Object Storage	Active	—
AI / Machine Learning (1)					
Text to Speech-5z	Default	Sydney	Text to Speech	Active	—
Analytics (0)					
Blockchain (0)					
Databases (2)					
node-red-uwwgz-2022--cloudant-166861...	Default	London	Cloudant	Active	—













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

The screenshot shows the IBM Cloud 'Buckets' page. The left sidebar has a navigation menu with options like 'Cloud Object Storage', 'Storage instances', 'Cloud Object Storage-a0', 'Buckets', 'Integrations', 'Endpoints', 'Usage details', 'Service credentials', 'Connections', and 'Plan'. The main area displays a table of buckets with columns: Name, Public access, Location, Storage class, and Created. A 'Create bucket' button is in the top right corner.

Name	Public access	Location	Storage class	Created
pavi2831	No	jp-tok	Smart Tier	2022-11-19 2:43 PM

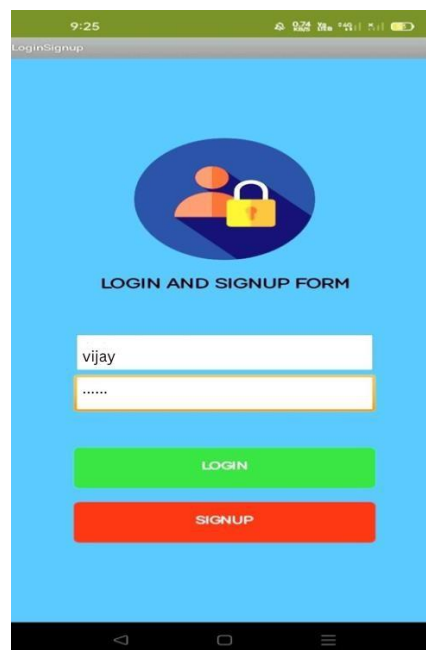
4) DATABASE CREATION:



Name	Size	# of Docs	Partitioned	Actions
loginsignup	1.0 KB	10	No	  
medreminder	3.9 KB	25	No	  
nodereddkwsb20221028	40.4 KB	4	No	  
sample	1.4 KB	16	No	  

FINAL EXECUTION:

- ❖ When the user enters the login credentials, it gets stored in db.
- ❖ After successful login user get redirected to the homescreen.



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

The screenshot shows the IBM Watson IoT Platform interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A sidebar on the left contains various icons. The main content area displays a table of devices. The first device listed is '19112022', which is 'Disconnected' and of type 'loginsignup'. Below the table, there is a section for 'Recent Events' for the selected device. It shows a single event with the following details:

Event	Value	Format	Last Received
event_1	{"username":"vijay","password":"1234@!"}	json	a few seconds ago

At the bottom right, a status bar indicates '3 Simulations running'.

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

The screenshot shows a 'New Document' editor in the IBM Watson IoT Platform. The document is titled 'loginsignup > New Document'. It contains a JSON payload with the following structure:

```
1 {
2   "_id": "4a50fe71c97165c6517d036f5bdfdf5a",
3   "_rev": "1-dc21b1d2ad91369e8181ae4efe1a6680",
4   "payload": {
5     "user": {
6       "TYPE YOUR NAME": "vijay",
7       "ENTER PASSWORD": "1234@!"
8     }
9   },
10  "socketid": "C9K09UyagzLwHESMAABz"
11 }
```

RESULT:

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