

# Smart Waste Management System for Metropolitan Cities

## Project Objectives - Create and Configure IBM Cloud Services:

I and all my team members have create accounts in the below platform and we also worked with them and used those services for our project works.

- IBM Watson IoT Platform
- Node-RED Service
- Cloudant DB

## Screenshot of those services:

i) IBM Watson IoT Platform:

IBM Watson IoT Platform

111719106009@smartinternz.com  
ID: rhpwpj

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	Added By	Device Class
> 12345	Disconnected	NodeMCU	Device	Oct 17, 2022 2:36 PM		111719106009@smartinternz.com	
> 12345	Disconnected	raspberrypi	Device	Oct 20, 2022 8:19 PM		111719106009@smartinternz.com	

Items per page: 50 | 1-2 of 2 items

1 of 1 page < 1 >

## ii) Node Red Service:

The screenshot shows the IBM Cloud dashboard for a project named "Project Nalaiyathiran". The interface is divided into several sections:

- Details:** Displays the App URL, Source (https://eu-gb.git.cloud.ibm.com/...), Resource group (Default), Deployment target (Project Nalaiyathiran), and Created date (10/10/2022).
- Services:** Shows the "Cloudant" service with links to the Open dashboard, Documentation, and API reference. There are buttons for "Connect existing services" and "Create service".
- Deployment Automation:** Shows the Name (ProjectNalaiyathiran), Location (London), and Tool integrations. Below this, the "Delivery Pipelines" section lists two pipelines: "pr-pipeline" (No stages detected) and "ci-pipeline" (Success).
- Getting started quickly:** A sidebar with a close button. It contains sections for "Configuring your app" (5 steps), "Building, running, and deploying your app locally" (2 steps), and a list of commands to run locally: `ibmcloud dev build`, `ibmcloud dev run`, and `ibmcloud dev deploy`.

The screenshot shows the "Node-RED on IBM Cloud" introduction page. The header is "Node-RED on IBM Cloud". The main heading is "Node-RED" with the subtitle "Flow-based programming for the Internet of Things".

The page 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](https://nodered.org).

There is a button "Go to your Node-RED flow editor" and a link "Learn how to customise Node-RED".

The section "Customising your instance of Node-RED" states: "This instance of Node-RED is enough to get you started creating flows. You may want to customise it for your needs, for example replacing this introduction page with your own, adding http authentication to the flow editor or adding new nodes to the palette. To start customising your instance of Node-RED, you can either download the application locally or use IBM DevOps Services to edit and deploy your changes directly."

Below this text are four expandable sections:

- + Securing the editor
- + Enabling Application Metrics for Node.js monitoring
- + Adding new nodes to the palette
- + Upgrading the version of Node-RED

iii) Cloudant DB

Monitoring

Databases

Replication

Active Tasks

Account

Support

Documentation

IBM Cloudant

Log Out IBMId-676000QP4U

Databases

Database name

Create Database

{ } JSON

Your Databases

Name	Size	# of Docs	Partitioned	Actions
admin	85 bytes	1	No	
coadmin	209 bytes	2	No	
projectnalaityathiran	91.9 KB	4	No	
truckdriver	226 bytes	2	No	

Showing 1-4 of 4 databases. Databases per page 20 < 1 >