

PROJECT OBJECTIVES

CREATE and CONFIGURE IBM CLOUD SERVICES

Create IBM Watson IoT Platform and Device

The screenshot shows the IBM Watson IoT Platform console. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. A search bar is on the left, and an 'Add Device' button is on the right. The main content area displays a table of devices. The first device is selected, showing its details in a sidebar.

Device ID	Status	Device Type	Class ID	Date Added
95509404	Disconnected	IoT	Device	Oct 10, 2022 6:25 PM

Device Details:

- Device ID: 95509404
- Device Type: IoT
- Date Added: Oct 10, 2022 6:25 PM
- Added By: 513119106079@smartinternz.com
- Connection Status: Disconnected
- Last Connected: Nov 20, 2022 10:51 PM
- Client Address: 106.195.45.146
- SecureToken
- Duration: 2 minutes
- Data Transferred: 199 B

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1 Simulation running

Create Node Red Service

The screenshot shows the Node-RED web interface. The left sidebar contains a 'filter nodes' search bar and a list of nodes categorized under 'common' and 'function'. The main workspace displays a flow diagram for 'Flow 1'. The flow starts with an 'IBM IoT' node (connected), which branches into three parallel paths: 'Train No.', 'Train no', and 'Train name'. These paths converge into a 'Location' node, which then connects to a 'msg payload' node. Below this, there is a 'train' node connected to a 'function' node, which then connects to an 'http' node. At the bottom, a 'Train_command' node is connected to an 'IBM IoT' node (connected), which then connects to a 'msg payload' node. The right sidebar shows a 'debug' console with a list of messages and their payloads.

Flow Diagram:

```
graph LR
    IoT1[IBM IoT] --> TrainNo[Train No.]
    IoT1 --> Trainno[Train no]
    IoT1 --> Trainname[Train name]
    TrainNo --> Location[Location]
    Trainno --> Location
    Trainname --> Location
    Location --> MsgPayload1[msg payload]
    train[train] --> function[function]
    function --> http[http]
    Train_command[Train_command] --> IoT2[IBM IoT]
    IoT2 --> MsgPayload2[msg payload]
```

Debug Console:

```
11/21/2022, 6:50:08 PM node: 42bb9984a91a333c
iot-2/type/iot/95509404/ev/1/event_1/fmt/json :
msg.payload : Object
{
  randomNumber: 67,
  temp: 32,
  Humid: 89
}

11/21/2022, 6:50:08 PM node: 42bb9984a91a333c
iot-2/type/iot/95509404/ev/1/event_1/fmt/json :
msg.payload : undefined
undefined

11/21/2022, 6:50:09 PM node: 42bb9984a91a333c
iot-2/type/iot/95509404/ev/1/event_1/fmt/json :
msg.payload : undefined
undefined

11/21/2022, 6:50:10 PM node: 42bb9984a91a333c
iot-2/type/iot/95509404/ev/1/event_1/fmt/json :
msg.payload : undefined
undefined
```

