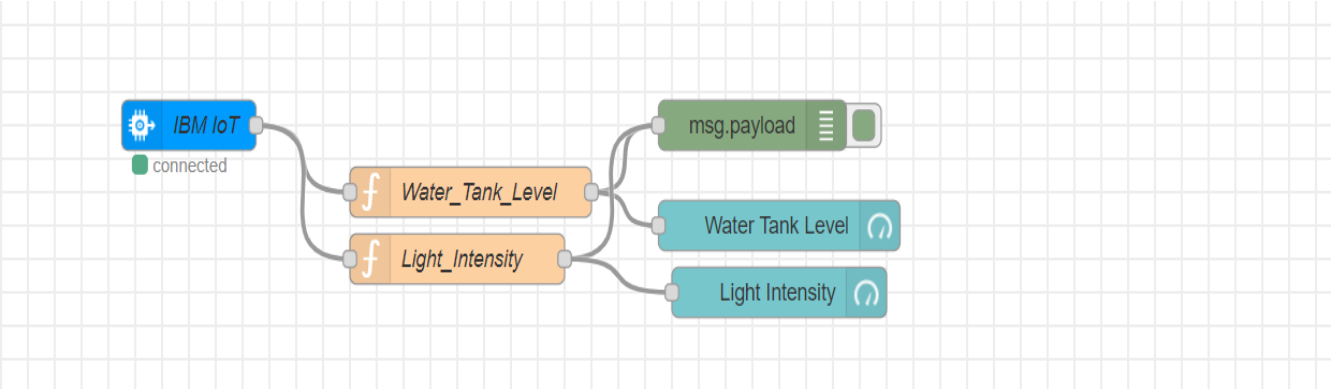
Assignment 3

Develop a code to upload the water tank level and light intensity values to the IBM IoT platform and visualize them in the web application.

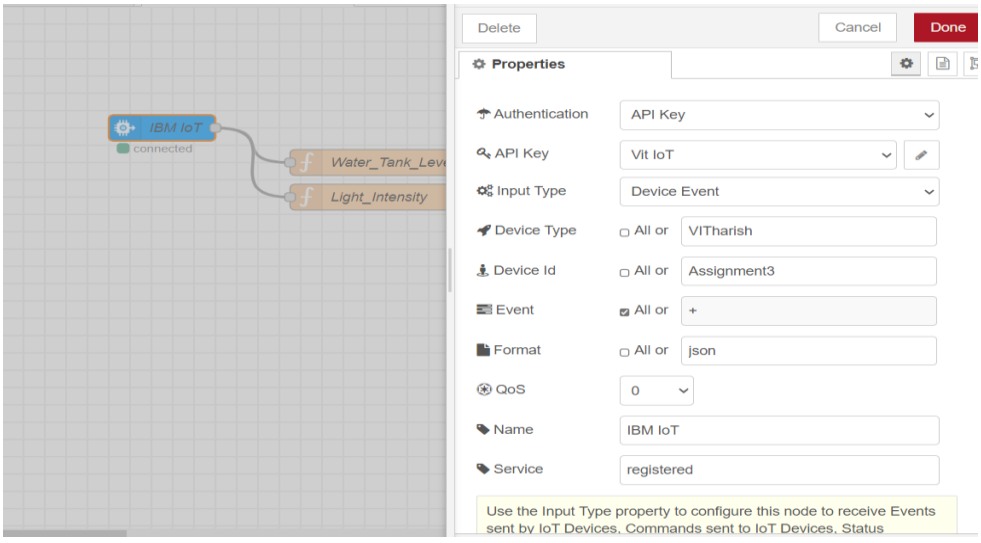
IoT Device Id and type:

	Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
>	12345	Disconnected	VITharish	Device	Jul 8, 2021 6:49 PM	
>	Assignment3	Disconnected	VITharish	Device	Jul 14, 2021 4:00 PM	

After opening node red app and then go to Node red flow editor:

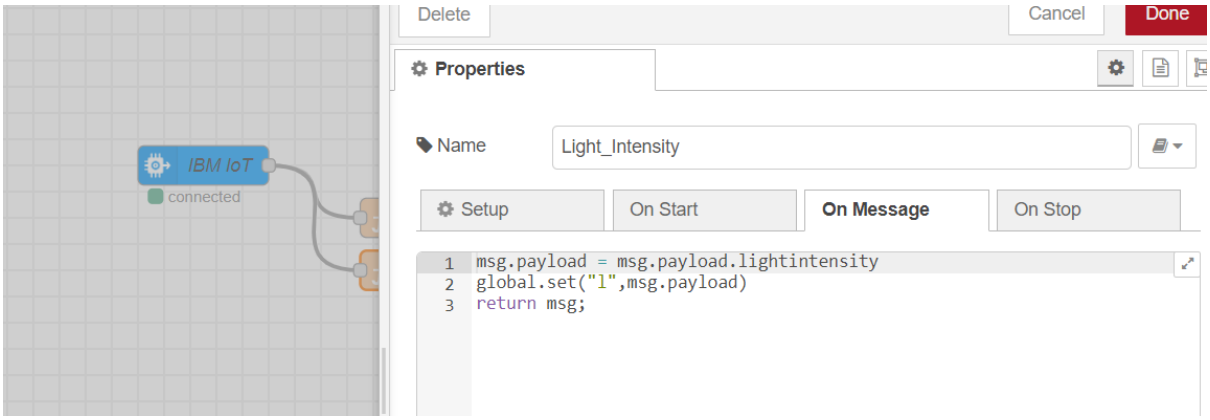


IBM IoT properties:



Getting Data of Water tank level and light intensity from Python code:

- msg.payload = msg.payload.WaterTankLevel
- global.set("w",msg.payload)
- return msg;

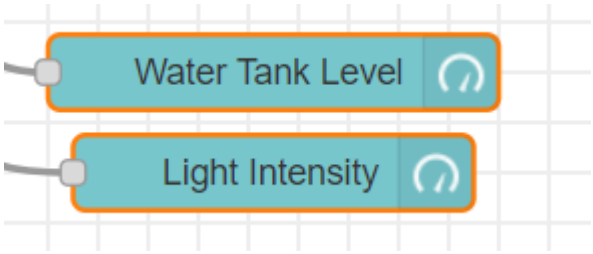


Python code:

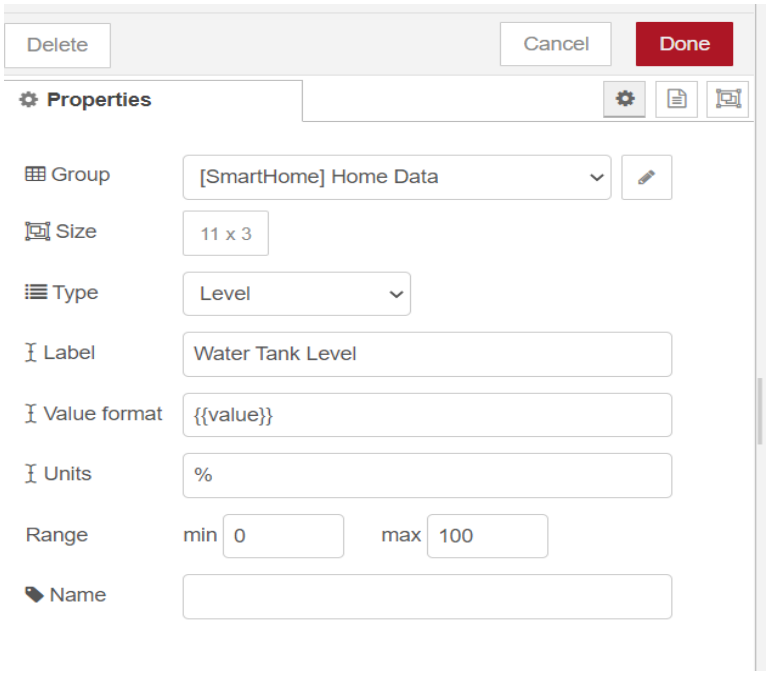
```
import wiotp.sdk.device
import time
import random
myConfig = {
    "identity": {
        "orgId": "aannkh",
        "typeId": "VITharish",
        "deviceId":"Assignment3"
    },
    "auth": {
        "token": "9381628451"
    }
```

```
}


def myCommandCallback(cmd):
   print("Message received from IBM IoT Platform: %s" %
cmd.data['command'])
   m=cmd.data['command']
   if(m == "lighton"):
      print("....Light is ON....")
   elif (m == "lightoff"):
      print("....Light is OFF....")
   print()


client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()


while True:
   temp=random.randint(0,100)
   hum=random.randint(1,100)
   myData={'WaterTankLevel':temp, 'lightintensity':hum}
   client.publishEvent(eventId="status", msgFormat="json", data=myData,
qos=0, onPublish=None)
   print("Published data Successfully: %s", myData)
   client.commandCallback = myCommandCallback
   time.sleep(2)
client.disconnect()
```

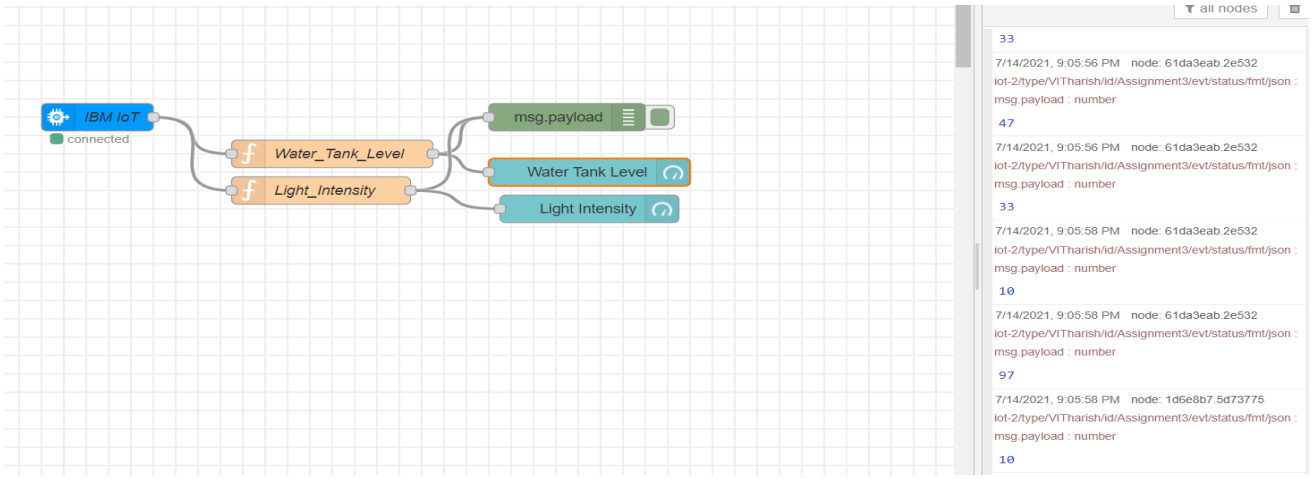
To represent the data in web application using Dashboard flows in node red:



Properties of Gauge:



After deploy:



Opening Web application to see the Data:

Web browser link: [Node-RED Dashboard (mybluemix.net)]

The Python Data is sharing with web in realtime.