

29_T3-CB02

COM NT Assignment: node-red Workshop.

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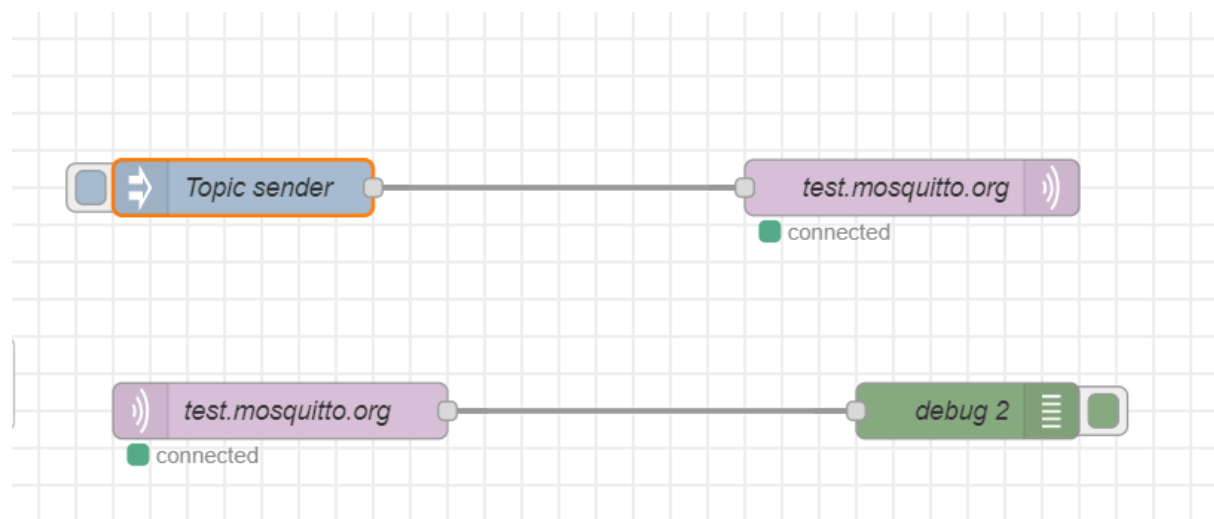
Introduction

I started off by going through the provided material. I got a good understanding of node-red from the introduction slide. I then got a good understanding of how mqtt works by doing some research. Lastly I familiarize myself with the different communication models and I have decided on the request/response and publish/subscribe models.

I made everything work using: node-red, the postman application and the MyMQTT phone application. This was to simplify my understanding of node-red.

MQTT:

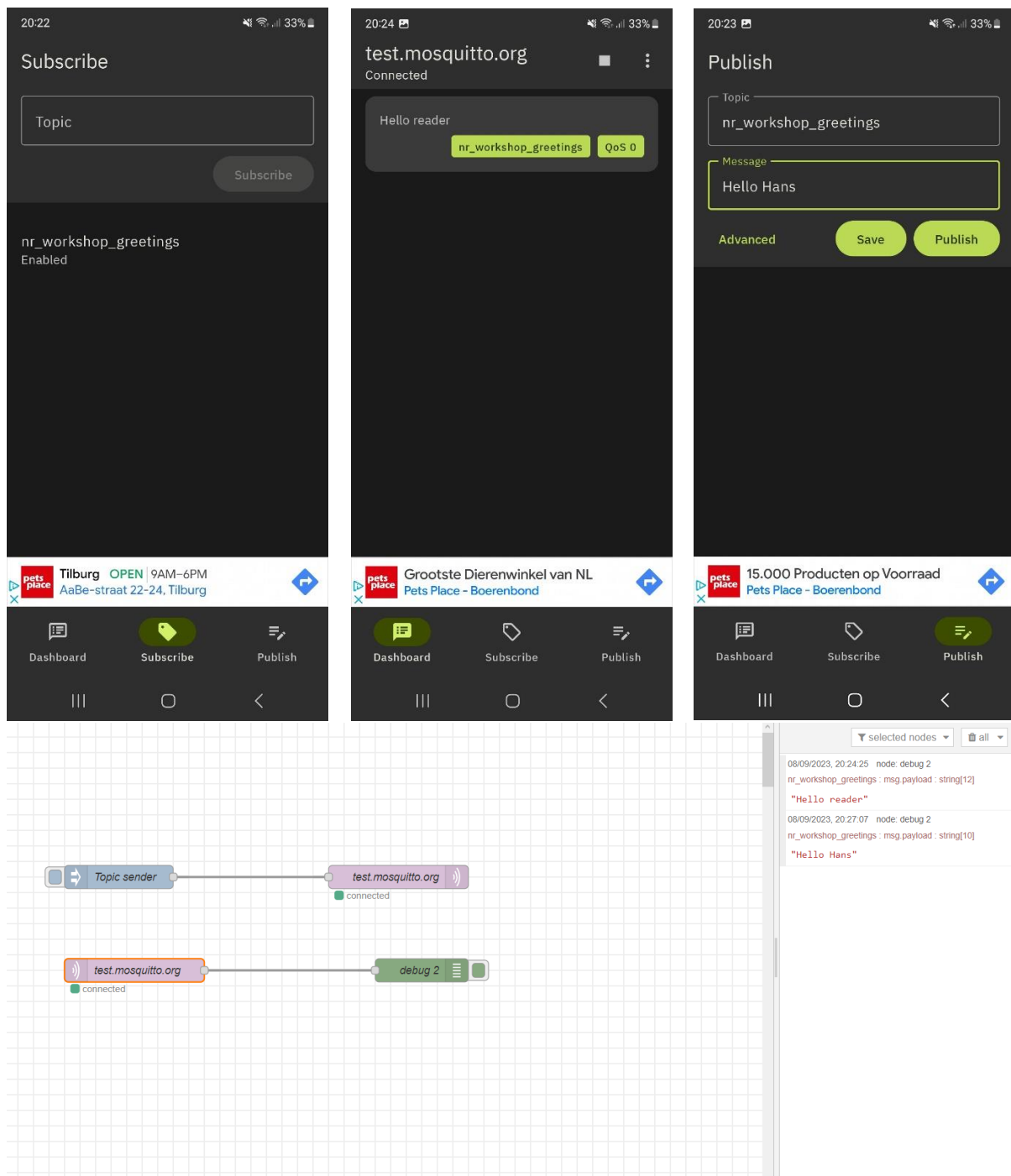
I made a simple mqtt flow by connecting an inject node to an MQTT-out node. This is so that I can publish messages and my subscribers can read them. I also have an mqtt-in node connected to a debug node to read if a subscriber publishes a message.



For reference, the topic I will be using is: nr_workshop_greetings. So within the inject, I assign this as the topic and I can write anything for the message. For now I will go with "Hello reader".

Within the mqtt-out node, I start setting up the server. For the sake of testing, I am using "test.mosquitto.org" with the port 1883 for my project. This is an MQTT 5 protocol. The same is done for the MQTT-in node. The only difference is I have to add the topic which is as before, "nr_workshop_greetings".

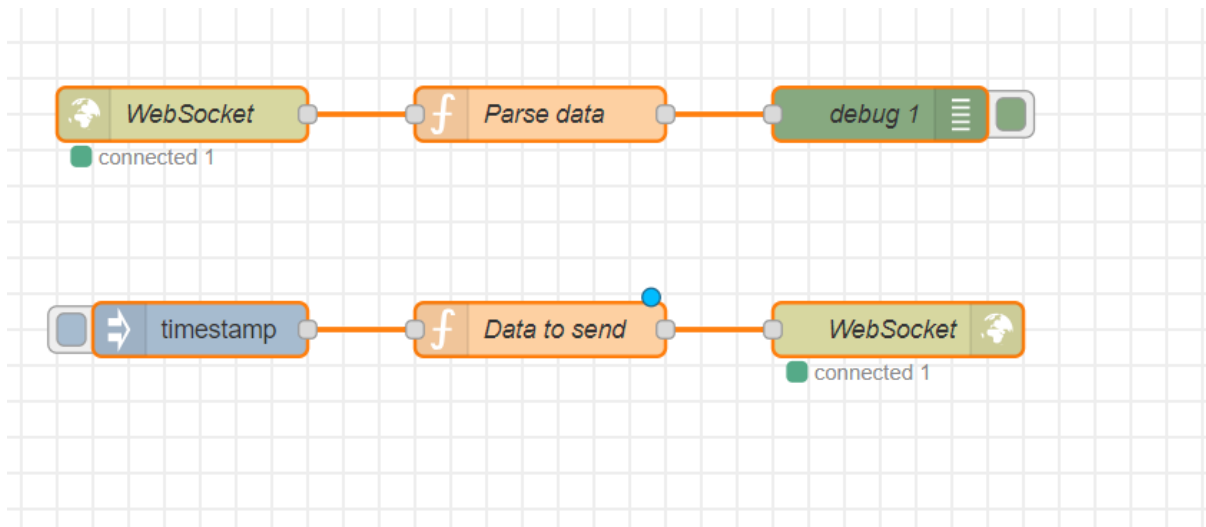
I use the mobile application "MyMQTT" to act as the subscriber in this case. I first subscribe to the topic mentioned above. Now that it is added, any message that gets published (injected) I will receive on my phone. I can also choose to publish a message of my own using the app. I use the publish section to type a message. In this case I will say the following message. As you can see, it will also appear in my debug window on node red. See the next images for visuals.



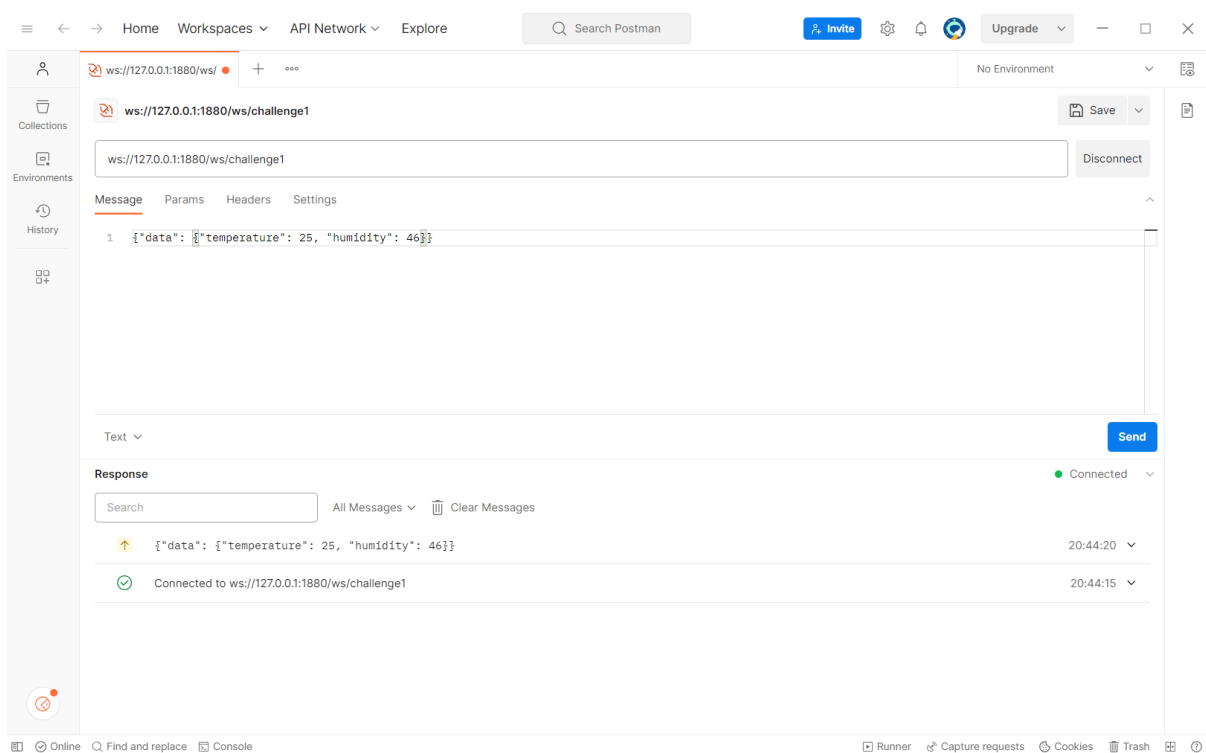
WebSocket:

For this section I made use of the postman application to both view and send messages. I also did some minor research to get some simple Javascript programming. Like the previous model, I did so by both connecting a websocket-out node to an inject node to send some messages. I connected to websocket-in node to a debug node to read messages. In this case node-red will act as my server. Since it is my server I need to configure a path so that postman can connect to it as well. In the websocket nodes I added the following in the path section: /ws/challenge1. I also added to function

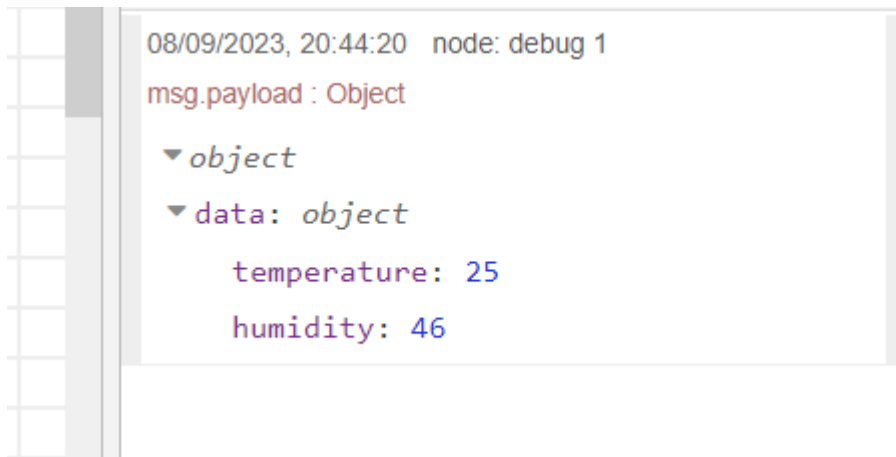
nodes for easier understanding. One to parse the received data (from JSON format) and the other is to send data to postman (In JSON format).



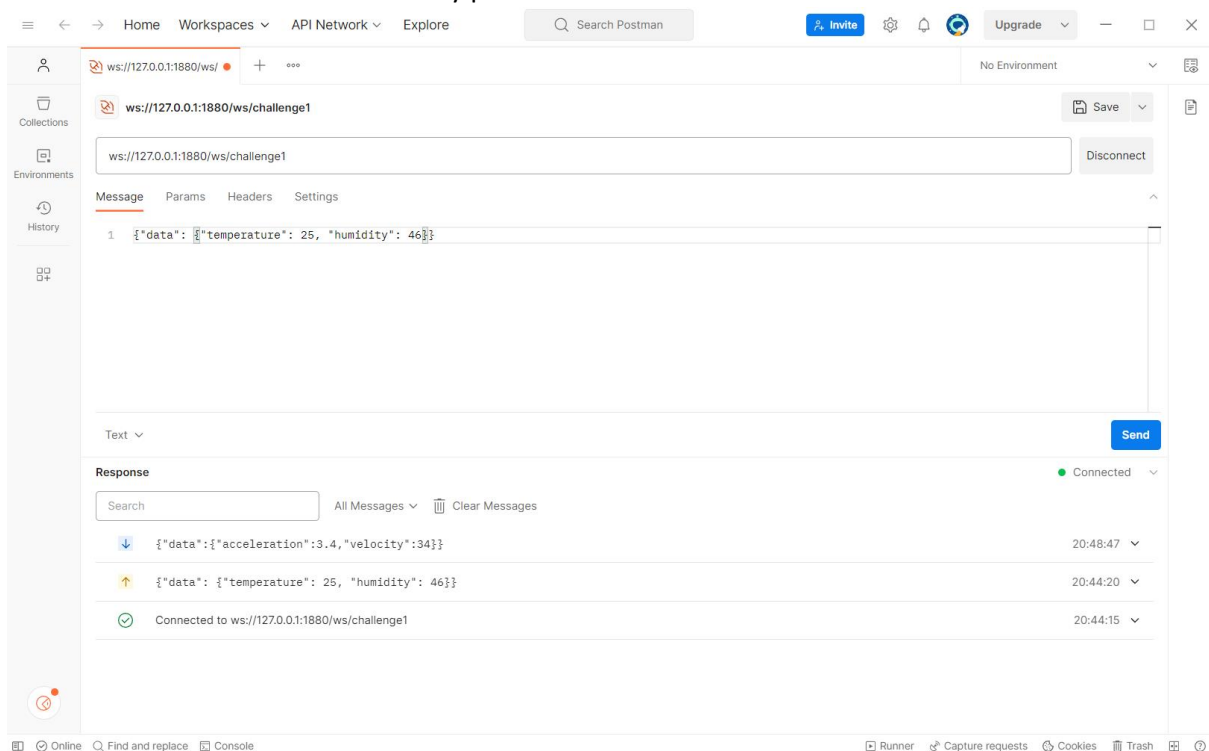
I start by sending a message from my postman to my websocket server.



In my node-red terminal I receive the following:



Of course I can send some messages as well from node-red to postman as well. I send them in the same format. In is then received in my postman terminal.



This concludes what I have done for my first challenge.

Creativity:

Throughout this entire assignment I would say my most creative aspect of it is using the function block to parse and send data in the form of JavaScript. I consider this my most creative aspect is because we never got any JavaScript in this course, so using another coding language is something different.

Personal skills:

There was not much to teach myself regarding personal skills. The one part I would mention is the new way of working. I am used to being taught something and then going to implement this knowledge into an assignment. The new way of working has me doing more research on what I need to do and then implementing this knowledge into the assignment. For example, I had to search up most of how node-red works, I used the workshop and saw some YouTube videos. I used all of these accumulated knowledge to make this assignment.