# **NI-DAQ Broadcasting to ROS**

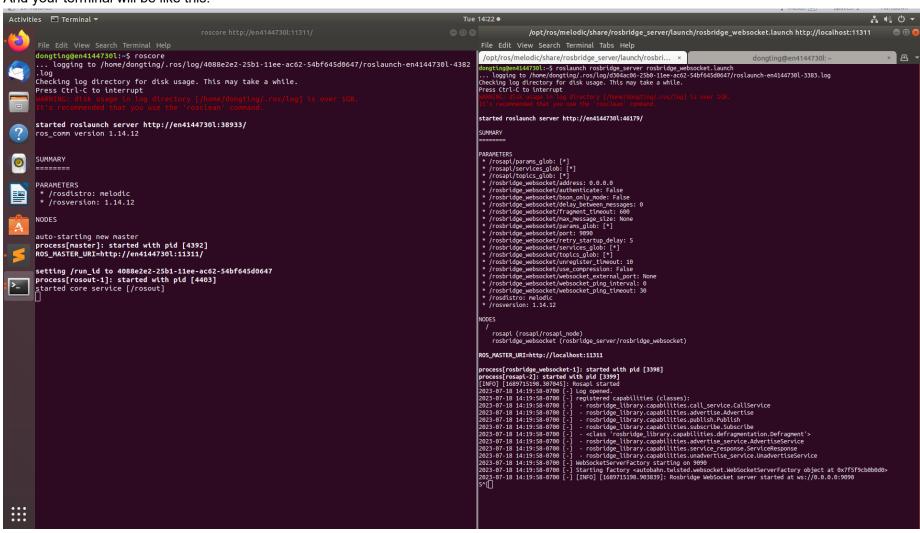
## 1: Broadcasting NI-DAQ from Windows to ROS

This part is a little bit tricky, as you need first start rosbridge\_server then start the python script in windows.

### 1.1: Step by step:

```
roscore
roslaunch rosbridge_server rosbridge_websocket.launch
```

And your terminal will be like this.



After that, you can see at the bottom, it says: rosbridge websocket server started at ... The in windows, to start.

```
python ros_ni_daq_talker.py
          /client_count
/connected_clients
                                                                                                                                                                                         /rosbridge_websocket/retry_startup_delay: 5
/rosbridge_websocket/services_glob: [*]
/rosbridge_websocket/topics_glob: [*]
                                                                                                                                                                                          /rosbridge_websocket/unregister_timeout: 10
/rosbridge_websocket/use_compression: False
          ,
/rosout_agg
<mark>dongting@en4144730l:~</mark>$ rostopic list
          /client_count
/connected_clients
                                                                                                                                                                                          /rosbridge_websocket/websocket_external_port: None
                                                                                                                                                                                         /rosbridge_websocket/websocket_ping_interval: 0
/rosbridge_websocket/websocket_ping_timeout: 30
/rosdistro: melodic
/rosversion: 1.14.12
           /
/ni_daq
         /rosout_agg
/rosout_agg
dongting@en4144730l:~$
                                                                                                                                                                                     NODES
                                                                                                                                                                                           rosapi (rosapi/rosapi_node)
rosbridge_websocket (rosbridge_server/rosbridge_websocket)
                                                                                                                                                                                   ROS_MASTER_URI=http://localhost:11311
                                                                                                                                                                                   process[rosbridge_websocket-1]: started with pid [4864]
                                                                                                                                                                                    process[rosapi-2]: started with pid [4865]
2023-07-18 14:24:08-0700 [-] Log opened.
[INFO] [1689715448.653001]: Rosapi started
                                                                                                                                                                                   [INFO] [1889/15448.053001]: Rosapt Started
2023-07-18 14:24:08-0700 [-] registered capabilities (classes):
2023-07-18 14:24:08-0700 [-] - rosbridge_library.capabilities.call_service.CallService
2023-07-18 14:24:08-0700 [-] - rosbridge_library.capabilities.advertise.Advertise
2023-07-18 14:24:08-0700 [-] - rosbridge_library.capabilities.publish.Publish
2023-07-18 14:24:08-0700 [-] - sclass 'rosbridge_library.capabilities.defragmentation.D
                                                                                                                                                                                                                                         - <class 'rosbridge_library.capabilities.defragmentation.Defr
                                                                                                                                                                                   agment'>
2023-07-18 14:24:08-0700 [-] - rosbridge_library.capabilities.advertise_service.AdvertiseS
                                                                                                                                                                                   2023-07-18 14:24:08-0700 [-] - rosbridge_library.capabilities.service_response.ServiceResp
                                                                                                                                                                                   2023-07-18 14:24:08-0700 [-] - rosbridge_library.capabilities.unadvertise_service.Unadvert
                                                                                                                                                                                    liseService
                                                                                                                                                                                   2023-07-18 14:24:08-0700 [-] WebSocketServerFactory starting on 9090 2023-07-18 14:24:08-0700 [-] Starting factory <autobahn.twisted.websocket.WebSocketServerFactory object at 0x7fb77b9cc390>
                                                                                                                                                                                   2023-07-18 14:24:08-0700 [-] [INFO] [1689715448.911440]: Rosbridge WebSocket server started at ws://0.0.0.0:9090
2023-07-18 14:24:35-0700 [-] [INFO] [1689715475.936552]: Client connected. 1 clients total
:::
```

#### 1.2: Code locations

- 1. windows side: checkout <u>code\_equipment</u>. The windows python script is located in code\_equipment/python/idealab\_equipment/ros\_ni\_daq\_talker.py
- 2. Linux side: checkout rosbridge\_suite ros1 branch

### 1.3: note

1. you might want to adjust the buffer and sample rate to get things working. I tested up to 40k hz for 4 channels and it should be covering most of the case.