

Upute za pokretanje optitracka

Preduvjeti:

Dva laptopa (jedan windows, jedan linux)

Oba laptopa moraju bit spojena na istu wifi mrežu

Linux -> ros environment iz uputa za diplomski (ja sam napravio docker container po tim uputama)

-> instalirati ros paket vrpn_client_ros

“source /opt/ros/[ros_version]/setup.bash”

“sudo apt-get install ros-[ros_version]-vrpn-client-ros”

Windows -> **motive software** za optitrack

<https://optitrack.com/support/downloads/motive.html>

Korištena verzija 2.3.6

Instalirati sve stvari koje pritom traži.

Pri prvom otvaranju Motiva, dozvoliti Windows Defenderu sve ovlasti.

Windows -> konfiguracija mreže

Command prompt (cmd) - komanda “ipconfig”

Pronaći IPv4 adresu za mrežnu karticu koja je povezana na internet.

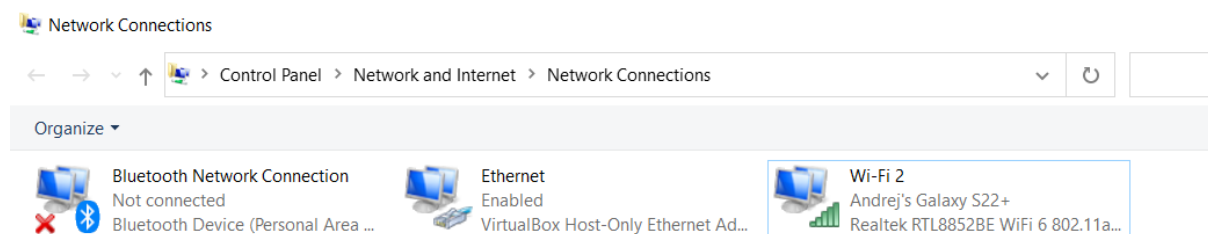
(Ovdje je korištena “Wi-Fi 2”)

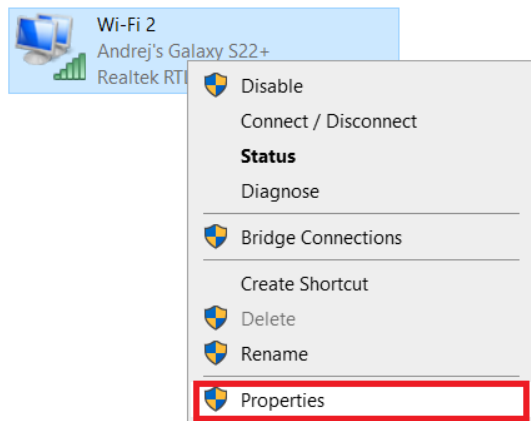
```
Wireless LAN adapter Wi-Fi 2:

Connection-specific DNS Suffix . : 
Link-local IPv6 Address . . . . . : fe80::9963:6b88:88f3:34c4%4
IPv4 Address. . . . . : 192.168.170.233
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.170.47
```

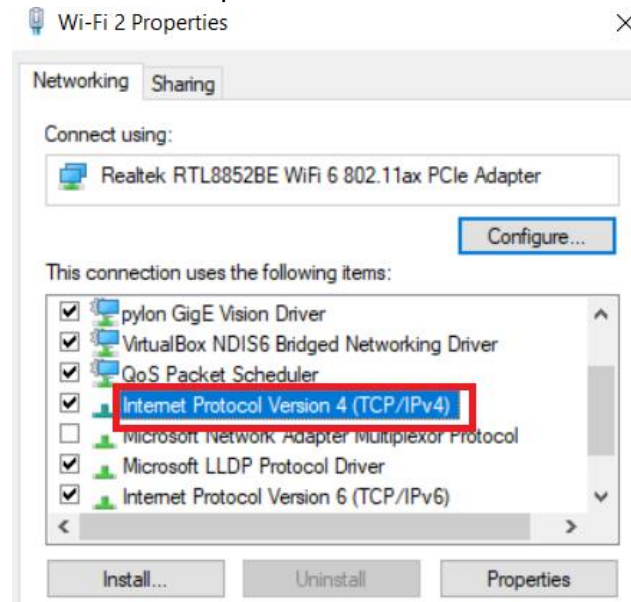
Adresu zapamtiti i otići u control panel:

“Control Panel\Network and Internet\Network Connections”





Otvoriti Internet protocol Version 4



Internet Protocol Version 4 (TCP/IPv4) Properties



General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☐ Obtain an IP address automatically

☒ Use the following IP address:

IP address:

Subnet mask:

Default gateway:

☐ Obtain DNS server address automatically

☒ Use the following DNS server addresses:

Preferred DNS server:

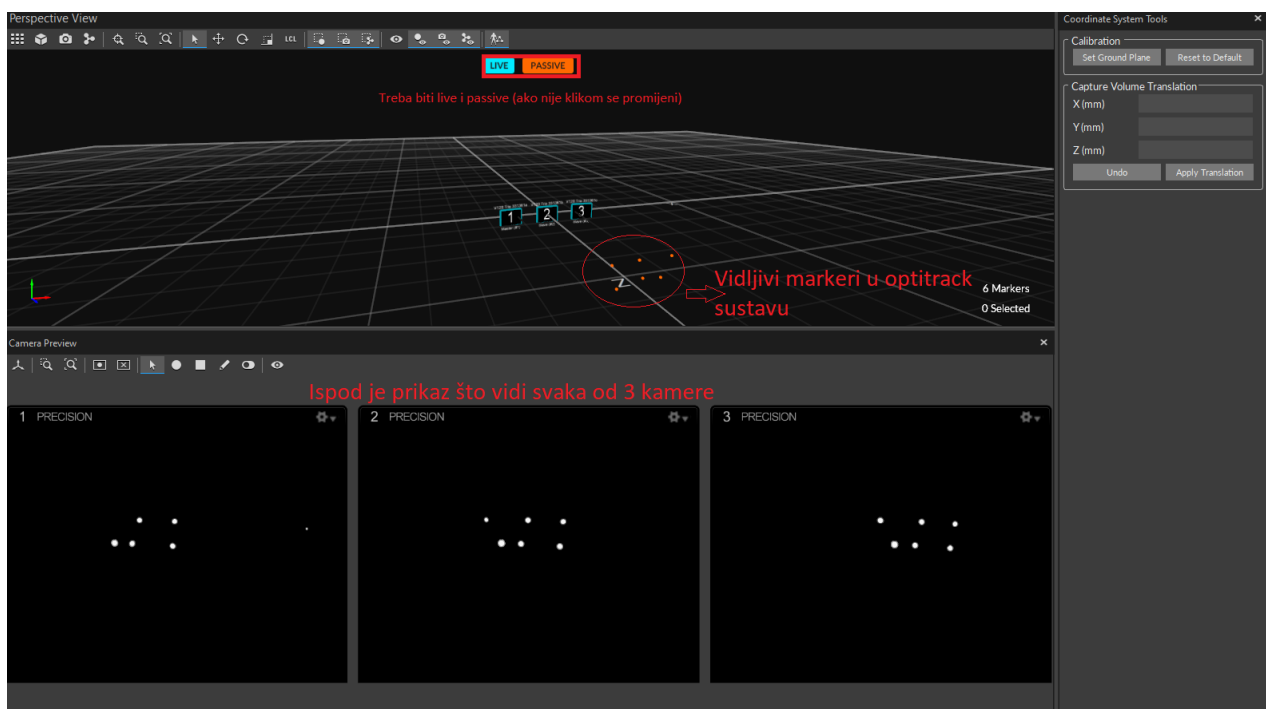
Alternate DNS server:

☐ Validate settings upon exit

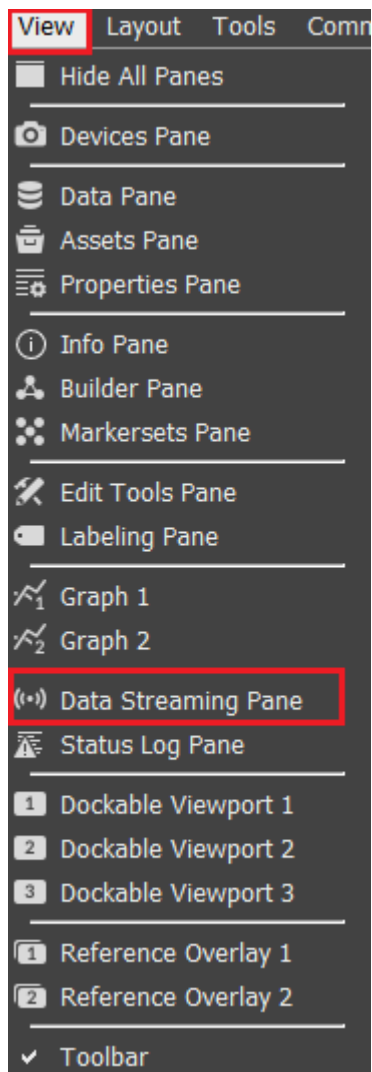
Advanced...

IP adresu iz ipconfig staviti kao static adresu i save-ati.

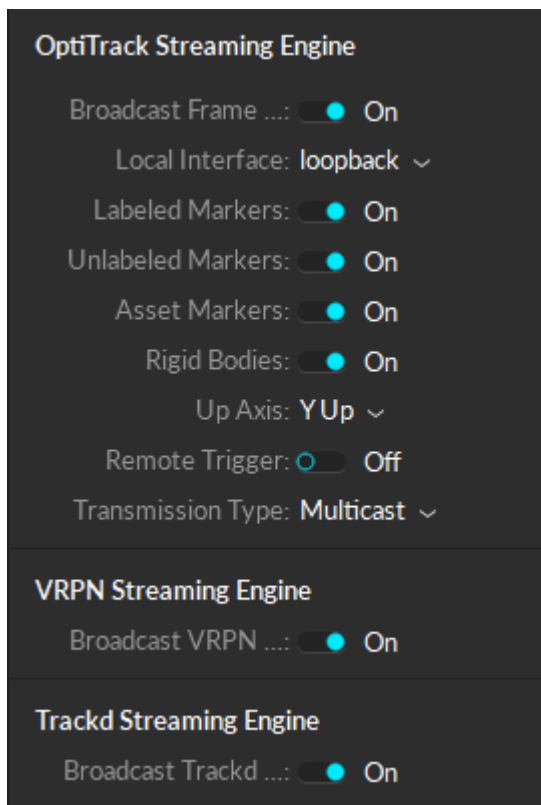
Windows -> pokrenuti motive (problem je u prikazu aplikacije ako rezolucija winodwsa nije 1920x1080)



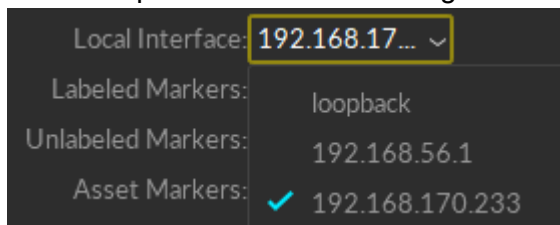
Treba na vrhu biti LIVE I PASSIVE



Unutar View odabrati "Data Streaming Pane"

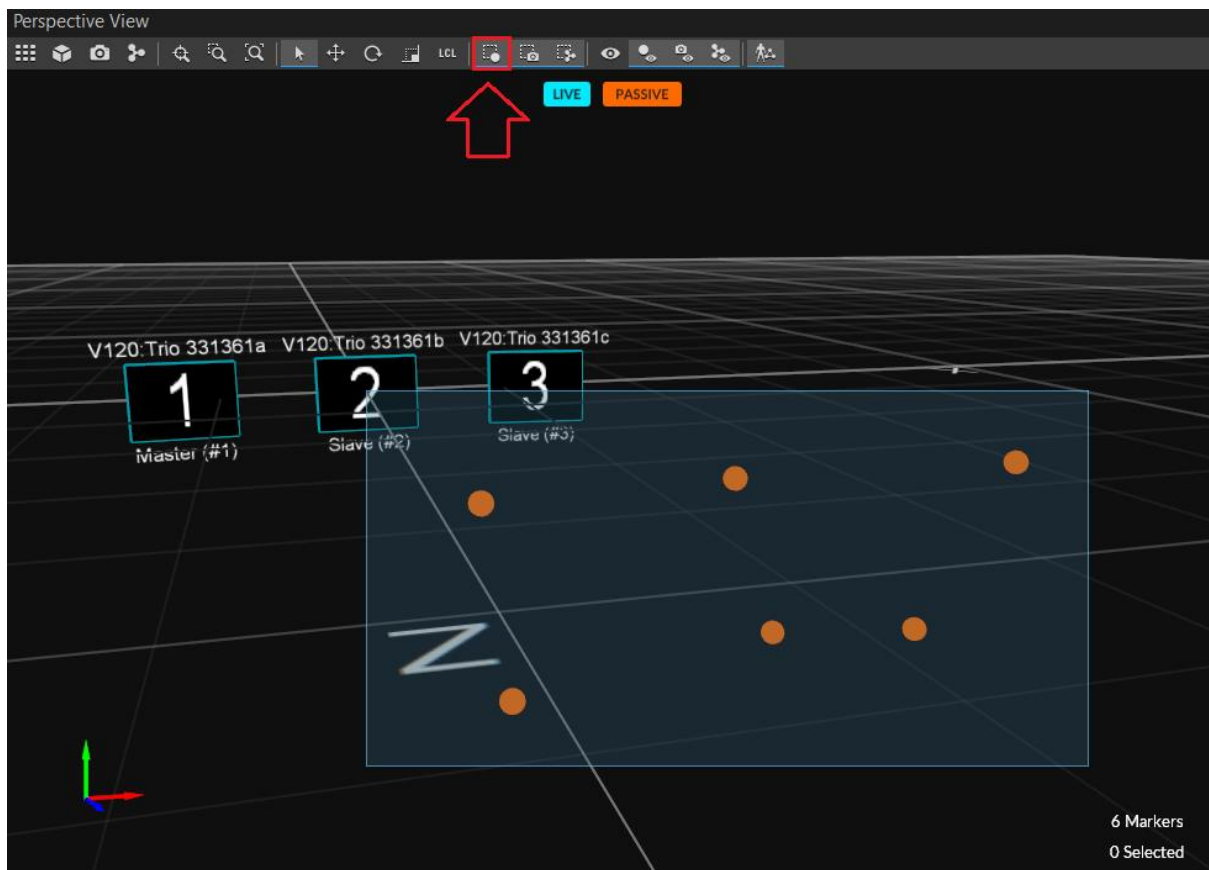


Postavke prozora “Data Streaming Pane”

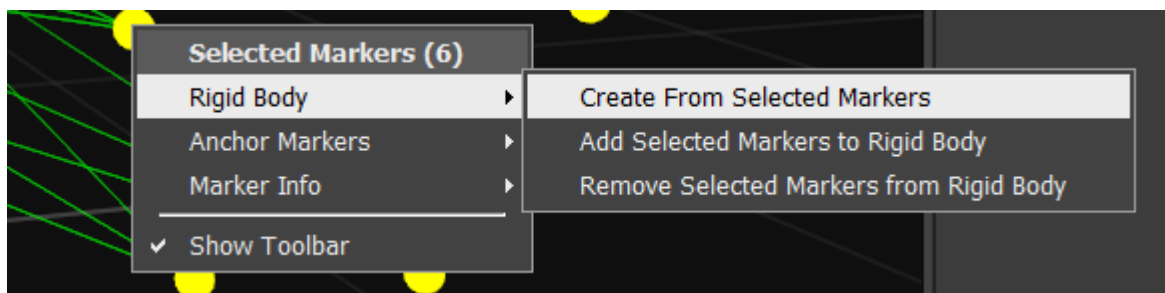


U local Interface: postaviti IP koji je upisan u Static IP iz koraka Windows konfiguracija mreže. Ovaj IP se upisuje u linux stranu kod pokretanja roslaunch vrpn_client_ros.

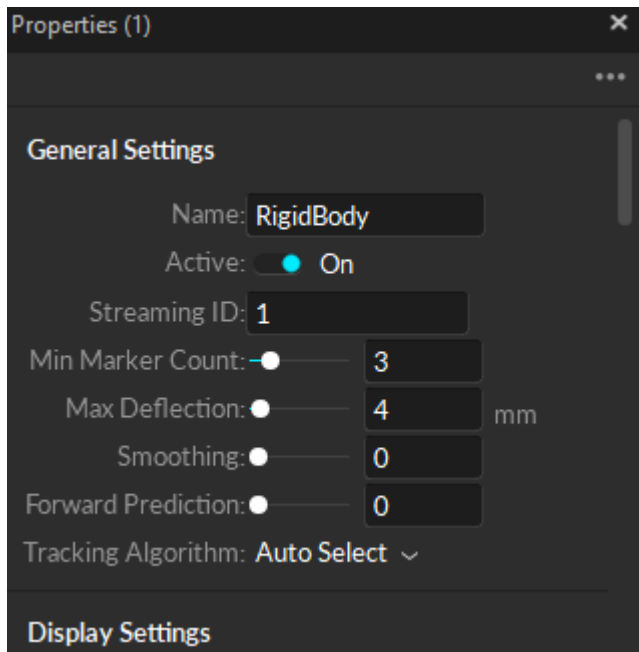
Napraviti rigid body u Motive:



Označiti markere dok je upaljena gornja opcija "Enable Marker Selection"



Desni klik na označene markere i Rigid Body -> Create From Selected Markers



Otvora se novi prozor u kojem se "Name" mijenja u "**Kalipen**" kako bi to bio naziv topica u ROS-u.

Dalje bi sve Linux komande i pokretanje trebalo raditi.

Linux -> konfiguracija mreže

Wifi settings -> mreža -> ipv4 -> postavi na manual

-> postavi ip na ip od windows + 1, npr ako je windows na 122.122.122.1 onda ce ovdje bit 122.122.122.2

-> postavi subnet mask na 255.255.255.0

-> apply

-> u terminalu

-> pokreni naredbu "roslaunch vrpn_client_ros sample.launch server:=192.168.144.233", zamijeni ip s ipom koji si postavio na windows

-> ovako bi trebao izgledat output nakon te komande

```
* /vrpn_client_node/update_frequency: 100.0
* /vrpn_client_node/use_server_time: False

NODES
/
  vrpn_client_node (vrpn_client_ros/vrpn_client_node)

auto-starting new master
process[master]: started with pid [295920]
ROS_MASTER_URI=http://localhost:11311

setting /run_id to d46ef15c-7f04-11ee-b4e8-106fd9ca4e81
process[roscout-1]: started with pid [295933]
started core service [/roscout]
process[vrpn_client_node-2]: started with pid [295940]
[ INFO] [1699536922.252130253] [/vrpn_client_node]: Connecting to VRPN server at 192.168.144.233:3883
check_vrpn_cookie(): VRPN Note: minor version number doesn't match: (prefer 'vrpn: ver. 07.34', got 'vrpn: ver. 07.33 0').
lly a problem.
[ INFO] [1699536922.279431013] [/vrpn_client_node]: Connection established
[ INFO] [1699536923.281896411] [/vrpn_client_node]: Found new sender: Kalipen
```

-> trebao bi biti vidljiv topic za kalipen pose, kojeg mozes printat sa

> rostopic echo /vrpn_client_node/Kalipen/pose

> ako je uspješno spojeno, treble bi se mijenjati koordinate ako pomičeš objekt ili kameru