Rviz Visualization

This tutorial uses Ubuntu 20.04 and ROS1 version Noetic as an example. Other ROS1 versions can use this as a reference.

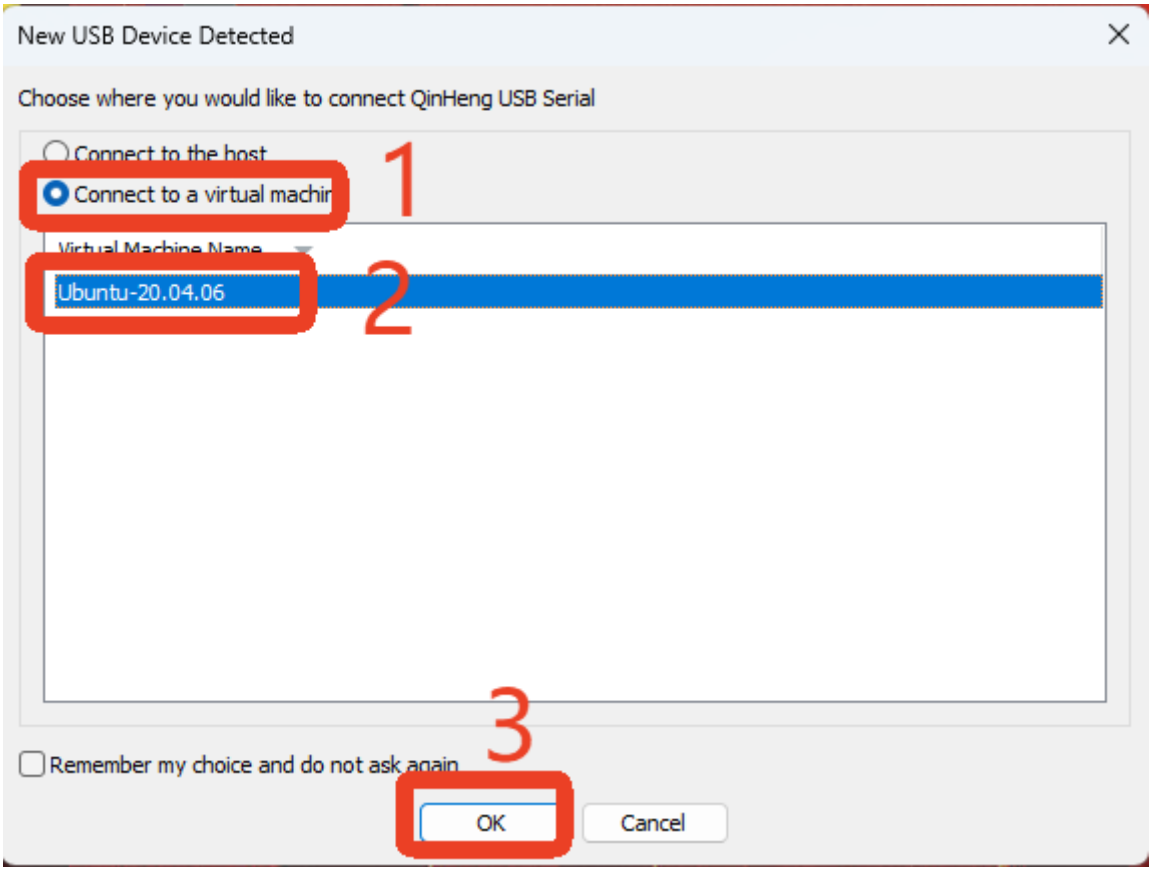
Note: Before running, please ensure that you have completed the "IMU Data Printing" section of the previous chapter and that it is running normally.

1. Connecting the Device

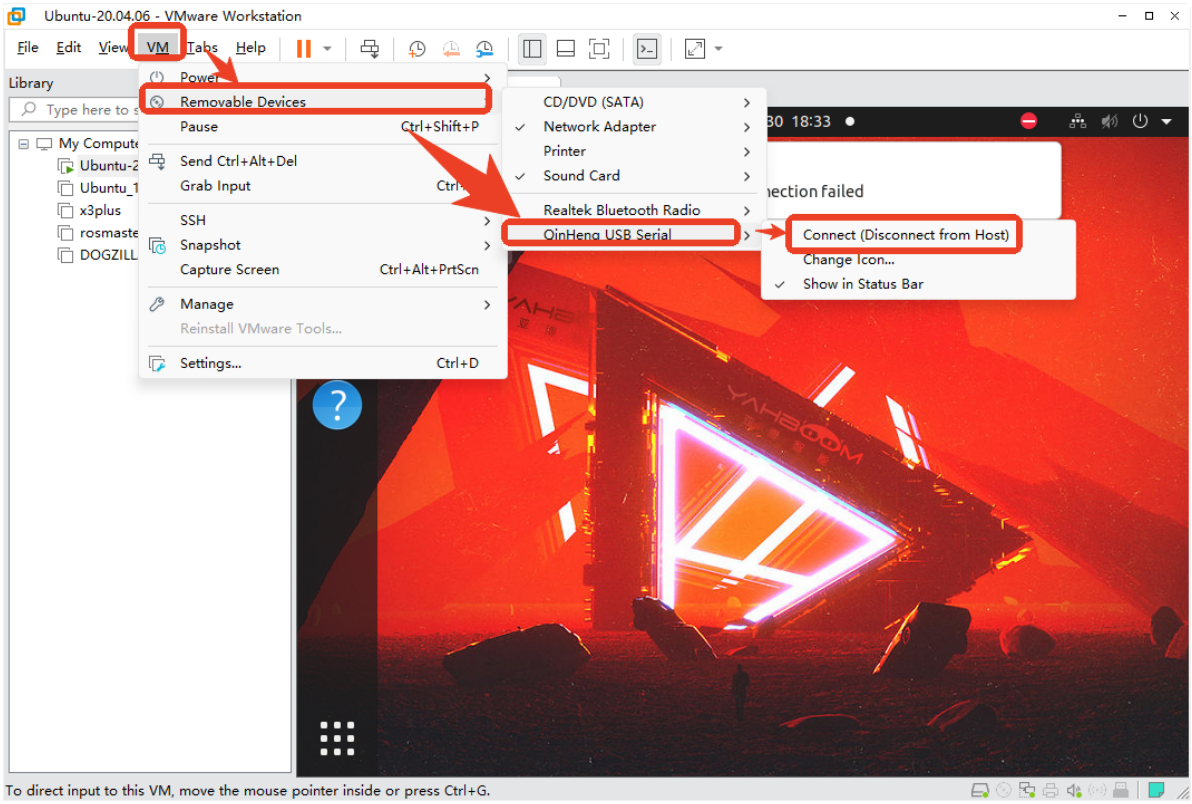
Connect the IMU attitude sensor to the host controller's USB port using a Type-C cable.

If using a virtual machine, refer to the following steps:

Virtual machine displays a pop-up window



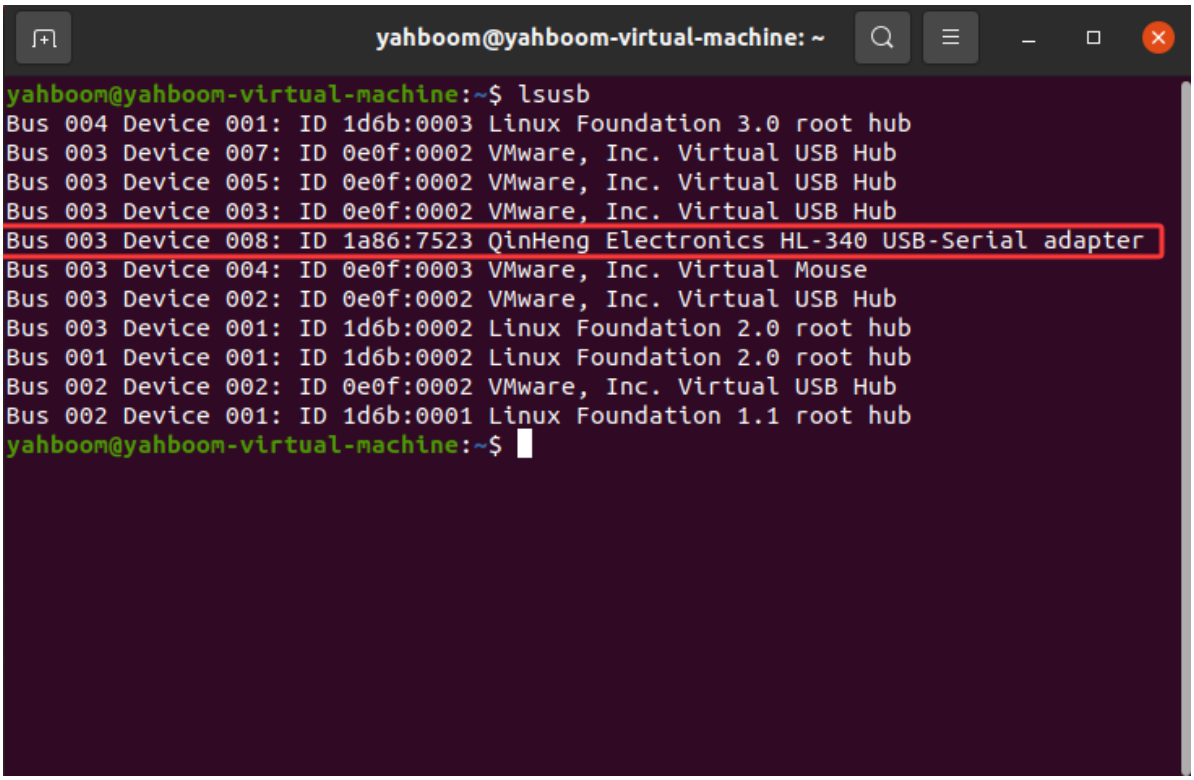
Virtual machine does not display a pop-up window



2. Check device connection status

View device ID

```
lsusb
```



View device number

```
ll /dev/ttyU*
```

```
yahboom@yahboom-virtual-machine:~$ ll /dev/ttyU*
crwxrwxrwx 1 root dialout 188, 0 10月 17 17:28 /dev/ttyUSB0
yahboom@yahboom-virtual-machine:~$
```

View IMU mapping

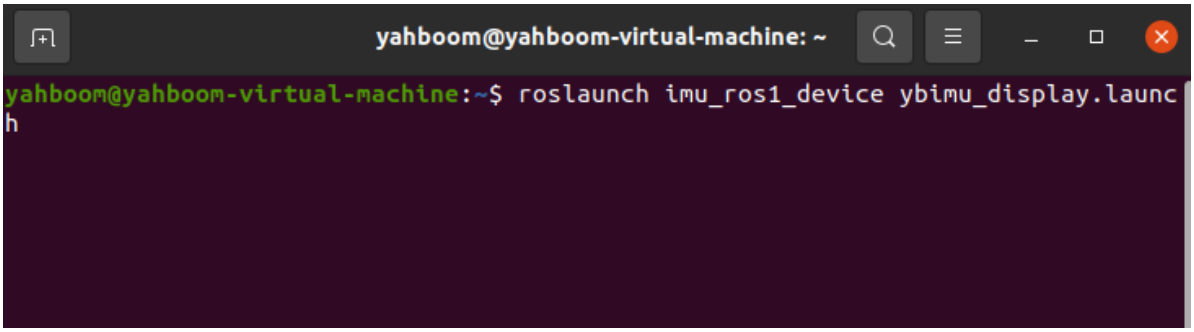
```
ll /dev/my*
```

```
yahboom@yahboom-virtual-machine:/etc/udev/rules.d$ ll /dev/my*
lrwxrwxrwx 1 root root 7 10月 17 17:28 /dev/myimu -> ttyUSB0
yahboom@yahboom-virtual-machine:/etc/udev/rules.d$
```

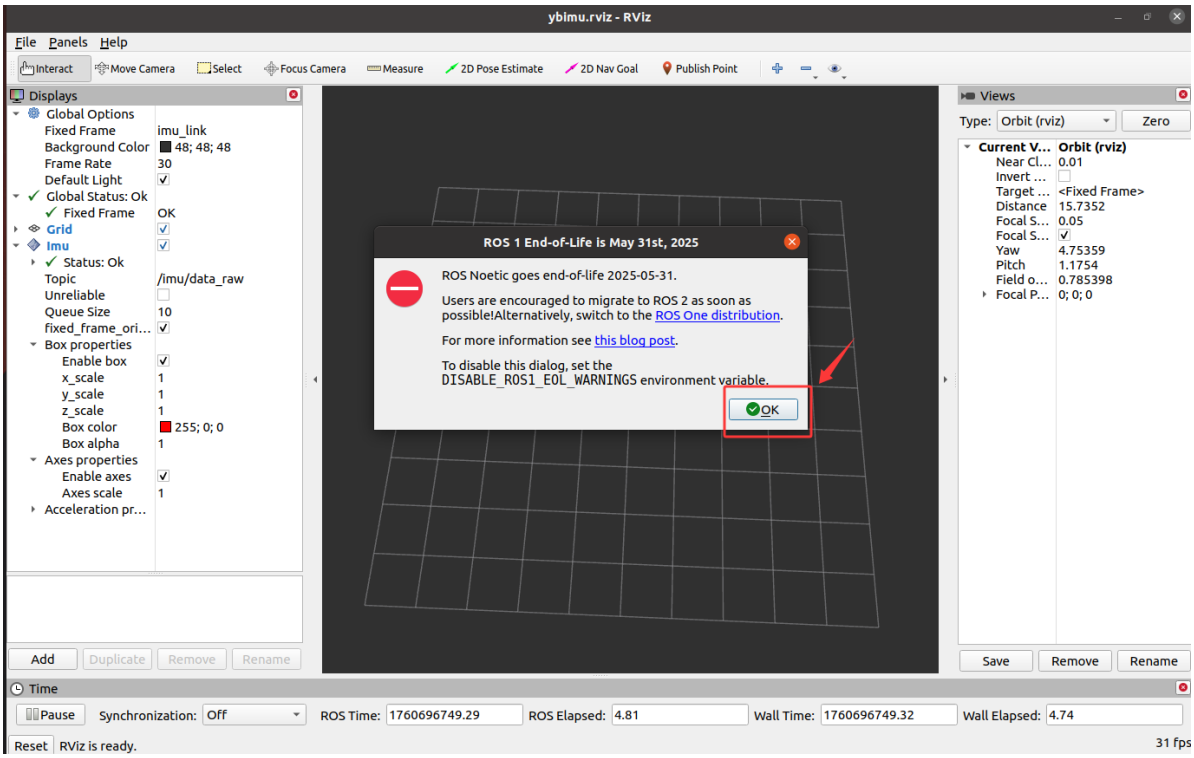
3. Rviz Visualization

Run the command to view

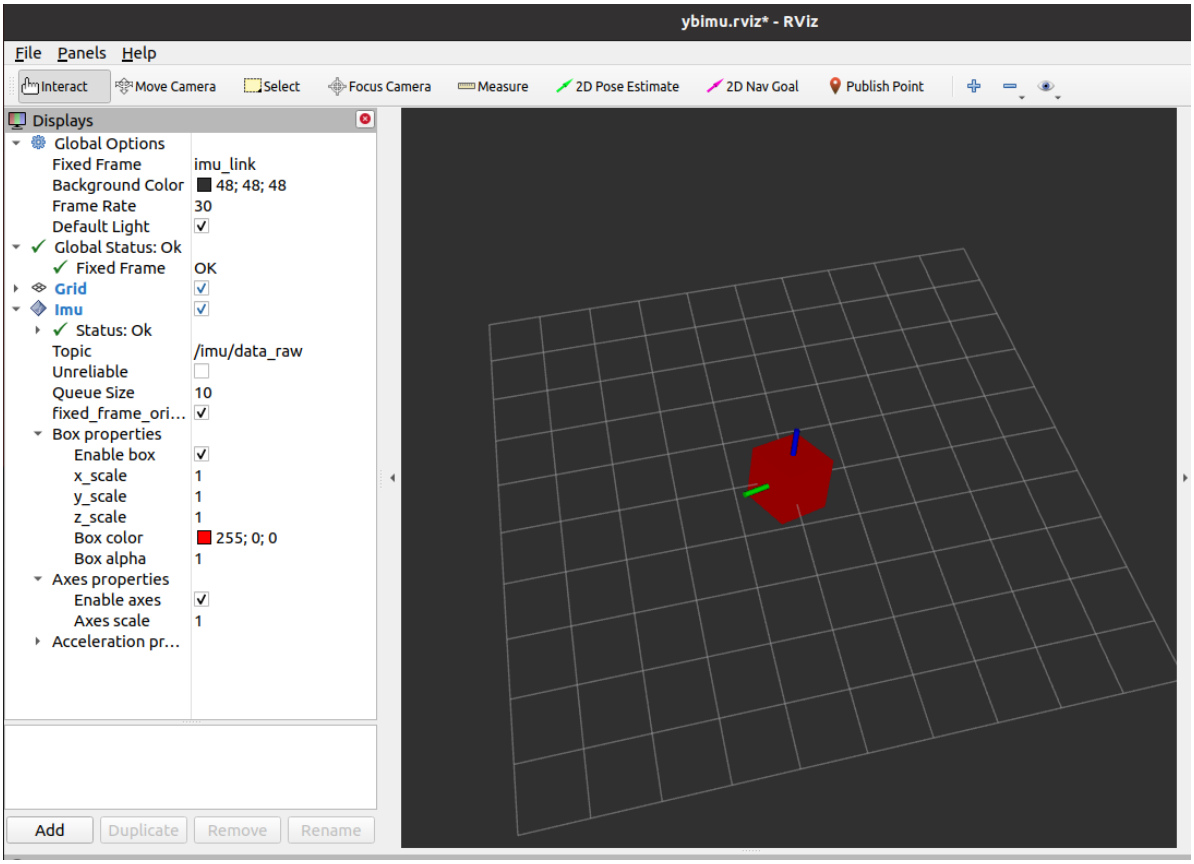
```
roslaunch imu_ros1_device ybimu_display.launch
```



After running, an Rviz window will pop up. If the following prompt appears, click OK. That's it.

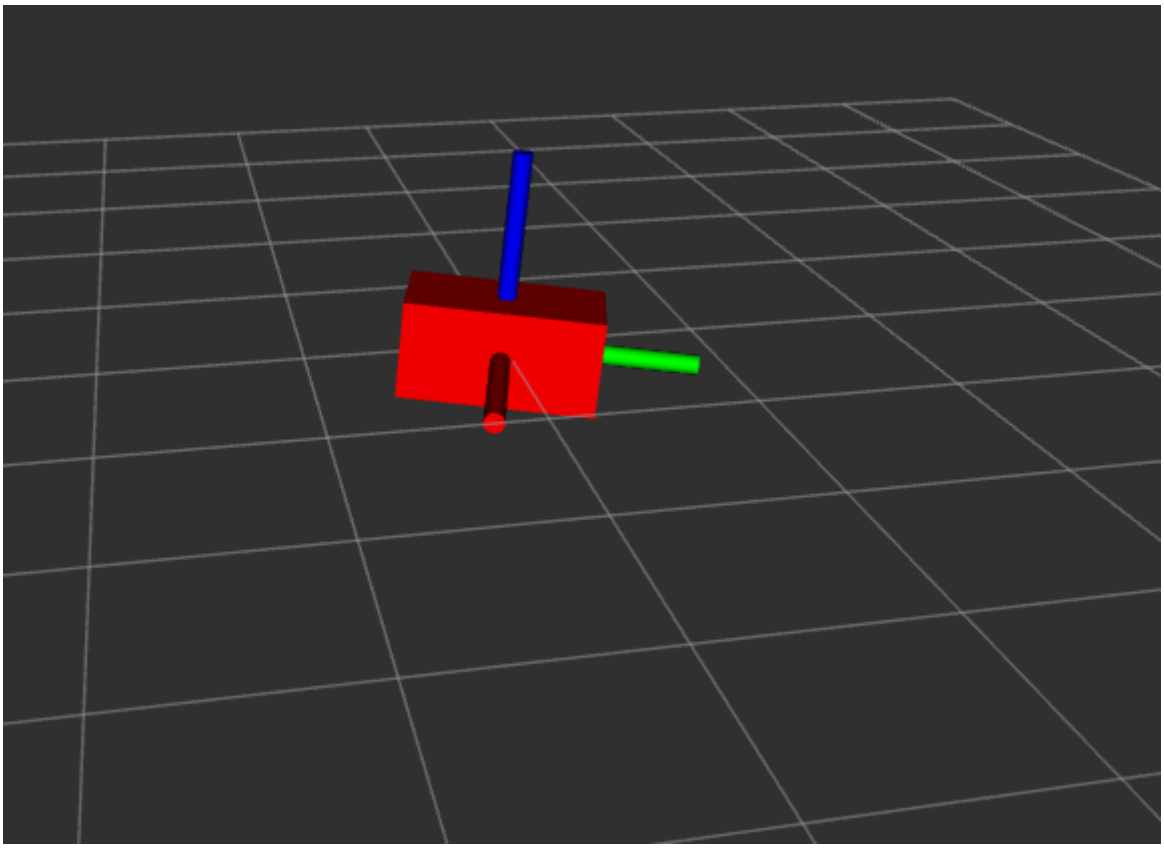


After entering, you can rotate the IMU module, and you'll see the IMU on the screen rotate accordingly.



Note:

If, after starting the command, you find that the blocks displayed by rviz are tilted horizontally, as shown in the image, you need to calibrate them.



Refer to the calibration tutorial in the attached folder for details.

4. Raspberry Pi 5, RDK X5 series, Jetson series

Note: Before running, please ensure that you have completed the "IMU data printing" section of the previous chapter and that it is running normally.

4.1 Starting the Docker image

```
sh ros1_noetic.sh
```

4.2 Rviz visualization

```
roslaunch imu_ros1_device ybimu_display.launch
```