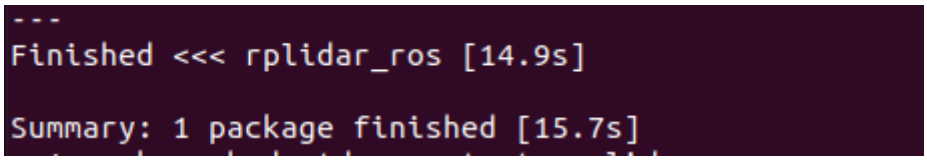
1.Preparation

1.1Compile function package

Unzip rplidar_ros-dev-ros2 in the [Source Code] folder to get the rplidar_ros-dev-ros2 function package. Copy rplidar_ros to the src directory of the workspace you created. Here, the workspace name is rplidar_ws as an example. The path of rplidar_ws is in the ~ directory, and then return to the workspace directory to compile.

```
cd ~/rplidar_ws
colcon build --symlink-install
```



The above screen description appears and the compilation is passed.

Then enter the following command to set the environment variables.

```
echo "source ~/rplidar_ws/install/setup.bash --extend" >> ~/.bashrc
```

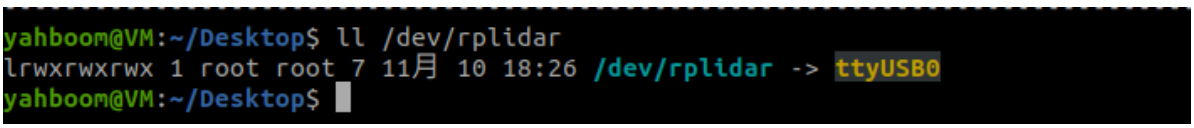
Open the terminal under the rplidar_ros-dev-ros2 function package, enter the following command, and copy the rplidar.rules file under the function package to /etc/udev/rules.d.

```
sudo cp rplidar.rules /etc/udev/rules.d/
```

Then re-plug the radar serial port.

Input following command:

```
ll /dev/rplidar
```



The above content indicates that the binding is successful.

The end is not necessarily 0 and changes according to the order in which the devices are inserted.

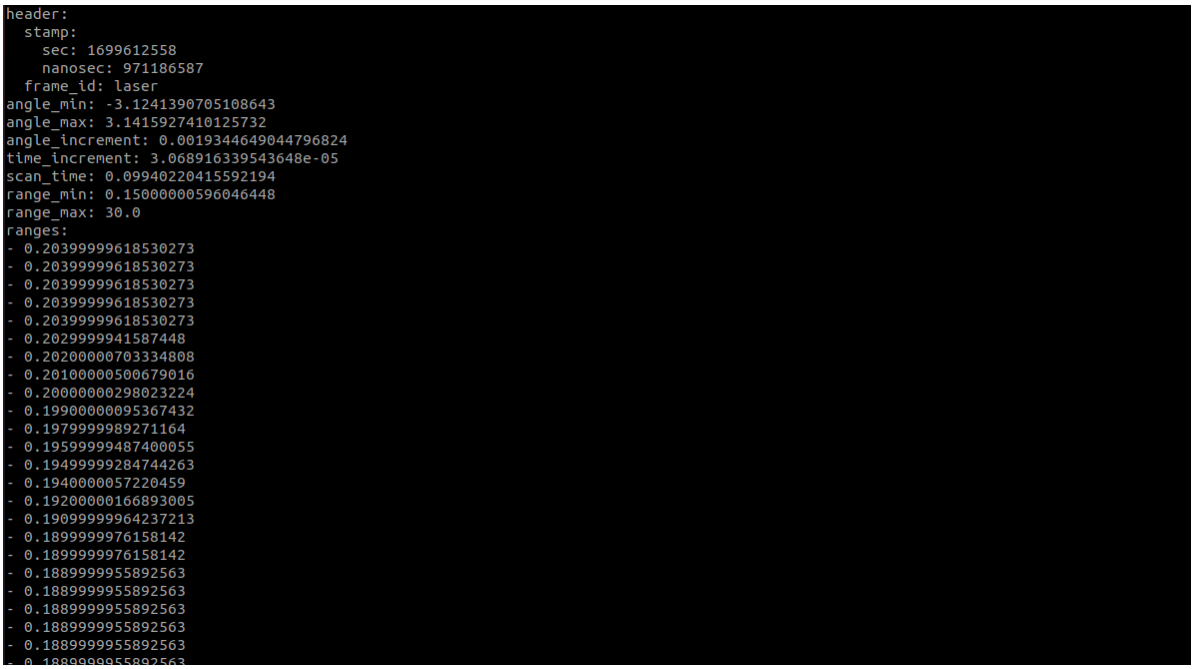
1.2 Run launch

Run lidar:

```
#A1 lidar
ros2 launch rplidar_ros rplidar_a1_launch.py
#A2M12 lidar
ros2 launch rplidar_ros rplidar_a2m12_launch.py
#A3 lidar
ros2 launch rplidar_ros rplidar_a3_launch.py
#C1 lidar
ros2 launch rplidar_ros rplidar_c1_launch.py
#S2 lidar、S2L lidar
ros2 launch rplidar_ros rplidar_s2_launch.py
```

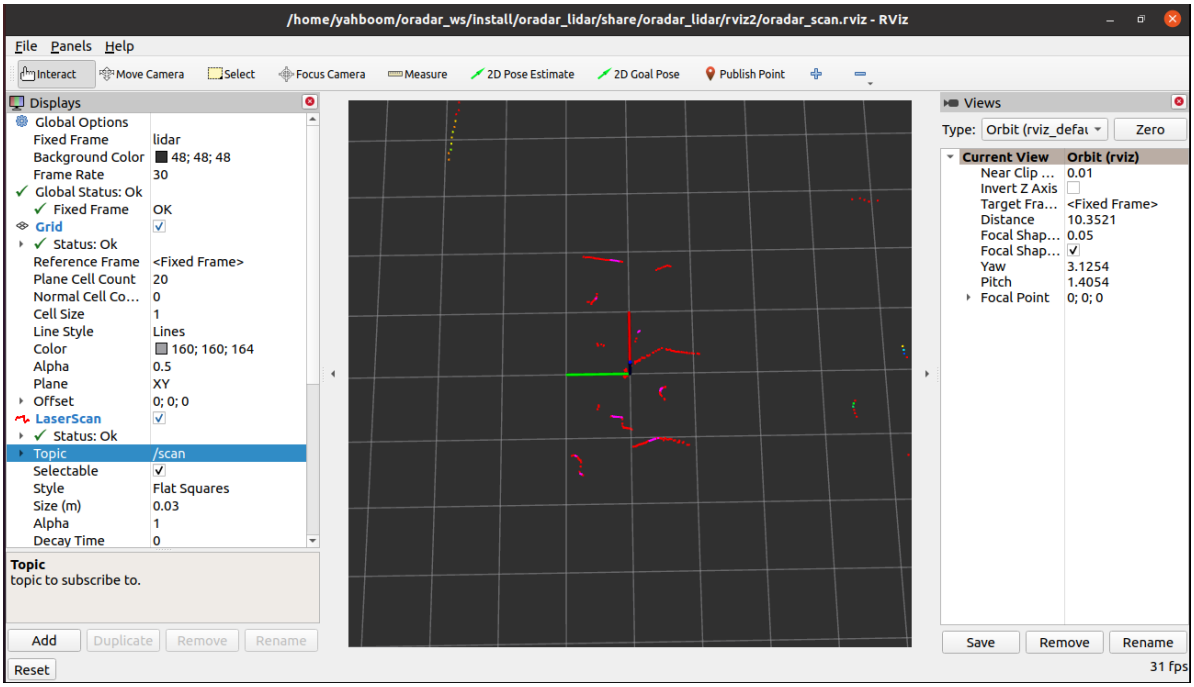
Lidar node data can be viewed through the following command.

```
ros2 topic echo /scan
```



Run the radar to display the point cloud and input it into the terminal (ctrl c is required to close the node that started the lidar before),

```
#A1 lidar
ros2 launch rplidar_ros view_rplidar_a1_launch.py
#A2M12 lidar
ros2 launch rplidar_ros view_rplidar_a2m12_launch.py
#A3 lidar
ros2 launch rplidar_ros view_rplidar_a3_launch.py
#C1 lidar
ros2 launch rplidar_ros view_rplidar_c1_launch.py
#S2 lidar、S2L lidar
ros2 launch rplidar_ros view_rplidar_s2_launch.py
```


/home/yahboom/oradar_ws/install/oradar_lidar/share/oradar_lidar/rviz2/oradar_scan.rviz - RViz
File Panels Help
Interact
Move Camera
Select
Focus Camera
Measure
2D Pose Estimate
2D Goal Pose
Publish Point
Displays
Global Options
Fixed Frame lidar
Background Color 48; 48; 48
Frame Rate 30
Global Status: Ok
Fixed Frame OK
Grid
Status: Ok
Reference Frame <Fixed Frame>
Plane Cell Count 20
Normal Cell Co… 0
Cell Size 1
Line Style Lines
Color 160; 160; 164
Alpha 0.5
Plane XY
Offset 0; 0; 0
LaserScan
Status: Ok
Topic /scan
Selectable
Style Flat Squares
Size (m) 0.03
Alpha 1
Decay Time 0
Topic
topic to subscribe to.
Add
Duplicate
Remove
Rename
Reset
Views
Type: Orbit (rviz_defa
Zero
Current View Orbit (rviz)
Near Clip … 0.01
Invert Z Axis
Target Fra… <Fixed Frame>
Distance 10.3521
Focal Shap… 0.05
Focal Shap…
Yaw 3.1254
Pitch 1.4054
Focal Point 0; 0; 0
Save
Remove
Rename
31 fps