17.ROS-rviz use

ros provides us with the rviz visualization tool for visualizing sensor data (such as radar point clouds, camera images, etc.) and some status information (commonly, the status of robot navigation, etc.). rviz can display multiple data types and visualize them by loading the Display type.

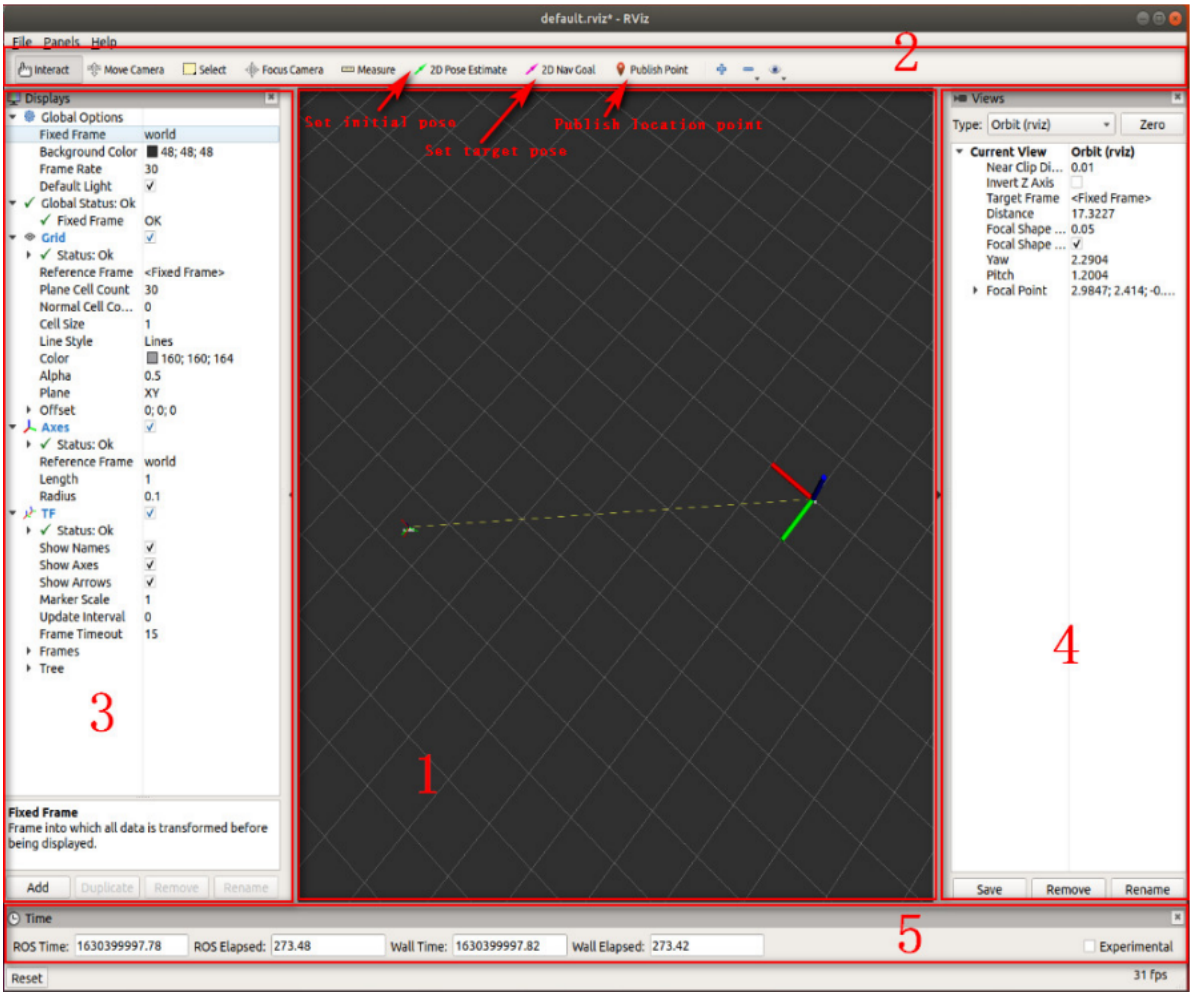
17.1 Start rviz

Similarly, before starting rviz, you must first start roscore, enter in the terminal,

```
roscore
```

Enter in another terminal,

```
rviz
```



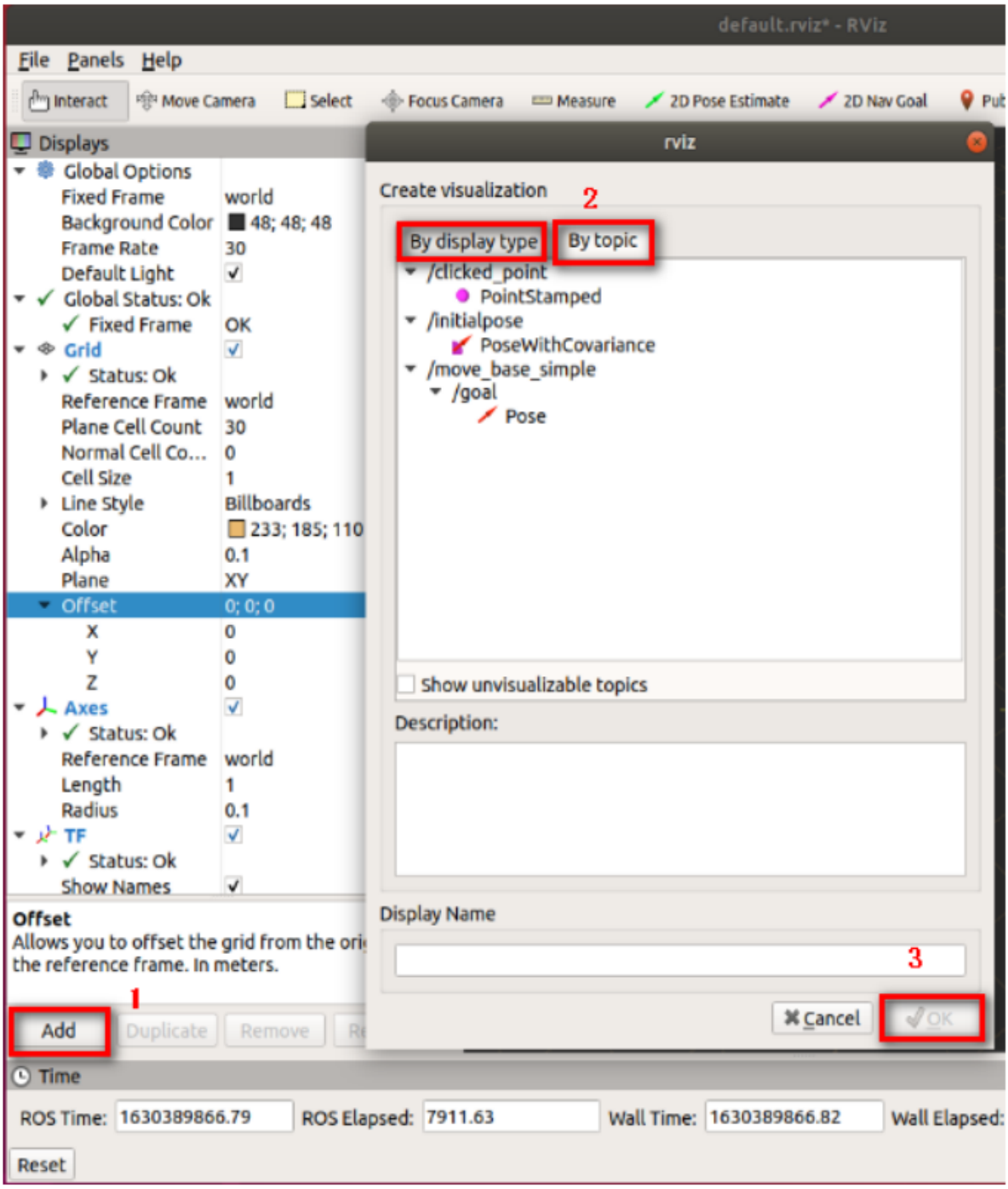
The rviz interface mainly includes the following parts:

- 1: 3D view area, used to visually display data. Common radar point clouds and depth camera point cloud displays are displayed here;
- 2: Toolbar, providing tools such as perspective control, target setting, publishing location, etc.
- 3: Display item list, used to display the currently selected display plug-in. You can configure the properties of each plug-in. Generally, we need to set the value of [Global Options]-[Fixed

Frame]

- 4: Angle setting area, you can choose a variety of observation angles.
- 5: Time display area, showing the current system time and ROS time.

17.2 Add display



As shown above,

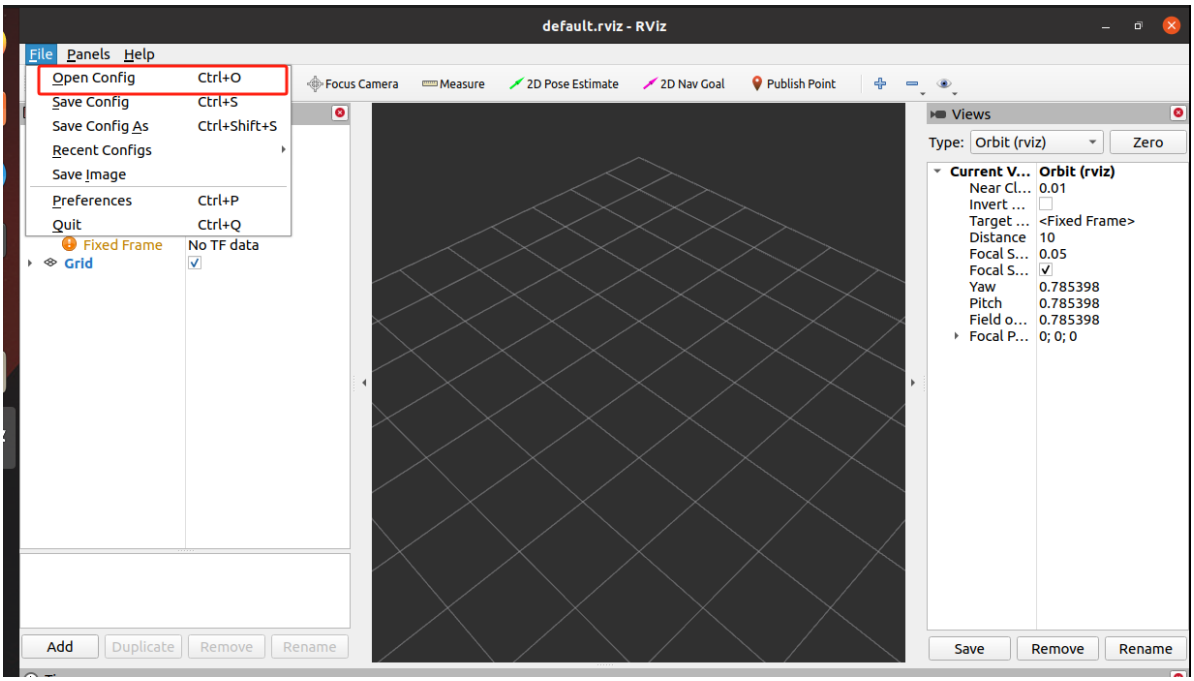
Step 1: Click the Add button, and a selection box will pop up on the right;

Step 2: You can choose to add it through the display type [By display type], but you need to modify the corresponding topic yourself before the coordinate system can be displayed; you can also choose the topic [By topic] and add it directly to display it normally.

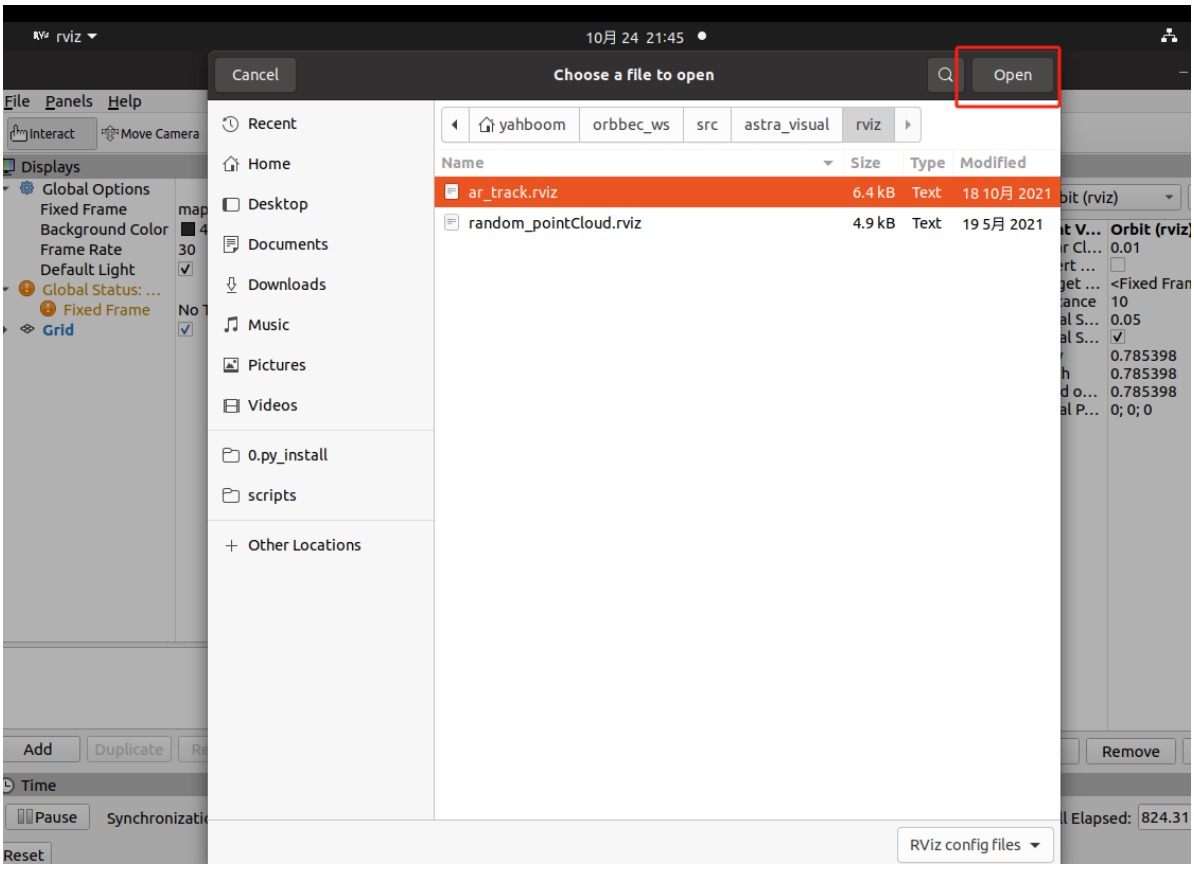
Step 3: Click [ok].

17.3 Load rviz file

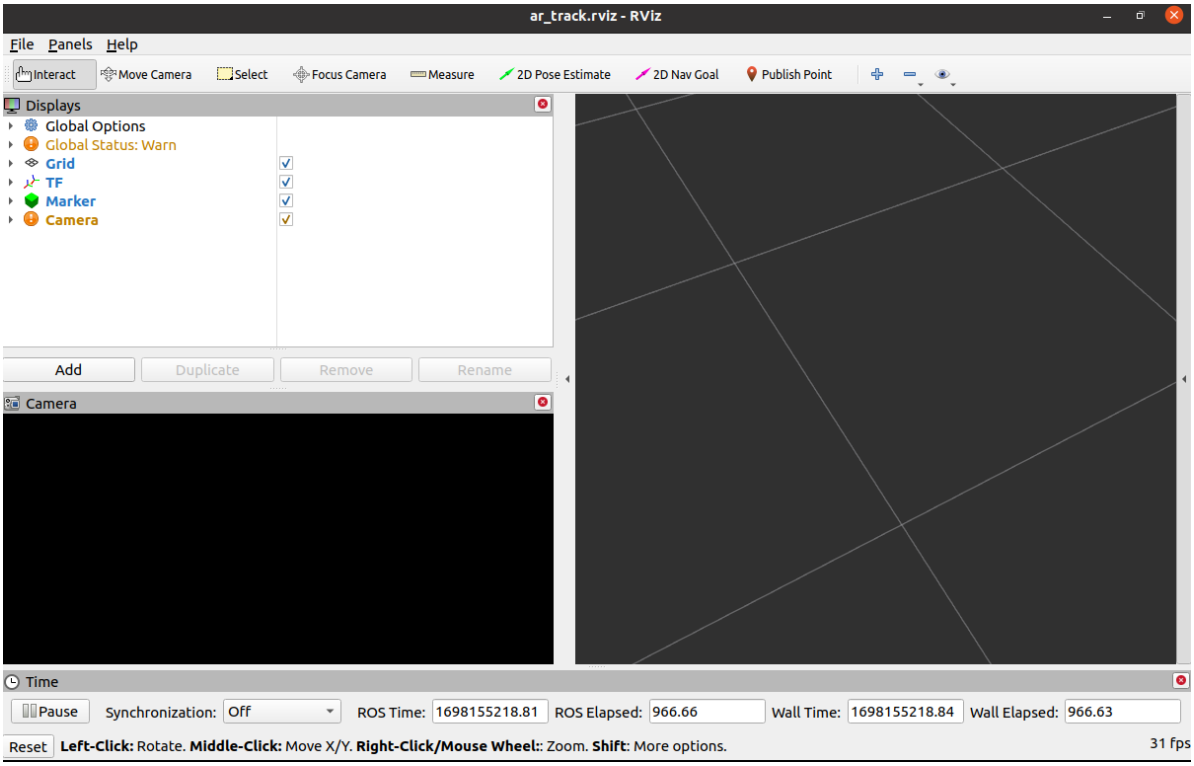
Sometimes, we need to load already configured files, then please operate as shown below,



Click [File] in the upper left corner and select [Open Config] to open the settings.



Find the rviz file that needs to be loaded, and finally click [Open].


ar_track.rviz - RViz
File Panels Help
Interact
Move Camera
Select
Focus Camera
Measure
2D Pose Estimate
2D Nav Goal
Publish Point
Displays
Global Options
Global Status: Warn
Grid
TF
Marker
Camera
Add
Duplicate
Remove
Rename
Camera
Time
Pause
Synchronization:
Off
ROS Time:
1698155218.81
ROS Elapsed:
966.66
Wall Time:
1698155218.84
Wall Elapsed:
966.63
Reset
Left-Click: Rotate. Middle-Click: Move X/Y. Right-Click/Mouse Wheel:: Zoom. Shift: More options.
31 fps