MoveIt control the real machine

Follow the previous steps to install the virtual machine. After decompressing the system files, open the virtual machine and use it. The environment has been set up and the relevant code has been placed in the Ubuntu system, in the file path /home/dofbot/dofbot_ws/src directory.

1.Control real machine

- **Configure multi-machine communication**

Just refer to the distributed communication tutorial in ros basics

- **Using Raspberry Pi as host**

```
roslaunch dofbot_config demo.launch    #virtual machine
rosrun dofbot_moveit 00_dofbot_move.py    #Host side
```

The corresponding relationship between the robotic arm servo and the joints: from the lowest end of the robotic arm to the end of the gripper.

Robotic arm servo	**joint**	
NO.1 SERVO	joint1	
NO.2 SERVO	joint2	
NO.3 SERVO	joint3	
NO.4 SERVO	joint4	
NO.5 SERVO	joint5	
NO.6 SERVO	grip_joint	

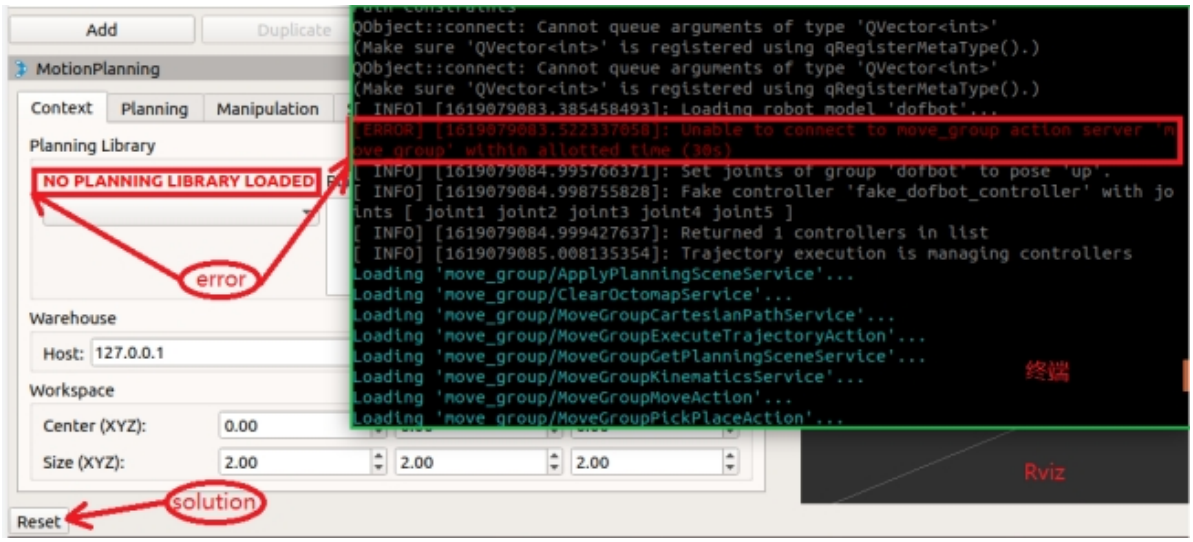
2. Start up robotic arm

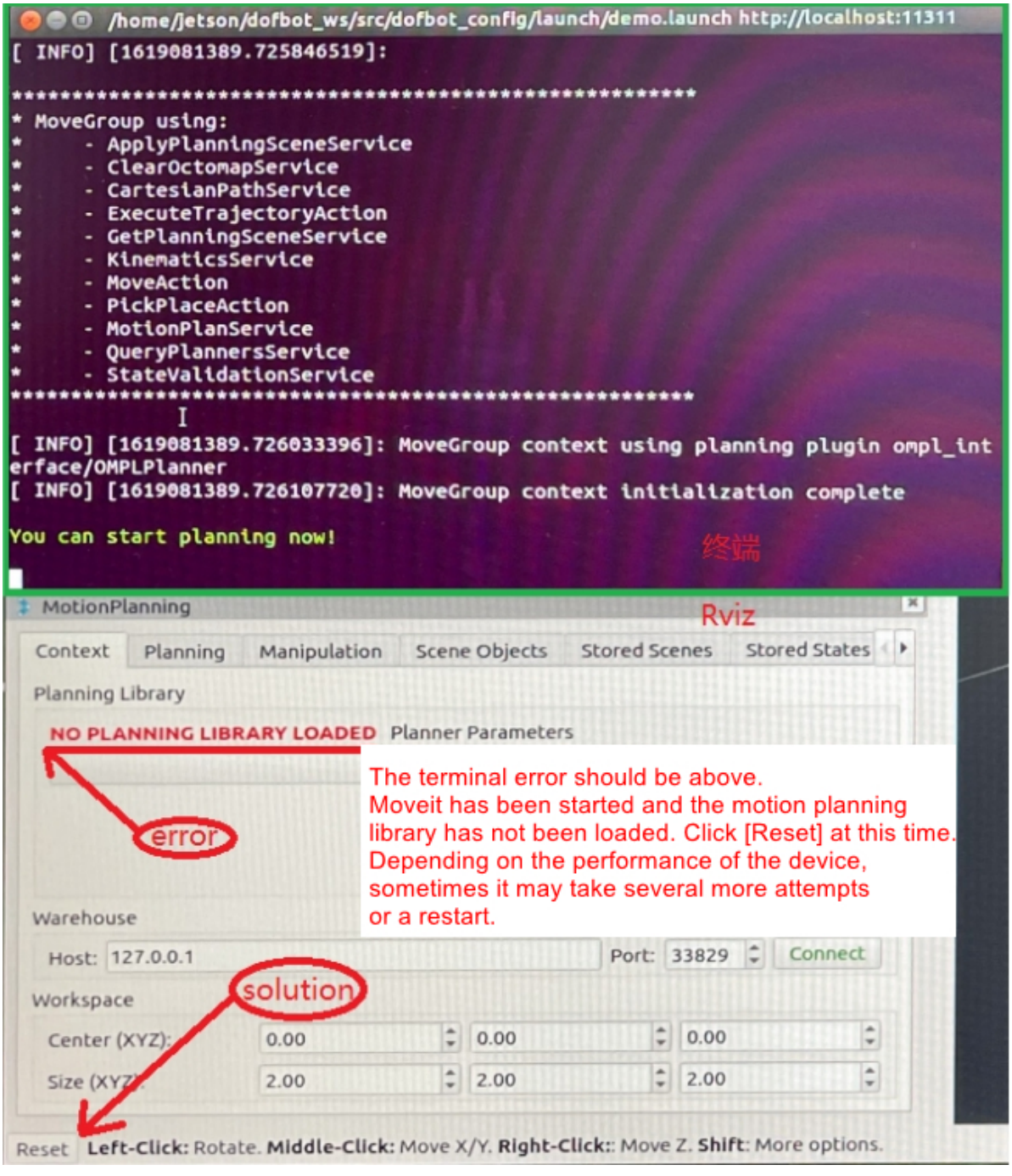
- When using the robot arm to move randomly to control a real machine, pay attention to the movement of the robot arm. Try to keep no objects next to the robot arm, because random movement will cause random walking.
- Scene Design: You can design the scene yourself and then import it.
- When moveIt is run and combined with the real machine case, there are non-corresponding actions. It may be because the previous control program has not been completely closed. You can try using Ctrl+C to interrupt the program, or simply close the terminal to shut down the previous process more completely.

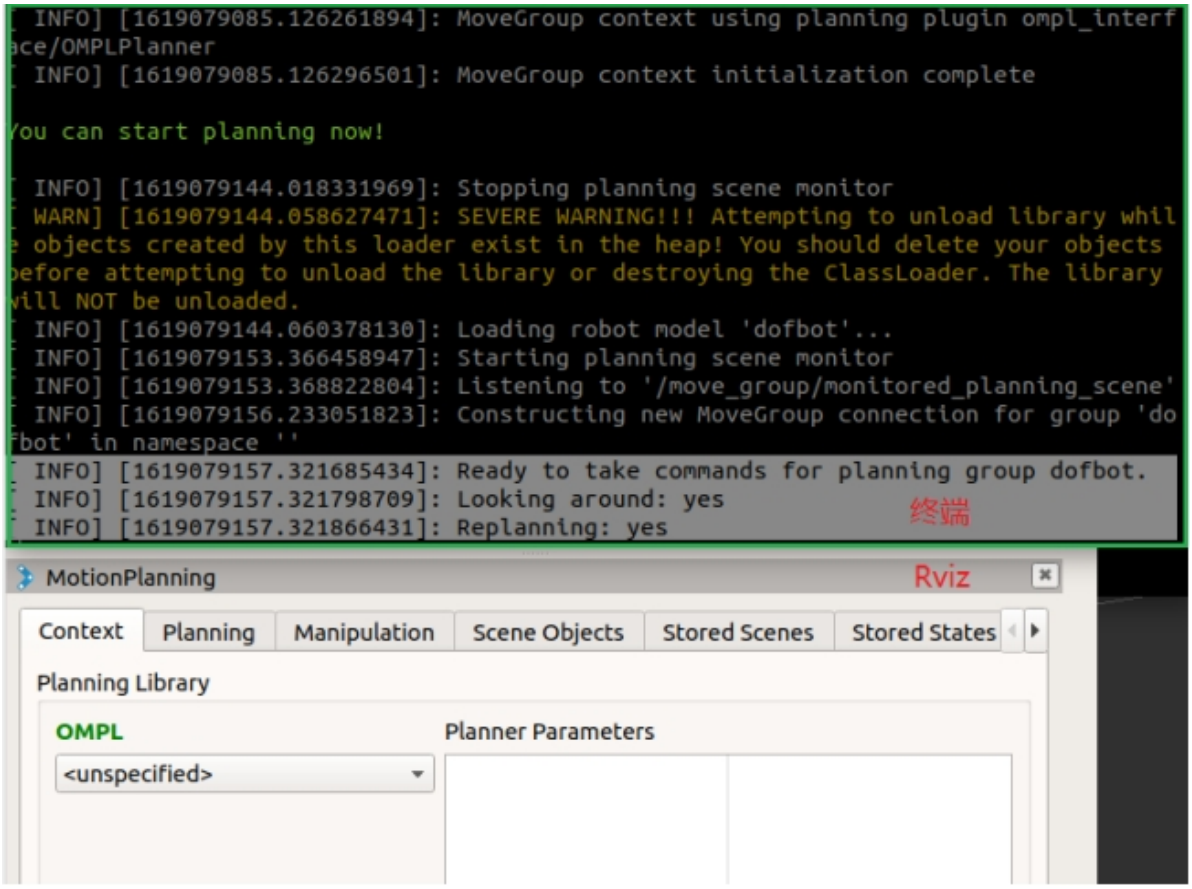
3. Start up MoveIT

The MoveIt simulation environment starts slowly, so wait patiently and observe the terminal. An error occurs as shown in the figure below. The solution is as shown in the figure. If the terminal reports an error and the motion planning library is not loaded, click [Reset] in the lower left corner and reload. At first, it is during the loading process. Don't rush to click [Reset]. If you click it

before loading is complete, the system will reload and it will not start.






[INFO] [1619079085.126261894]: MoveGroup context using planning plugin ompl_interf
ace/OMPLPlanner
[INFO] [1619079085.126296501]: MoveGroup context initialization complete
You can start planning now!
[INFO] [1619079144.018331969]: Stopping planning scene monitor
[WARN] [1619079144.058627471]: SEVERE WARNING!!! Attempting to unload library whil
e objects created by this loader exist in the heap! You should delete your objects
before attempting to unload the library or destroying the ClassLoader. The library
will NOT be unloaded.
[INFO] [1619079144.060378130]: Loading robot model 'dofbot'...
[INFO] [1619079153.366458947]: Starting planning scene monitor
[INFO] [1619079153.368822804]: Listening to '/move_group/monitored_planning_scene'
[INFO] [1619079156.233051823]: Constructing new MoveGroup connection for group 'do
fbot' in namespace ''
[INFO] [1619079157.321685434]: Ready to take commands for planning group dofbot.
[INFO] [1619079157.321798709]: Looking around: yes
[INFO] [1619079157.321866431]: Replanning: yes
终端
MotionPlanning
Rviz
Context
Planning
Manipulation
Scene Objects
Stored Scenes
Stored States
Planning Library
OMPL
Planner Parameters
<unspecified>