Moveit Cartesian path

1. Usage environment

Motherboard: Jetson Orin Nano/Nx

ROS2: Humble

2. Driving the real machine

Driving the real machine is to convert the joint state information of the robot arm into the control of the real robot arm by subscribing to the `/joint_states` topic of Moveit2.

Note: Since the real robot arm does not have an obstacle avoidance function, some positions may hit obstacles; so the planned robot arm movements should be as reasonable as possible and avoid positions with obstacles

(It is recommended to use preset positions to demonstrate driving the real machine)

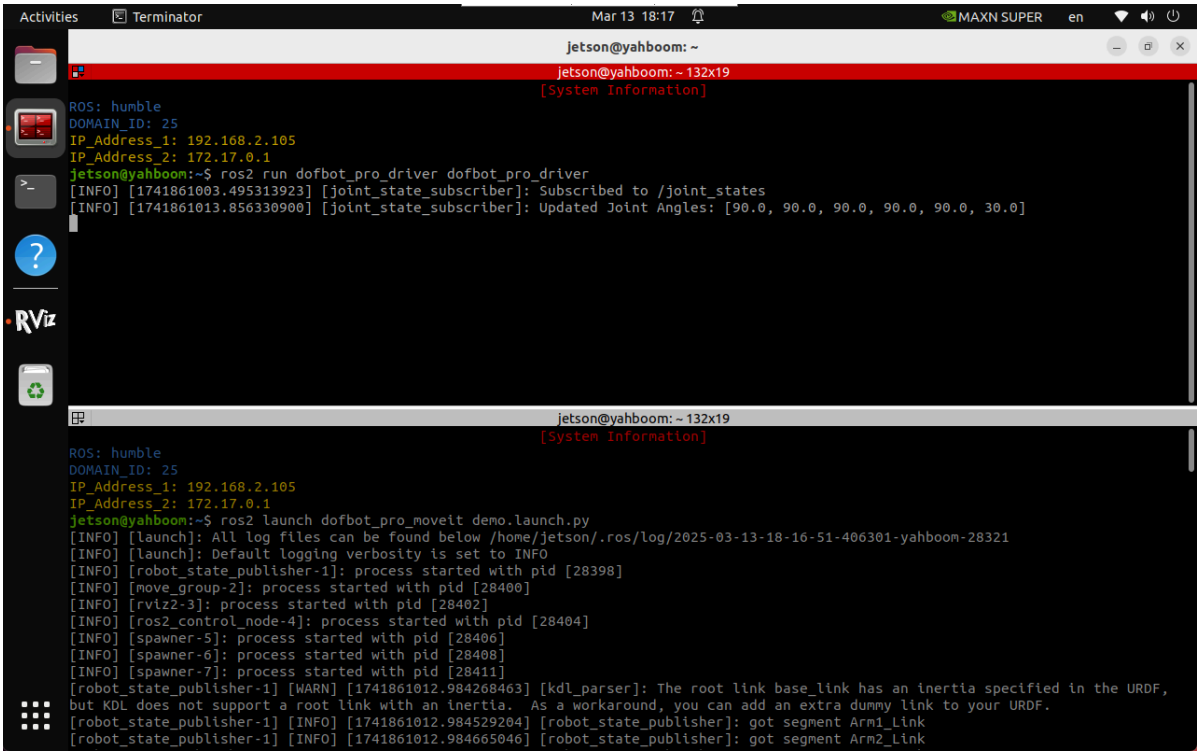
2.1. Start the real machine

If you do not drive the real machine, simulate the robot arm movements in MoveIt:

```
ros2 run dofbot_pro_driver dofbot_pro_driver
```

2.2. Start MoveIt2

```
ros2 launch dofbot_pro_moveit demo.launch.py
```



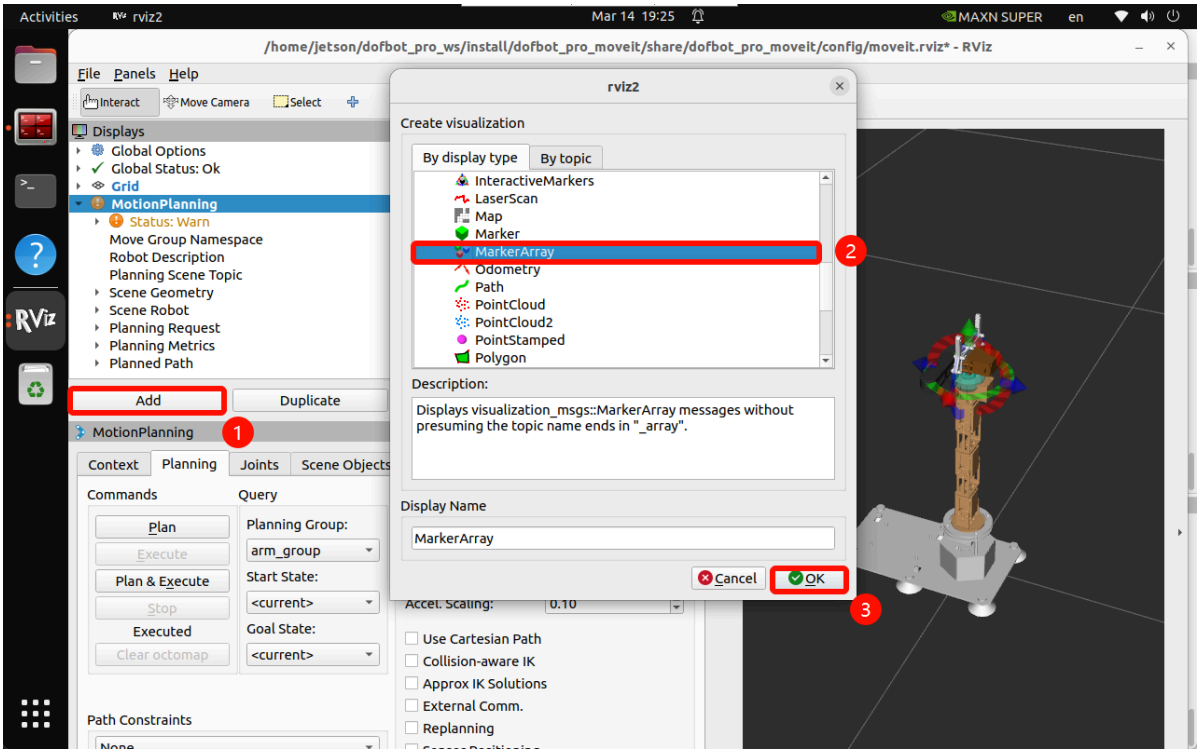
3. Cartesian path

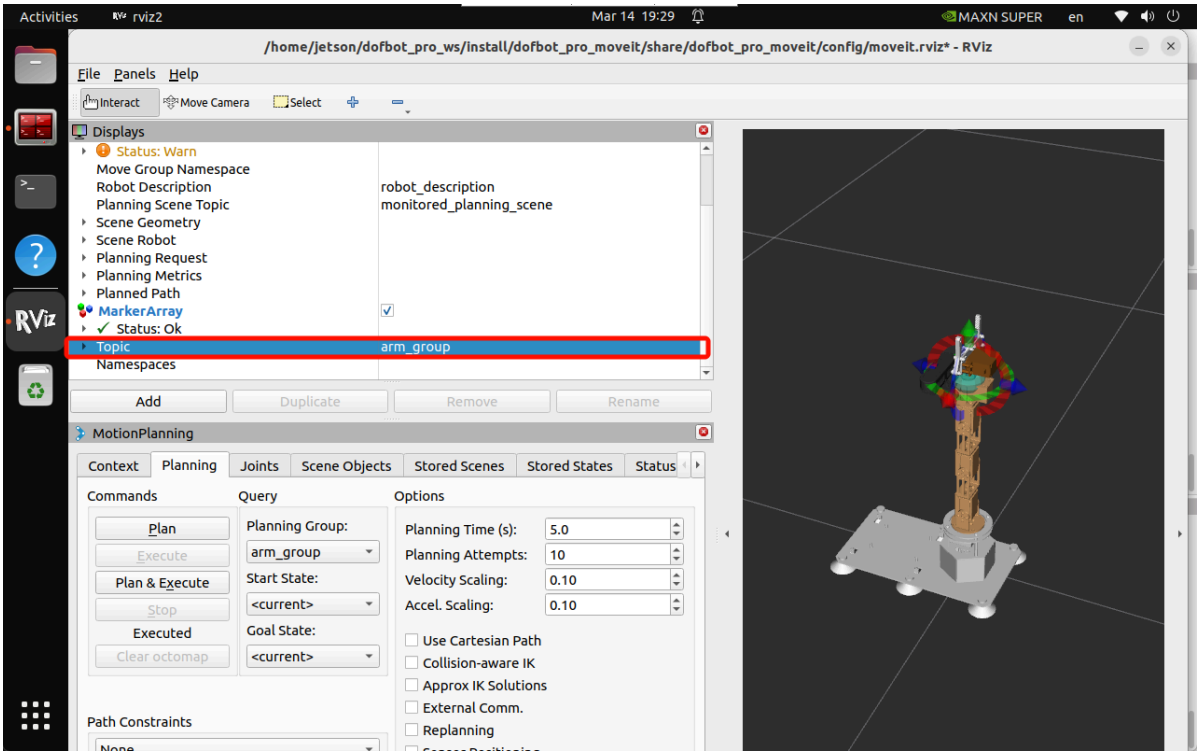
Cartesian path refers to the linear motion path of the end effector of the robot arm in the Cartesian coordinate system.

```
Due to the limitation of the robot's freedom and structure, the Cartesian path point is very difficult to find
```

3.1, Visualization

Before starting the command, you need to add the `MarkerArray` plug-in in `RViz2` to display the Cartesian planned straight line path: `MarkerArray` needs to select the `arm_group` topic





3.2, Start Command

The robot needs to be successfully loaded in MoveIt and `You can start planning now!` appears to run the following command: The robot will plan the Cartesian path by itself

```
ros2 run dofbot_pro_moveit cartesian_path
```