

Movelt drives the real machine

1. Usage environment

Motherboard: Jetson Orin Nano/Nx

ROS2: Humble

2. Drive the real machine

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

Note: Since the real robot arm does not have an obstacle avoidance function, some positions may encounter 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 Movelt:

```
ros2 run jetcobot_driver sync_plan
```

2.2. Start MoveIt2

```
ros2 launch jetcobot_moveit demo.launch.py
```

```
jetson@yahboom:~/jetcobot_colcon_ws$ source install/setup.bash
jetson@yahboom:~/jetcobot_colcon_ws$ ros2 run jetcobot_driver sync_plan
[INFO] [1746523618.089714205] [mycobot_receiver]: Connected to MyCobot at /dev/ttyUSB0, baud: 1000000
```

```
jetson@yahboom:~$ ros2 launch jetcobot_moveit demo.launch.py
[INFO] [launch]: All log files can be found below /home/jetson/.ros/log/2025-05-06-18-22-35-906299-yahboom-5757
[INFO] [launch]: Default logging verbosity is set to INFO
[INFO] [static_transform_publisher-1]: process started with pid [5758]
[INFO] [robot_state_publisher-2]: process started with pid [5760]
[INFO] [move_group-3]: process started with pid [5762]
[INFO] [rviz2-4]: process started with pid [5764]
[INFO] [ros2_control_node-5]: process started with pid [5766]
[INFO] [spawner-6]: process started with pid [5768]
[INFO] [spawner-7]: process started with pid [5770]
[static_transform_publisher-1] [INFO] [1746526957.078854709] [static_transform_publisher0]: Spinning until stopped - publishing transform
[static_transform_publisher-1] translation: ('0.000000', '0.000000', '0.000000')
[static_transform_publisher-1] rotation: ('0.000000', '0.000000', '0.000000', '1.000000')
[static_transform_publisher-1] from 'world' to 'base_link'
[ros2_control_node-5] [WARN] [1746526957.111454920] [controller_manager]: [Deprecated] Passing the robot description parameter directly to the control_manager n
```

3. Real machine movement

Demonstrating driving the real robot arm to the preset initialization position:

Set the planning group: arm_group

Set the pose: init

Plan and execute pose: Plan & Execute

