

# MoveIt collision detection

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## 1. RVIZ simulation motion of robotic arm

### 1.1 Start roscore

- If you are using Jetson Orin NX/Jetson Orin Nano board. You need to enter the Docker environment using the following command.

```
sh ~/start_docker.sh  
roscore
```

- If you are using Jetson Nano board. You need to enter the following command directly.

```
roscore
```

### 1.2 Start simulation

Open a new terminal.

- If you are using Jetson Orin NX/Jetson Orin Nano board. You need to enter the Docker environment using the following command.

```
sh ~/start_docker.sh
```

- If you are using Jetson Nano board. You need to enter the following command directly.

```
roslaunch jetcobot_moveit jetcobot_moveit.launch
```

## 2. Drive real robotic arm

Open a new terminal.

- If you are using Jetson Orin NX/Jetson Orin Nano board. You need to enter the Docker environment using the following command.

```
sh ~/start_docker.sh
```

- If you are using Jetson Nano board. You need to enter the following command directly.

```
roslaunch jetcobot_moveit sync_plan.py
```

**Note:** After the program driving the real machine is running, the robotic arm will follow the movement of the simulated robot.

**Please be careful not to place other objects around to avoid being hit by the robotic arm.**

## 4. Run program

Open a new terminal.

- If you are using Jetson Orin NX/Jetson Orin Nano board. You need to enter the Docker environment using the following command.

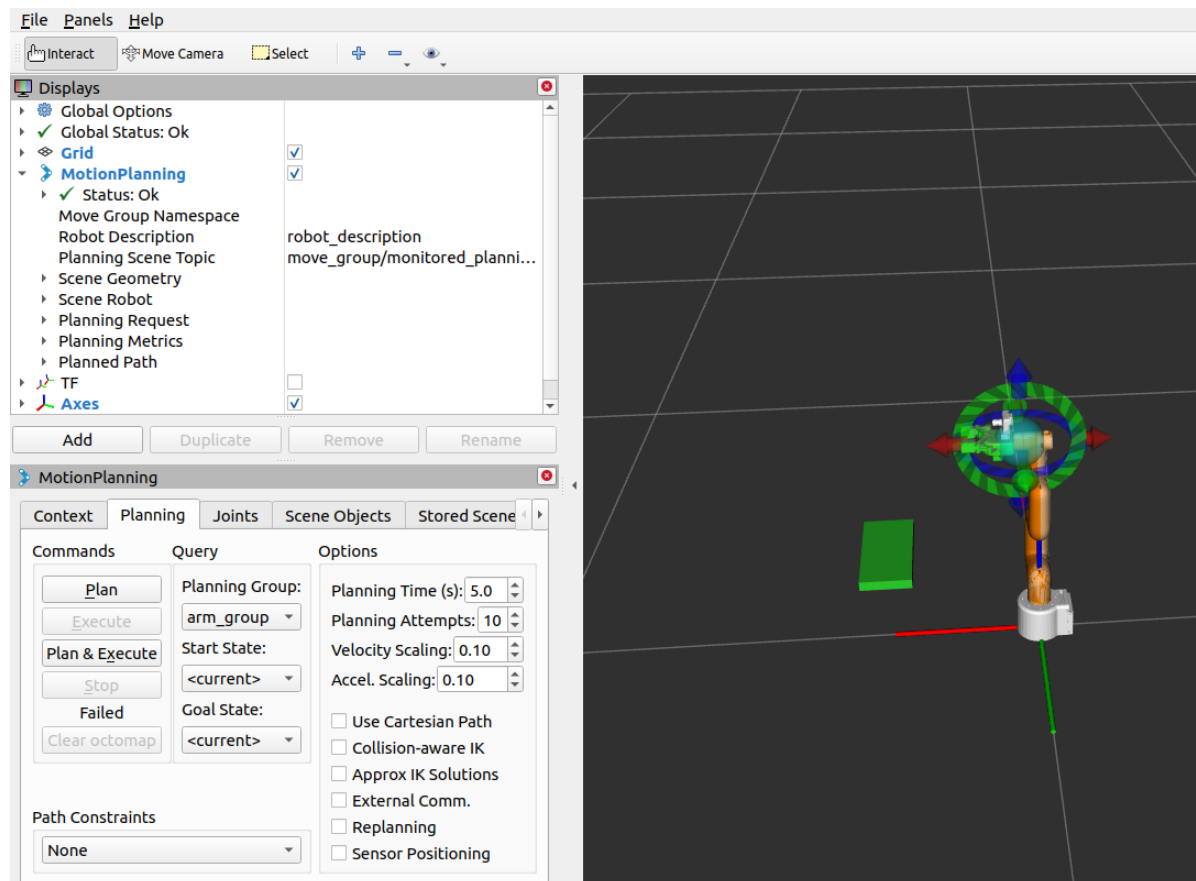
```
sh ~/start_docker.sh
```

- If you are using Jetson Nano board. You need to enter the following command directly.

```
roslaunch jetcobot_moveit 05_attached_object.py
```

Code path: ~/jetcobot\_ws/src/jetcobot\_moveit/scripts/05\_attached\_object.py

Experimental phenomenon: We can see that the robotic arm will make actions to avoid obstacles in RVIZ.



Close the process: Press [ctrl+c].

If it fails to close, press [ctrl+z].