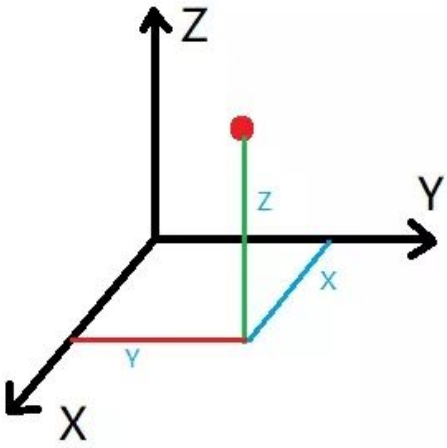
# MoveIt Cartesian Path

## 1 Introduction

The Cartesian coordinate system is the collective name for the Cartesian coordinate system and the oblique coordinate system. A Cartesian path is actually a line connecting any two points in space.




## 2. Start

Start MoveIT

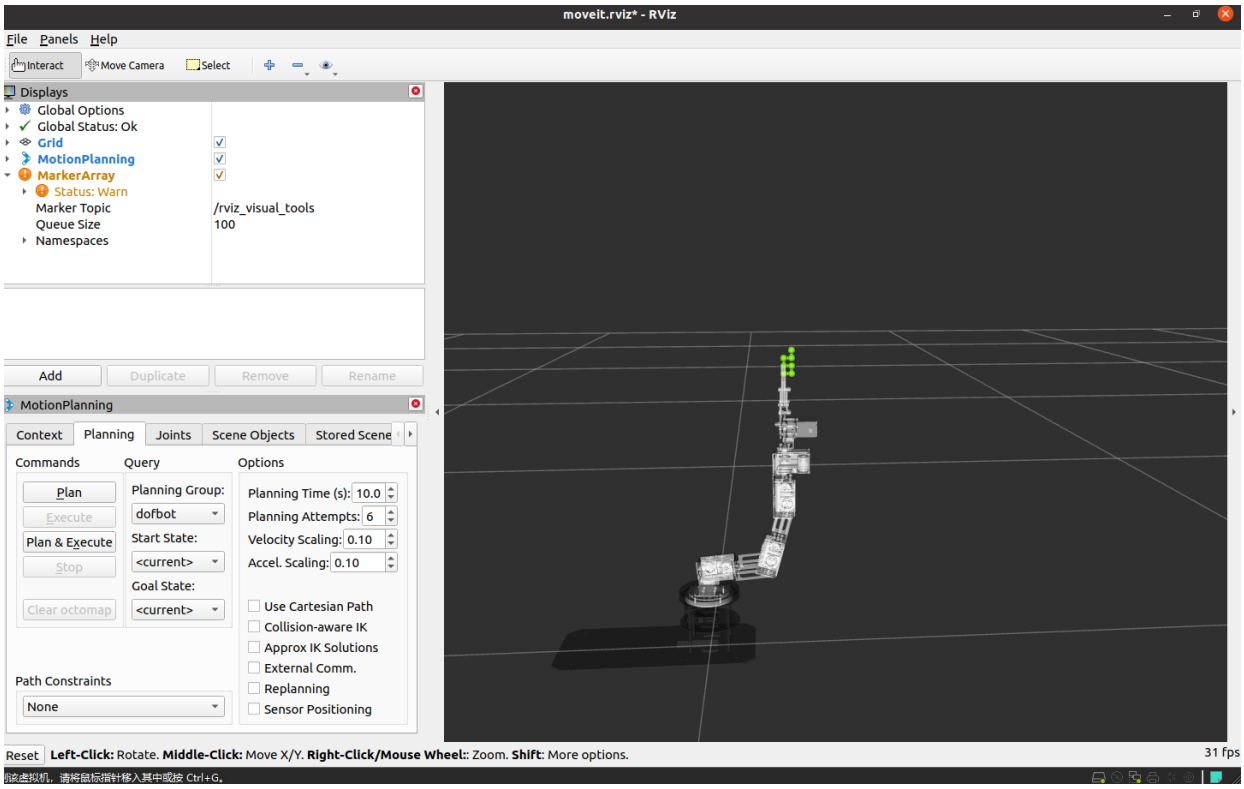
```
roslaunch dofbot_config demo.launch
```

Start Cartesian Path Node

```
rosrun dofbot_moveit 04_cartesian
```

- C++ code examples

To view the trajectory, you need to add the [MarkerArray] plug-in and select the [/rviz_visual_tools] topic.



## 3. C++ source code file

Set a specific location

```
    ROS_INFO("Set Init Pose.");
    //Set specific location
    vector<double> pose{0, -0.69, -0.17, 0.86, 0};
    yahboomcar.setJointValueTarget(pose);
```

Add waypoint

```
    //Initialize path point vector
    std::vector<geometry_msgs::Pose> waypoints;
    //Add the initial pose to the waypoint list
    waypoints.push_back(start_pose);
    start_pose.position.x -= 0.04;
    waypoints.push_back(start_pose);
    start_pose.position.z -= 0.02;
    waypoints.push_back(start_pose);
    start_pose.position.x += 0.04;
    waypoints.push_back(start_pose);
    start_pose.position.z -= 0.02;
    waypoints.push_back(start_pose);
    start_pose.position.x += 0.03;
    waypoints.push_back(start_pose);
```

waypoint planning

```
fraction = yahboomcar.computeCartesianPath(waypoints, eef_step, jump_threshold, trajectory);
```