# Readme

Tested on Jan 5- 2022,

- Ubuntu 16.04
- Libfranka 0.7.1
- ROS - Kinetic
- franka ros - 0.6.0
- moveit - Kinetic

Known issues as of Jan 5 - 2022,

- Unable to make a real-time kernel for Ubuntu 18.04 following the official tutorial in https://frankaemika.github.io/docs/installation_linux.html

Things to do for beginners.

1. Make the system real time
2. Install librealsense and make the robot move by running one of the example controller
3. Install franka ros and make the robot move by running one of the example controller
4. Install moveit and make the robot move by running one of the example controller

Workspace layout in /home

libfranka - This folder/workspace is for dealing with libfranka

robot_ros - This is a catkin workspace it only has franka_ros package

robot_moveit - This is a catkin workspace it only has the move it package

Issue: When running moveit, it is good idea to source ~/robot_ros/devel/setup.sh such that moveit can detect the franka ros

Connecting move it to the real robot: Also source the robot_moveit workspace

roslaunch panda_moveit_config panda_control_moveit_rviz.launch robot_ip:=172.16.0.2

After this moveit is conected to the actual robot, one can run moveit based script and the robot will perform the action.

New workspace:

Users can create any new workspace and source it and should be able to run their scripts to the actual robot. There are three ways do it.

1. Libfranka
2. Franka ros
3. Moveit

When using movie based script do the following:

1. In one terminal run roscore
2. In another terminal source ~/robot_ros/devel/setup.sh also source ~/robot_moveit/devel/setup.bash and run the following command

   roslaunch panda_moveit_config panda_control_moveit_rviz.launch robot_ip:=172.16.0.2

   If rviz is not required then, roslaunch panda_moveit_config panda_control_moveit.launch robot_ip:=172.16.0.2

   It’s always a good idea to test ones algorithm in simulation before running in actual robot using

   roslaunch panda_moveit_config panda_control_moveit_rviz.launch
3. Run your desired script once it has been made executable using chmod +x ~/praneel_ws/scripts/move_to_point.py

   ./praneel_ws/scripts/move_to_point.py