

Le Robot Marcheur

PROJECT ROBOTIQUE INDUSTRIELLE

SUNGKUR SEEKCHA

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Partie 3 Impact des configurations

En naviguant dans les fichiers de config du package créé avec moveit setup assistant, dans le dossier config se trouve des fichiers de configuration.

Modifier ces fichiers config pour :

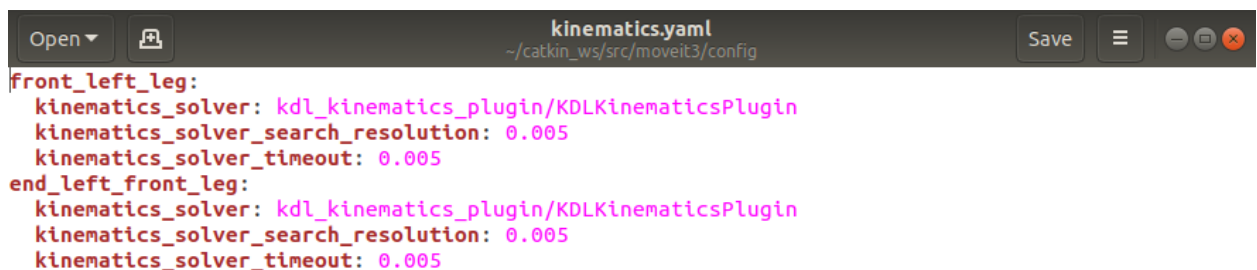
1. Changer de solveur (en plus de ceux proposés, vous ajouterez aussi le IKFast solver)
2. Changer les paramètres pour la planification de trajectoire

Vous afficherez des données permettant de mettre en avant l'impact de vos modifications sur le système (temps de résolution, valeur des joints, etc ...).

Vous interpréterez vos résultats.

Note: done for only one leg.

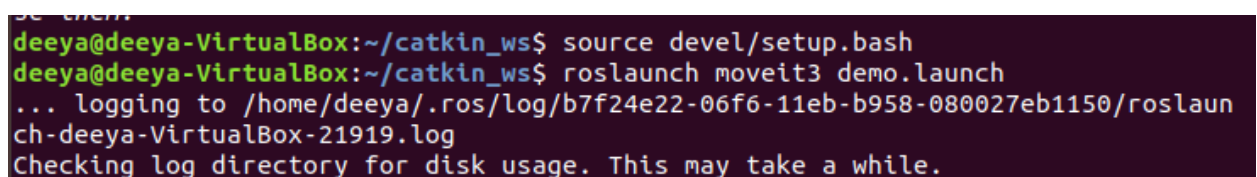
1. In Folder moveit3 > config
2. Open kinematics.yaml file.



```
kinematics.yaml
~/catkin_ws/src/moveit3/config

front_left_leg:
  kinematics_solver: kdl_kinematics_plugin/KDLKinematicsPlugin
  kinematics_solver_search_resolution: 0.005
  kinematics_solver_timeout: 0.005
end_left_front_leg:
  kinematics_solver: kdl_kinematics_plugin/KDLKinematicsPlugin
  kinematics_solver_search_resolution: 0.005
  kinematics_solver_timeout: 0.005
```

3. Launch rviz

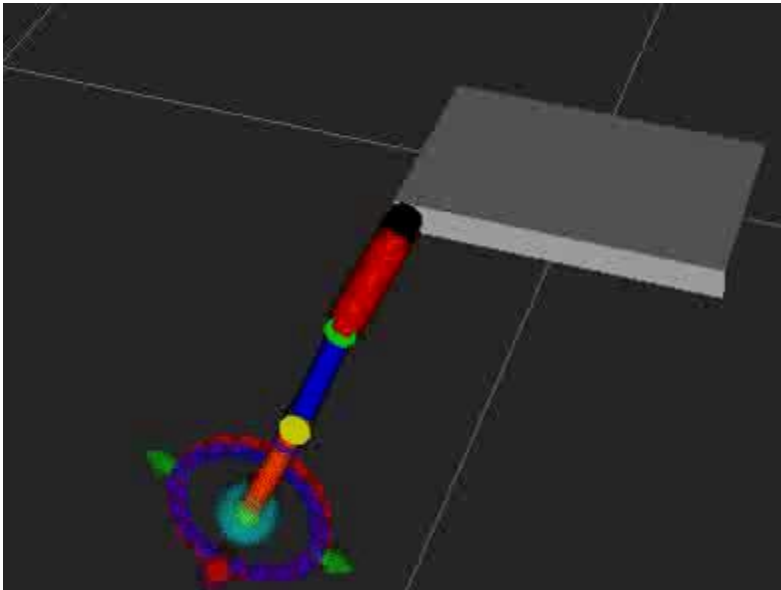


```
deeya@deeya-VirtualBox:~/catkin_ws$ source devel/setup.bash
deeya@deeya-VirtualBox:~/catkin_ws$ roslaunch moveit3 demo.launch
... logging to /home/deeya/.ros/log/b7f24e22-06f6-11eb-b958-080027eb1150/roslaun
ch-deeya-VirtualBox-21919.log
Checking log directory for disk usage. This may take a while.
```

4. Call service

```
Service arguments are: [joint1.data joint2.data joint3.data joint4.data]
deeya@deeya-VirtualBox:~/catkin_ws$ rosservice call /direct_kin_service_front_le
ft_leg "
joint1:
  data: 1.2100
joint2:
  data: 0.000
joint3:
  data: 0.1700
joint4:
  data: -1.629
"
res:
  data: True
message:
  data: "Success"
```

Click on the image to see the movement



5. Change solver, search resolution, solver timeout

```
front_left_leg:
  kinematics_solver: srv_kinematics_plugin/SrvKinematicsPlugin
  kinematics_solver_search_resolution: 0.010
  kinematics_solver_timeout: 0.050
end_left_front_leg:
  kinematics_solver: srv_kinematics_plugin/SrvKinematicsPlugin
  kinematics_solver_search_resolution: 0.010
  kinematics_solver_timeout: 0.050
```

6. Result

