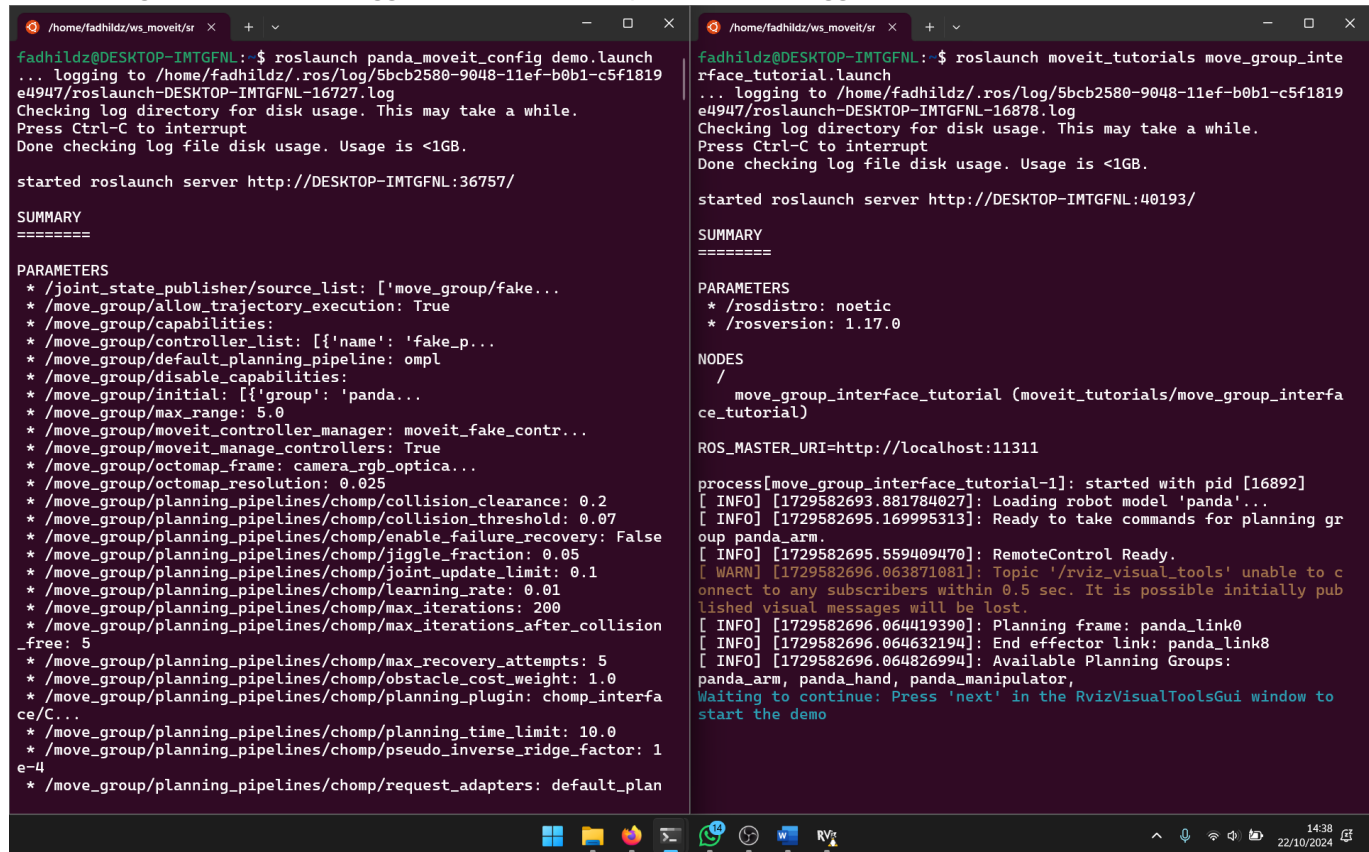


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Kelas : TK-45-G09

## Move Group C++ Interface – MoveIt 1 Noetic

1. Jalankan roslaunch panda\_moveit\_config demo.launch untuk menjalankan simulasi robot panda di RViz dan roslaunch moveit\_tutorials move\_group\_interface\_tutorial.launch untuk menunjukkan bagaimana cara menggunakan MoveGroupInterface menggunakan C++.



```
fadhildz@DESKTOP-INTGFNL: $ roslaunch panda_moveit_config demo.launch
... logging to /home/fadhildz/.ros/log/5bcb2580-9048-11ef-b0b1-c5f1819
e4947/roslaunch-DESKTOP-INTGFNL-16727.log
Checking log directory for disk usage. This may take a while.
Press Ctrl-C to interrupt
Done checking log file disk usage. Usage is <1GB.

started roslaunch server http://DESKTOP-INTGFNL:36757/

SUMMARY
=====

PARAMETERS
* /joint_state_publisher/source_list: ['move_group/fake...
* /move_group/allow_trajectory_execution: True
* /move_group/capabilities:
* /move_group/controller_list: [{'name': 'fake_p...
* /move_group/default_planning_pipeline: ompl
* /move_group/disable_capabilities:
* /move_group/initial: [{'group': 'panda...
* /move_group/max_range: 5.0
* /move_group/moveit_controller_manager: moveit_fake_contr...
* /move_group/moveit_manage_controllers: True
* /move_group/octomap_frame: camera_rgb_optica...
* /move_group/octomap_resolution: 0.025
* /move_group/planning_pipeline/chomp/collision_clearance: 0.2
* /move_group/planning_pipeline/chomp/collision_threshold: 0.07
* /move_group/planning_pipeline/chomp/enable_failure_recovery: False
* /move_group/planning_pipeline/chomp/jiggle_fraction: 0.05
* /move_group/planning_pipeline/chomp/joint_update_limit: 0.1
* /move_group/planning_pipeline/chomp/learning_rate: 0.01
* /move_group/planning_pipeline/chomp/max_iterations: 200
* /move_group/planning_pipeline/chomp/max_iterations_after_collision
_free: 5
* /move_group/planning_pipeline/chomp/max_recovery_attempts: 5
* /move_group/planning_pipeline/chomp/obstacle_cost_weight: 1.0
* /move_group/planning_pipeline/chomp/planning_plugin: chomp_interfa
ce/C...
* /move_group/planning_pipeline/chomp/planning_time_limit: 10.0
* /move_group/planning_pipeline/chomp/pseudo_inverse_ridge_factor: 1
e-4
* /move_group/planning_pipeline/chomp/request_adapters: default_plan

fadhildz@DESKTOP-INTGFNL: $ roslaunch moveit_tutorials move_group_inte
rface_tutorial.launch
... logging to /home/fadhildz/.ros/log/5bcb2580-9048-11ef-b0b1-c5f1819
e4947/roslaunch-DESKTOP-INTGFNL-16878.log
Checking log directory for disk usage. This may take a while.
Press Ctrl-C to interrupt
Done checking log file disk usage. Usage is <1GB.

started roslaunch server http://DESKTOP-INTGFNL:40193/

SUMMARY
=====

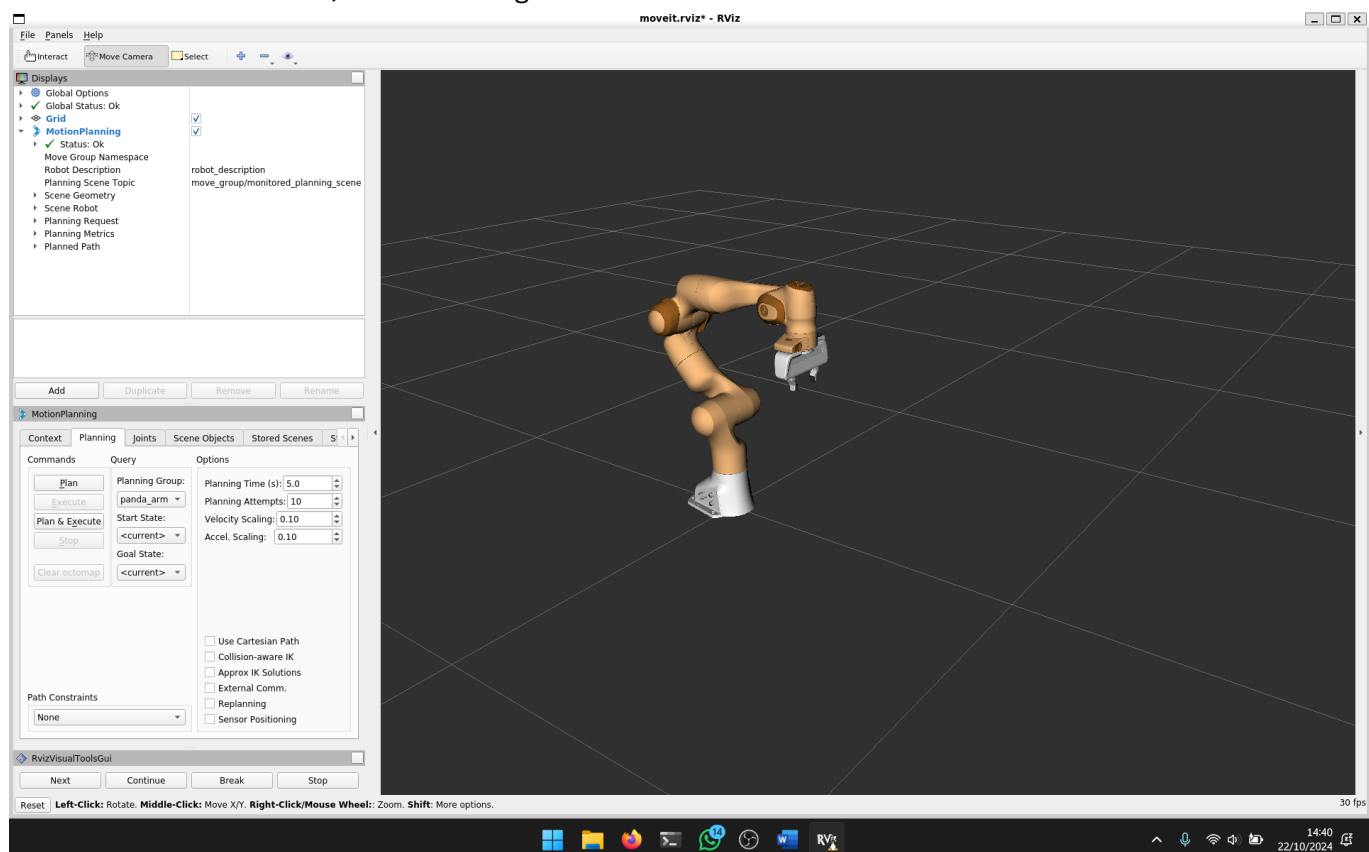
PARAMETERS
* /roscpp: noetic
* /rosversion: 1.17.0

NODES
/
  move_group_interface_tutorial (moveit_tutorials/move_group_interfa
ce_tutorial)

ROS_MASTER_URI=http://localhost:11311

process[move_group_interface_tutorial-1]: started with pid [16892]
[ INFO] [1729582693.881784027]: Loading robot model 'panda'...
[ INFO] [1729582695.169995313]: Ready to take commands for planning gr
oup panda_arm.
[ INFO] [1729582695.559409470]: RemoteControl Ready.
[ WARN] [1729582696.063871081]: Topic '/rviz_visual_tools' unable to c
onnect to any subscribers within 0.5 sec. It is possible initially pub
lished visual messages will be lost.
[ INFO] [1729582696.064419390]: Planning frame: panda_link0
[ INFO] [1729582696.064632194]: End effector link: panda_link8
[ INFO] [1729582696.064826994]: Available Planning Groups:
panda_arm, panda_hand, panda_manipulator,
Waiting to continue: Press 'next' in the RvizVisualToolsGui window to
start the demo
```

2. RViz akan terbuka, klik next di bagian RvizVisualToolsGui.



### 3. Jalankan simulasi dari plan 1 hingga plan 7.

```

/home/fadhildz/ws_moveit/sr x + v
fadhildz@DESKTOP-IMTGFNL: $ roslaunch panda_moveit_config demo.launch
... logging to /home/fadhildz/.ros/log/5bcb2580-9048-11ef-b0b1-c5f1819
e4947/roslaunch-DESKTOP-IMTGFNL-16727.log
Checking log directory for disk usage. This may take a while.
Press Ctrl-C to interrupt
Done checking log file disk usage. Usage is <1GB.

started roslaunch server http://DESKTOP-IMTGFNL:36757/

SUMMARY
=====

PARAMETERS
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* /move_group/disable_capabilities:
* /move_group/initial: [{'group': 'panda...
* /move_group/max_range: 5.0
* /move_group/moveit_controller_manager: moveit_fake_contr...
* /move_group/moveit_manage_controllers: True
* /move_group/octomap_frame: camera_rgb_optica...
* /move_group/octomap_resolution: 0.025
* /move_group/planning_pipelines/chomp/collision_clearance: 0.2
* /move_group/planning_pipelines/chomp/collision_threshold: 0.07
* /move_group/planning_pipelines/chomp/enable_failure_recovery: False
* /move_group/planning_pipelines/chomp/jiggle_fraction: 0.05
* /move_group/planning_pipelines/chomp/joint_update_limit: 0.1
* /move_group/planning_pipelines/chomp/learning_rate: 0.01
* /move_group/planning_pipelines/chomp/max_iterations: 200
* /move_group/planning_pipelines/chomp/max_iterations_after_collision_free: 5
* /move_group/planning_pipelines/chomp/max_recovery_attempts: 5
* /move_group/planning_pipelines/chomp/obstacle_cost_weight: 1.0
* /move_group/planning_pipelines/chomp/planning_plugin: chomp_interfa
ce/C...
* /move_group/planning_pipelines/chomp/planning_time_limit: 10.0
* /move_group/planning_pipelines/chomp/pseudo_inverse_ridge_factor: 1
e-4
* /move_group/planning_pipelines/chomp/request_adapters: default_plan

[ INFO] [1729583082.567611600]: Planning frame: panda_link0
[ INFO] [1729583082.567750760]: End effector link: panda_link8
[ INFO] [1729583082.567841359]: Available Planning Groups:
panda_arm, panda_hand, panda_manipulator,
Waiting to continue: Press 'next' in the RvizVisualToolsGui window to
start the demo... continuing
[ INFO] [1729583087.701491960]: Visualizing plan 1 (pose goal)
[ INFO] [1729583087.701802860]: Visualizing plan 1 as trajectory line
[ INFO] [1729583087.702823737]: No planning scene passed into moveit_v
isual_tools, creating one.
[ INFO] [1729583087.732643742]: Loading robot model 'panda'...
[ INFO] [1729583088.366816113]: Publishing maintained planning scene o
n ''

Waiting to continue: Press 'next' in the RvizVisualToolsGui window to
continue the demo... continuing
[ INFO] [1729583155.455526144]: Visualizing plan 2 (joint space goal)

Waiting to continue: Press 'next' in the RvizVisualToolsGui window to
continue the demo... continuing
[ INFO] [1729583163.332355336]: Visualizing plan 3 (constraints)

Waiting to continue: next step... continuing
[ INFO] [1729583171.454438735]: Visualizing plan 4 (Cartesian path) (1
00.00% achieved)

Waiting to continue: Press 'next' in the RvizVisualToolsGui window to
continue the demo... continuing
[ INFO] [1729583178.699246475]: Visualizing plan 5 (with no obstacles)

Waiting to continue: next step... continuing
[ INFO] [1729583188.211349808]: Add an object into the world

Waiting to continue: Press 'next' in the RvizVisualToolsGui window to
once the collision object appears in RViz... continuing
[ INFO] [1729583193.409670729]: Visualizing plan 6 (pose goal move aro
und cuboid)

Waiting to continue: Press 'next' in the RvizVisualToolsGui window onc
e the plan is complete... continuing
[ INFO] [1729583198.174334891]: Attach the object to the robot

```

### 4. Robot akan bergerak sesuai dengan plan nya.

