

## Terminal 1 untuk command *roscore*

```
roscore http://LENOVO:11311/
-bash: /opt/ros/kinetic/setup.bash: No such file or directory
-bash: /opt/ros/kinetic/setup.bash: No such file or directory
dent@LENOVO:~$ roscore
... logging to /home/dent/.ros/log/6dbd72c6-e190-11eb-8d63-4cebbd266341/roslaunch-LENOVO-162.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://LENOVO:49831/
ros_comm version 1.14.11

SUMMARY
=====

PARAMETERS
* /rostdistro: melodic
* /rosversion: 1.14.11

NODES

auto-starting new master
process[master]: started with pid [354]
ROS_MASTER_URI=http://LENOVO:11311/

setting /run_id to 6dbd72c6-e190-11eb-8d63-4cebbd266341
process[rosout-1]: started with pid [367]
started core service [/rosout]
```

## Terminal 2 untuk *catkin\_make*

```
dent@LENOVO: ~/catkin_ws
dent@LENOVO:~/catkin_ws$ cd catkin_ws
dent@LENOVO:~/catkin_ws$ catkin_make
Base path: /home/dent/catkin_ws
Source space: /home/dent/catkin_ws/src
Build space: /home/dent/catkin_ws/build
Devel space: /home/dent/catkin_ws/devel
Install space: /home/dent/catkin_ws/install
####
#### Running command: "make cmake_check_build_system" in "/home/dent/catkin_ws/build"
####
####
#### Running command: "make -j8 -l8" in "/home/dent/catkin_ws/build"
####
[ 0%] Built target std_msgs_generate_messages_cpp
[ 0%] Built target std_msgs_generate_messages_py
[ 0%] Built target std_msgs_generate_messages_eus
[ 0%] Built target std_msgs_generate_messages_lisp
[ 0%] Built target std_msgs_generate_messages_nodejs
[ 9%] Built target publisher
[ 19%] Built target subscriber
[ 19%] Built target _intro_generate_messages_check_deps_arithmetic
[ 28%] Built target server
[ 38%] Built target client
[ 38%] Built target roscpp_generate_messages_py
[ 38%] Built target roscpp_generate_messages_lisp
[ 38%] Built target roscpp_generate_messages_eus
[ 38%] Built target roscpp_generate_messages_cpp
[ 38%] Built target roscpp_generate_messages_eus
[ 38%] Built target roscpp_generate_messages_lisp
[ 38%] Built target roscpp_generate_messages_nodejs
[ 38%] Built target roscpp_generate_messages_py
[ 38%] Built target roscpp_generate_messages_nodejs
[ 47%] Built target subscriber_node
[ 57%] Built target publisher_node
[ 66%] Built target intro_generate_messages_py
[ 76%] Built target intro_generate_messages_eus
[ 80%] Built target intro_generate_messages_cpp
[ 85%] Built target intro_generate_messages_lisp
[ 90%] Built target intro_generate_messages_nodejs
[ 100%] Built target obiwancpp

dent@LENOVO:~/catkin_ws
Install space: /home/dent/catkin_ws/install
####
#### Running command: "make cmake_check_build_system" in "/home/dent/catkin_ws/build"
####
####
#### Running command: "make -j8 -l8" in "/home/dent/catkin_ws/build"
####
[ 0%] Built target std_msgs_generate_messages_cpp
[ 0%] Built target std_msgs_generate_messages_py
[ 0%] Built target std_msgs_generate_messages_eus
[ 0%] Built target std_msgs_generate_messages_lisp
[ 0%] Built target std_msgs_generate_messages_nodejs
[ 9%] Built target publisher
[ 19%] Built target subscriber
[ 19%] Built target _intro_generate_messages_check_deps_arithmetic
[ 28%] Built target server
[ 38%] Built target client
[ 38%] Built target roscpp_generate_messages_py
[ 38%] Built target roscpp_generate_messages_lisp
[ 38%] Built target roscpp_generate_messages_eus
[ 38%] Built target roscpp_generate_messages_cpp
[ 38%] Built target roscpp_generate_messages_eus
[ 38%] Built target roscpp_generate_messages_lisp
[ 38%] Built target roscpp_generate_messages_nodejs
[ 38%] Built target roscpp_generate_messages_py
[ 38%] Built target roscpp_generate_messages_nodejs
[ 47%] Built target subscriber_node
[ 57%] Built target publisher_node
[ 66%] Built target intro_generate_messages_py
[ 76%] Built target intro_generate_messages_eus
[ 80%] Built target intro_generate_messages_cpp
[ 85%] Built target intro_generate_messages_lisp
[ 90%] Built target intro_generate_messages_nodejs
[ 100%] Built target obiwancpp
[ 100%] Built target intro_generate_messages

dent@LENOVO:~/catkin_ws$ source devel/setup.bash
dent@LENOVO:~/catkin_ws$
```

### Terminal 3 untuk *roslaunch publisher\_subscriber publisher\_node*(untuk node publisher)

```
dent@LENOVO: ~/catkin_ws
-bash: /opt/ros/kinetic/setup.bash: No such file or directory
-bash: /opt/ros/kinetic/setup.bash: No such file or directory
dent@LENOVO:~$ source devel/setup.bash
-bash: devel/setup.bash: No such file or directory
dent@LENOVO:~$ cd catkin_ws
dent@LENOVO:~/catkin_ws$ source devel/setup.bash
dent@LENOVO:~/catkin_ws$ roslaunch publisher_subscriber publisher_node
```

## Terminal 4 untuk *roslaunch publisher\_subscriber subscriber\_node*(untuk node subscriber)

```
dent@LENOVO: ~/catkin_ws
-bash: /opt/ros/kinetic/setup.bash: No such file or directory
-bash: /opt/ros/kinetic/setup.bash: No such file or directory
dent@LENOVO:~$ cd catkin_ws
dent@LENOVO:~/catkin_ws$ source devel/setup.bash
dent@LENOVO:~/catkin_ws$ roslaunch publisher_subscriber subscriber_node
[ INFO] [1625931412.383026600]: Hello, World!
[ INFO] [1625931412.393440600]: Hello, World!
[ INFO] [1625931412.393643800]: Hello, World!
[ INFO] [1625931412.402713200]: Hello, World!
[ INFO] [1625931412.419473600]: Hello, World!
[ INFO] [1625931412.436970700]: Hello, World!
[ INFO] [1625931412.453251100]: Hello, World!
[ INFO] [1625931412.469873500]: Hello, World!
[ INFO] [1625931412.486331000]: Hello, World!
[ INFO] [1625931412.502962300]: Hello, World!
[ INFO] [1625931412.520185400]: Hello, World!
[ INFO] [1625931412.537189500]: Hello, World!
[ INFO] [1625931412.553580400]: Hello, World!
[ INFO] [1625931412.570056200]: Hello, World!
[ INFO] [1625931412.586267100]: Hello, World!
[ INFO] [1625931412.603553700]: Hello, World!
[ INFO] [1625931412.619588400]: Hello, World!
[ INFO] [1625931412.637342000]: Hello, World!
[ INFO] [1625931412.653359100]: Hello, World!
[ INFO] [1625931412.670407000]: Hello, World!
[ INFO] [1625931412.686697400]: Hello, World!
[ INFO] [1625931412.704027700]: Hello, World!
[ INFO] [1625931412.720416500]: Hello, World!
[ INFO] [1625931412.736667100]: Hello, World!
[ INFO] [1625931412.753375600]: Hello, World!
[ INFO] [1625931412.770013000]: Hello, World!
[ INFO] [1625931412.786853200]: Hello, World!
[ INFO] [1625931412.803431700]: Hello, World!
[ INFO] [1625931412.820289000]: Hello, World!
[ INFO] [1625931412.837527000]: Hello, World!
[ INFO] [1625931412.853571700]: Hello, World!
[ INFO] [1625931412.870408700]: Hello, World!
[ INFO] [1625931412.886625900]: Hello, World!
[ INFO] [1625931412.903103500]: Hello, World!
[ INFO] [1625931412.919733800]: Hello, World!
[ INFO] [1625931412.937588600]: Hello, World!

dent@LENOVO:~/catkin_ws
[ INFO] [1625931422.303515300]: Hello, World!
[ INFO] [1625931422.319901900]: Hello, World!
[ INFO] [1625931422.336919900]: Hello, World!
[ INFO] [1625931422.353386300]: Hello, World!
[ INFO] [1625931422.370175900]: Hello, World!
[ INFO] [1625931422.386448800]: Hello, World!
[ INFO] [1625931422.402988500]: Hello, World!
[ INFO] [1625931422.420314400]: Hello, World!
[ INFO] [1625931422.436679100]: Hello, World!
[ INFO] [1625931422.453252400]: Hello, World!
[ INFO] [1625931422.469801400]: Hello, World!
[ INFO] [1625931422.486583300]: Hello, World!
[ INFO] [1625931422.503043200]: Hello, World!
[ INFO] [1625931422.519614000]: Hello, World!
[ INFO] [1625931422.536224700]: Hello, World!
[ INFO] [1625931422.553272800]: Hello, World!
[ INFO] [1625931422.569620000]: Hello, World!
[ INFO] [1625931422.586399200]: Hello, World!
[ INFO] [1625931422.603482200]: Hello, World!
[ INFO] [1625931422.620111800]: Hello, World!
[ INFO] [1625931422.636808000]: Hello, World!
[ INFO] [1625931422.653329800]: Hello, World!
[ INFO] [1625931422.669869500]: Hello, World!
[ INFO] [1625931422.686364200]: Hello, World!
[ INFO] [1625931422.703375600]: Hello, World!
[ INFO] [1625931422.720664800]: Hello, World!
[ INFO] [1625931422.737560200]: Hello, World!
[ INFO] [1625931422.754114300]: Hello, World!
[ INFO] [1625931422.770005600]: Hello, World!
[ INFO] [1625931422.786250000]: Hello, World!
[ INFO] [1625931422.803359200]: Hello, World!
[ INFO] [1625931422.820311200]: Hello, World!
[ INFO] [1625931422.836292100]: Hello, World!
[ INFO] [1625931422.853042500]: Hello, World!
[ INFO] [1625931422.869619500]: Hello, World!
[ INFO] [1625931422.886747200]: Hello, World!
[ INFO] [1625931422.903316100]: Hello, World!
[ INFO] [1625931422.919589600]: Hello, World!
[ INFO] [1625931422.936317500]: Hello, World!
[ INFO] [1625931422.952982500]: Hello, World!
```