

ROS Rviz,bag,sensor_msg,tf(1)

학과 : 산업인공지능학과
학번 : 2020254016
이름 : 박 민 우

1. ROS bag

1) Rosbag

- ROSMASTER 실행

```
roscore http://Park:11311/
ubuntu@Park:~$ roscore
... logging to /home/ubuntu/.ros/log/fe48d6ae-36a6-11eb-96ee-3497f69b6ef8/roslaunch-Park-14622.log
Checking log directory for disk usage. This may take awhile.
Press Ctrl-C to interrupt
Done checking log file disk usage. Usage is <1GB.

started roslaunch server http://Park:38687/
ros_comm version 1.12.16

SUMMARY
=====
PARAMETERS
* /rostdistro: kinetic
* /rosversion: 1.12.16
NODES
auto-starting new master
process[master]: started with pid [14632]
ROS_MASTER_URI=http://Park:11311/

setting /run_id to fe48d6ae-36a6-11eb-96ee-3497f69b6ef8
process[rosout-1]: started with pid [14645]
started core service [/rosout]
```

- Turtlesim node 실행

- Turtlesim Teleop node 실행

```
ubuntu@Park:~$ rosrn turtlesim turtlesim_node
[ INFO] [1607137670.709371453]: Starting turtlesim with node name /turtlesim
[ INFO] [1607137670.728673954]: Spawning turtle [turtle1] at x=[5.544445], y=[5.544445], theta=[0.000000]

ubuntu@Park:~$ rosrn turtlesim turtle_teleop_key
Reading from keyboard
Use arrow keys to move the turtle.
```

- Rosbag record 실행

- Teleop node에서 방향키로 조작

- Rosbag record 종료

```
ubuntu@Park:~$ rosbag record -a
[ INFO] [1607137760.573938600]: Recording to 2020-12-05-12-09-20.bag.
[ INFO] [1607137760.574969631]: Subscribing to /turtle1/color_sensor
[ INFO] [1607137760.586040219]: Subscribing to /turtle1/cmd_vel
[ INFO] [1607137760.594499749]: Subscribing to /rosout
[ INFO] [1607137760.606978124]: Subscribing to /rosout_agg
[ INFO] [1607137760.616769601]: Subscribing to /turtle1/pose
^Cubuntu@Park:~$
```

- Bag file 확인

```
ubuntu@Park: ~
[ INFO] [1607137760.616769601]: Subscribing to /turtle1/pose
^Cubuntu@Park:~$ rosbag info 2020-12-05-12-09-20.bag
path:      2020-12-05-12-09-20.bag
version:   2.0
duration:  55.4s
start:     Dec 05 2020 12:09:20.62 (1607137760.62)
end:       Dec 05 2020 12:10:16.00 (1607137816.00)
size:      501.3 KB
messages:  7094
compression: none [1/1 chunks]
types:
  geometry_msgs/Twist [9f195f881246dfa2798d1d3eebca84a]
  rosbag_msgs/Log    [acffd30cd6b6de30f120938c17c593fb]
  turtlesim/Color    [353891e354491c51aabe32df673fb446]
  turtlesim/Pose     [863b248d5016ca62ea2e895ae5265cf9]
topics:
  /rosout           4 msgs      : rosbag_msgs/Log (2 connections)
  /turtle1/cmd_vel   185 msgs   : geometry_msgs/Twist
  /turtle1/color_sensor 3453 msgs  : turtlesim/Color
  /turtle1/pose      3452 msgs  : turtlesim/Pose
ubuntu@Park:~$
```

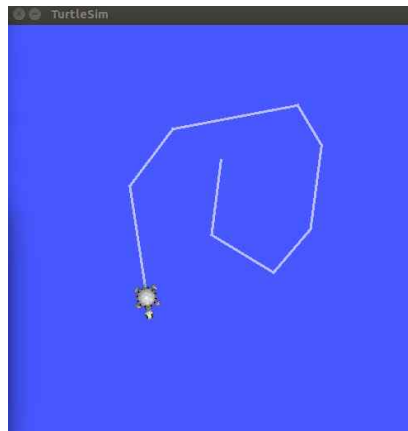
2) Rosbag play

- Bag file 재생

```
ubuntu@Park: ~
/turtle1/pose 3452 msgs : turtlesim/Pose
ubuntu@Park:~$ rosbag play 2020-12-05-12-09-20.bag
[ INFO] [1607137979.308168996]: Opening 2020-12-05-12-09-20.bag
Waiting 0.2 seconds after advertising topics... done.
Hit space to toggle paused, or 's' to step.
[RUNNING] Bag Time: 1607137815.969937 Duration: 55.346475 / 55.378774
Done.
ubuntu@Park:~$
```

- Turtlesim node에서 record된 topic 확인
- Turtlesim node 재시작
- Rosbag play, 동일한 동작 확인

```
ubuntu@Park: ~
ubuntu@Park:~$ roslaunch turtlesim turtlesim_node
[ INFO] [1607138106.074535965]: Starting turtlesim with node name /turtlesim
[ INFO] [1607138106.078560303]: Spawning turtle [turtle1] at x=[5.544445], y=[5.544445], theta=[0.000000]
ubuntu@Park:~$ rosbag play 2020-12-05-12-09-20.bag
[ INFO] [1607138237.976785176]: Opening 2020-12-05-12-09-20.bag
Waiting 0.2 seconds after advertising topics... done.
Hit space to toggle paused, or 's' to step.
[DELAIED] Bag Time: 1607137760.623462 Duration: 0.000000 / 55.378774 Delay
[RUNNING] Bag Time: 1607137760.623462 Duration: 0.000000 / 55.378774
[RUNNING] Bag Time: 1607137760.623462 Duration: 0.000000 / 55.378774
[RUNNING] Bag Time: 1607137760.624266 Duration: 0.000804 / 55.378774
[RUNNING] Bag Time: 1607137760.724437 Duration: 0.100975 / 55.378774
[RUNNING] Bag Time: 1607137760.769566 Duration: 0.146104 / 55.378774
[RUNNING] Bag Time: 1607137760.770477 Duration: 0.147015 / 55.378774
[RUNNING] Bag Time: 1607137760.786591 Duration: 0.163129 / 55.378774
[RUNNING] Bag Time: 1607137760.802735 Duration: 0.179273 / 55.378774
[RUNNING] Bag Time: 1607137760.817950 Duration: 0.194488 / 55.378774
[RUNNING] Bag Time: 1607137760.834132 Duration: 0.210670 / 55.378774
[RUNNING] Bag Time: 1607137760.850355 Duration: 0.226893 / 55.378774
[RUNNING] Bag Time: 1607137760.866561 Duration: 0.243099 / 55.378774
[RUNNING] Bag Time: 1607137760.882737 Duration: 0.259274 / 55.378774
[RUNNING] Bag Time: 1607137760.897980 Duration: 0.274518 / 55.378774
[RUNNING] Bag Time: 1607137760.914100 Duration: 0.289647 / 55.378774
```



[record 된 turtlesim]