

Procedure used for preparation of Virtual Machine

Please download virtual box and the image for our course [here](#).

Ubuntu Info

```
version: 18.04
username: ros
password: r0sr0s
```

Include MuJoCo License

Download MuJoCo simulator from <http://www.mujoco.org> and put the simulator code as well as your MuJoCo key into there folders: `~/.mujoco/` , `~/.mujoco/mjpro200`, and `~/.mujoco/mjpro200/bin/`, i.e.:

```
ls ~/.mujoco
mjkey.txt  mjpro200
```

and

```
ls ~/.mujoco/mjpro200/
bin doc include model sample mjkey.txt
```

and

```
ls ~/.mujoco/mjpro200/bin
mjkey.txt ....
```

The MuJoCo key is not configured in virtual machine image. Follow the instruction on above to configure it.

Test ROS

Use three terminals (3 windows in terminator)

- First terminal (roscore)

```
source ~/ros/devel/setup.bash
roscore
```

- Second terminal (publisher)

```
source ~/ros/devel/setup.bash
rostopic pub -r 1 /course_name std_msgs/String "data: 'manipulation_course'"
```

- Third terminal (subscriber)

```
source ~/ros/devel/setup.bash
rostopic list #should print three topics
rostopic echo /course_name
```

should print

```
data: "manipulation_course"
---
data: "manipulation_course"
---
data: "manipulation_course"
---
...
```