

Programming for Robotics - ROS: Course Preparation

In this course, we will work with Ubuntu 18.04 and ROS Melodic Morenia. We highly recommend you to **use a virtual machine and the provided image** that already contains a preinstalled environment with the following software:

- Ubuntu 18.04
- ROS Melodic Morenia
- Eclipse IDE 19-12
- Catkin Command Line Tools
- Terminator
- Git

Install Virtual Machine

To run the provided image you need the VMware Workstation 15 Pro (Windows, Linux) or VMware Fusion 11 (macOS). This software can be ordered on the ETH Zurich's IT Shop (free for students): <https://idesnx.ethz.ch/>, search for "VMware Academic Program ETH Stud".

Please follow the given instructions to download and install the software from VMware. We recommend you to have at least 20GB of available disk space on your computer to run the virtual machine.

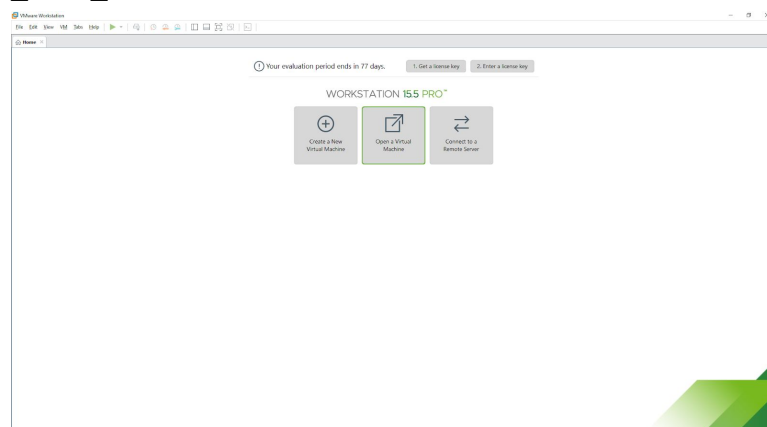
Download Image

Download the zipped folder "[Ubuntu_18_04_ROS_Course.zip](#)" (~ 5.6 GB) from polybox and extract it. If you extract the zipped folder in an Ubuntu distribution make sure that you installed the p7zip library with:

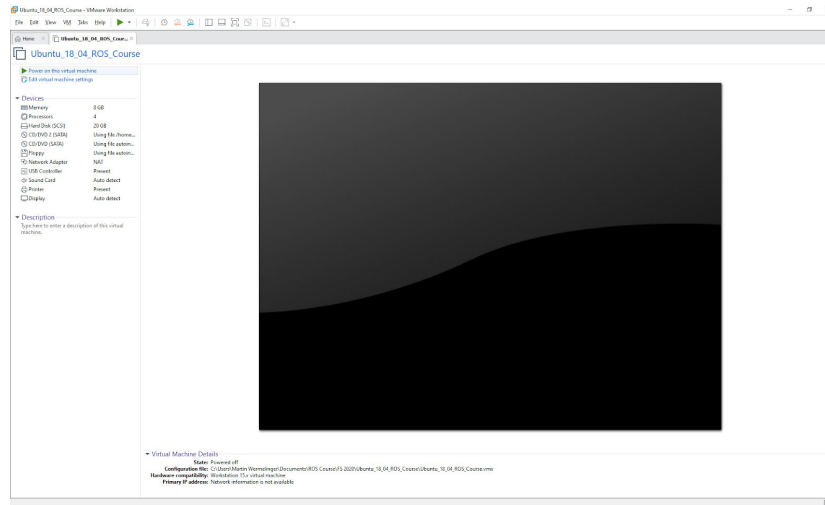
```
> sudo apt-get install p7zip-full
```

Start Up Virtual Machine

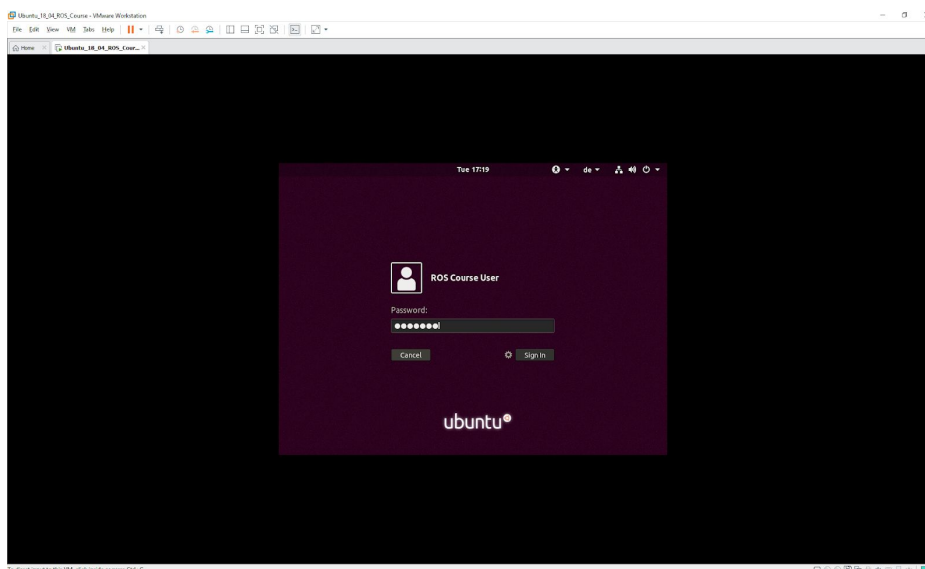
- Open VMware Workstation
- Open file `Ubuntu_18_04_ROS_Course.vmx` in the downloaded folder
`Ubuntu_18_04_ROS_Course`



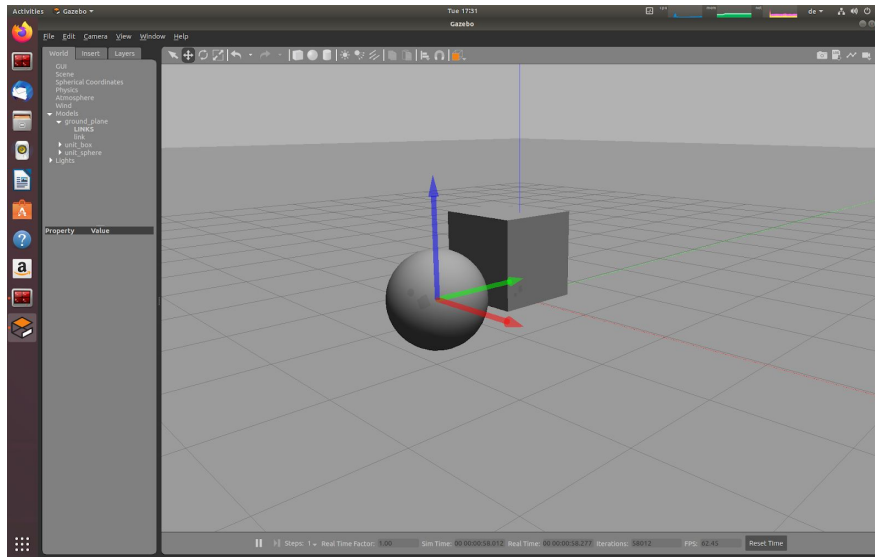
- Start the virtual machine with “Power on this virtual machine” or “Start up this guest operating system”. A prompt will open and ask if you copied or moved the virtual machine, click “I Copied It”. **Important!** If it is the first time you are using a virtual machine on your laptop, there might be an error message that tells you that “This host supports Intel VT-x, but Intel VT-x is disabled”. The Intel Virtual Technology (Intel VT) has to be enabled in your BIOS (or UEFI). You will have to restart the computer and press either Enter, F1, F10, or DEL to go to BIOS settings (depending on your PC manufacturer). Under Security->System Security you will find the option to enable VT. Some more explanations can be found [here](#).



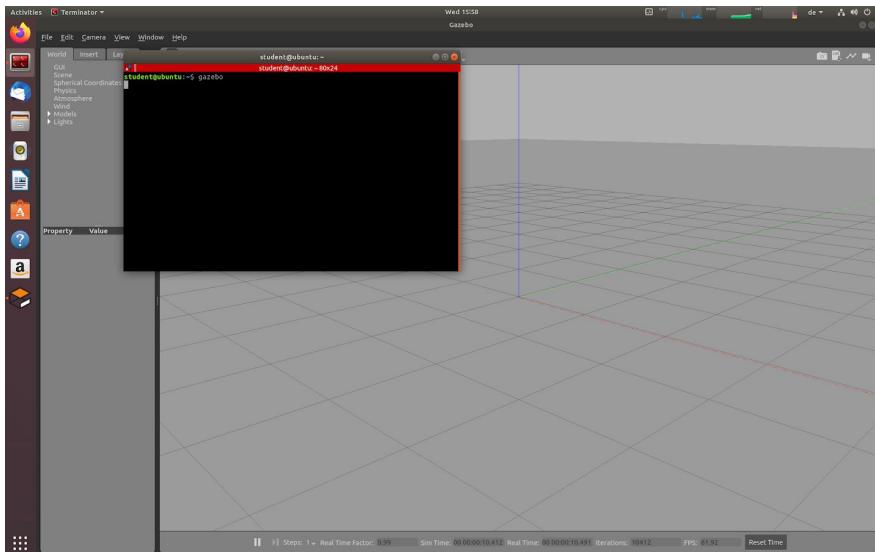
- To login under Ubuntu use the provided account ROS Course User:
Password: student



- A window should appear showing an empty simulation environment, feel free to play around by adding/moving/deleting objects.



- Close the simulation by pressing Ctrl+C in the terminal you used to start gazebo.



- Power Off Ubuntu to stop the session in the virtual machine.

