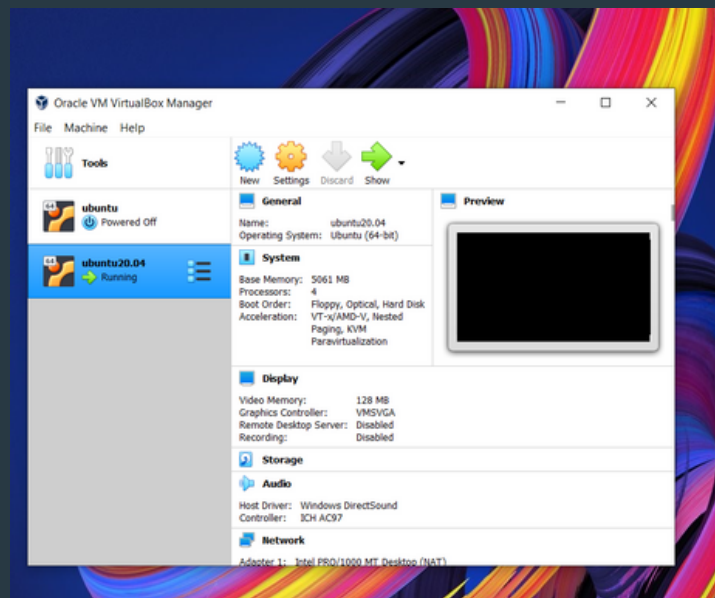
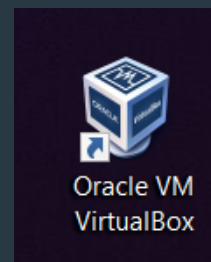
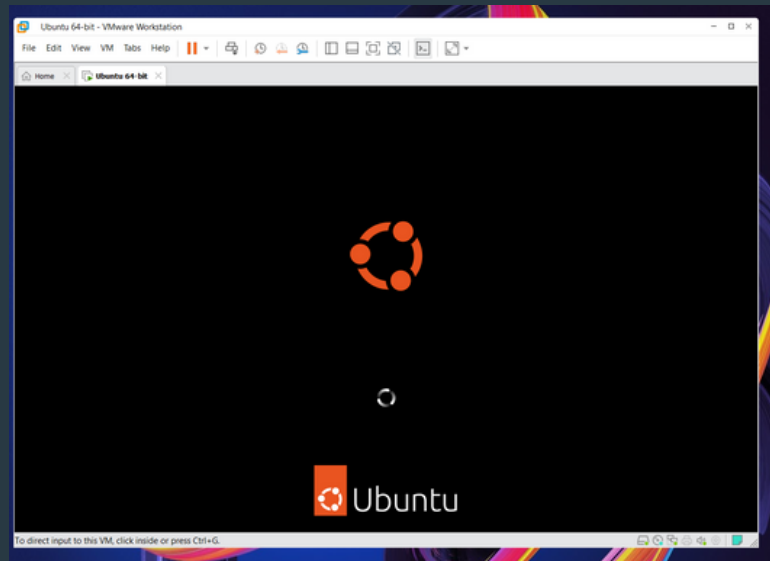


readme: installing ROS

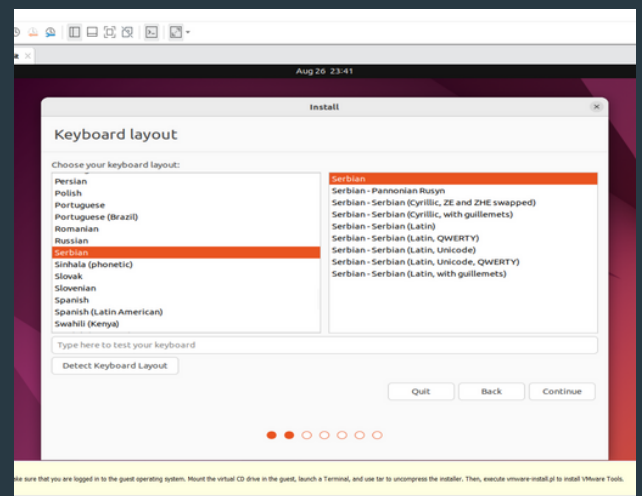
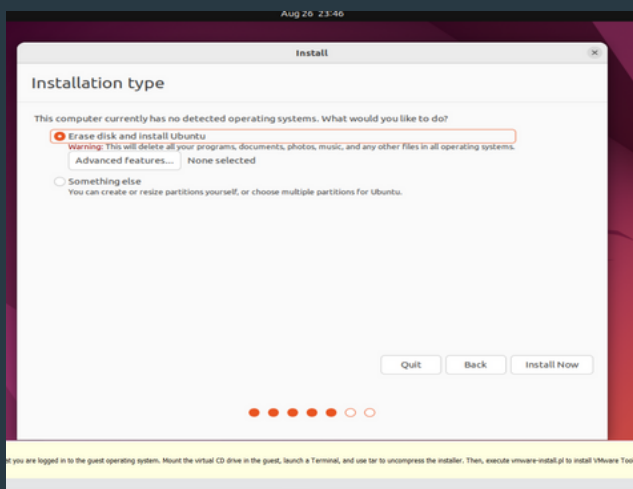
1-download a virtual machine in this case: virtualbox



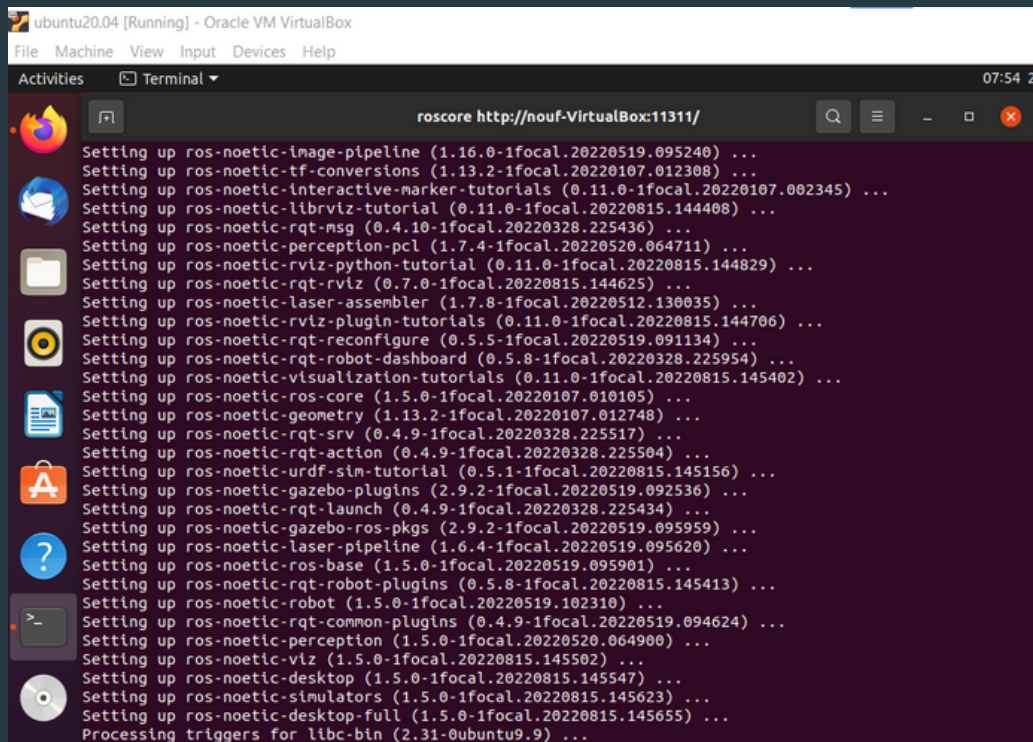
2-download ubuntu20.04



3-setting up ubuntu configurations and settings

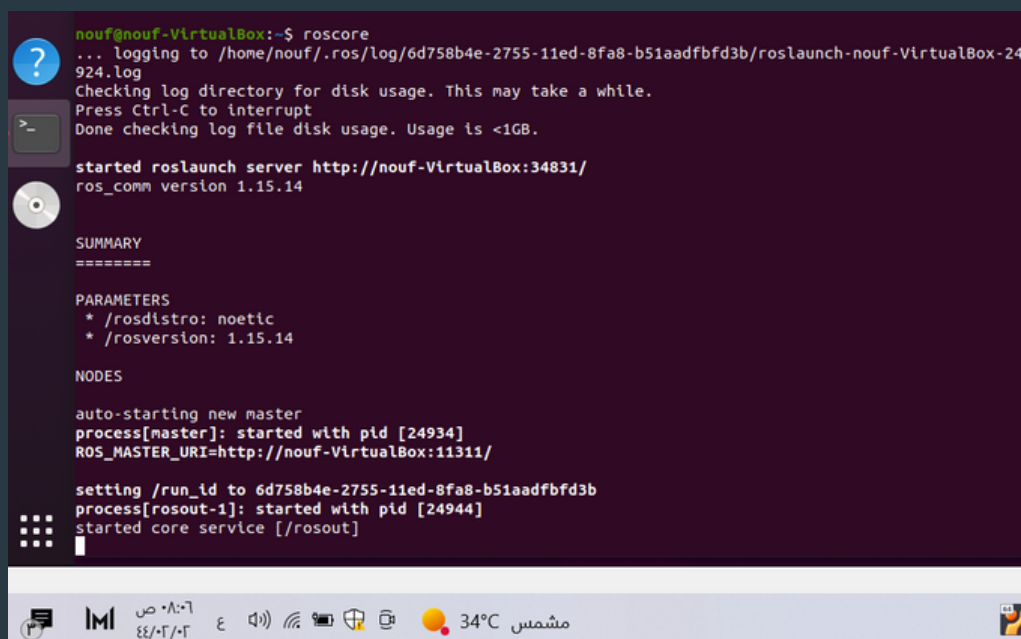


(ros successfully installed):



```
Setting up ros-noetic-image-pipeline (1.16.0-1focal.20220519.095240) ...
Setting up ros-noetic-tf-conversions (1.13.2-1focal.20220107.012308) ...
Setting up ros-noetic-interactive-marker-tutorials (0.11.0-1focal.20220107.002345) ...
Setting up ros-noetic-librviz-tutorial (0.11.0-1focal.20220815.144408) ...
Setting up ros-noetic-rqt-msg (0.4.10-1focal.20220328.225436) ...
Setting up ros-noetic-perception-pcl (1.7.4-1focal.20220520.064711) ...
Setting up ros-noetic-rviz-python-tutorial (0.11.0-1focal.20220815.144829) ...
Setting up ros-noetic-rqt-rviz (0.7.0-1focal.20220815.144625) ...
Setting up ros-noetic-laser-assembler (1.7.8-1focal.20220512.130035) ...
Setting up ros-noetic-rviz-plugin-tutorials (0.11.0-1focal.20220815.144706) ...
Setting up ros-noetic-rqt-reconfigure (0.5.5-1focal.20220519.091134) ...
Setting up ros-noetic-rqt-robot-dashboard (0.5.8-1focal.20220328.225954) ...
Setting up ros-noetic-visualization-tutorials (0.11.0-1focal.20220815.145402) ...
Setting up ros-noetic-ros-core (1.5.0-1focal.20220107.010105) ...
Setting up ros-noetic-geometry (1.13.2-1focal.20220107.012748) ...
Setting up ros-noetic-rqt-srv (0.4.9-1focal.20220328.225517) ...
Setting up ros-noetic-rqt-action (0.4.9-1focal.20220328.225504) ...
Setting up ros-noetic-urdf-sim-tutorial (0.5.1-1focal.20220815.145156) ...
Setting up ros-noetic-gazebo-plugins (2.9.2-1focal.20220519.092536) ...
Setting up ros-noetic-rqt-launch (0.4.9-1focal.20220328.225434) ...
Setting up ros-noetic-gazebo-ros-pkgs (2.9.2-1focal.20220519.095959) ...
Setting up ros-noetic-laser-pipeline (1.6.4-1focal.20220519.095620) ...
Setting up ros-noetic-ros-base (1.5.0-1focal.20220519.095901) ...
Setting up ros-noetic-rqt-robot-plugins (0.5.8-1focal.20220815.145413) ...
Setting up ros-noetic-robot (1.5.0-1focal.20220519.102310) ...
Setting up ros-noetic-rqt-common-plugins (0.4.9-1focal.20220519.094624) ...
Setting up ros-noetic-perception (1.5.0-1focal.20220520.064900) ...
Setting up ros-noetic-viz (1.5.0-1focal.20220815.145502) ...
Setting up ros-noetic-desktop (1.5.0-1focal.20220815.145547) ...
Setting up ros-noetic-simulators (1.5.0-1focal.20220815.145623) ...
Setting up ros-noetic-desktop-full (1.5.0-1focal.20220815.145655) ...
Processing triggers for libc-bin (2.31-0ubuntu9.9) ...
```

5-testing if ROS works by typing (roscore)



```
nouf@nouf-VirtualBox:~$ roscore
... logging to /home/nouf/.ros/log/6d758b4e-2755-11ed-8fa8-b51aadfbfd3b/roslaunch-nouf-VirtualBox-24
924.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://nouf-VirtualBox:34831/
ros_comm version 1.15.14

SUMMARY
=====

PARAMETERS
* /rostdistro: noetic
* /rosversion: 1.15.14

NODES

auto-starting new master
process[master]: started with pid [24934]
ROS_MASTER_URI=http://nouf-VirtualBox:11311/

setting /run_id to 6d758b4e-2755-11ed-8fa8-b51aadfbfd3b
process[rosout-1]: started with pid [24944]
started core service [/rosout]
```

(this output means it works perfectly)