Connection to robair

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Outline

1. ROS on robair (wireless connection: experimental);
2. ROS on robair (wired connection);
3. ROS on robair: how it works;
4. Tests of connection to robair.

Change the configuration: experimental wireless connection

1. You can run ROS nodes on your computer or on robair;
2. Move change_configuration.sh from ~/catkin_ws/data_for_labs to ~
3. To run nodes on your laptop: ~/change_configuration.sh local
   - Open a new terminal
4. To run nodes on one robair: ~/change_configuration.sh hotspot
   - Open a new terminal
5. To connect to a hotspot: robair**x**_hotspot
   - MDP: robairRobair42

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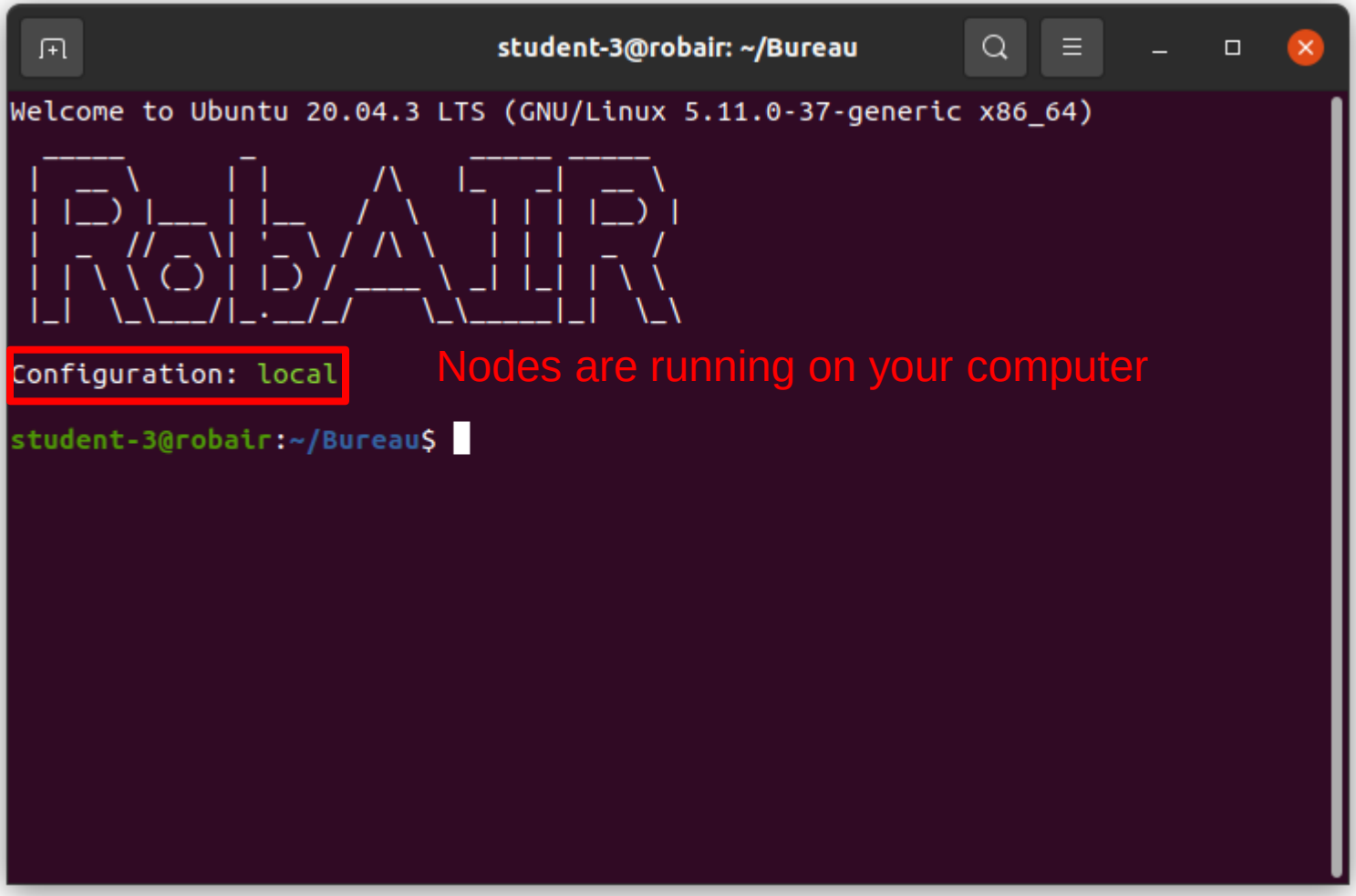
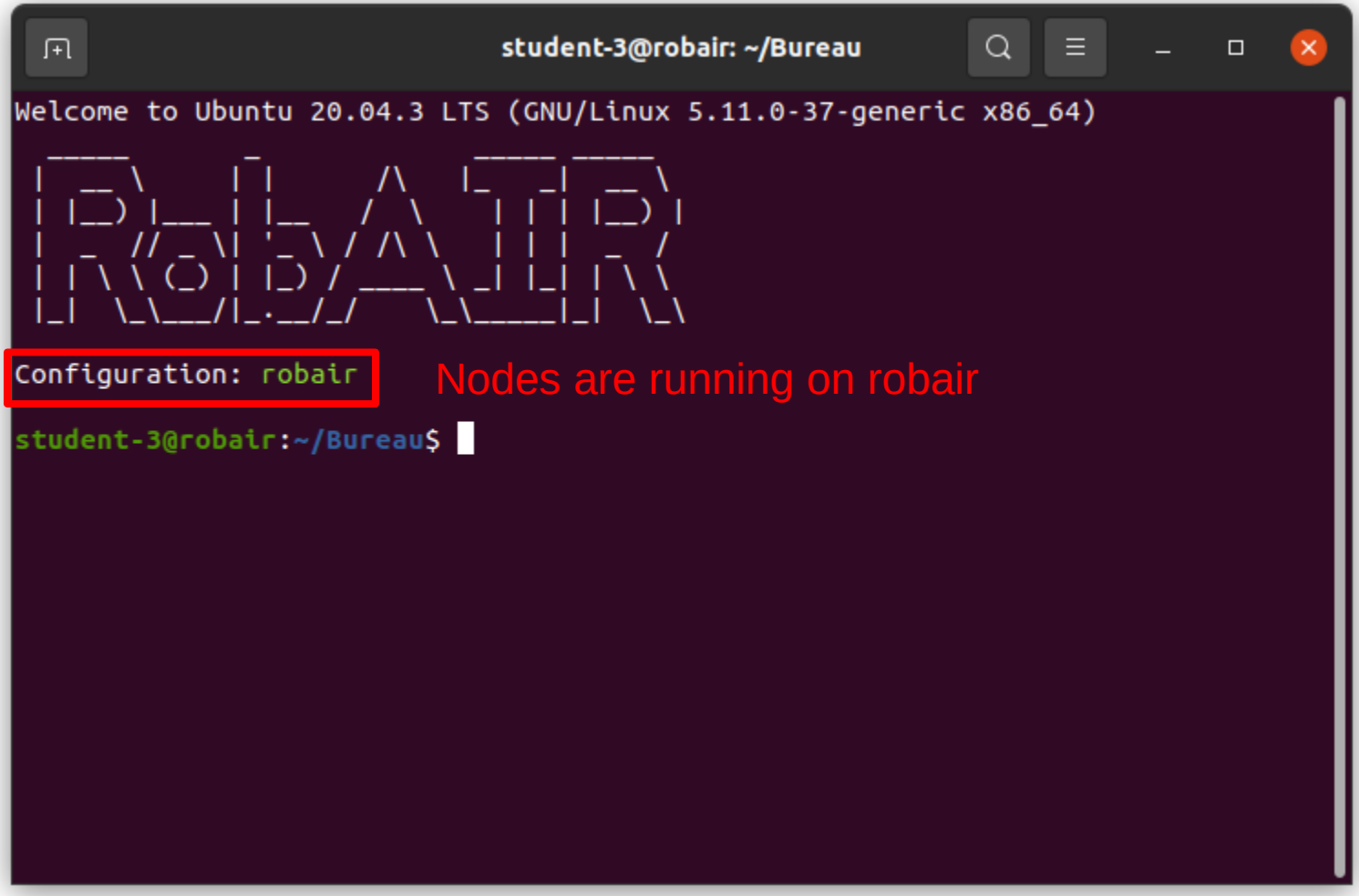
Change the configuration: wired connection (1/4)

1. You can run ROS nodes on your computer or on robair;



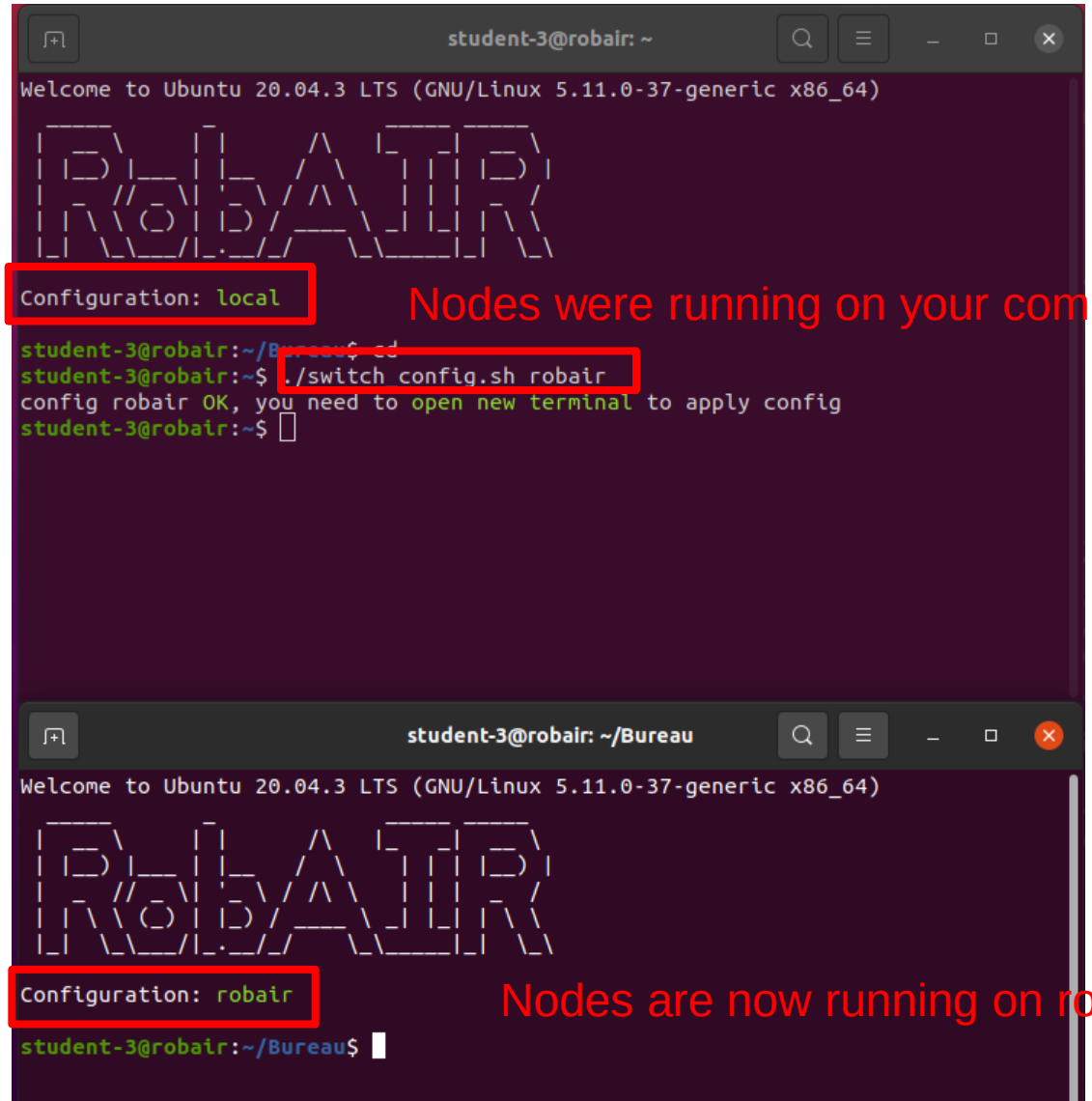
Change the configuration : wired connection (2/4)

1. You can run ROS nodes on your computer or on robair;



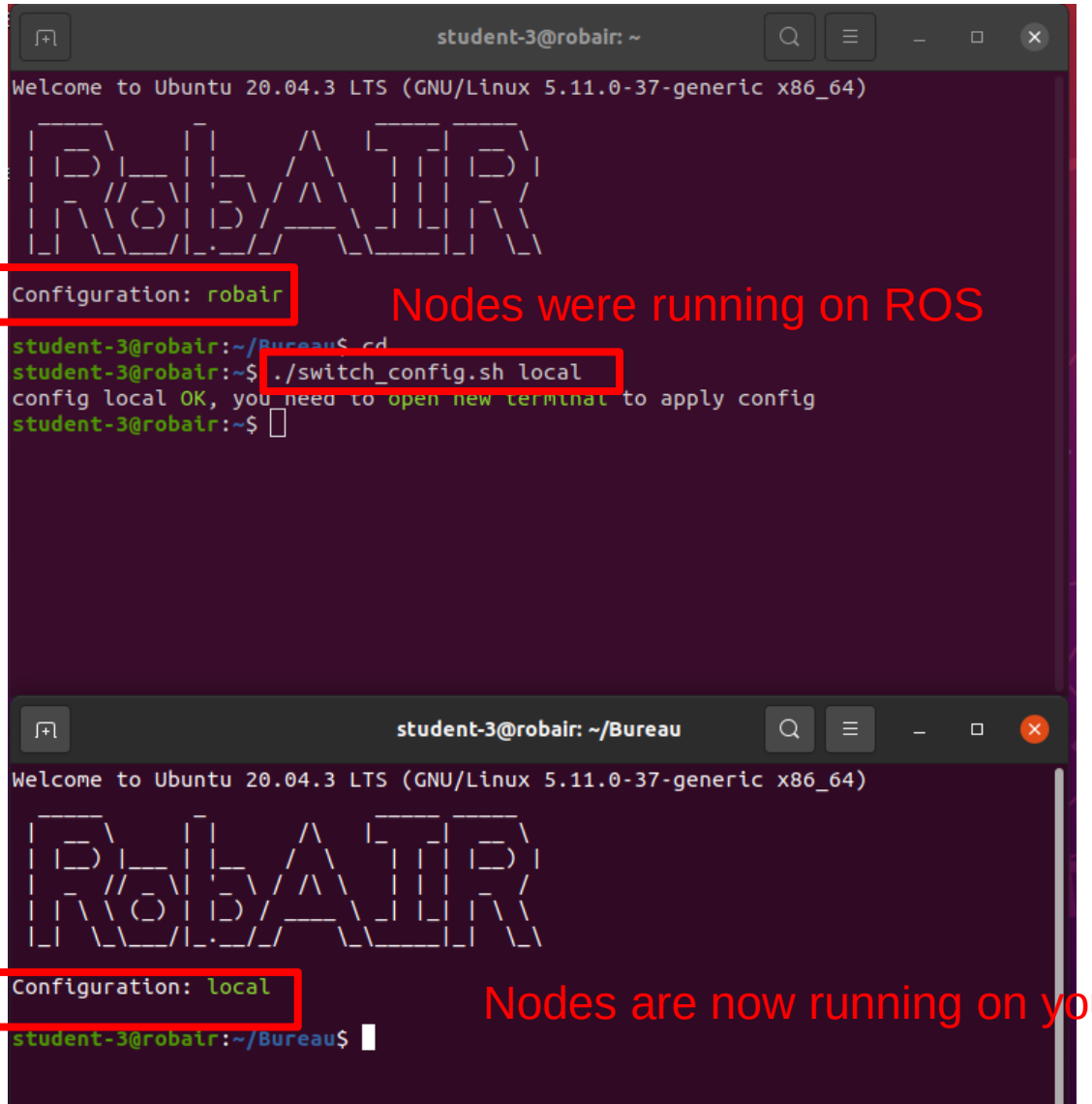
Change the configuration: : wired connection (3/4)

1. To change your configuration, run switch_config.sh in ~



Change the configuration: : wired connection (4/4)

1. To change your configuration, run switch_config.sh in ~



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ROS on robair (1/5)

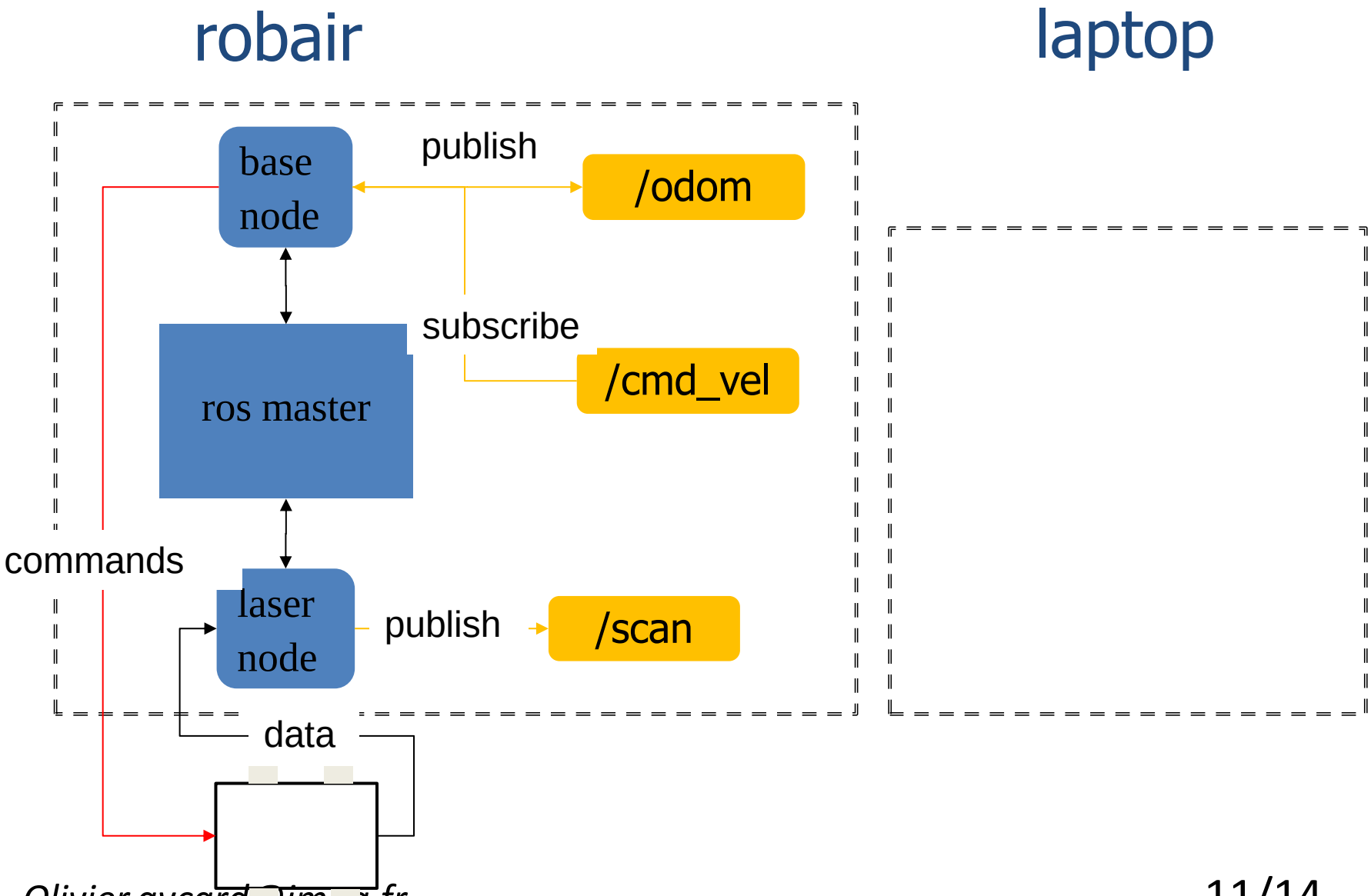
- You must be connected to robair with a wire to run nodes on robair

- Roscore is running on robair:
  - You do not have to run “roscore” on your laptop

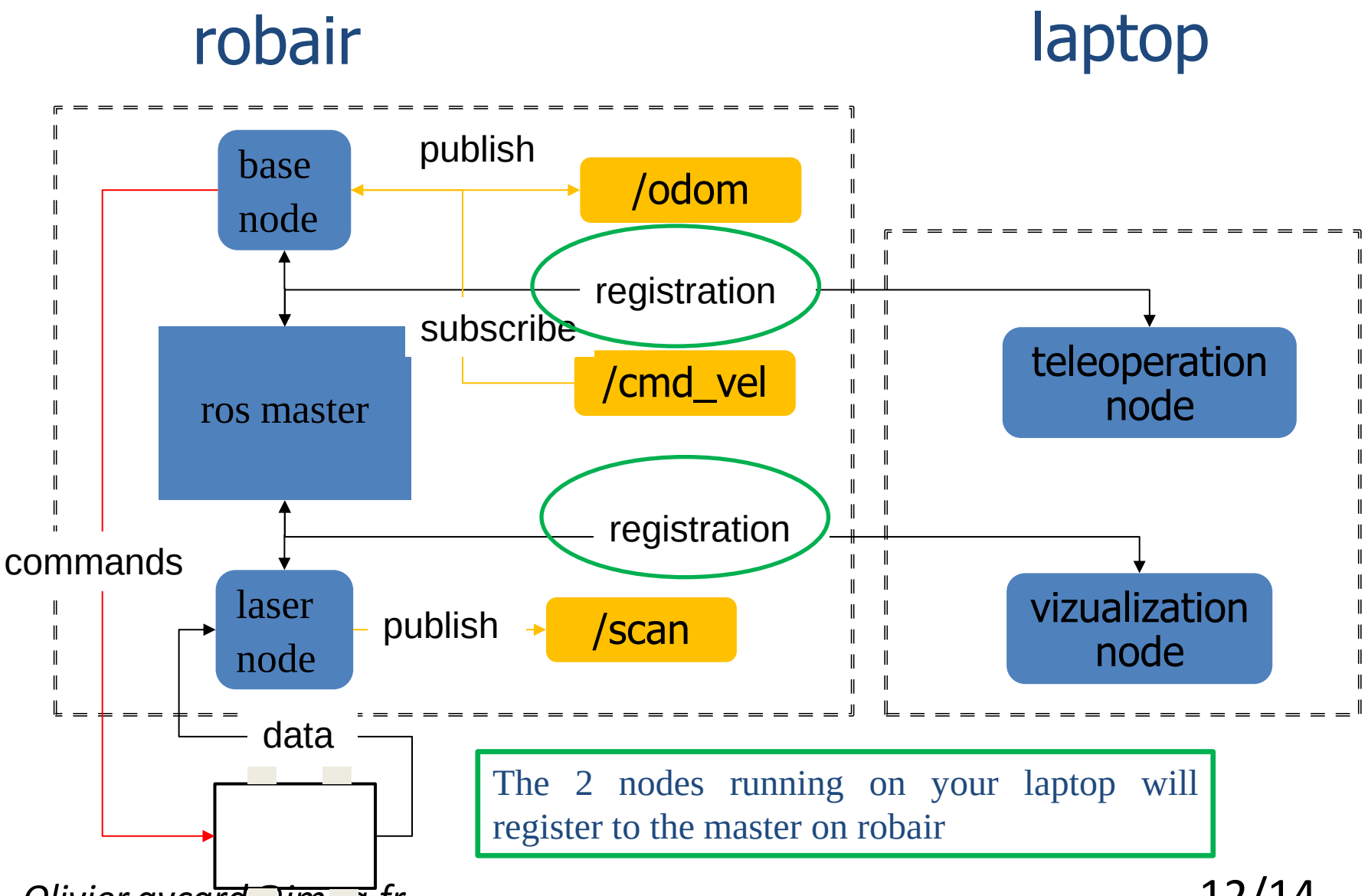
- Each robair publishes:
  - /scan (laserscanner data);
  - /odom (odometry).

- Each robair subscribes to:
  - /cmd_vel to command robair in translation and/or rotation.

ROS on robair (2/5)

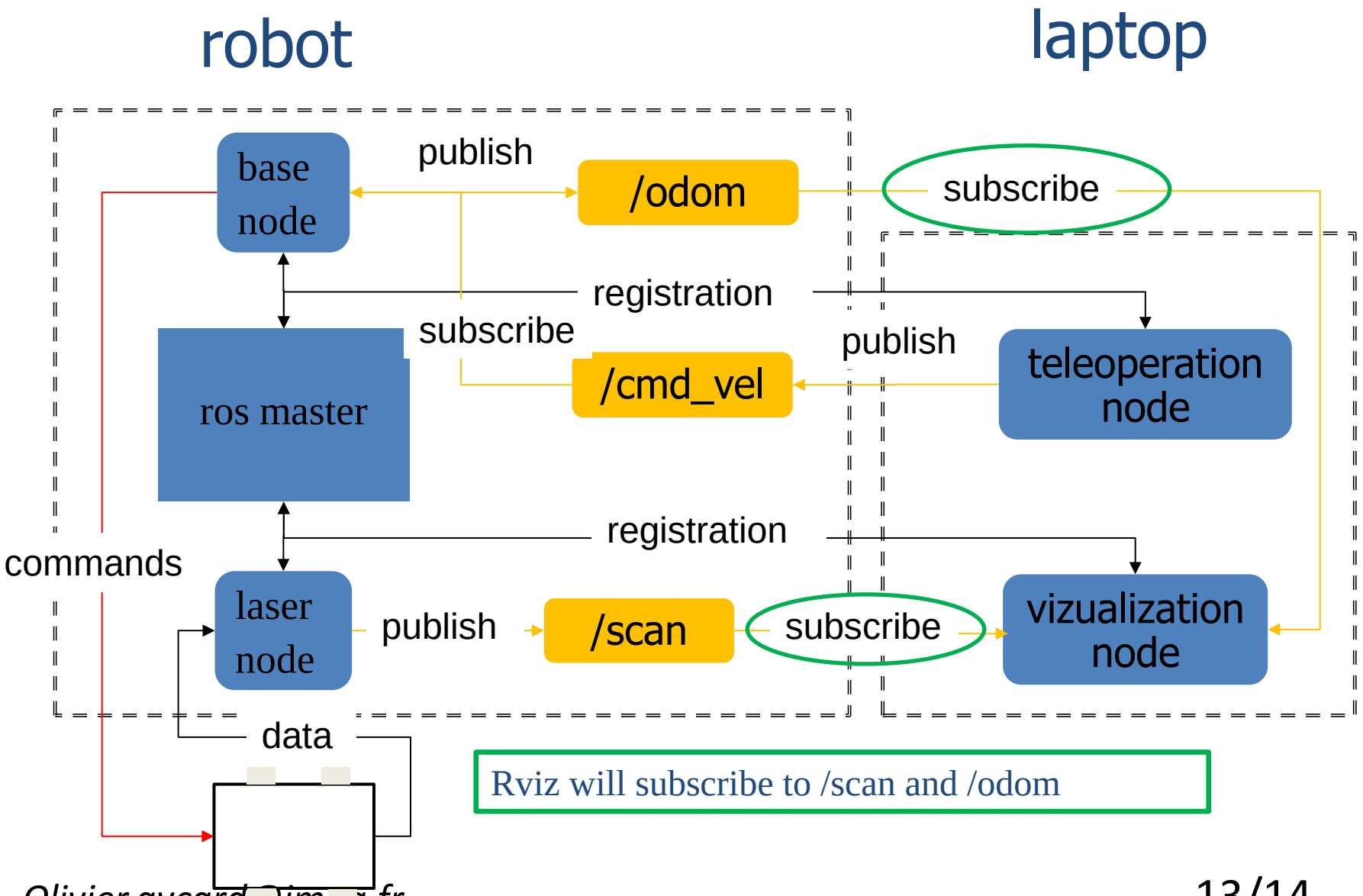


ROS on robair (3/5)

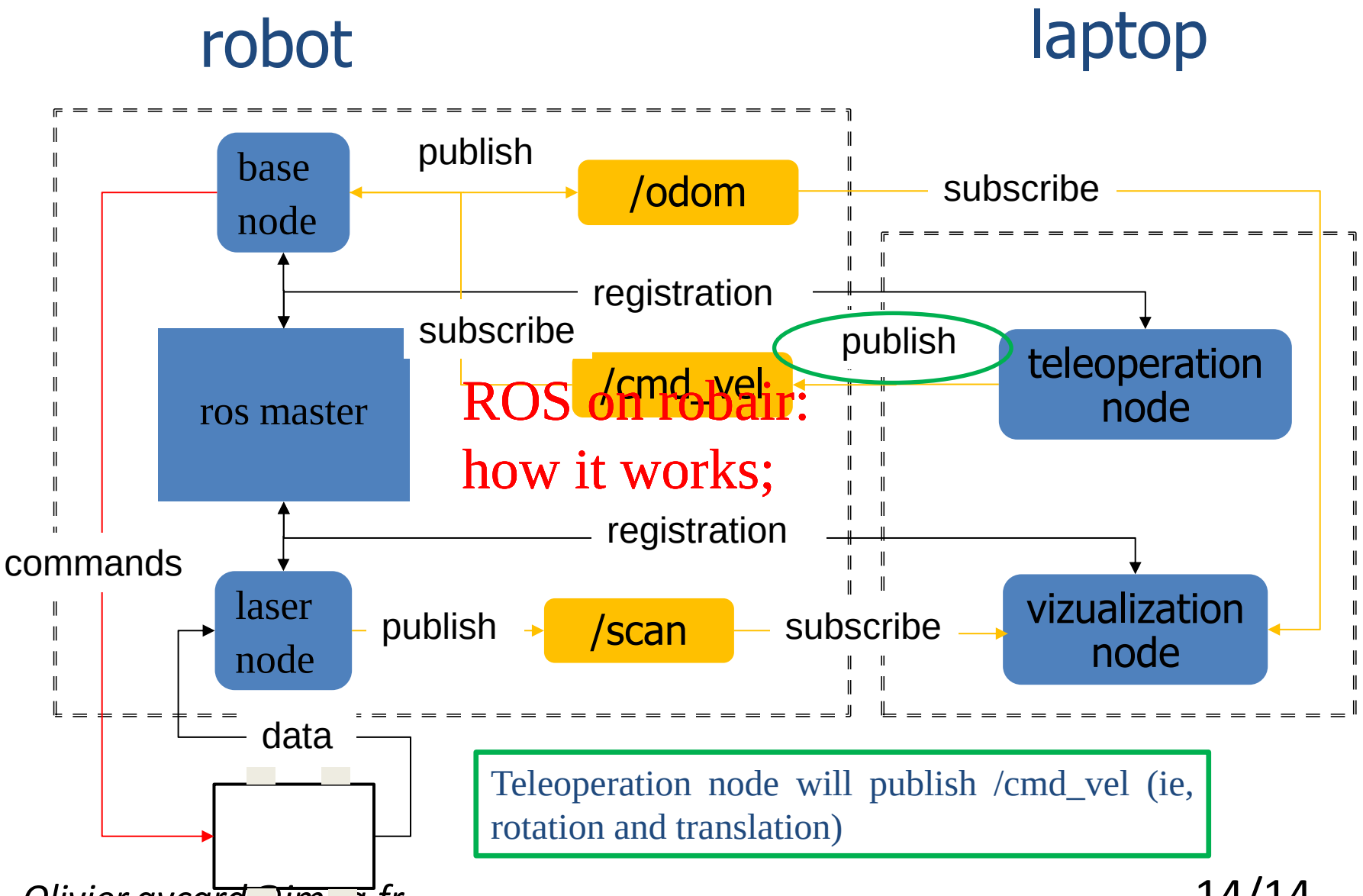


The 2 nodes running on your laptop will register to the master on robair

ROS on robair (4/5)



ROS on robair (5/5)



Teleoperation node will publish /cmd_vel (ie, rotation and translation)

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Tests of connection on robair

- You do not have to run “roscore” on your laptop
  - Roscore is now on robair
- We will check if you are able to receive the laser data (/scan topic) and send motion to robair (/cmd_vel topic)

1. Open a terminal and run rviz
   - You should see the data of the laser scanner
2. Open a terminal and run “rosrun teleoperation teleoperation_node.py”
   - Use the keyboard to move robair
   - You should see robair moving