

Connection to robair

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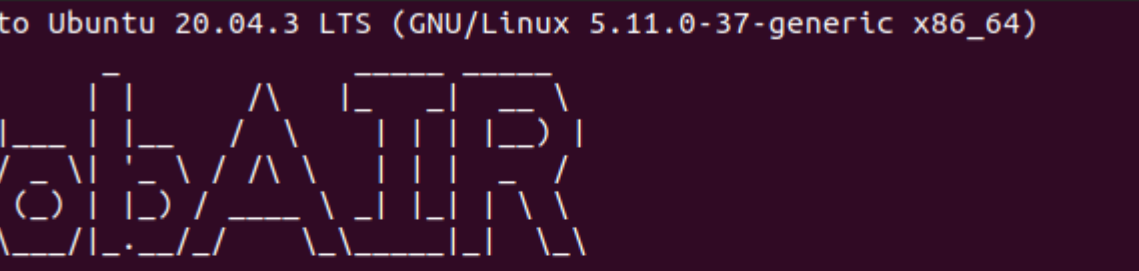


Outline

1. Change the configuration to run our nodes on robair;
2. ROS on robair;
3. Tests of connection to robair.

Change the configuration

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



The screenshot shows a terminal window with a dark background. At the top, the window title is "student-3@robair: ~/Bureau". Below the title bar, it says "Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.11.0-37-generic x86_64)". In the center, the word "Robair" is displayed in a large, stylized font made of white dashed lines. Below this, the text "Configuration: local" is shown in green, with "local" highlighted by a red rectangular box. To the right of this, the text "Nodes are running on your computer" is displayed in red. At the bottom, the terminal prompt "student-3@robair:~/Bureau\$" is visible in green, followed by a white cursor.

```
student-3@robair: ~/Bureau
```

Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.11.0-37-generic x86_64)

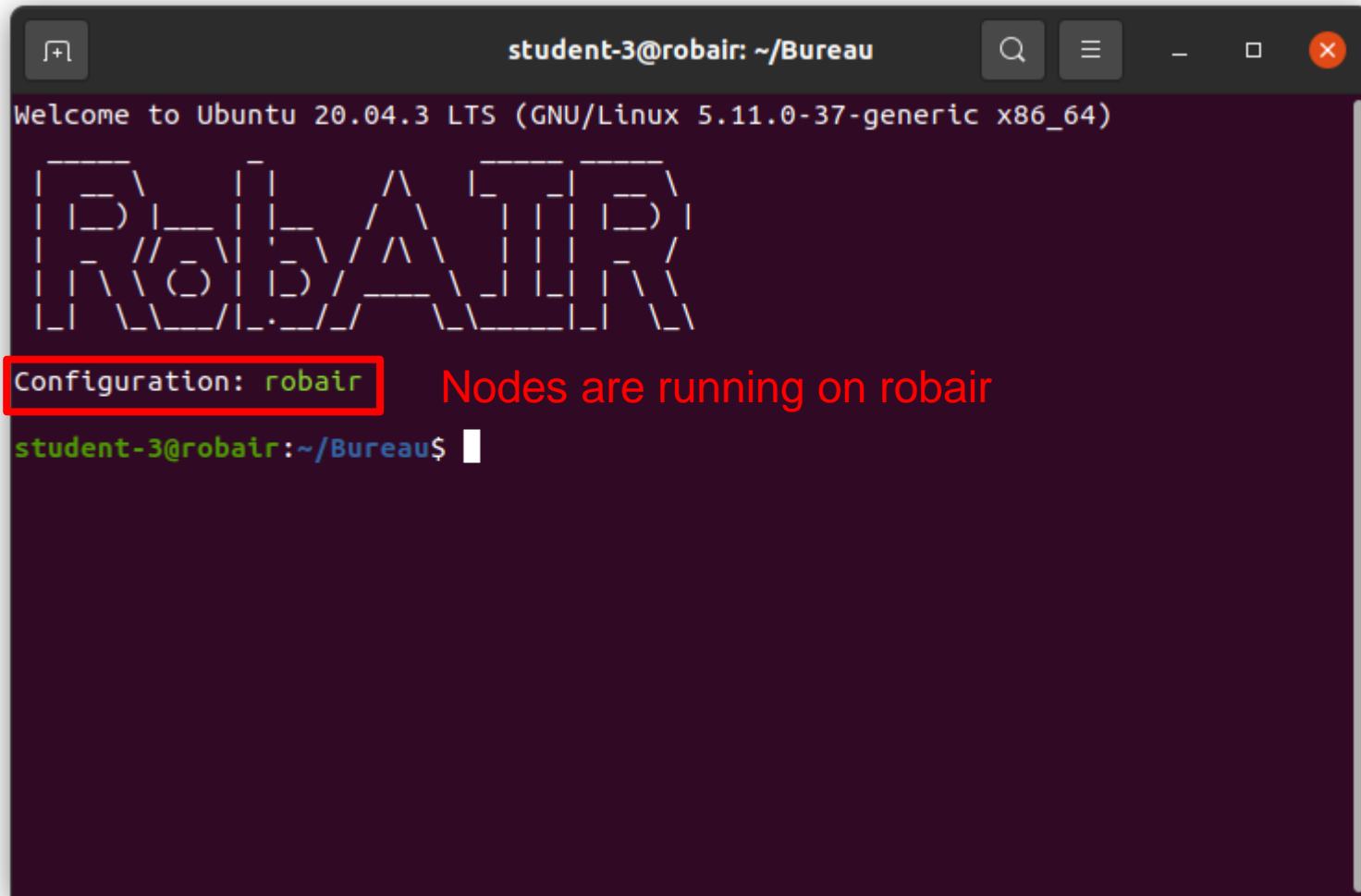
Robair

Configuration: local Nodes are running on your computer

```
student-3@robair:~/Bureau$
```

Change the configuration

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

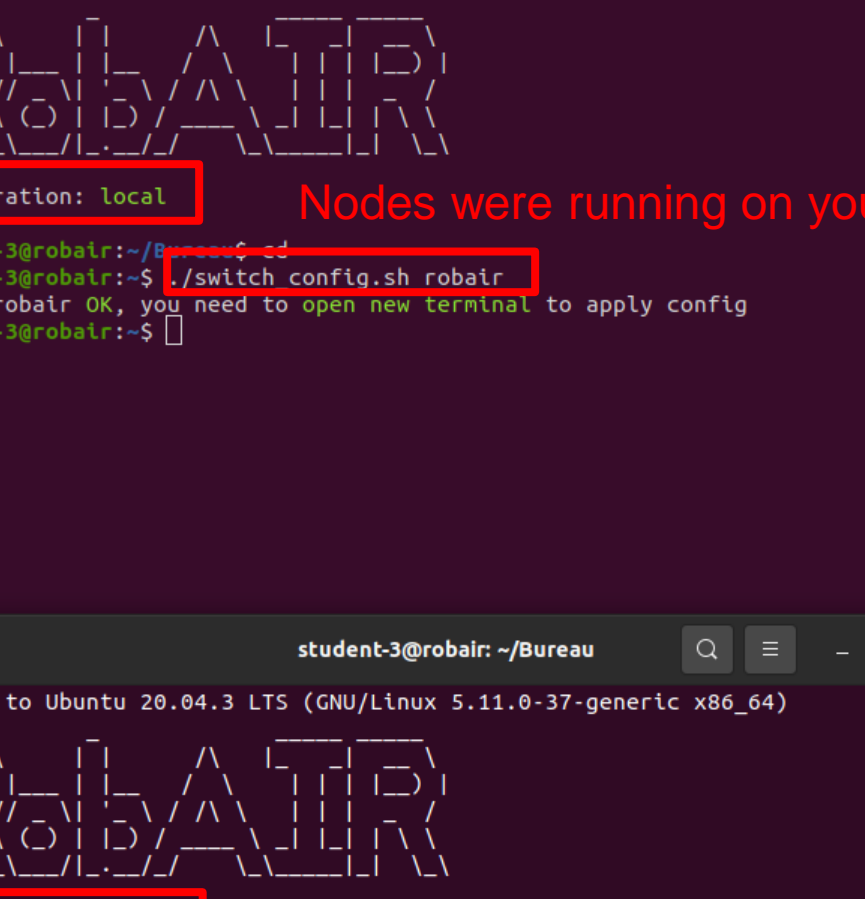


A terminal window titled 'student-3@robair: ~/Bureau' showing the ROS configuration. The window has a dark purple background. The text 'Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.11.0-37-generic x86_64)' is displayed at the top. Below it, the word 'ROB AIR' is rendered in a large, white, dashed outline font. A red rectangular box highlights the text 'Configuration: robair' in green. To the right of this box, the text 'Nodes are running on robair' is written in red. At the bottom, the prompt 'student-3@robair:~/Bureau\$' is shown in green, followed by a white cursor.

```
student-3@robair: ~/Bureau
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.11.0-37-generic x86_64)
ROB AIR
Configuration: robair
Nodes are running on robair
student-3@robair:~/Bureau$
```

Change the configuration

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



The image displays two screenshots of a terminal window, illustrating the configuration of Robair nodes.

Top Screenshot: The terminal shows the user `student-3@robair` in the `~` directory. The prompt is `student-3@robair:~$`. The configuration is set to `local`, highlighted by a red box. The output of the `cat config.sh` command is shown, indicating that the nodes were running on the computer. The prompt is `student-3@robair:~$`.

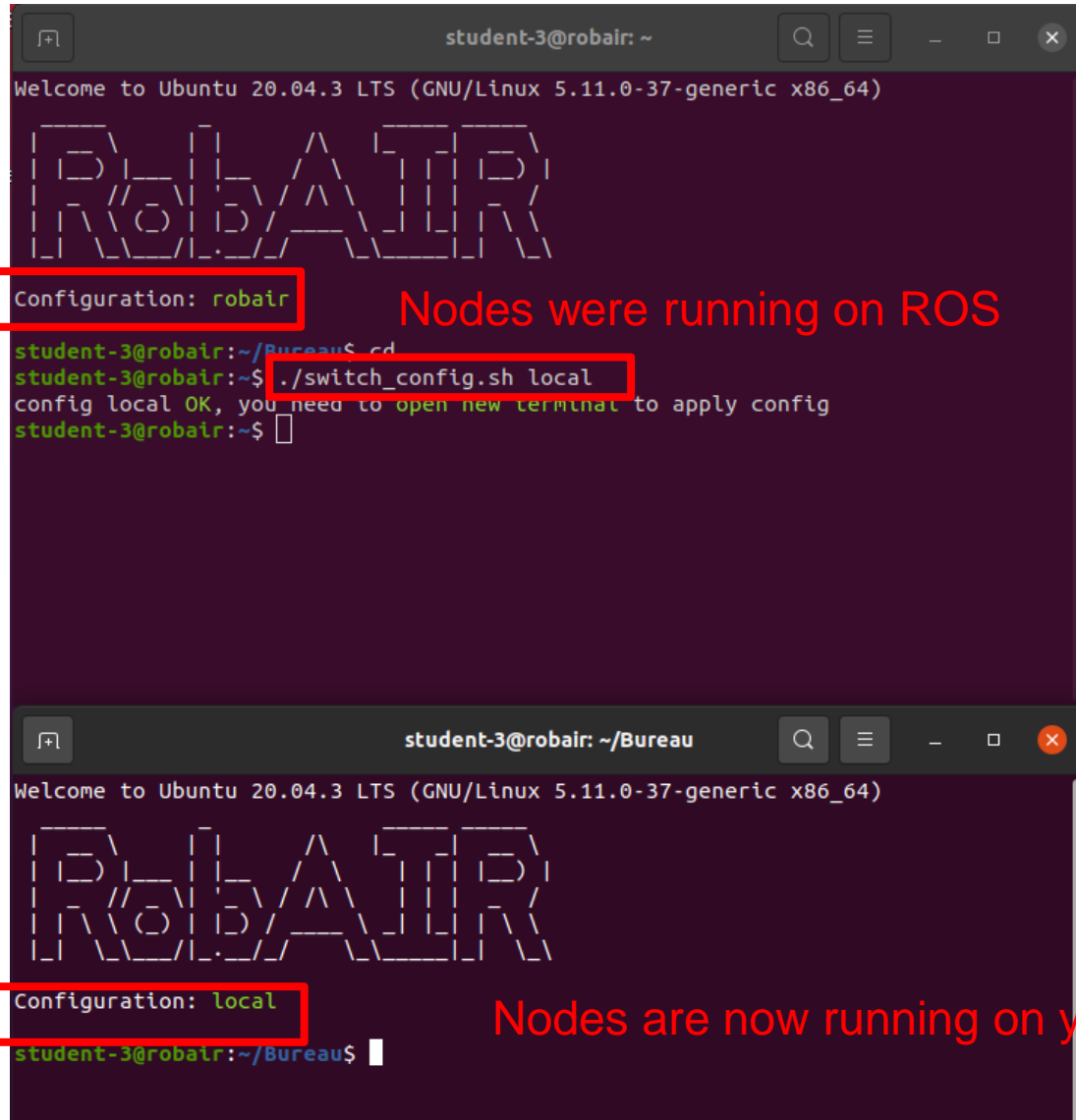
Bottom Screenshot: The terminal shows the user `student-3@robair` in the `~/Bureau` directory. The prompt is `student-3@robair:~/Bureau$`. The configuration is set to `robair`, highlighted by a red box. The output of the `./switch config.sh robair` command is shown, indicating that the nodes are now running on the remote machine. The prompt is `student-3@robair:~/Bureau$`.

Nodes were running on your computer

Nodes are now running on robair

Change the configuration

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



The image displays two terminal windows from a Ubuntu 20.04.3 LTS system. The top window shows the initial state where the configuration is 'robair'. A red box highlights the prompt 'Configuration: robair'. Below it, the command `./switch_config.sh local` is entered and executed, with another red box highlighting the command. The output indicates that the configuration has been updated to 'local'. The bottom window shows the same terminal after the change, with a red box highlighting the new prompt 'Configuration: local'. Red text annotations are present next to the highlighted configuration values in both windows.

```
student-3@robair: ~  
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.11.0-37-generic x86_64)  
ROB AIR  
Configuration: robair  
student-3@robair:~/Bureau$ cd  
student-3@robair:~$ ./switch_config.sh local  
config local OK, you need to open new terminal to apply config  
student-3@robair:~$  
  
student-3@robair: ~/Bureau  
Welcome to Ubuntu 20.04.3 LTS (GNU/Linux 5.11.0-37-generic x86_64)  
ROB AIR  
Configuration: local  
student-3@robair:~/Bureau$
```

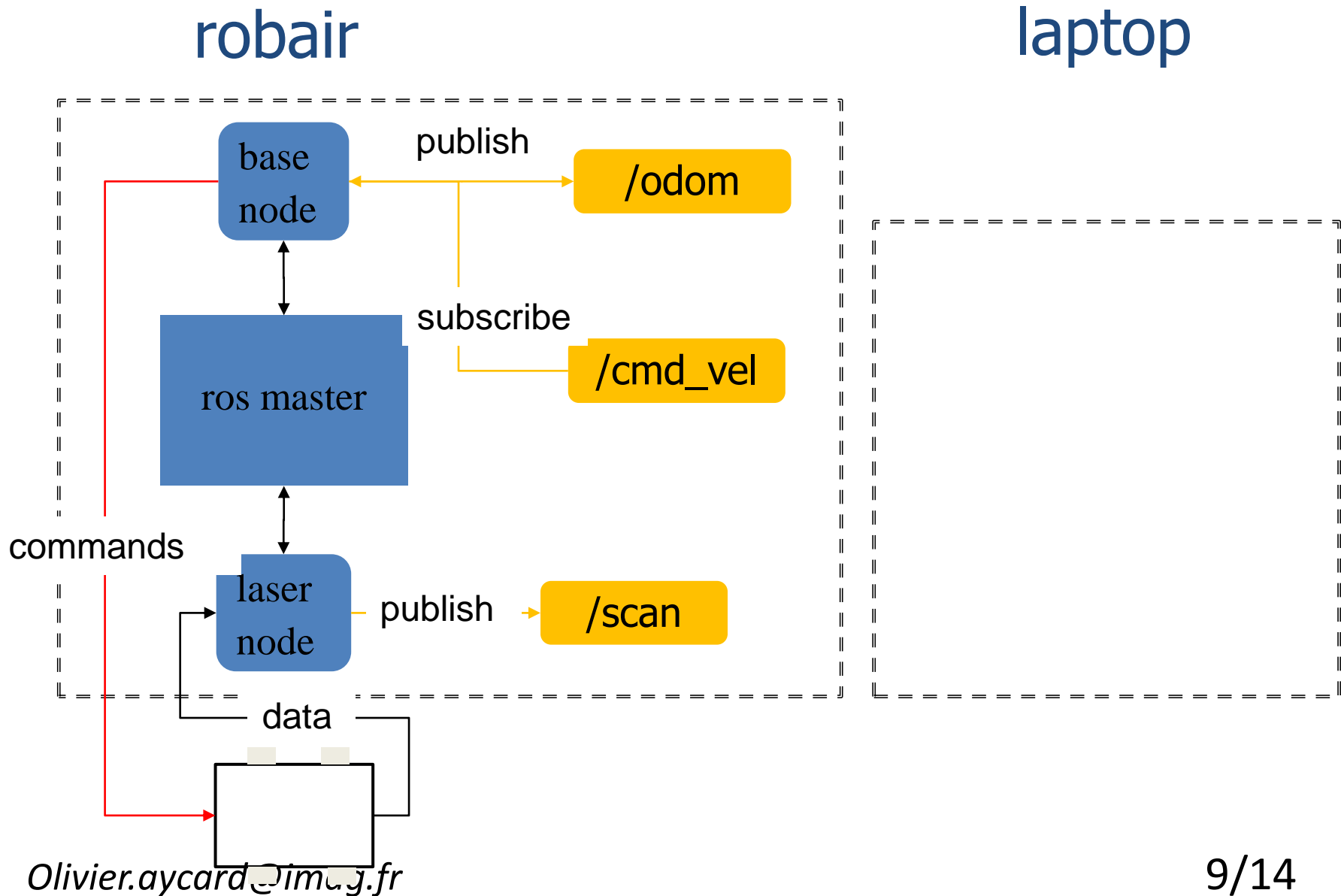
Outline

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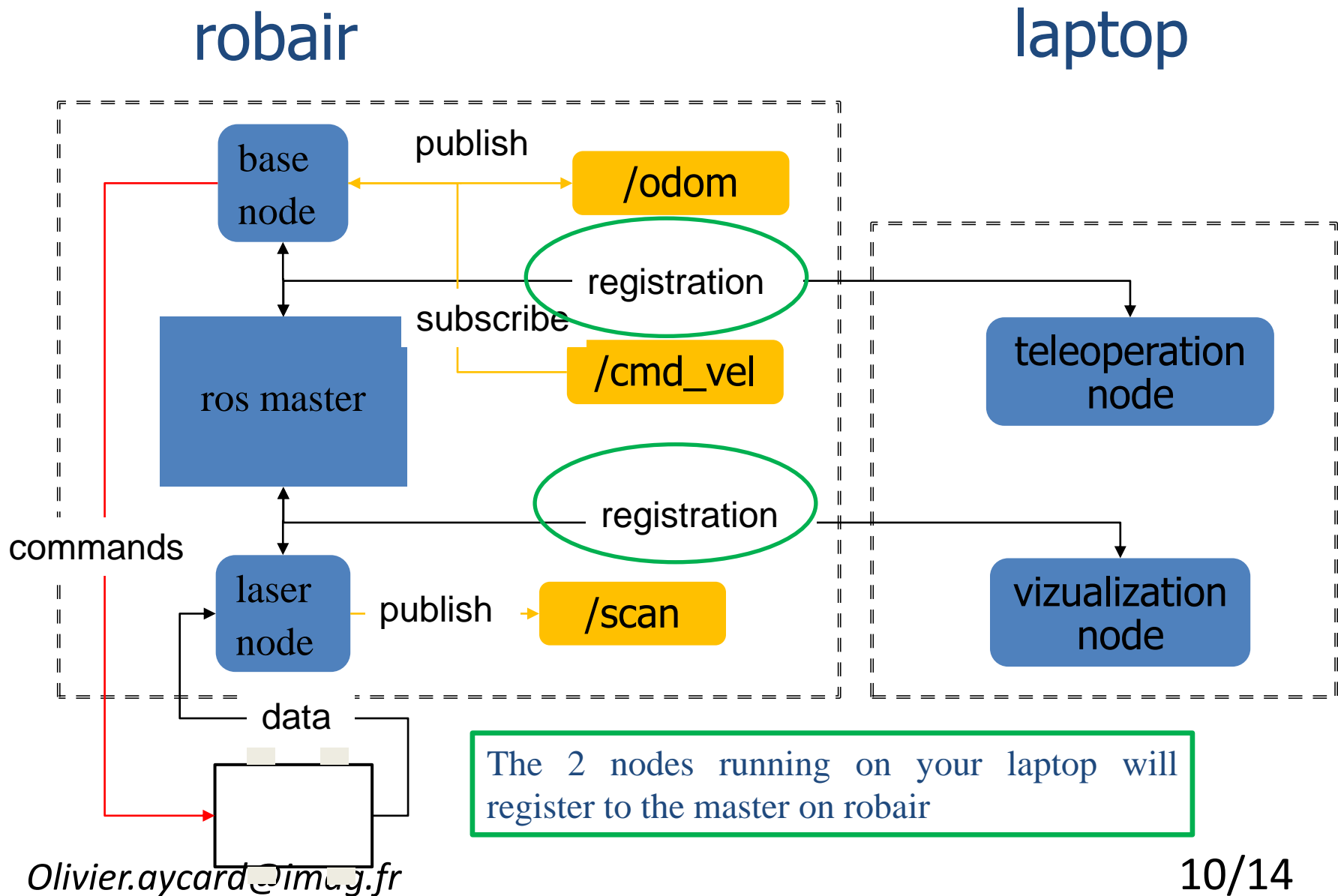
ROS on robair (1/5)

- 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.

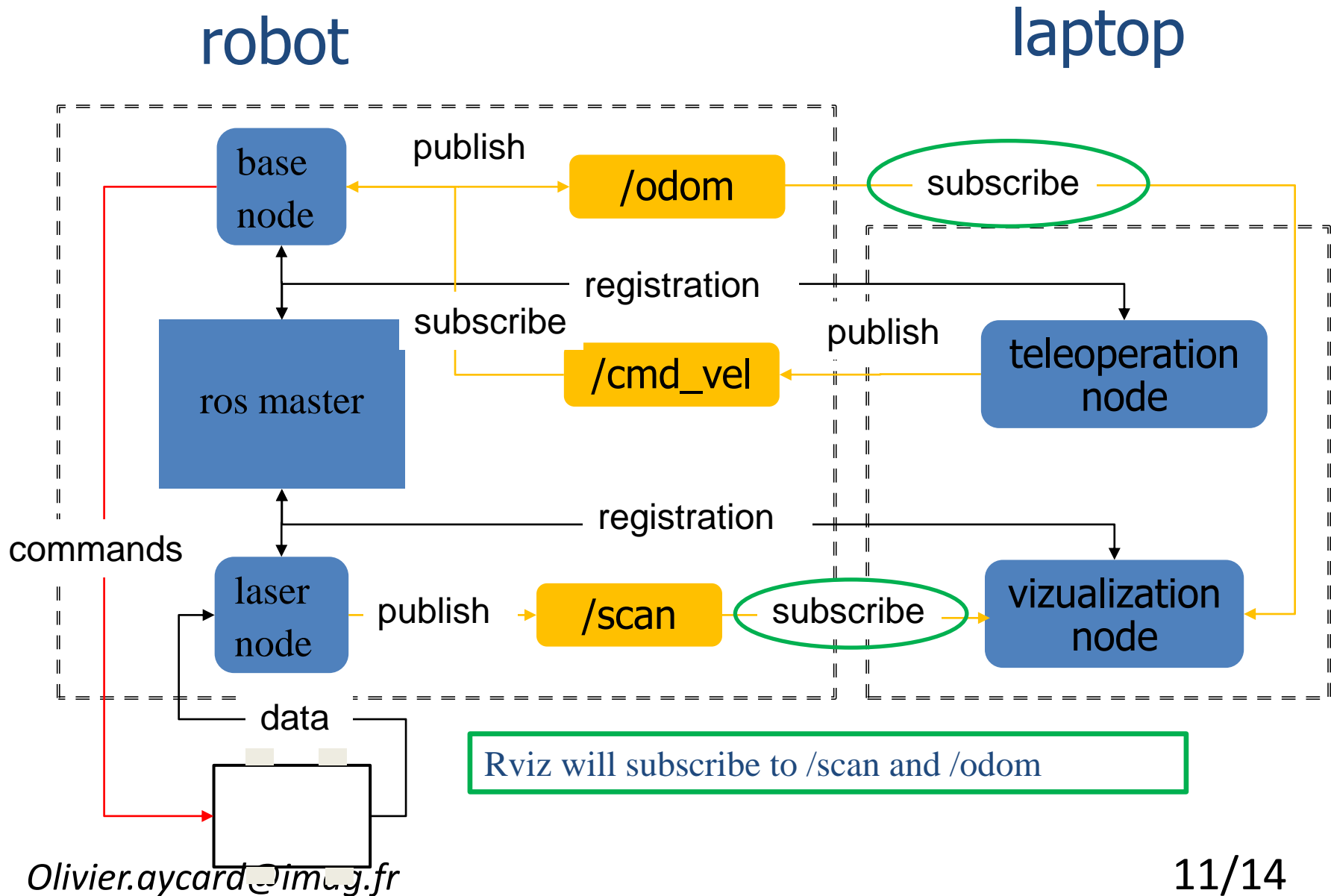
ROS on robair (2/5)



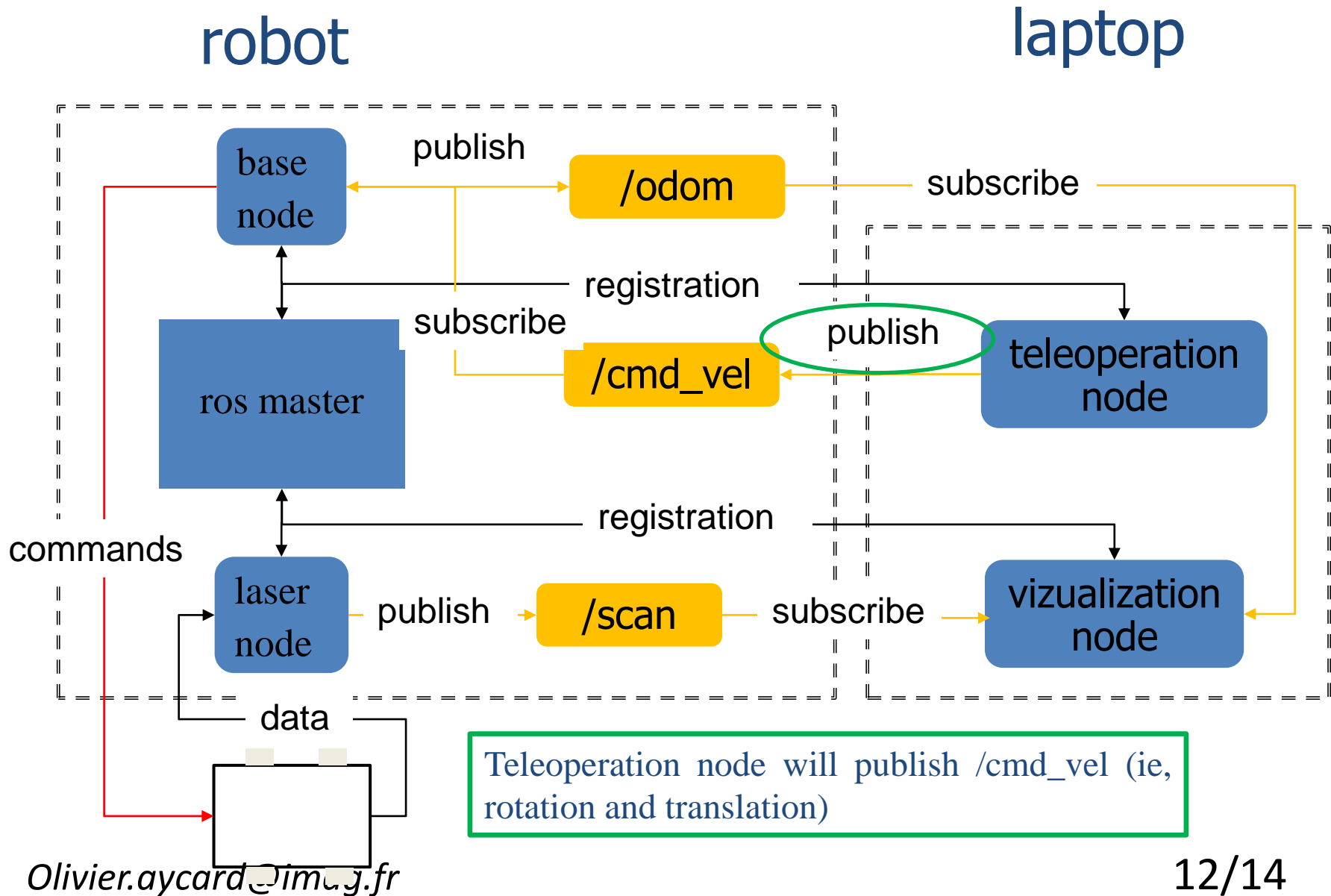
ROS on robair (3/5)



ROS on robair (4/5)



ROS on robair (5/5)



Outline

1. Change the configuration to run our nodes on robair;
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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 “roslaunch teleoperation teleoperation_node.py”
 - Use the keyboard to move robair
 - You should see robair moving