

Cognitive Systems

Practical Exercises – Reconfiguration of workspace

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Robotics and Embedded Systems (Informatik VI)

TUM

Outline

- Remove all existing ROS packages
- SVN checkout ROS packages
- Build the packages
- Run the required ROS nodes

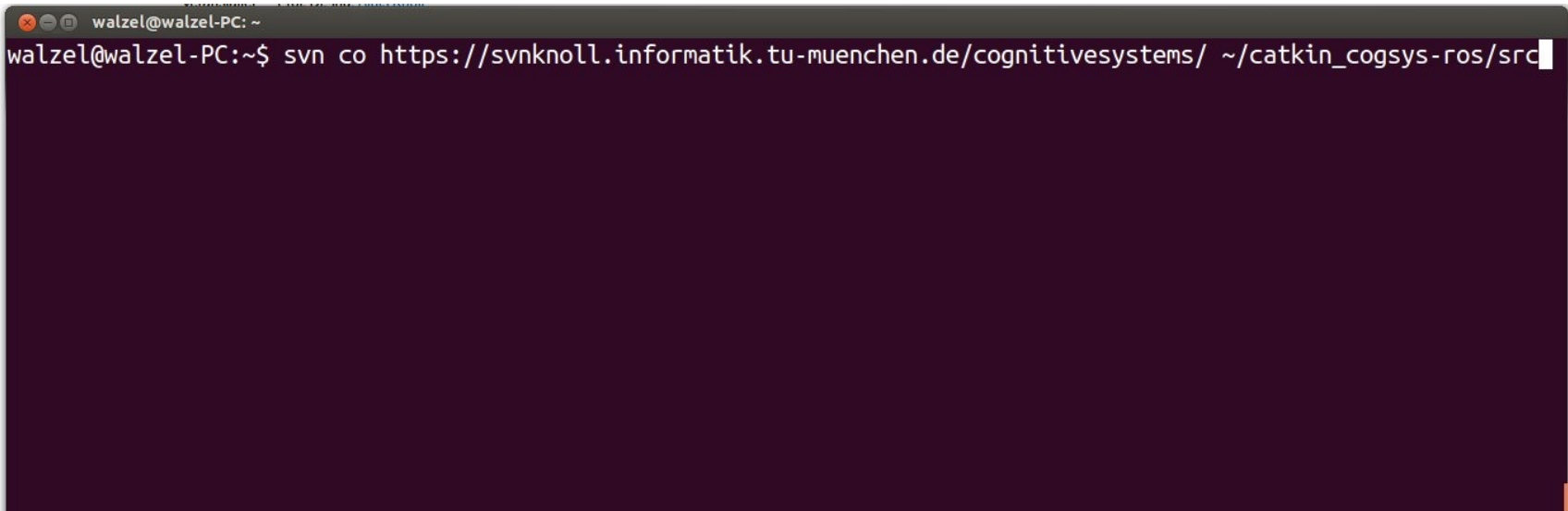
Remove all existing ROS packages

- Open a new Terminal
- Change to ~/catkin_cogsys-ros/src directory
- Remove all packages from src-folder

```
walzel@walzel-PC: ~/catkin_cogsys-ros/src
walzel@walzel-PC:~$ cd ~/catkin_cogsys-ros/src
walzel@walzel-PC:~/catkin_cogsys-ros/src$ ls
camera                demo_cogsys_cpp      robot_control_viz
camera_dummy          gripper_control      rosjava_msgs_srvs
CMakeLists.txt        messages_services    rosjava_projects
cogsys_visualization  object_detector      world_model
comm_lib              robot_control
walzel@walzel-PC:~/catkin_cogsys-ros/src$ rm -rf *
```

SVN checkout ROS packages

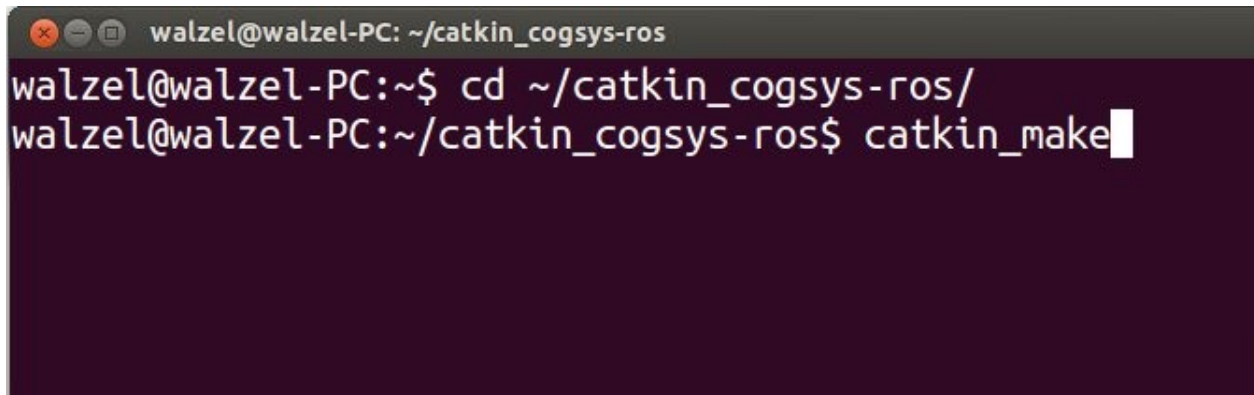
- Checkout ROS packages from new SVN repository
- (See `cogsys_howto_v3.txt` from lecture's website for copy & paste approach)



```
walzel@walzel-PC: ~$ svn co https://svnknoll.informatik.tu-muenchen.de/cognitivesystems/ ~/catkin_cogsys-ros/src
```

Build the packages

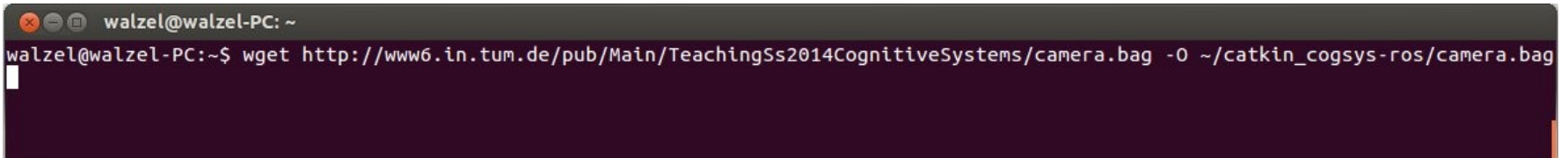
- Change directory to `~/catkin_cogsys-ros/`
- Invoke `catkin_make`



```
walzel@walzel-PC: ~/catkin_cogsys-ros  
walzel@walzel-PC:~$ cd ~/catkin_cogsys-ros/  
walzel@walzel-PC:~/catkin_cogsys-ros$ catkin_make
```

Run the required ROS nodes

- If everything was built successfully, execute the following commands in the given sequence
- Download ROS camera bag file (if you haven't done so yet)
- (See `cogsys_howto_v3.txt` from lecture's website for copy & paste approach)

A terminal window with a dark background and light text. The window title is "walzel@walzel-PC: ~". The command entered is "wget http://www6.in.tum.de/pub/Main/TeachingSs2014CognitiveSystems/camera.bag -O ~/catkin_cogsys-ros/camera.bag".

```
walzel@walzel-PC: ~  
walzel@walzel-PC:~$ wget http://www6.in.tum.de/pub/Main/TeachingSs2014CognitiveSystems/camera.bag -O ~/catkin_cogsys-ros/camera.bag
```

Run the required ROS nodes

- Open 8 Terminal windows and execute the following commands in the given sequence

- roscore
- cogsys_visualization
- Robot controllers
- camera_dummy
- Play ROS bag file
- object_detector
- world_model
- demo_cogsys_viz_cpp

```
walzel@walzel-PC: ~ 113x1
walzel@walzel-PC:~$ roscore

walzel@walzel-PC: ~ 113x1
walzel@walzel-PC:~$ roslaunch cogsys_visualization cogsys_demonstrator.launch

walzel@walzel-PC: ~ 113x1
walzel@walzel-PC:~$ roslaunch robot_control_viz bothbots.launch

walzel@walzel-PC: ~ 113x1
walzel@walzel-PC:~$ rosruncamera_dummy camera_dummy

walzel@walzel-PC: ~ 113x1
walzel@walzel-PC:~$ rosbag play -l -r 0.5 ~/catkin_cogsys-ros/camera.bag

walzel@walzel-PC: ~ 113x1
walzel@walzel-PC:~$ rosruncamera_dummy camera_dummy

walzel@walzel-PC: ~ 113x1
walzel@walzel-PC:~$ rosruncamera_dummy camera_dummy

walzel@walzel-PC: ~ 113x1
walzel@walzel-PC:~$ rosruncamera_dummy camera_dummy

walzel@walzel-PC: ~ 113x1
walzel@walzel-PC:~$ rosruncamera_dummy camera_dummy

walzel@walzel-PC: ~ 113x46
walzel@walzel-PC:~$ rosruncamera_dummy camera_dummy
```