

Formation Control in ROS2

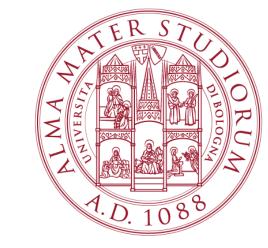
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Workspace preparation



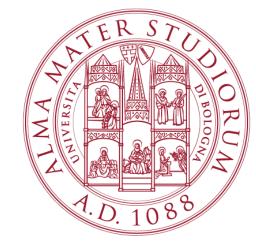
To activate ROS2, run:

./opt/ros/foxy/setup.bash

Create a new directory that will contain the ROS2 workspace: mkdir-p formation_ros2_ws/src cd formation_ros2_ws/src

Create the package from the **src** directory using **ros2 pkg create --build-type ament_python formation_control**

Package configuration



```
Add dependencies in package.xml

<exec_depend>rclpy</exec_depend>

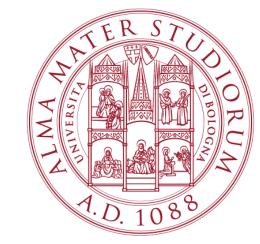
<exec_depend>std_msgs</exec_depend>

<exec_depend>ros2launch</exec_depend>
```

Modify the **setup.py**

- add to the header "from glob import glob" and to the data_files list:
 ("share/" + package_name, glob("launch_folder/formation_launch.py"))
- (ii) Specify the entry point, i.e., the name of the ROS2 node associated to the source file **the_agent.py** "generic_agent = formation_control.the_agent:main"

Package build and run



Include the source file for the ROS2 *Node*, which is to be added into **formation_ros2_ws/src/formation_control/formation_control**

From the ROS2 workspace root **formation_ros2_ws** (**ls** should list the **src** directory) build the package **colcon build --symlink-install --packages-select formation_control**

Then

- run (reactivate ROS2 if needed)
 - ./opt/ros/foxy/setup.bash
- run
 - . install/setup.bash
- run the launch file
 ros2 launch formation_control formation_launch.py