

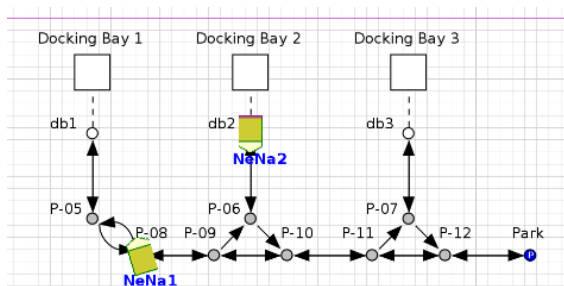
## Graduation and Internship Assignment: ROS 2 and Fleet Management for the Dingo robot

The Dingo is an indoor mobile robot from Clearpath. Currently, the robot uses Robot Operating System. In this assignment you work on applying the latest version of ROS (ROS 2 and Navigation 2) to the Dingo robot. Moreover, you enable the robot to receive commands from fleet management software to control the Dingo.



### Task description

You work on porting the ROS 1 models and software for the Dingo to ROS 2. You will perform a comparison of two open source fleet management packages: [OpenTCS](#) from Fraunhofer IML (written in Java) and Robot Middleware Framework ([RMF](#)) from Open Robotics (written in C++). The robot will first be developed and tested in a simulation environment (Gazebo) and later tests will be performed on the physical robot. There will be multiple people working on the robot, so a clear division of work will be made at the start of the assignment. Experience with ROS, ROS 2, simulation and/or Linux (or being open to learn these topics) is a pro for this assignment. Being enthusiastic to work on software for robots is a hard requirement 😊



screenshot OpenTCS (left) and screenshot RMF (right)

### Practical Information

**Student Profile:** Applied Computer Science, Computer Science (HBO-ICT), Electronics, Mechatronics (with interest in software aspects of robotics)

**Duration:** February 2021 – July 2020

**Compensation:** 230 euro per month, before taxes

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