Robotisim

Fix ROS2 Dependencies Issues Quickly

Beginner's Guide

1. Identify missing dependencies from a colcon build.

Description: Run colcon build in your ROS Humble workspace and reproduce any find_package or missing symbol errors.

Note the exact package names shown in the error messages and cross-check package.xml to find which declared deps are failing.

2. Install a missing binary dependency via apt.

Description: Choose one missing binary package identified earlier and run sudo apt-get install ros-humble-<package-name> to install it.

Source your workspace (. install/setup.bash) and run colcon build again to confirm that specific error is resolved.

3. Initialize rosdep and install workspace dependencies.

Description: Run sudo rosdep init (if needed), rosdep update, then rosdep install -y --from-paths src --ignore-src.

Verify rosdep installs system packages for your src folders and re-run colcon build to check for remaining missing deps.

4. Import source dependencies from a .repos file with vcs.

Description: Use or create a .repos file (e.g., turtlebot3.repos) and run vcs import src < turtlebot3.repos to clone required source repos.

Inspect each cloned repo's package.xml (and switch branches if pinned) so source-only dependencies are present before building.

5. Build packages in the required order using colcon --packages-select.

Description: Identify packages that must be built first (from package.xml dependencies) and run colcon build --packages-select <pkg1> <pkg2> to compile them.

After the selected packages succeed, run a full colcon build to ensure dependent packages compile without missing binaries.