ROS2 package setup and Run

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This document contains the information to setup and build the node package used by the Poly\_suite. Below are the packages required for the Poly\_suite.

* + Control\_Validation (Node\_control\_validation\_ws)
  + Perception\_Validation (Node\_lg\_groundtruth\_data\_ws)

## Pre requisites

Following are library / package need to be required in the ADE docker for the Control\_Validation and Perception\_Validation package-

Open terminal in adehome directory or redirect to the adehome path and enter below commands-

$ cd AutowareAuto

$ ade start

$ ade enter

$ source /opt/AutowareAuto/setup.bash

The above command help you to start and enter into the ADE docker where all the package and module run.

Note: All the below commands are going to run inside the ADE docker.

Open terminal and run the below command to install the Pandas libarary-

* **Pandas:** This library has dependency on perception validation node so need to be install in linux before below steps-

$ sudo python3 -m pip install pandas

* **Lgsvl\_msgs:** This custom msgs type are used by the lg simulator for publish/subscribe the data on th ROS bridge, Install and build by using the below steps-

Open terminal in adehome path-

$ git clone <https://github.com/lgsvl/lgsvl_msgs.git>

$ cd lgsvl\_msgs

$ colcon build

$ cd ..

$ source lgsvl\_msgs/install/setup.bash

$ ros2 msg list |grep lgsvl\_msgs

*# If you can see the list of lgsvl\_msgs, they're ready to be used.*

* **Watchdog:** This library is also required by the below node for running.

$ pip install watchdog

## Build Perception Validation Node

Open terminal and go to the AutowareAuto folder and run below commands to build the perception validation package for Poly\_Suite.

$ cd AutowareAuto

$ ade start

$ ade enter

$ cd Node/Node\_lg\_groundtruth\_data\_ws/Node\_lg\_groundtruth\_data\_ws/src

$ colcon build

$ cd ..

$ colcon build

This will successfully build the package and ready to use.

## Build Control Validation Node

Open terminal and go to the AutowareAuto folder and run below commands to build the control validation package for Poly\_Suite.

$ cd AutowareAuto

$ ade start

$ ade enter

$ cd Node/Node\_control\_validation\_ws/Node\_control\_validation\_ws/src

$ colcon build

$ cd ..

$ colcon build

This will successfully build the package and ready to use.

## Note:

Pre requisite are compulsory, if they are not installed or had any issue while installing then it will cause issue while running the control validation and perception validation package for the poly\_suite application.

All the above commands will be going to run inside the ADE docker where AutowareAuto is install except Pandas library.

Both the package must be placed inside the mention path and manner-

$ adehome/Node/Node\_control\_validation\_ws

$adehome/Node/Node\_lg\_groundtruth\_data\_ws