The NeedlePenetrationRobot scripts need the following modules running beforehand:

- ROS2 Humble
- cisst-saw/sawGalilController

Sourcing and building ROS2

1. In terminal CLI, source ROS2:

source /opt/ros/humble/setup.bash

2. Navigate to ros2_ws directory from home directory

cd ros2_ws

3. Rebuild ros packages

colcon build

4. Source workspace (build files in ~/ros2_ws/install)

source install/setup.bash

Running sawGalilController

1. Navigate to the json configuration file directory

cd ros2_ws/cisst-saw/sawGalilContoller/core/share/test/

2. Start galil_controller and attached json config file. You should see a GUI appear. No need to interact with it.

galil_controller -j NPR4.json

3. Verify correction ros topics are being published. We should see relevant CRTK rostopics: measured_cp, measured_js, move_cp, move_js, etc. See CRTK library documentation for more info.

ros2 topic list

Once both modules are working, we can run the main robot controller GUI script

1. Navigate back to ros2_ws directory

cd ~/ros2_ws

2. Run GUI and control script. You should see a GUI appear with controls for the robot.

ros2 run needle_penetration_robot