

编号	问题	答复
1	<p>基于motor_SDK提供的方法尝试使用lcm通信获取机器狗的robot_data,但是在狗的运动过程中,只有q,qd,tau,ros2 topic订阅的线速度信息有发生变化,acc,quat,omeg和ctrl都一直是0,请问怎么解决呢?有数据产生了变化就是证明已经和狗连接上了?</p> <pre data-bbox="256 462 1260 700"> tensor([[-2.4048, 1.8579, 1.0179, -1.8574, -4.0232, 2.0200, -3.7875, -5.8979, -0.0681, 7.2529, -13.0396, 0.6348]])) rpy [3]: [0. 0. 0.] acc [3]: [0. 0. 0.] quat[4]: [0. 0. 0. 0.] omeg[3]: [0. 0. 0.] q [12]: [-0.32497603 1.0332576 -2.53073072 0.47768152 0.81364363 -2.49876761 -0.32315263 1.03330076 -2.53073311 0.32363561 1.03322804 -2.53073049] qd [12]: [4.30634391e-04 1.43417201e-05 1.63743884e-04 -6.74212934e-05 -1.04279525e-05 -9.60964317e-05 1.56222598e-03 -8.93767690e-04]</pre> <pre data-bbox="256 708 1057 970"> print(f"rpy [3]: {self.robot_data.rpy}") print(f"acc [3]: {self.robot_data.acc}") print(f"quat[4]: {self.robot_data.quat}") print(f"omeg[3]: {self.robot_data.omega}") print(f"q [12]: {self.robot_data.q}") print(f"qd [12]: {self.robot_data.qd}") print(f"tau[12]: {self.robot_data.tau}") print(f"ctrl[12]: {self.motor_cmd.q_des}")</pre> <pre data-bbox="256 978 1102 1264"> import lcm from time import sleep import numpy as np import threading import signal from leg_control_data_lcmt import leg_control_data_lcmt from motor_ctrl_lcmt import motor_ctrl_lcmt from motor_ctrl_state_lcmt import motor_ctrl_state_lcmt from state_estimator_lcmt import state_estimator_lcmt</pre>	<p>微信沟通定位到lcm消息订阅初始化异常,需要指定端口号后,再subscribe(),串行初始化会存在覆盖的问题。</p>

2	<p>请问调用伺服指令</p> <pre>ros2 topic pub /motion_servo_cmd protocol/msg/MotionServoCmd "{motion_id: 308, cmd_type: 2}" 报以下错是怎么回是</pre> <pre>[INFO] [1715740518.784706587] [MotionManager]: Receive ServoCmd from 0 with motion_id: 308 [ERROR] [1715740518.784779435] [MotionManager]: FSM invalid with current state: Setup</pre>	<p>MotionManager 的状态机没有切换到 Active。按照文档或者视频讲解，调用接口切换状态机状态后即可。</p>
3	<p>1. python3 src/cyberdog_simulator/cyberdog_gazebo/script/launchsim.py 请问运行这个指令出现这个错误怎么解决</p> <pre>[INFO] [1791c21415cb:~/home/cyberdog_sim#] python3 src/cyberdog_simulator/cyberdog_gazebo/script/launchsim.py root@02d1504685dc:~/home/cyberdog_sim# python3 src/cyberdog_simulator/cyberdog_gazebo/script/launchsim.py # Option "-e" is deprecated and might be removed in a later version of gnome-terminal. # Use "--" to terminate the options and put the command line to execute after it. # Couldn't connect to accessibility bus: Failed to connect to socket /tmp/dbus-T0gI8CDEMs: Connection refused # Error constructing proxy for org.gnome.Terminal:/org/gnome/Terminal/Factory0: Could not connect: Connection refused # Option "-e" is deprecated and might be removed in a later version of gnome-terminal. # Use "--" to terminate the options and put the command line to execute after it. # Couldn't connect to accessibility bus: Failed to connect to socket /tmp/dbus-T0gI8CDEMs: Connection refused # Error constructing proxy for org.gnome.Terminal:/org/gnome/Terminal/Factory0: Could not connect: Connection refused # Option "-e" is deprecated and might be removed in a later version of gnome-terminal. # Use "--" to terminate the options and put the command line to execute after it. # Couldn't connect to accessibility bus: Failed to connect to socket /tmp/dbus-T0gI8CDEMs: Connection refused # Error constructing proxy for org.gnome.Terminal:/org/gnome/Terminal/Factory0: Could not connect: Connection refused root@02d1504685dc:~/home/cyberdog_sim#</pre> <pre>root@1791c21415cb:~/home/cyberdog_sim# source /opt/ros/galactic/setup.bash root@1791c21415cb:~/home/cyberdog_sim# source install/setup.bash root@1791c21415cb:~/home/cyberdog_sim# ros2 launch cyberdog_gazebo cyberdog_control_launch.py [INFO] [launch]: All log files can be found below /root/.ros/log/2024-05-29-16-54-01-831591-1791c21415cb-67 [INFO] [launch]: Default logging verbosity is set to INFO cd /home/cyberdog_sim/install/share/cyberdog_locomotion/..../lib/cyberdog_locomotion && ./cyberdog_control m s ----- [Main Controller] Begin to execute, and the current time is: 2024/05/29/ 16:54:01 Wednesday ----- [Quadruped] Legged Robots Control Software Quadruped: Cyberdog2 Driver: Development Simulation Driver Parameters Source: Load parameters from network [Shared Memory] open existing development-simulator size 3093952 bytes [ERROR] SharedMemoryObject::Attach shm_open(development-simulator) failed: No such file or directory terminate called after throwing an instance of 'std::runtime_error' what() = Failed to create shared memory! Aborted (core dumped) root@1791c21415cb:~/home/cyberdog_sim# ros2 topic list /apply_force /clicked_point /clock /goal_pose /initial_pose /joint_states /parameter_events /performance_metrics /robot_description /rosout /tf /tf_static /yaml_parameter root@1791c21415cb:~/home/cyberdog_sim#</pre>	<p>对于第一张图的问题，应该是 gnome 的错误，可以查阅相关的文档，如果无法解决，可以尝试通过分别运行各程序来解决该问题。参考教程中分别运行各程序的部分。</p> <p>对于第二张图的问题，该错误是由于仿真程序的 shared momery 没有正确创建导致。可能的原因是 docker 分配的共享内存不足，或者是仿真程序没有正确的运行，可尝试检查以上问题。</p>

4	视觉功能文档里安装依赖报错怎么解决 <pre>root@Ubuntu20:/etc/apt# sudo apt-get install nvidia-l4t-jetson-multimedia-api Reading package lists... Done Building dependency tree Reading state information... Done E: Unable to locate package nvidia-l4t-jetson-multimedia-api</pre>	需要在 Cyberdog2 真机环境中安装
5	里程计的数据可以在哪里看到？	仿真环境中监控/tf 话题中 vodom 的位置即可，也可以通过 lcm 监控 state_estimator 通信获取
6	是否可以提供基于 isaac gym 的仿真训练代码，还有强化学习控制器的 policy 架构？训练时的腿部轨迹控制方法，Policy Modulating Trajectory Generator 是否有效？	暂未开源，可参考已有开源项目： https://github.com/leggedrobotics/legged_gym PMTG 轨迹方法可参考 https://gitee.com/HUAWEI-ASCEND/quadruped-robot 越障： https://extreme-parkour.github.io/