```
ros2 launch za6_bringup bringup.launch sim_mode:=true hal_debug_output:=true
hal_debug_level:=5

[INFO] [launch]: Default logging verbosity is set to INFO
[INFO] [hal_mgr-1]: process details:
cmd='/opt/ros/humble/lib/hal_hw_interface/hal_mgr --ros-args -r __node:=hal_mgr
--params-file /tmp/launch_params_lm8avu0k', cwd='None', custom_env?=True
[INFO] [hal_mgr-1]: process started with pid [14558]
[INFO] [spawner-2]: process started with pid [14560]
[INFO] [spawner-3]: process started with pid [14562]
[INFO] [spawner-4]: process started with pid [14564]
[INFO] [robot_state_publisher-5]: process started with pid [14566]
[INFO] [move_group-6]: process started with pid [14568]
[INFO] [rviz2-7]: process started with pid [14570]
[robot_state_publisher-5] [INFO 1773776101.812352548] [robot_state_publisher]:
got segment base (setupURDF() at ./src/robot_state_publisher.cpp:201)
[robot_state_publisher-5] [INFO 1773776101.812385838] [robot_state_publisher]:
got segment base_link (setupURDF() at ./src/robot_state_publisher.cpp:201)
[robot_state_publisher-5] [INFO 1773776101.812390012] [robot_state_publisher]:
got segment flange (setupURDF() at ./src/robot_state_publisher.cpp:201)
[robot_state_publisher-5] [INFO 1773776101.812392660] [robot_state_publisher]:
got segment grasp_link (setupURDF() at ./src/robot_state_publisher.cpp:201)
[robot_state_publisher-5] [INFO 1773776101.812395239] [robot_state_publisher]:
got segment link_1 (setupURDF() at ./src/robot_state_publisher.cpp:201)
[robot_state_publisher-5] [INFO 1773776101.812397686] [robot_state_publisher]:
got segment link_2 (setupURDF() at ./src/robot_state_publisher.cpp:201)
[robot_state_publisher-5] [INFO 1773776101.812400060] [robot_state_publisher]:
got segment link_3 (setupURDF() at ./src/robot_state_publisher.cpp:201)
[robot_state_publisher-5] [INFO 1773776101.812402477] [robot_state_publisher]:
got segment link_4 (setupURDF() at ./src/robot_state_publisher.cpp:201)
[robot_state_publisher-5] [INFO 1773776101.812405028] [robot_state_publisher]:
got segment link_5 (setupURDF() at ./src/robot_state_publisher.cpp:201)
[robot_state_publisher-5] [INFO 1773776101.812407581] [robot_state_publisher]:
got segment link_6 (setupURDF() at ./src/robot_state_publisher.cpp:201)
[robot_state_publisher-5] [INFO 1773776101.812409997] [robot_state_publisher]:
got segment tool0 (setupURDF() at ./src/robot_state_publisher.cpp:201)
[robot_state_publisher-5] [INFO 1773776101.812412477] [robot_state_publisher]:
got segment world (setupURDF() at ./src/robot_state_publisher.cpp:201)
[move_group-6] [INFO 1773776101.821879097] [moveit_rdf_loader.rdf_loader]:
Loaded robot model in 0.000765736 seconds (RDFLoader() at
./rdf_loader/src/rdf_loader.cpp:80)
[move_group-6] [INFO 1773776101.821906307] [moveit_robot_model.robot_model]:
Loading robot model 'za6'... (buildModel() at
./robot_model/src/robot_model.cpp:89)
[move_group-6] [INFO 1773776101.821911404] [moveit_robot_model.robot_model]: No
root/virtual joint specified in SRDF. Assuming fixed joint
(constructJointModel() at ./robot_model/src/robot_model.cpp:959)
[move_group-6] [INFO 1773776101.830923153]
[moveit_ros.planning_scene_monitor.planning_scene_monitor]: Publishing
maintained planning scene on 'monitored_planning_scene'
(startPublishingPlanningScene() at
./planning_scene_monitor/src/planning_scene_monitor.cpp:405)
[move_group-6] [INFO 1773776101.830986125]
[moveit.ros_planning_interface.moveit_cpp]: Listening to 'joint_states' for
joint states (loadPlanningSceneMonitor() at ./moveit_cpp/src/moveit_cpp.cpp:101)
[move_group-6] [INFO 1773776101.831108400] [moveit_ros.current_state_monitor]:
Listening to joint states on topic 'joint_states' (startStateMonitor() at
./planning_scene_monitor/src/current_state_monitor.cpp:175)
[move_group-6] [INFO 1773776101.831257280]
[moveit_ros.planning_scene_monitor.planning_scene_monitor]: Listening to
'/attached_collision_object' for attached collision objects (startStateMonitor()
at ./planning_scene_monitor/src/planning_scene_monitor.cpp:1285)
[move_group-6] [INFO 1773776101.831262944]
[moveit_ros.planning_scene_monitor.planning_scene_monitor]: Starting planning
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scene monitor (startSceneMonitor() at
./planning_scene_monitor/src/planning_scene_monitor.cpp:1108)
[move_group-6] [INFO 1773776101.831557281]
[moveit_ros.planning_scene_monitor.planning_scene_monitor]: Listening to
'/planning_scene' (startSceneMonitor() at
./planning_scene_monitor/src/planning_scene_monitor.cpp:1116)
[move_group-6] [INFO 1773776101.831561758]
[moveit_ros.planning_scene_monitor.planning_scene_monitor]: Starting world
geometry update monitor for collision objects, attached objects, octomap
updates. (startWorldGeometryMonitor() at
./planning_scene_monitor/src/planning_scene_monitor.cpp:1194)
[move_group-6] [INFO 1773776101.831650185]
[moveit_ros.planning_scene_monitor.planning_scene_monitor]: Listening to
'collision_object' (startWorldGeometryMonitor() at
./planning_scene_monitor/src/planning_scene_monitor.cpp:1203)
[move_group-6] [INFO 1773776101.831745112]
[moveit_ros.planning_scene_monitor.planning_scene_monitor]: Listening to
'planning_scene_world' for planning scene world geometry
(startWorldGeometryMonitor() at
./planning_scene_monitor/src/planning_scene_monitor.cpp:1213)
[move_group-6] [WARN 1773776101.831809417]
[moveit.ros.occupancy_map_monitor.middleware_handle]: Resolution not specified
for Octomap. Assuming resolution = 0.1 instead
(OccupancyMapMonitorMiddlewareHandle() at
./src/occupancy_map_monitor_middleware_handle.cpp:77)
[move_group-6] [ERROR 1773776101.831815097]
[moveit.ros.occupancy_map_monitor.middleware_handle]: No 3D sensor plugin(s)
defined for octomap updates (OccupancyMapMonitorMiddlewareHandle() at
./src/occupancy_map_monitor_middleware_handle.cpp:94)
[move_group-6] [INFO 1773776101.832048266]
[moveit.ros_planning_interface.moveit_cpp]: Loading planning pipeline 'ompl'
(loadPlanningPipelines() at ./moveit_cpp/src/moveit_cpp.cpp:139)
[move_group-6] [INFO 1773776101.836436739]
[moveit.ros_planning.planning_pipeline]: Using planning interface 'OMPL'
(configure() at ./planning_pipeline/src/planning_pipeline.cpp:139)
[move_group-6] [INFO 1773776101.837291084]
[moveit_ros.add_time_optimal_parameterization]: Param 'ompl.path_tolerance' was
not set. Using default value: 0.100000 (getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:106)
[move_group-6] [INFO 1773776101.837299038]
[moveit_ros.add_time_optimal_parameterization]: Param 'ompl.resample_dt' was not
set. Using default value: 0.100000 (getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:106)
[move_group-6] [INFO 1773776101.837301626]
[moveit_ros.add_time_optimal_parameterization]: Param 'ompl.min_angle_change'
was not set. Using default value: 0.001000 (getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:106)
[move_group-6] [INFO 1773776101.837310963] [moveit_ros.fix_workspace_bounds]:
Param 'ompl.default_workspace_bounds' was not set. Using default value:
10.000000 (getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:106)
[move_group-6] [INFO 1773776101.837318529] [moveit_ros.fix_start_state_bounds]:
Param 'ompl.start_state_max_bounds_error' was set to 0.100000 (getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:112)
[move_group-6] [INFO 1773776101.837321304] [moveit_ros.fix_start_state_bounds]:
Param 'ompl.start_state_max_dt' was not set. Using default value: 0.500000
(getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:106)

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[move_group-6] [INFO 1773776101.837326507]
[moveit_ros.fix_start_state_collision]: Param 'ompl.start_state_max_dt' was not
set. Using default value: 0.500000 (getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:106)
[move_group-6] [INFO 1773776101.837329235]
[moveit_ros.fix_start_state_collision]: Param 'ompl.jiggle_fraction' was set to
0.050000 (getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:112)
[move_group-6] [INFO 1773776101.837332144]
[moveit_ros.fix_start_state_collision]: Param 'ompl.max_sampling_attempts' was
not set. Using default value: 100 (getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:106)
[move_group-6] [INFO 1773776101.837337268]
[moveit.ros_planning.planning_pipeline]: Using planning request adapter 'Add
Time Optimal Parameterization' (configure() at
./planning_pipeline/src/planning_pipeline.cpp:189)
[move_group-6] [INFO 1773776101.837339344]
[moveit.ros_planning.planning_pipeline]: Using planning request adapter 'Resolve
constraint frames to robot links' (configure() at
./planning_pipeline/src/planning_pipeline.cpp:189)
[move_group-6] [INFO 1773776101.837340903]
[moveit.ros_planning.planning_pipeline]: Using planning request adapter 'Fix
Workspace Bounds' (configure() at
./planning_pipeline/src/planning_pipeline.cpp:189)
[move_group-6] [INFO 1773776101.837342653]
[moveit.ros_planning.planning_pipeline]: Using planning request adapter 'Fix
Start State Bounds' (configure() at
./planning_pipeline/src/planning_pipeline.cpp:189)
[move_group-6] [INFO 1773776101.837344223]
[moveit.ros_planning.planning_pipeline]: Using planning request adapter 'Fix
Start State In Collision' (configure() at
./planning_pipeline/src/planning_pipeline.cpp:189)
[move_group-6] [INFO 1773776101.837345776]
[moveit.ros_planning.planning_pipeline]: Using planning request adapter 'Fix
Start State Path Constraints' (configure() at
./planning_pipeline/src/planning_pipeline.cpp:189)
[move_group-6] [INFO 1773776101.837843053]
[moveit.ros_planning_interface.moveit_cpp]: Loading planning pipeline 'chomp'
(loadPlanningPipelines() at ./moveit_cpp/src/moveit_cpp.cpp:139)
[move_group-6] [INFO 1773776101.838917627]
[moveit.ros_planning.planning_pipeline]: Using planning interface 'CHOMP'
(configure() at ./planning_pipeline/src/planning_pipeline.cpp:139)
[move_group-6] [INFO 1773776101.839324485]
[moveit_ros.add_time_optimal_parameterization]: Param 'chomp.path_tolerance' was
not set. Using default value: 0.100000 (getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:106)
[move_group-6] [INFO 1773776101.839337068]
[moveit_ros.add_time_optimal_parameterization]: Param 'chomp.resample_dt' was
not set. Using default value: 0.100000 (getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:106)
[move_group-6] [INFO 1773776101.839339555]
[moveit_ros.add_time_optimal_parameterization]: Param 'chomp.min_angle_change'
was not set. Using default value: 0.001000 (getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:106)
[move_group-6] [INFO 1773776101.839348550] [moveit_ros.fix_workspace_bounds]:
Param 'chomp.default_workspace_bounds' was not set. Using default value:
10.000000 (getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
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.h:106)
[move_group-6] [INFO 1773776101.839354840] [moveit_ros.fix_start_state_bounds]:
Param 'chomp.start_state_max_bounds_error' was set to 0.100000 (getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:112)
[move_group-6] [INFO 1773776101.839357246] [moveit_ros.fix_start_state_bounds]:
Param 'chomp.start_state_max_dt' was not set. Using default value: 0.500000
(getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:106)
[move_group-6] [INFO 1773776101.839362249]
[moveit_ros.fix_start_state_collision]: Param 'chomp.start_state_max_dt' was not
set. Using default value: 0.500000 (getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:106)
[move_group-6] [INFO 1773776101.839364829]
[moveit_ros.fix_start_state_collision]: Param 'chomp.jiggle_fraction' was set to
0.050000 (getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:112)
[move_group-6] [INFO 1773776101.839367077]
[moveit_ros.fix_start_state_collision]: Param 'chomp.max_sampling_attempts' was
not set. Using default value: 100 (getParam() at
/opt/ros/humble/include/moveit/planning_request_adapter/planning_request_adapter
.h:106)
[move_group-6] [INFO 1773776101.839371855]
[moveit.ros_planning.planning_pipeline]: Using planning request adapter 'Add
Time Optimal Parameterization' (configure() at
./planning_pipeline/src/planning_pipeline.cpp:189)
[move_group-6] [INFO 1773776101.839373855]
[moveit.ros_planning.planning_pipeline]: Using planning request adapter 'Resolve
constraint frames to robot links' (configure() at
./planning_pipeline/src/planning_pipeline.cpp:189)
[move_group-6] [INFO 1773776101.839375382]
[moveit.ros_planning.planning_pipeline]: Using planning request adapter 'Fix
Workspace Bounds' (configure() at
./planning_pipeline/src/planning_pipeline.cpp:189)
[move_group-6] [INFO 1773776101.839377033]
[moveit.ros_planning.planning_pipeline]: Using planning request adapter 'Fix
Start State Bounds' (configure() at
./planning_pipeline/src/planning_pipeline.cpp:189)
[move_group-6] [INFO 1773776101.839378531]
[moveit.ros_planning.planning_pipeline]: Using planning request adapter 'Fix
Start State In Collision' (configure() at
./planning_pipeline/src/planning_pipeline.cpp:189)
[move_group-6] [INFO 1773776101.839380033]
[moveit.ros_planning.planning_pipeline]: Using planning request adapter 'Fix
Start State Path Constraints' (configure() at
./planning_pipeline/src/planning_pipeline.cpp:189)
[move_group-6] [INFO 1773776101.839692591]
[moveit.ros_planning_interface.moveit_cpp]: Loading planning pipeline
'pilz_industrial_motion_planner' (loadPlanningPipelines() at
./moveit_cpp/src/moveit_cpp.cpp:139)
[move_group-6] [INFO 1773776101.840470051]
[moveit.pilz_industrial_motion_planner.joint_limits_aggregator]: Reading limits
from namespace robot_description_planning (getAggregatedLimits() at
./src/joint_limits_aggregator.cpp:55)
[move_group-6] [INFO 1773776101.841759956]
[moveit.pilz_industrial_motion_planner]: Available plugins:
pilz_industrial_motion_planner/PlanningContextLoaderCIRC
pilz_industrial_motion_planner/PlanningContextLoaderLIN
pilz_industrial_motion_planner/PlanningContextLoaderPTP    (initialize() at
./src/pilz_industrial_motion_planner.cpp:87)
[move_group-6] [INFO 1773776101.841772730]
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[moveit.pilz_industrial_motion_planner]: About to load:
pilz_industrial_motion_planner/PlanningContextLoaderCIRC (initialize() at
./src/pilz_industrial_motion_planner.cpp:92)
[move_group-6] [INFO 1773776101.842478649]
[moveit.pilz_industrial_motion_planner]: Registered Algorithm [CIRC]
(registerContextLoader() at ./src/pilz_industrial_motion_planner.cpp:181)
[move_group-6] [INFO 1773776101.842488432]
[moveit.pilz_industrial_motion_planner]: About to load:
pilz_industrial_motion_planner/PlanningContextLoaderLIN (initialize() at
./src/pilz_industrial_motion_planner.cpp:92)
[move_group-6] [INFO 1773776101.842990202]
[moveit.pilz_industrial_motion_planner]: Registered Algorithm [LIN]
(registerContextLoader() at ./src/pilz_industrial_motion_planner.cpp:181)
[move_group-6] [INFO 1773776101.842999247]
[moveit.pilz_industrial_motion_planner]: About to load:
pilz_industrial_motion_planner/PlanningContextLoaderPTP (initialize() at
./src/pilz_industrial_motion_planner.cpp:92)
[move_group-6] [INFO 1773776101.843461075]
[moveit.pilz_industrial_motion_planner]: Registered Algorithm [PTP]
(registerContextLoader() at ./src/pilz_industrial_motion_planner.cpp:181)
[move_group-6] [INFO 1773776101.843471261]
[moveit.ros_planning.planning_pipeline]: Using planning interface 'Pilz
Industrial Motion Planner' (configure() at
./planning_pipeline/src/planning_pipeline.cpp:139)
[move_group-6] [INFO 1773776101.850439546]
[moveit.plugins.moveit_simple_controller_manager]: Added FollowJointTrajectory
controller for joint_trajectory_controller (initialize() at
./src/moveit_simple_controller_manager.cpp:182)
[move_group-6] [INFO 1773776101.850969838]
[moveit.plugins.moveit_simple_controller_manager]: Added FollowJointTrajectory
controller for streaming_controller (initialize() at
./src/moveit_simple_controller_manager.cpp:182)
[move_group-6] [INFO 1773776101.851028936]
[moveit.plugins.moveit_simple_controller_manager]: Returned 2 controllers in
list (getControllersList() at ./src/moveit_simple_controller_manager.cpp:233)
[move_group-6] [INFO 1773776101.851039060]
[moveit.plugins.moveit_simple_controller_manager]: Returned 2 controllers in
list (getControllersList() at ./src/moveit_simple_controller_manager.cpp:233)
[move_group-6] [INFO 1773776101.851113319]
[moveit_ros.trajectory_execution_manager]: Trajectory execution is managing
controllers (initialize() at
./trajectory_execution_manager/src/trajectory_execution_manager.cpp:204)
[move_group-6] [INFO 1773776101.851119005] [move_group.move_group]: MoveGroup
debug mode is ON (main() at ./src/move_group.cpp:290)
[move_group-6] [INFO 1773776101.856872620] [move_group.move_group]:
[move_group-6]
[move_group-6] ********************************************************
[move_group-6] * MoveGroup using:
[move_group-6] *          - ApplyPlanningSceneService
[move_group-6] *          - ClearOctomapService
[move_group-6] *          - CartesianPathService
[move_group-6] *          - ExecuteTrajectoryAction
[move_group-6] *          - GetPlanningSceneService
[move_group-6] *          - KinematicsService
[move_group-6] *          - MoveAction
[move_group-6] *          - MotionPlanService
[move_group-6] *          - QueryPlannersService
[move_group-6] *          - StateValidationService
[move_group-6] ********************************************************
[move_group-6]    (configureCapabilities() at ./src/move_group.cpp:195)
[move_group-6] [INFO 1773776101.856894713]
[moveit_move_group_capabilities_base.move_group_context]: MoveGroup context
using planning plugin ompl_interface/OMPLPlanner (status() at
./src/move_group_context.cpp:96)
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[move_group-6] [INFO 1773776101.856898604]
[moveit_move_group_capabilities_base.move_group_context]: MoveGroup context
initialization complete (status() at ./src/move_group_context.cpp:97)
[move_group-6] Loading 'move_group/ApplyPlanningSceneService'...
[move_group-6] Loading 'move_group/ClearOctomapService'...
[move_group-6] Loading 'move_group/MoveGroupCartesianPathService'...
[move_group-6] Loading 'move_group/MoveGroupExecuteTrajectoryAction'...
[move_group-6] Loading 'move_group/MoveGroupGetPlanningSceneService'...
[move_group-6] Loading 'move_group/MoveGroupKinematicsService'...
[move_group-6] Loading 'move_group/MoveGroupMoveAction'...
[move_group-6] Loading 'move_group/MoveGroupPlanService'...
[move_group-6] Loading 'move_group/MoveGroupQueryPlannersService'...
[move_group-6] Loading 'move_group/MoveGroupStateValidationService'...
[move_group-6]
[move_group-6] You can start planning now!
[move_group-6]
[rviz2-7] [INFO 1773776101.906887552] [rviz2]: Stereo is NOT SUPPORTED
(operator()() at ./src/main.cpp:62)
[rviz2-7] [INFO 1773776101.906929313] [rviz2]: OpenGl version: 4.5 (GLSL 4.5)
(operator()() at ./src/main.cpp:62)
[hal_mgr-1] [INFO 1773776101.913524437] [hal_mgr]: Created node (init_ros_node()
at /opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
hal_obj_base.py:83)
[hal_mgr-1] [INFO 1773776101.913799639] [hal_mgr]: Initializing 'hal_mgr'
component (__attrs_post_init__() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_component.py:71)
[hal_mgr-1] [INFO 1773776101.914025950] [hal_mgr]: New param 'update_rate',
default 10 (get_ros_param() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/hal_obj_base.py:133)
[hal_mgr-1] [INFO 1773776101.914879239] [hal_mgr]: New param 'hal_debug_output',
default True (get_ros_param() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/hal_obj_base.py:133)
[hal_mgr-1] [INFO 1773776101.915134244] [hal_mgr]: New param 'hal_debug_level',
default 1 (get_ros_param() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/hal_obj_base.py:133)
[hal_mgr-1] [INFO 1773776101.915641011] [hal_mgr]: Applying fastRTPS SHM hack:
/opt/ros/humble/share/hal_hw_interface/config/fastrtps_disable_shm.xml
(start_realtime() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
hal_mgr.py:49)
[hal_mgr-1] [INFO 1773776101.915776369] [hal_mgr]: Starting hal_mgr;
debug=1/level=5 (start_realtime() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/hal_mgr.py:51)
[rviz2-7] [INFO 1773776101.917545447] [rviz2]: Stereo is NOT SUPPORTED
(operator()() at ./src/main.cpp:62)
[hal_mgr-1] rtapi_msgd command:    /usr/libexec/machinekit/rtapi_msgd --
instance=0 --rtmsglevel=5 --usrmsglevel=5 --debug=5 --halsize=524288 -s
[hal_mgr-1] rtapi_app command:    /usr/libexec/machinekit/rtapi_app --instance=0
--debug=5 -s
[hal_mgr-1] Mar 17 14:35:01 msgd:0: startup pid=14717 rtlevel=5 usrlevel=5
halsize=524288 cc=gcc 11.4.0    version=unknown
[hal_mgr-1] Mar 17 14:35:01 msgd:0: ØMQ=4.3.4 czmq=4.2.1 protobuf=3.12.4
atomics=concurrencykit 0.7.1      libwebsockets=4.0.20
[hal_mgr-1] Mar 17 14:35:01 msgd:0: configured: sha=4ec052b33
[hal_mgr-1] Mar 17 14:35:01 msgd:0: built:            Apr    1 2024 16:49:03
sha=4ec052b33
[hal_mgr-1] Mar 17 14:35:01 rtapi:0: rtapi_app:0: Attached global segment
magic=0xeadbead
[hal_mgr-1] 4:rtapi_app:14749:user Loaded module rtapi from path
/usr/lib/machinekit/modules/rtapi.so
[hal_mgr-1] Mar 17 14:35:01 rtapi:0: 4:rtapi_app:14749:user Loaded module rtapi
from path /usr/lib/machinekit/modules/rtapi.so
[hal_mgr-1] 4:rtapi_app:14749:user rtapi default iparms: ''
[hal_mgr-1] Mar 17 14:35:01 rtapi:0: 4:rtapi_app:14749:user rtapi default
```

```
iparms: ''
[hal_mgr-1] 3::14749:rt INFO:    Picked default flavor 'posix' automatically
[hal_mgr-1] Mar 17 14:35:01 rtapi:0: 3::14749:rt INFO:    Picked default flavor
'posix' automatically
[hal_mgr-1] 4:rtapi_app:14749:user rtapi: loaded from
/usr/lib/machinekit/modules/rtapi.so
[hal_mgr-1] Mar 17 14:35:01 rtapi:0: 4:rtapi_app:14749:user rtapi: loaded
from /usr/lib/machinekit/modules/rtapi.so
[hal_mgr-1] 4:rtapi_app:14749:user Loaded module hal_lib from path
/usr/lib/machinekit/modules/hal_lib.so
[hal_mgr-1] Mar 17 14:35:01 rtapi:0: 4:rtapi_app:14749:user Loaded module
hal_lib from path /usr/lib/machinekit/modules/hal_lib.so
[hal_mgr-1] 4:rtapi_app:14749:user hal_lib default iparms: ''
[hal_mgr-1] Mar 17 14:35:01 rtapi:0: 4:rtapi_app:14749:user hal_lib default
iparms: ''
[hal_mgr-1] 4:rtapi_app:14749:user hal_lib: loaded from
/usr/lib/machinekit/modules/hal_lib.so
[hal_mgr-1] Mar 17 14:35:01 rtapi:0: 4:rtapi_app:14749:user hal_lib: loaded from
/usr/lib/machinekit/modules/hal_lib.so
[hal_mgr-1] 4:rtapi_app:14749:user accepting commands at
ipc:///tmp/0.rtapi.e5ed91c3-4a99-46fc-a7e3-b6c99f4b0873
[hal_mgr-1] Mar 17 14:35:01 rtapi:0: 4:rtapi_app:14749:user accepting commands
at ipc:///tmp/0.rtapi.e5ed91c3-4a99-46fc-a7e3-b6c99f4b0873
[hal_mgr-1] 3:rtapi_app:14749:user rtapi_app:0 ready flavor=posix gcc=11.4.0
git=unknown
[hal_mgr-1] Mar 17 14:35:01 rtapi:0: 3:rtapi_app:14749:user rtapi_app:0 ready
flavor=posix gcc=11.4.0 git=unknown
[hal_mgr-1] 4:rtapi_app:14749:user pid=14749 flavor=posix gcc=11.4.0 git=unknown
[hal_mgr-1] Mar 17 14:35:01 rtapi:0: 4:rtapi_app:14749:user pid=14749
flavor=posix gcc=11.4.0 git=unknown
[hal_mgr-1] 4:rtapi_app:14749:user pid=14749 flavor=posix gcc=11.4.0 git=unknown
[hal_mgr-1] Mar 17 14:35:01 rtapi:0: 4:rtapi_app:14749:user pid=14749
flavor=posix gcc=11.4.0 git=unknown
[hal_mgr-1] [INFO 1773776101.937276706] [hal_mgr]: hal_mgr/ready topic new
value:    True (publish_ready_topic() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
hal_mgr.py:91)
[hal_mgr-1] Mar 17 14:35:01 msgd:0: ULAPI:14749:rt libcgroup initialization
succeded
[hal_mgr-1] Mar 17 14:35:01 msgd:0: ULAPI:14749:rt rtapi_app_main:232 HAL:
initializing RT hal_lib support
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_xinitfv:83 HAL:
initializing component 'hal_lib' type=4 arg1=0 arg2=0/0x0
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt hal_heap_addmem:58 HAL:
extending arena by 262144 bytes
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_export_xfunctfv:84
HAL: exporting function 'newinst' type 2 fp=0 owner=66
[INFO] [hal_hw_interface.launch.hal_rt_node(hal_control_node)]: Loading HAL RT
component /opt/ros/humble/lib/hal_control_node
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_export_xfunctfv:84
HAL: exporting function 'delinst' type 2 fp=0 owner=66
[INFO] [hal_hw_interface.launch.hal_rt_node(hal_control_node)]:     args:
ARGV=--ros-args,--params-file,/tmp/launch_params_99jipi38,--params-file,/home/
User/Tormach/install/za6_hardware/share/za6_hardware/config/
hal_hw_interface.yaml,--params-file,/home/User/Tormach/install/
za6_moveit_config/share/za6_moveit_config/config/ros2_controllers.yaml
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_xinitfv:256 HAL:
singleton component 'hal_lib' id=66 initialized
[INFO] [hal_hw_interface.launch.hal_rt_node(hal_control_node)]: loadrt complete
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt rtapi_app_main:236 HAL: RT
hal_lib support initialized rc=66
[hal_mgr-1] Mar 17 14:35:01 msgd:0: RTAPI:14750:user ulapi_init(): ulapi loaded
[hal_mgr-1] Mar 17 14:35:01 msgd:0: RTAPI:14750:user Module 'HAL_hal_lib14750'
finished ULAPI init
```

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[hal_mgr-1] Mar 17 14:35:01 msgd:0: RTAPI:14750:user halg_xinitfv:256 HAL:
singleton component 'hal_lib14750' id=70 initialized
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14750:user Module 'HAL_halcmd14750'
finished ULAPI init
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14750:user --halcmd ping
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14750:user halg_exit:281 HAL:
removing component 72 'halcmd14750'
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14750:user ulapi_hal_lib_cleanup:271
HAL: lib_module_id=70
[hal_mgr-1] [INFO 1773776101.937513036] [hal_mgr]: hal_mgr:    Started realtime
(start_realtime() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
hal_mgr.py:64)
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14750:user halg_exit:281 HAL:
removing component 70 'hal_lib14750'
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14750:user halg_exit:303 HAL:
hal_errorcount()=0
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14750:user halg_exit:304 HAL:
_halerrno=0
[hal_mgr-1] 4:rtapi_app:14749:user pid=14749 flavor=posix gcc=11.4.0 git=unknown
[hal_mgr-1] Mar 17 14:35:01 rtapi:0: 4:rtapi_app:14749:user pid=14749
flavor=posix gcc=11.4.0 git=unknown
[hal_mgr-1] 4:rtapi_app:14749:user Loaded module hal_control_node from path
/opt/ros/humble/lib/hal_control_node.so
[hal_mgr-1] Mar 17 14:35:01 rtapi:0: 4:rtapi_app:14749:user Loaded module
hal_control_node from path /opt/ros/humble/lib/hal_control_node.so
[hal_mgr-1] 4:rtapi_app:14749:user hal_control_node default iparms: ''
[hal_mgr-1] Mar 17 14:35:01 rtapi:0: 4:rtapi_app:14749:user hal_control_node
default iparms: ''
[hal_mgr-1] [INFO 1773776101.944825141] [hal_control_node]: Initialized HAL
component 'hal_control_node' ID 75 (rtapi_app_main() at
/root/ros_colcon_ws/src/hal_ros_control/hal_hw_interface/src/hal_control_node.cp
p:121)
[hal_mgr-1] Mar 17 14:35:01 msgd:0: RTAPI:14546:user ulapi_init(): ulapi loaded
[hal_mgr-1] Mar 17 14:35:01 msgd:0: RTAPI:14546:user Module 'cyrtapimodule14546'
finished ULAPI init
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_xinitfv:83 HAL:
initializing component 'hal_control_node' type=1 arg1=0 arg2=0/0x0
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt Initialized HAL component
'hal_control_node' ID 75
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt       ROS args:    0 = '--
ros-args'
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt       ROS args:    1 = '--
params-file'
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt       ROS args:    2 =
'/tmp/launch_params_99jipi38'
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt       ROS args:    3 = '--
params-file'
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt       ROS args:    4 =
'/home/User/Tormach/install/za6_hardware/share/za6_hardware/config/
hal_hw_interface.yaml'
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt       ROS args:    5 = '--
params-file'
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt       ROS args:    6 =
'/home/User/Tormach/install/za6_moveit_config/share/za6_moveit_config/config/
ros2_controllers.yaml'
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt Initializing
hal_control_node.reset HAL pin
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_control_node.reset' bit I/O false
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt Initializing
hal_control_node.cm_ok HAL pin
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_control_node.cm_ok' bit OUT false
```

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[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt Initializing
hal_control_node.read/update/write HAL pins
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_control_node.tmax_read' s32 I/O 0
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_control_node.tmax_write' s32 I/O 0
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_control_node.tmax_update' s32 I/O 0
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt Initializing node executor
[hal_mgr-1] [WARN 1773776101.949644707] [controller_manager]: [Deprecated]
Passing the robot description parameter directly to the control_manager node is
deprecated. Use '~/robot_description' topic from 'robot_state_publisher'
instead. (ControllerManager() at ./src/controller_manager.cpp:295)
[hal_mgr-1] [INFO 1773776101.949735231] [resource_manager]: Loading hardware
'hal_hw_interface'   (load_hardware() at ./src/resource_manager.cpp:88)
[hal_mgr-1] [INFO 1773776101.950131132] [resource_manager]: Initialize hardware
'hal_hw_interface'   (initialize_hardware() at ./src/resource_manager.cpp:111)
[hal_mgr-1] [INFO 1773776101.950142633] [hal_control_node_system_interface]:
Initializing HAL hardware interface (on_init() at
/root/ros_colcon_ws/src/hal_ros_control/hal_hw_interface/src/hal_system_interfac
e.cpp:120)
[hal_mgr-1] [INFO 1773776101.950152341] [hal_control_node_system_interface]: HAL
component hal_control_node ID:    75 (on_init() at
/root/ros_colcon_ws/src/hal_ros_control/hal_hw_interface/src/hal_system_interfac
e.cpp:124)
[hal_mgr-1] [INFO 1773776101.950204636] [hal_control_node_system_interface]:
Initialized HAL pins (on_init() at
/root/ros_colcon_ws/src/hal_ros_control/hal_hw_interface/src/hal_system_interfac
e.cpp:151)
[hal_mgr-1] [INFO 1773776101.950208571] [resource_manager]: Successful
initialization of hardware 'hal_hw_interface' (initialize_hardware() at
./src/resource_manager.cpp:120)
[spawner-4] [INFO 1773776101.950343879] [spawner_joint_state_broadcaster]:
waiting for service /controller_manager/list_controllers to become available...
(service_caller() at
/opt/ros/humble/local/lib/python3.10/dist-packages/controller_manager/
controller_manager_services.py:127)
[spawner-2] [INFO 1773776101.950512049] [spawner_joint_trajectory_controller]:
waiting for service /controller_manager/list_controllers to become available...
(service_caller() at
/opt/ros/humble/local/lib/python3.10/dist-packages/controller_manager/
controller_manager_services.py:127)
[spawner-3] [INFO 1773776101.950700348] [spawner_streaming_controller]: waiting
for service /controller_manager/list_controllers to become available...
(service_caller() at
/opt/ros/humble/local/lib/python3.10/dist-packages/controller_manager/
controller_manager_services.py:127)
[hal_mgr-1] [INFO 1773776101.950211998] [hal_control_node_system_interface]:
Exporting state interfaces (export_state_interfaces() at
/root/ros_colcon_ws/src/hal_ros_control/hal_hw_interface/src/hal_system_interfac
e.cpp:159)
[hal_mgr-1] [INFO 1773776101.950220228] [hal_control_node_system_interface]:
Exporting command interfaces (export_command_interfaces() at
/root/ros_colcon_ws/src/hal_ros_control/hal_hw_interface/src/hal_system_interfac
e.cpp:170)
[hal_mgr-1] [INFO 1773776101.950236202] [resource_manager]: 'configure' hardware
'hal_hw_interface'   (operator()() at ./src/resource_manager.cpp:45)
[hal_mgr-1] [INFO 1773776101.950240761] [resource_manager]: Successful
'configure' of hardware 'hal_hw_interface' (operator()() at
./src/resource_manager.cpp:54)
[hal_mgr-1] [INFO 1773776101.950246174] [resource_manager]: 'activate' hardware
'hal_hw_interface'   (operator()() at ./src/resource_manager.cpp:45)
[hal_mgr-1] [INFO 1773776101.950249474] [resource_manager]: Successful
'activate' of hardware 'hal_hw_interface' (operator()() at
```

./src/resource_manager.cpp:54)
[hal_mgr-1] [INFO 1773776101.951039611] [hal_control_node]: HAL component ready! (rtapi_app_main() at
/root/ros_colcon_ws/src/hal_ros_control/hal_hw_interface/src/hal_control_node.cpp:212)
[hal_mgr-1] [INFO 1773776101.951048222] [controller_manager]: HAL controller manager initializing (rtapi_app_main() at
/root/ros_colcon_ws/src/hal_ros_control/hal_hw_interface/src/hal_control_node.cpp:216)
[hal_mgr-1] 4:rtapi_app:14749:user hal_control_node: loaded from
/opt/ros/humble/lib/hal_control_node.so
[hal_mgr-1] Mar 17 14:35:01 rtapi:0: 4:rtapi_app:14749:user hal_control_node:
loaded from /opt/ros/humble/lib/hal_control_node.so
[rviz2-7] Warning: class_loader.impl: SEVERE WARNING!!! A namespace collision
has occurred with plugin factory for class
rviz_default_plugins::displays::InteractiveMarkerDisplay. New factory will
OVERWRITE existing one. This situation occurs when libraries containing plugins
are directly linked against an executable (the one running right now generating
this message). Please separate plugins out into their own library or just don't
link against the library and use either
class_loader::ClassLoader/MultiLibraryClassLoader to open.
[rviz2-7]   at line 253 in
/opt/ros/humble/include/class_loader/class_loader/class_loader_core.hpp
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt Initializing HAL hardware
interface
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt HAL component
hal_control_node ID: 75
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_1.position_cmd' float OUT 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_1.velocity_cmd' float OUT 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_1.position_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_1.velocity_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_1.effort_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_2.position_cmd' float OUT 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_2.velocity_cmd' float OUT 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_2.position_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_2.velocity_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_2.effort_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_3.position_cmd' float OUT 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_3.velocity_cmd' float OUT 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_3.position_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_3.velocity_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_3.effort_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_4.position_cmd' float OUT 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_4.velocity_cmd' float OUT 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_4.position_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:

creating pin 'hal_hw_interface.joint_4.velocity_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_4.effort_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_5.position_cmd' float OUT 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_5.velocity_cmd' float OUT 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_5.position_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_5.velocity_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_5.effort_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_6.position_cmd' float OUT 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_6.velocity_cmd' float OUT 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_6.position_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_6.velocity_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_hw_interface.joint_6.effort_fb' float IN 0.000000
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt Initialized HAL pins
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt Exporting state interfaces
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt Exporting command
interfaces
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt Starting executor
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt Exporting HAL function;
marking component ready
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_export_xfunctfv:84
HAL: exporting function 'hal_control_node.funct' type 0 fp=1 owner=75
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_control_node.funct.time' s32 OUT 0
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_control_node.funct.tmax' s32 I/O 0
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt halg_pin_newfv:191 HAL:
creating pin 'hal_control_node.funct.tmax-inc' bit OUT false
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt HAL component ready!
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14749:rt HAL controller manager
initializing
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14546:user halg_xinitfv:83 HAL:
initializing component 'machinekit::hal14546' type=2 arg1=0 arg2=0/0x0
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14546:user halg_xinitfv:83 HAL:
initializing component 'hal_lib14546' type=4 arg1=0 arg2=0/0x0
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14546:user Module 'HAL_hal_lib14546'
finished ULAPI init
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14546:user halg_xinitfv:256 HAL:
singleton component 'hal_lib14546' id=116 initialized
[hal_mgr-1] Mar 17 14:35:01 msgd:0: hal_lib:14546:user Module
'HAL_machinekit::hal14546' finished ULAPI init
[hal_mgr-1] [INFO 1773776101.967735512] [controller_manager]: Loading controller
'streaming_controller' (load_controller() at ./src/controller_manager.cpp:608)
[spawner-3] [INFO 1773776101.971224894] [spawner_streaming_controller]: Loaded
streaming_controller (main() at /opt/ros/humble/local/lib/python3.10/dist-
packages/controller_manager/spawner.py:237)
[hal_mgr-1] [INFO 1773776101.971589234] [controller_manager]: Configuring
controller 'streaming_controller' (configure_controller() at
./src/controller_manager.cpp:797)
[hal_mgr-1] [INFO 1773776101.972015895] [streaming_controller]: configure
successful (on_configure() at ./src/forward_controllers_base.cpp:65)
[INFO] [hal_hw_interface.launch.hal_ordered_action]: HAL action hal_control_node
ready
[INFO] [hal_hw_interface.launch.hal_ordered_action]: Executing deferred action

```
<HalUserNode 'hw_device_mgr'>
[INFO] [hw_device_mgr-8]: process details:
cmd='/home/User/Tormach/install/za6_hardware/lib/za6_hardware/hw_device_mgr --
sim --ros-args --params-file /tmp/launch_params_tdlhg3n_ --params-file
/home/User/Tormach/install/za6_hardware/share/za6_hardware/config/
hal_hw_device_mgr.yaml', cwd='None', custom_env?=True
[INFO] [hw_device_mgr-8]: process started with pid [14802]
[hw_device_mgr-8] 2026-03-17 14:35:02,161 [INFO]ZA_sim_device_mgr: Reading sim
device data from
'/home/User/Tormach/install/za6_hardware/share/za6_hardware/config/
hal_sim_devices.yaml'
[hw_device_mgr-8] 2026-03-17 14:35:02,164
[INFO]hw_device_mgr.ethercat.xml_reader: Reading ESI from
(hw_device_mgr.devices.device_xml, BogusServo.xml)
[hw_device_mgr-8] 2026-03-17 14:35:02,167
[INFO]hw_device_mgr.ethercat.xml_reader: Reading ESI from
(hw_device_mgr.devices.device_xml, SV660_EOE_1Axis_V9.12.xml)
[INFO] [spawner-3]: process has finished cleanly [pid 14562]
[hw_device_mgr-8] 2026-03-17 14:35:02,178
[INFO]hw_device_mgr.ethercat.xml_reader: Reading ESI from
(hw_device_mgr.devices.device_xml, iTegva_E7x_Series.xml)
[hw_device_mgr-8] 2026-03-17 14:35:02,181
[INFO]hw_device_mgr.ethercat.xml_reader: Reading ESI from
(hw_device_mgr.devices.device_xml, IS620N_v2.6.7.xml)
[hw_device_mgr-8] 2026-03-17 14:35:02,197 [INFO]ZA_sim_device_mgr: Starting in
sim mode
[hw_device_mgr-8] 2026-03-17 14:35:02,197 [INFO]ZA_sim_device_mgr: Initializing
'ZA_sim_device_mgr' ROS node
[hw_device_mgr-8] 2026-03-17 14:35:02,197 [INFO]ZA_sim_device_mgr: Reading
device config from
'/home/User/Tormach/install/za6_hardware/share/za6_hardware/config/
hal_device_config.yaml'
[hal_mgr-1] [INFO 1773776102.201671830] [controller_manager]: Loading controller
'joint_state_broadcaster' (load_controller() at
./src/controller_manager.cpp:608)
[hal_mgr-1] [INFO 1773776102.204638787] [controller_manager]: Loading controller
'joint_trajectory_controller' (load_controller() at
./src/controller_manager.cpp:608)
[spawner-4] [INFO 1773776102.204917233] [spawner_joint_state_broadcaster]:
Loaded joint_state_broadcaster (main() at
/opt/ros/humble/local/lib/python3.10/dist-packages/controller_manager/
spawner.py:237)
[hal_mgr-1] [INFO 1773776102.207547404] [controller_manager]: Configuring
controller 'joint_state_broadcaster' (configure_controller() at
./src/controller_manager.cpp:797)
[hal_mgr-1] [INFO 1773776102.207599964] [joint_state_broadcaster]: 'joints' or
'interfaces' parameter is empty. All available state interfaces will be
published (on_configure() at ./src/joint_state_broadcaster.cpp:108)
[spawner-2] [INFO 1773776102.207831283] [spawner_joint_trajectory_controller]:
Loaded joint_trajectory_controller (main() at
/opt/ros/humble/local/lib/python3.10/dist-packages/controller_manager/
spawner.py:237)
[hal_mgr-1] [INFO 1773776102.209177134] [controller_manager]: Configuring
controller 'joint_trajectory_controller' (configure_controller() at
./src/controller_manager.cpp:797)
[hal_mgr-1] [INFO 1773776102.209246489] [joint_trajectory_controller]: No
specific joint names are used for command interfaces. Using 'joints' parameter.
(on_configure() at ./src/joint_trajectory_controller.cpp:693)
[hal_mgr-1] [INFO 1773776102.209273959] [joint_trajectory_controller]: Command
interfaces are [position velocity] and state interfaces are [position velocity].
(on_configure() at ./src/joint_trajectory_controller.cpp:822)
[hal_mgr-1] [INFO 1773776102.209285435] [joint_trajectory_controller]: Using
'splines' interpolation method. (on_configure() at
./src/joint_trajectory_controller.cpp:833)
```

[hal_mgr-1] [INFO 1773776102.209434503] [joint_trajectory_controller]:
Controller state will be published at 50.00 Hz. (on_configure() at
./src/joint_trajectory_controller.cpp:847)
[hal_mgr-1] [INFO 1773776102.210282027] [joint_trajectory_controller]: Action
status changes will be monitored at 20.00 Hz. (on_configure() at
./src/joint_trajectory_controller.cpp:927)
[hw_device_mgr-8] 2026-03-17 14:35:02,254 [INFO]ZA_sim_device_mgr: New device
manager instance starting
[hw_device_mgr-8] 2026-03-17 14:35:02,254 [INFO]ZA_sim_device_mgr: Initializing
devices
[hw_device_mgr-8] 2026-03-17 14:35:02,254 [INFO](0x00B090C0,
0xB0905030)@(0,0,0): EtherCATSimConfig:(0x00B090C0,0xB0905030)@(0,0,0) created
from bus scan
[hw_device_mgr-8] 2026-03-17 14:35:02,254 [INFO](0x00B090C0,
0xB0905030)@(0,1,0): EtherCATSimConfig:(0x00B090C0,0xB0905030)@(0,1,0) created
from bus scan
[hw_device_mgr-8] 2026-03-17 14:35:02,254 [INFO](0x00B090C0,
0xB0905030)@(0,2,0): EtherCATSimConfig:(0x00B090C0,0xB0905030)@(0,2,0) created
from bus scan
[hw_device_mgr-8] 2026-03-17 14:35:02,254 [INFO](0x00B090C0,
0xB0905030)@(0,3,0): EtherCATSimConfig:(0x00B090C0,0xB0905030)@(0,3,0) created
from bus scan
[hw_device_mgr-8] 2026-03-17 14:35:02,254 [INFO](0x00B090C0,
0xB0905030)@(0,4,0): EtherCATSimConfig:(0x00B090C0,0xB0905030)@(0,4,0) created
from bus scan
[hw_device_mgr-8] 2026-03-17 14:35:02,254 [INFO](0x00B090C0,
0xB0905030)@(0,5,0): EtherCATSimConfig:(0x00B090C0,0xB0905030)@(0,5,0) created
from bus scan
[hw_device_mgr-8] 2026-03-17 14:35:02,256 [INFO]ZA_sim_device_mgr: Initialized
device ZA_sim_drive@(0,0,0)
[hw_device_mgr-8] 2026-03-17 14:35:02,257 [INFO]ZA_sim_device_mgr: Initialized
device ZA_sim_drive@(0,1,0)
[hw_device_mgr-8] 2026-03-17 14:35:02,257 [INFO]ZA_sim_device_mgr: Initialized
device ZA_sim_drive@(0,2,0)
[hw_device_mgr-8] 2026-03-17 14:35:02,258 [INFO]ZA_sim_device_mgr: Initialized
device ZA_sim_drive@(0,3,0)
[hw_device_mgr-8] 2026-03-17 14:35:02,258 [INFO]ZA_sim_device_mgr: Initialized
device ZA_sim_drive@(0,4,0)
[hw_device_mgr-8] 2026-03-17 14:35:02,258 [INFO]ZA_sim_device_mgr: Initialized
device ZA_sim_drive@(0,5,0)
[hw_device_mgr-8] 2026-03-17 14:35:02,259 [INFO]ZA_sim_device_mgr: Device
manager initialization complete
[hw_device_mgr-8] 2026-03-17 14:35:02,260 [INFO]ZA_sim_device_mgr: HAL component
'hw_device_mgr' ready
[hw_device_mgr-8] 2026-03-17 14:35:02,260 [INFO]ZA_sim_device_mgr: Initialized
'ZA_sim_device_mgr' ROS node
[hal_mgr-1] Mar 17 14:35:02 msgd:0: RTAPI:14802:user ulapi_init(): ulapi loaded
[hal_mgr-1] Mar 17 14:35:02 msgd:0: RTAPI:14802:user Module 'HAL_hal_lib14802'
finished ULAPI init
[hal_mgr-1] Mar 17 14:35:02 msgd:0: RTAPI:14802:user halg_xinitfv:256 HAL:
singleton component 'hal_lib14802' id=120 initialized
[hal_mgr-1] Mar 17 14:35:02 msgd:0: hal_lib:14802:user Module
'HAL_hw_device_mgr' finished ULAPI init
[hal_mgr-1] Mar 17 14:35:02 msgd:0: hal_lib:14802:user halg_pin_newfv:191 HAL:
creating pin 'hw_device_mgr.0.0.0.sim_error_code' u32 OUT 0
[hal_mgr-1] Mar 17 14:35:02 msgd:0: hal_lib:14802:user halg_pin_newfv:191 HAL:
creating pin 'hw_device_mgr.0.0.0.sim_online' bit OUT false
[hal_mgr-1] Mar 17 14:35:02 msgd:0: hal_lib:14802:user halg_pin_newfv:191 HAL:
creating pin 'hw_device_mgr.0.0.0.sim_oper' bit OUT false
[hal_mgr-1] Mar 17 14:35:02 msgd:0: hal_lib:14802:user halg_pin_newfv:191 HAL:
creating pin 'hw_device_mgr.0.0.0.sim_status_word' u32 OUT 0
[hal_mgr-1] Mar 17 14:35:02 msgd:0: hal_lib:14802:user halg_pin_newfv:191 HAL:
creating pin 'hw_device_mgr.0.0.0.sim_control_mode_fb' s32 OUT 0
[INFO] [hal_hw_interface.launch.hal_ordered_action]: HAL action hw_device_mgr

ready
[INFO] [hal_hw_interface.launch.hal_ordered_action]: Executing deferred action
<HalUserNode 'hal_io'>
[INFO] [hal_io-9]: process details:
cmd='/opt/ros/humble/lib/hal_hw_interface/hal_io
/home/User/Tormach/install/za6_hardware/share/za6_hardware/config/
hal_io_config.yaml --ros-args --params-file
/home/User/Tormach/install/za6_hardware/share/za6_hardware/config/hal_io.yaml',
cwd='None', custom_env?=True
[INFO] [hal_io-9]: process started with pid [14817]
[hw_device_mgr-8] 2026-03-17 14:35:02,364 [INFO]ZA_sim_drive@(0,0,0): Goal not
reached: Offline
[hw_device_mgr-8] 2026-03-17 14:35:02,364 [INFO]ZA_sim_drive@(0,1,0): Goal not
reached: Offline
[hw_device_mgr-8] 2026-03-17 14:35:02,364 [INFO]ZA_sim_drive@(0,2,0): Goal not
reached: Offline
[hw_device_mgr-8] 2026-03-17 14:35:02,364 [INFO]ZA_sim_drive@(0,3,0): Goal not
reached: Offline
[hw_device_mgr-8] 2026-03-17 14:35:02,364 [INFO]ZA_sim_drive@(0,4,0): Goal not
reached: Offline
[hw_device_mgr-8] 2026-03-17 14:35:02,364 [INFO]ZA_sim_drive@(0,5,0): Goal not
reached: Offline
[hw_device_mgr-8] 2026-03-17 14:35:02,364 [INFO]ZA_sim_device_mgr: Goal not
reached: Offline
(ZA_sim_drive@(0,0,0),ZA_sim_drive@(0,1,0),ZA_sim_drive@(0,2,0),ZA_sim_drive@(0,
3,0),ZA_sim_drive@(0,4,0),ZA_sim_drive@(0,5,0))
[hw_device_mgr-8] 2026-03-17 14:35:02,364 [INFO]ZA_sim_device_mgr: Waiting for
devices to come online before init
[hal_io-9] [INFO 1773776102.469455759] [hal_io]: Created node (init_ros_node()
at /opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
hal_obj_base.py:83)
[hal_io-9] [INFO 1773776102.469625596] [hal_io]: Initializing 'hal_io' component
(__attrs_post_init__() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_component.py:71)
[hal_io-9] [INFO 1773776102.469750093] [hal_io]: New param 'update_rate',
default 10 (get_ros_param() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/hal_obj_base.py:133)
[hal_io-9] [INFO 1773776102.470112924] [hal_io]: Reading config file
'/home/User/Tormach/install/za6_hardware/share/za6_hardware/config/
hal_io_config.yaml' (read_config() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/hal_io_comp.py:58)
[hal_io-9] [INFO 1773776102.472805475] [hal_io]: Created pin "dout01" type/dir
"HAL_BIT/HAL_OUT" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.472935828] [hal_io]: Creating publisher on topic
"dout01" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.473534892] [hal_io]: Creating subscriber on topic
"hal_io/dout01" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
[hal_io-9] [INFO 1773776102.473797224] [hal_io]: Created pin "dout02" type/dir
"HAL_BIT/HAL_OUT" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.473923088] [hal_io]: Creating publisher on topic
"dout02" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.474138901] [hal_io]: Creating subscriber on topic
"hal_io/dout02" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
[hal_io-9] [INFO 1773776102.474365750] [hal_io]: Created pin "dout03" type/dir
"HAL_BIT/HAL_OUT" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-

packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.474486567] [hal_io]: Creating publisher on topic
"dout03" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.474696970] [hal_io]: Creating subscriber on topic
"hal_io/dout03" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
[hal_io-9] [INFO 1773776102.474911008] [hal_io]: Created pin "dout04" type/dir
"HAL_BIT/HAL_OUT" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.475032530] [hal_io]: Creating publisher on topic
"dout04" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.475246157] [hal_io]: Creating subscriber on topic
"hal_io/dout04" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
[hal_io-9] [INFO 1773776102.475454543] [hal_io]: Created pin "dout05" type/dir
"HAL_BIT/HAL_OUT" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.475573784] [hal_io]: Creating publisher on topic
"dout05" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.475767525] [hal_io]: Creating subscriber on topic
"hal_io/dout05" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
[hal_io-9] [INFO 1773776102.475972776] [hal_io]: Created pin "dout06" type/dir
"HAL_BIT/HAL_OUT" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.476091436] [hal_io]: Creating publisher on topic
"dout06" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.476296889] [hal_io]: Creating subscriber on topic
"hal_io/dout06" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
[hal_io-9] [INFO 1773776102.476516028] [hal_io]: Created pin "dout07" type/dir
"HAL_BIT/HAL_OUT" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.476637209] [hal_io]: Creating publisher on topic
"dout07" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.476830001] [hal_io]: Creating subscriber on topic
"hal_io/dout07" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
[hal_io-9] [INFO 1773776102.477031807] [hal_io]: Created pin "dout08" type/dir
"HAL_BIT/HAL_OUT" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.477155647] [hal_io]: Creating publisher on topic
"dout08" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.477348764] [hal_io]: Creating subscriber on topic
"hal_io/dout08" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
[hal_io-9] [INFO 1773776102.477551867] [hal_io]: Created pin "dout09" type/dir
"HAL_BIT/HAL_OUT" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.477672774] [hal_io]: Creating publisher on topic
"dout09" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)

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[hal_io-9] [INFO 1773776102.477870715] [hal_io]: Creating subscriber on topic
"hal_io/dout09" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
[hal_io-9] [INFO 1773776102.478084564] [hal_io]: Created pin "dout10" type/dir
"HAL_BIT/HAL_OUT" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.478208453] [hal_io]: Creating publisher on topic
"dout10" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.478410498] [hal_io]: Creating subscriber on topic
"hal_io/dout10" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
[hal_io-9] [INFO 1773776102.478616499] [hal_io]: Created pin "dout11" type/dir
"HAL_BIT/HAL_OUT" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.478735603] [hal_io]: Creating publisher on topic
"dout11" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.478929916] [hal_io]: Creating subscriber on topic
"hal_io/dout11" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
[hal_io-9] [INFO 1773776102.479133424] [hal_io]: Created pin "dout12" type/dir
"HAL_BIT/HAL_OUT" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.479256670] [hal_io]: Creating publisher on topic
"dout12" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.479453304] [hal_io]: Creating subscriber on topic
"hal_io/dout12" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
[hal_io-9] [INFO 1773776102.479653938] [hal_io]: Created pin "dout13" type/dir
"HAL_BIT/HAL_OUT" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.479772614] [hal_io]: Creating publisher on topic
"dout13" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.479968011] [hal_io]: Creating subscriber on topic
"hal_io/dout13" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
[hal_io-9] [INFO 1773776102.480201327] [hal_io]: Created pin "dout14" type/dir
"HAL_BIT/HAL_OUT" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.480324529] [hal_io]: Creating publisher on topic
"dout14" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.480532583] [hal_io]: Creating subscriber on topic
"hal_io/dout14" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
[hal_io-9] [INFO 1773776102.480745543] [hal_io]: Created pin "dout15" type/dir
"HAL_BIT/HAL_OUT" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.480866672] [hal_io]: Creating publisher on topic
"dout15" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.481065767] [hal_io]: Creating subscriber on topic
"hal_io/dout15" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
```

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[hal_io-9] [INFO 1773776102.481306285] [hal_io]: Created pin "dout16" type/dir
"HAL_BIT/HAL_OUT" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.481425200] [hal_io]: Creating publisher on topic
"dout16" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.481632230] [hal_io]: Creating subscriber on topic
"hal_io/dout16" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
[hal_io-9] [INFO 1773776102.481849837] [hal_io]: Created pin "control_mode"
type/dir "HAL_S32/HAL_OUT" (_hal_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.481971159] [hal_io]: Creating publisher on topic
"control_mode" (_ros_publisher_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.482223558] [hal_io]: Creating subscriber on topic
"hal_io/control_mode" (_ros_subscriber_init() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_pin.py:297)
[hal_io-9] [INFO 1773776102.482447902] [hal_io]: Created pin "din01" type/dir
"HAL_BIT/HAL_IN" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.482568394] [hal_io]: Creating publisher on topic
"din01" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.482816977] [hal_io]: Created pin "din02" type/dir
"HAL_BIT/HAL_IN" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.482939450] [hal_io]: Creating publisher on topic
"din02" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.483173483] [hal_io]: Created pin "din03" type/dir
"HAL_BIT/HAL_IN" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.483293383] [hal_io]: Creating publisher on topic
"din03" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.483513127] [hal_io]: Created pin "din04" type/dir
"HAL_BIT/HAL_IN" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.483631208] [hal_io]: Creating publisher on topic
"din04" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.483846367] [hal_io]: Created pin "din05" type/dir
"HAL_BIT/HAL_IN" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.483966723] [hal_io]: Creating publisher on topic
"din05" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.484190926] [hal_io]: Created pin "din06" type/dir
"HAL_BIT/HAL_IN" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.484311323] [hal_io]: Creating publisher on topic
"din06" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.484520538] [hal_io]: Created pin "din07" type/dir
"HAL_BIT/HAL_IN" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.484639435] [hal_io]: Creating publisher on topic
"din07" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
```

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[hal_io-9] [INFO 1773776102.484858030] [hal_io]: Created pin "din08" type/dir
"HAL_BIT/HAL_IN" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.484975727] [hal_io]: Creating publisher on topic
"din08" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.485192563] [hal_io]: Created pin "din09" type/dir
"HAL_BIT/HAL_IN" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.485311029] [hal_io]: Creating publisher on topic
"din09" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.485522284] [hal_io]: Created pin "din10" type/dir
"HAL_BIT/HAL_IN" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.485638665] [hal_io]: Creating publisher on topic
"din10" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.485849495] [hal_io]: Created pin "din11" type/dir
"HAL_BIT/HAL_IN" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.485966647] [hal_io]: Creating publisher on topic
"din11" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.486190167] [hal_io]: Created pin "din12" type/dir
"HAL_BIT/HAL_IN" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.486311611] [hal_io]: Creating publisher on topic
"din12" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.486533231] [hal_io]: Created pin "din13" type/dir
"HAL_BIT/HAL_IN" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.486651295] [hal_io]: Creating publisher on topic
"din13" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.486864746] [hal_io]: Created pin "din14" type/dir
"HAL_BIT/HAL_IN" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.486980969] [hal_io]: Creating publisher on topic
"din14" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.487194214] [hal_io]: Created pin "din15" type/dir
"HAL_BIT/HAL_IN" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.487311175] [hal_io]: Creating publisher on topic
"din15" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.487526094] [hal_io]: Created pin "din16" type/dir
"HAL_BIT/HAL_IN" (_hal_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:85)
[hal_io-9] [INFO 1773776102.487650611] [hal_io]: Creating publisher on topic
"din16" (_ros_publisher_init() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/ros_hal_pin.py:209)
[hal_io-9] [INFO 1773776102.487875055] [hal_io]: User component 'hal_io' ready
(setup_component() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_component.py:105)
[INFO] [hal_hw_interface.launch.hal_ordered_action]: HAL action hal_io ready
[INFO] [hal_hw_interface.launch.hal_ordered_action]: Executing deferred action
<HalUserNode 'drive_state'>
[INFO] [drive_state-10]: process details:
cmd='/home/User/Tormach/install/za6_hardware/lib/za6_hardware/drive_state --ros-
args --params-file /tmp/launch_params_ii_2_2ou', cwd='None', custom_env?=True
```

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[INFO] [drive_state-10]: process started with pid [14828]
[drive_state-10] [INFO 1773776102.703015982] [drive_state]: Created node
(init_ros_node() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
hal_obj_base.py:83)
[drive_state-10] [INFO 1773776102.703723665] [drive_state]: Service
'enable_drives' created (init_state_services() at
/home/User/Tormach/install/za6_hardware/local/lib/python3.10/dist-packages/
hal_plumber/drive_state.py:176)
[drive_state-10] [INFO 1773776102.703973643] [drive_state]: Service
'disable_drives' created (init_state_services() at
/home/User/Tormach/install/za6_hardware/local/lib/python3.10/dist-packages/
hal_plumber/drive_state.py:183)
[drive_state-10] [INFO 1773776102.704110258] [drive_state]: New param
'joint_trajectory_topic', default
'/joint_trajectory_controller/joint_trajectory' (get_ros_param() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
hal_obj_base.py:133)
[drive_state-10] [INFO 1773776102.704361368] [drive_state]: New param 'timeout',
default 15 (get_ros_param() at /opt/ros/humble/local/lib/python3.10/dist-
packages/hal_hw_interface/hal_obj_base.py:133)
[drive_state-10] [INFO 1773776102.704573180] [drive_state]: New param
'update_rate', default 10 (get_ros_param() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
hal_obj_base.py:133)
[drive_state-10] [INFO 1773776102.706576476] [drive_state]: Joint states sub +
pub created (init_state_services() at
/home/User/Tormach/install/za6_hardware/local/lib/python3.10/dist-packages/
hal_plumber/drive_state.py:195)
[drive_state-10] [INFO 1773776102.707635998] [drive_state]: Service 'home_joint'
created (init_home_service() at
/home/User/Tormach/install/za6_hardware/local/lib/python3.10/dist-packages/
hal_plumber/drive_state.py:466)
[drive_state-10] [INFO 1773776102.707915760] [drive_state]: Publisher
'drives_enabled' created (init_topics() at
/home/User/Tormach/install/za6_hardware/local/lib/python3.10/dist-packages/
hal_plumber/drive_state.py:478)
[drive_state-10] [INFO 1773776102.708133273] [drive_state]: Publisher
'drives_faulted' created (init_topics() at
/home/User/Tormach/install/za6_hardware/local/lib/python3.10/dist-packages/
hal_plumber/drive_state.py:486)
[drive_state-10] [INFO 1773776102.708306809] [drive_state]: Initializing
'drive_state' component (__attrs_post_init__() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_component.py:71)
[drive_state-10] [INFO 1773776102.708511715] [drive_state]: New param
'device_config_path', default '' (get_ros_param() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
hal_obj_base.py:133)
[drive_state-10] [INFO 1773776102.764172152] [drive_state]: New param
'sim_mode', default False (get_ros_param() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
hal_obj_base.py:133)
[drive_state-10] 2026-03-17 14:35:02,764
[INFO]hw_device_mgr.ethercat.xml_reader: Reading ESI from
(hw_device_mgr.devices.device_xml, BogusServo.xml)
[drive_state-10] 2026-03-17 14:35:02,767
[INFO]hw_device_mgr.ethercat.xml_reader: Reading ESI from
(hw_device_mgr.devices.device_xml, SV660_EOE_1Axis_V9.12.xml)
[drive_state-10] 2026-03-17 14:35:02,777
[INFO]hw_device_mgr.ethercat.xml_reader: Reading ESI from
(hw_device_mgr.devices.device_xml, iTegva_E7x_Series.xml)
[drive_state-10] 2026-03-17 14:35:02,780
[INFO]hw_device_mgr.ethercat.xml_reader: Reading ESI from
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(hw_device_mgr.devices.device_xml, IS620N_v2.6.7.xml)
[drive_state-10] [INFO 1773776102.794368035] [drive_state]: New param
'sim_device_data_path', default '' (get_ros_param() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
hal_obj_base.py:133)
[drive_state-10] Traceback (most recent call last):
[drive_state-10]      File
"/home/User/Tormach/install/za6_hardware/lib/za6_hardware/drive_state", line 12,
in <module>
[drive_state-10]          ds = DriveState(argv=sys.argv[1:],
qos_reliability_policy="RELIABLE")
[drive_state-10]      File "<attrs generated init
hal_plumber.drive_state.DriveState>", line 7, in __init__
[drive_state-10]      File
"/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_component.py", line 78, in __attrs_post_init__
[drive_state-10]          self.init_hal_comp()
[drive_state-10]      File
"/home/User/Tormach/install/za6_hardware/local/lib/python3.10/dist-packages/
hal_plumber/drive_state.py", line 111, in init_hal_comp
[drive_state-10]          drv_cls.init_sim(sim_device_data=sim_dev_data)
[drive_state-10] AttributeError: type object 'ZASimDrives' has no attribute
'init_sim'
[ERROR] [drive_state-10]: process has died [pid 14828, exit code 1, cmd
'/home/User/Tormach/install/za6_hardware/lib/za6_hardware/drive_state --ros-args
--params-file /tmp/launch_params_ii_2_2ou'].
[rviz2-7] [ERROR 1773776104.959222683]
[moveit_ros_visualization.motion_planning_frame]: Action server:
/recognize_objects not available (MotionPlanningFrame() at
./motion_planning_rviz_plugin/src/motion_planning_frame.cpp:214)
[rviz2-7] [INFO 1773776104.982488623]
[moveit_ros_visualization.motion_planning_frame]: MoveGroup namespace changed: /
-> . Reloading params. (enable() at
./motion_planning_rviz_plugin/src/motion_planning_frame.cpp:597)
[rviz2-7] [INFO 1773776105.342106585] [moveit_rdf_loader.rdf_loader]: Loaded
robot model in 0.318714 seconds (RDFLoader() at
./rdf_loader/src/rdf_loader.cpp:80)
[rviz2-7] [INFO 1773776105.342200862] [moveit_robot_model.robot_model]: Loading
robot model 'za6'... (buildModel() at ./robot_model/src/robot_model.cpp:89)
[rviz2-7] [INFO 1773776105.342236343] [moveit_robot_model.robot_model]: No
root/virtual joint specified in SRDF. Assuming fixed joint
(constructJointModel() at ./robot_model/src/robot_model.cpp:959)
[rviz2-7] [INFO 1773776105.407399768]
[moveit_ros.planning_scene_monitor.planning_scene_monitor]: Starting planning
scene monitor (startSceneMonitor() at
./planning_scene_monitor/src/planning_scene_monitor.cpp:1108)
[rviz2-7] [INFO 1773776105.409729598]
[moveit_ros.planning_scene_monitor.planning_scene_monitor]: Listening to
'/monitored_planning_scene' (startSceneMonitor() at
./planning_scene_monitor/src/planning_scene_monitor.cpp:1116)
[rviz2-7] [INFO 1773776105.484650025]
[interactive_marker_display_97382236168528]: Connected on namespace:
/rviz_moveit_motion_planning_display/robot_interaction_interactive_marker_topic
(updateStatus() at ./src/interactive_marker_client.cpp:406)
[rviz2-7] [INFO 1773776105.487395721]
[moveit_ros_visualization.motion_planning_frame]: group manipulator
(changePlanningGroupHelper() at
./motion_planning_rviz_plugin/src/motion_planning_frame.cpp:379)
[rviz2-7] [INFO 1773776105.487405343]
[moveit_ros_visualization.motion_planning_frame]: Constructing new MoveGroup
connection for group 'manipulator' in namespace '' (changePlanningGroupHelper()
at ./motion_planning_rviz_plugin/src/motion_planning_frame.cpp:382)
[rviz2-7] [INFO 1773776105.490150125] [move_group_interface]: Ready to take
commands for planning group manipulator. (MoveGroupInterfaceImpl() at
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./move_group_interface/src/move_group_interface.cpp:185)
[rviz2-7] [INFO 1773776105.490568308]
[moveit_ros_visualization.motion_planning_frame]: group manipulator
(changePlanningGroupHelper() at
./motion_planning_rviz_plugin/src/motion_planning_frame.cpp:379)
[rviz2-7] [INFO 1773776105.508092252]
[interactive_marker_display_97382236168528]: Sending request for interactive
markers (updateStatus() at ./src/interactive_marker_client.cpp:406)
[rviz2-7] [INFO 1773776105.542883584]
[interactive_marker_display_97382236168528]: Service response received for
initialization (updateStatus() at ./src/interactive_marker_client.cpp:406)
[hw_device_mgr-8] 2026-03-17 14:35:07,461 [ERROR]ZA_sim_device_mgr: Timeout
(5s):   Offline
(ZA_sim_drive@(0,0,0),ZA_sim_drive@(0,1,0),ZA_sim_drive@(0,2,0),ZA_sim_drive@(0,
3,0),ZA_sim_drive@(0,4,0),ZA_sim_drive@(0,5,0))
[hw_device_mgr-8] 2026-03-17 14:35:07,461 [WARNING]ZA_sim_device_mgr:
Manager/device fault; entering fault state
[hw_device_mgr-8] 2026-03-17 14:35:07,461 [WARNING]ZA_sim_device_mgr: Unable to
honor fault_command command: Cannot trigger event fault_command because the
onbeforefault_command handler returns False
[INFO] [launch.user]: Shutting down: HAL action drive_state ready wait timed
out
[WARNING] [hal_hw_interface.launch.hal_ordered_action]: Canceling handler
<HalFiles 'hal_files'>
[INFO] [hal_io-9]: sending signal 'SIGINT' to process[hal_io-9]
[INFO] [hw_device_mgr-8]: sending signal 'SIGINT' to process[hw_device_mgr-8]
[INFO] [rviz2-7]: sending signal 'SIGINT' to process[rviz2-7]
[INFO] [move_group-6]: sending signal 'SIGINT' to process[move_group-6]
[INFO] [robot_state_publisher-5]: sending signal 'SIGINT' to
process[robot_state_publisher-5]
[INFO] [spawner-4]: sending signal 'SIGINT' to process[spawner-4]
[INFO] [spawner-2]: sending signal 'SIGINT' to process[spawner-2]
[INFO] [hal_mgr-1]: sending signal 'SIGINT' to process[hal_mgr-1]
[hal_io-9] [WARN 1773776107.850302866] [hal_io]: Shutting down on keyboard
interrupt (main() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_component.py:163)
[hal_io-9] Failed to publish log message to rosout: publisher's context is
invalid, at ./src/rcl/publisher.c:389
[hal_io-9] Traceback (most recent call last):
[hal_io-9]   File "/opt/ros/humble/lib/hal_hw_interface/hal_io", line 38, in
<module>
[hal_io-9]   HalIO(sys.argv[1:]).main()
[hal_io-9]   File
"/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_component.py", line 165, in main
[hal_io-9]   self.node_context.shutdown()
[hal_io-9]   File
"/opt/ros/humble/local/lib/python3.10/dist-packages/rclpy/context.py", line 102,
in shutdown
[hal_io-9]   self.__context.shutdown()
[hal_io-9] rclpy._rclpy_pybind11.RCLError: failed to shutdown: rcl_shutdown
already called on the given context, at ./src/rcl/init.c:241
[hw_device_mgr-8] 2026-03-17 14:35:07,851 [WARNING]ZA_sim_device_mgr: Caught
KeyboardInterrupt
[hw_device_mgr-8] 2026-03-17 14:35:07,852 [INFO]ZA_sim_device_mgr: Shutting down
[hw_device_mgr-8] Traceback (most recent call last):
[hw_device_mgr-8]   File
"/home/User/Tormach/install/za6_hardware/lib/za6_hardware/hw_device_mgr", line
24, in <module>
[hw_device_mgr-8]   mgr.run()
[hw_device_mgr-8]   File
"/opt/ros/humble/lib/python3.10/site-packages/hw_device_mgr/mgr_ros/mgr.py",
line 132, in run

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[hw_device_mgr-8]              rclpy.shutdown()
[hw_device_mgr-8]      File "/opt/ros/humble/local/lib/python3.10/dist-
packages/rclpy/__init__.py", line 130, in shutdown
[hw_device_mgr-8]          _shutdown(context=context)
[hw_device_mgr-8]      File "/opt/ros/humble/local/lib/python3.10/dist-
packages/rclpy/utilities.py", line 58, in shutdown
[hw_device_mgr-8]          return context.shutdown()
[hw_device_mgr-8]      File "/opt/ros/humble/local/lib/python3.10/dist-
packages/rclpy/context.py", line 102, in shutdown
[hw_device_mgr-8]          self.__context.shutdown()
[hw_device_mgr-8] rclpy._rclpy_pybind11.RCLError: failed to shutdown:
rcl_shutdown already called on the given context, at ./src/rcl/init.c:241
[rviz2-7] [INFO 1773776107.854586015] [rclcpp]: signal_handler(SIGINT/SIGTERM)
(deferred_signal_handler() at ./src/rclcpp/signal_handler.cpp:258)
[move_group-6] [INFO 1773776107.857281254] [rclcpp]:
signal_handler(SIGINT/SIGTERM) (deferred_signal_handler() at
./src/rclcpp/signal_handler.cpp:258)
[robot_state_publisher-5] [INFO 1773776107.861778780] [rclcpp]:
signal_handler(SIGINT/SIGTERM) (deferred_signal_handler() at
./src/rclcpp/signal_handler.cpp:258)
[hal_mgr-1] [WARN 1773776107.868999253] [hal_mgr]: Shutting down on keyboard
interrupt (main() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
ros_hal_component.py:163)
[hal_mgr-1] Failed to publish log message to rosout: publisher's context is
invalid, at ./src/rcl/publisher.c:389
[hal_mgr-1] [INFO 1773776107.869350968] [hal_mgr]: Running shutdown cb 999
(_run_shutdown_cbs() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
hal_obj_base.py:172)
[hal_mgr-1] Failed to publish log message to rosout: publisher's context is
invalid, at ./src/rcl/publisher.c:389
[hal_mgr-1] [WARN 1773776107.869630689] [hal_mgr]: Stopping realtime
(stop_realtime() at
/opt/ros/humble/local/lib/python3.10/dist-packages/hal_hw_interface/
hal_mgr.py:67)
[hal_mgr-1] Failed to publish log message to rosout: publisher's context is
invalid, at ./src/rcl/publisher.c:389
[rviz2-7] [WARN 1773776107.878466306]
[interactive_marker_display_97382236168528]: Server not available while running,
resetting (updateStatus() at ./src/interactive_marker_client.cpp:409)
[hal_mgr-1] 4:rtapi_app:14749:user pid=14749 flavor=posix gcc=11.4.0 git=unknown
[hal_mgr-1] Mar 17 14:35:07 rtapi:0: 4:rtapi_app:14749:user pid=14749
flavor=posix gcc=11.4.0 git=unknown
[hal_mgr-1] <commandline>:0: Realtime threads stopped
[hal_mgr-1] 4:rtapi_app:14749:user pid=14749 flavor=posix gcc=11.4.0 git=unknown
[hal_mgr-1] Mar 17 14:35:07 rtapi:0: 4:rtapi_app:14749:user pid=14749
flavor=posix gcc=11.4.0 git=unknown
[hal_mgr-1] [INFO 1773776107.883698081] [controller_manager]: rtapi_app_exit():
HAL controller manager shutting down (rtapi_app_exit() at
/root/ros_colcon_ws/src/hal_ros_control/hal_hw_interface/src/hal_control_node.cp
p:252)
[move_group-6] [INFO 1773776107.902141247]
[moveit.ros_planning_interface.moveit_cpp]: Deleting MoveItCpp (~MoveItCpp()
at ./moveit_cpp/src/moveit_cpp.cpp:88)
[move_group-6] [INFO 1773776107.902982113]
[moveit_ros.planning_scene_monitor.planning_scene_monitor]: Stopped publishing
maintained planning scene. (stopPublishingPlanningScene() at
./planning_scene_monitor/src/planning_scene_monitor.cpp:394)
[move_group-6] [INFO 1773776107.905226665]
[moveit_ros.planning_scene_monitor.planning_scene_monitor]: Stopping world
geometry monitor (stopWorldGeometryMonitor() at
./planning_scene_monitor/src/planning_scene_monitor.cpp:1241)
[move_group-6] [INFO 1773776107.906287082]
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[moveit_ros.planning_scene_monitor.planning_scene_monitor]: Stopping planning
scene monitor (stopSceneMonitor() at
./planning_scene_monitor/src/planning_scene_monitor.cpp:1124)
[move_group-6] Warning: class_loader.ClassLoader: SEVERE WARNING!!! Attempting
to unload library while objects created by this loader exist in the heap! You
should delete your objects before attempting to unload the library or destroying
the ClassLoader. The library will NOT be unloaded.
[move_group-6]                        at line 127 in ./src/class_loader.cpp
[move_group-6] Stack trace (most recent call last):
[move_group-6] #16      Object "", at 0xffffffffffffffff, in
[move_group-6] #15      Object
"/opt/ros/humble/lib/moveit_ros_move_group/move_group", at 0x5d5678fa4724, in
[move_group-6] #14      Object "/usr/lib/x86_64-linux-gnu/libc.so.6", at
0x754a12a48e3f, in __libc_start_main
[move_group-6] #13      Object "/usr/lib/x86_64-linux-gnu/libc.so.6", at
0x754a12a48d8f, in
[move_group-6] #12      Object
"/opt/ros/humble/lib/moveit_ros_move_group/move_group", at 0x5d5678fa365b, in
[move_group-6] #11      Object
"/opt/ros/humble/lib/moveit_ros_move_group/move_group", at 0x5d5678fa5709, in
[move_group-6] #10      Object "/opt/ros/humble/lib/libmoveit_cpp.so.2.5.9", at
0x754a133ab876, in moveit_cpp::MoveItCpp::~MoveItCpp()
[move_group-6] #9       Object "/opt/ros/humble/lib/libmoveit_cpp.so.2.5.9", at
0x754a133a9ba9, in
[move_group-6] #8       Object
"/opt/ros/humble/lib/libmoveit_trajectory_execution_manager.so.2.5.9", at
0x754a1273e495, in
trajectory_execution_manager::TrajectoryExecutionManager::~TrajectoryExecutionMa
nager()
[move_group-6] #7       Object
"/opt/ros/humble/lib/libmoveit_trajectory_execution_manager.so.2.5.9", at
0x754a127513a9, in
[move_group-6] #6       Object "/opt/ros/humble/lib/librclcpp.so", at
0x754a13009f2c, in rclcpp::Node::~Node()
[move_group-6] #5       Object "/opt/ros/humble/lib/librclcpp.so", at
0x754a13009ece, in rclcpp::Node::~Node()
[move_group-6] #4       Object "/opt/ros/humble/lib/librclcpp.so", at
0x754a12fe4f39, in
[move_group-6] #3       Object "/opt/ros/humble/lib/librclcpp.so", at
0x754a13013579, in
[move_group-6] #2       Object "/opt/ros/humble/lib/librclcpp.so", at
0x754a130134c0, in rclcpp::node_interfaces::NodeBase::~NodeBase()
[move_group-6] #1       Object "/opt/ros/humble/lib/librclcpp.so", at
0x754a12fe4f39, in
[move_group-6] #0       Object "/opt/ros/humble/lib/librclcpp.so", at
0x754a12fe9df1, in rclcpp::CallbackGroup::~CallbackGroup()
[move_group-6] Segmentation fault (Address not mapped to object
[0x754a051ad798])
[INFO] [robot_state_publisher-5]: process has finished cleanly [pid 14566]
[ERROR] [hw_device_mgr-8]: process has died [pid 14802, exit code 1, cmd
'/home/User/Tormach/install/za6_hardware/lib/za6_hardware/hw_device_mgr --sim --
ros-args --params-file /tmp/launch_params_tdlhg3n_ --params-file
/home/User/Tormach/install/za6_hardware/share/za6_hardware/config/
hal_hw_device_mgr.yaml'].
[ERROR] [hal_io-9]: process has died [pid 14817, exit code 1, cmd
'/opt/ros/humble/lib/hal_hw_interface/hal_io
/home/User/Tormach/install/za6_hardware/share/za6_hardware/config/
hal_io_config.yaml --ros-args --params-file
/home/User/Tormach/install/za6_hardware/share/za6_hardware/config/hal_io.yaml'].
[ERROR] [rviz2-7]: process[rviz2-7] failed to terminate '5' seconds after
receiving 'SIGINT', escalating to 'SIGTERM'
[ERROR] [move_group-6]: process[move_group-6] failed to terminate '5' seconds
after receiving 'SIGINT', escalating to 'SIGTERM'
[ERROR] [spawner-4]: process[spawner-4] failed to terminate '5' seconds after
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receiving 'SIGINT', escalating to 'SIGTERM'
[ERROR] [spawner-2]: process[spawner-2] failed to terminate '5' seconds after
receiving 'SIGINT', escalating to 'SIGTERM'
[ERROR] [hal_mgr-1]: process[hal_mgr-1] failed to terminate '5' seconds after
receiving 'SIGINT', escalating to 'SIGTERM'
[INFO] [rviz2-7]: sending signal 'SIGTERM' to process[rviz2-7]
[INFO] [move_group-6]: sending signal 'SIGTERM' to process[move_group-6]
[INFO] [spawner-4]: sending signal 'SIGTERM' to process[spawner-4]
[INFO] [spawner-2]: sending signal 'SIGTERM' to process[spawner-2]
[INFO] [hal_mgr-1]: sending signal 'SIGTERM' to process[hal_mgr-1]
[ERROR] [spawner-4]: process has died [pid 14564, exit code -15, cmd
'/opt/ros/humble/lib/controller_manager/spawner --controller-manager-timeout=180
--switch-timeout=180 joint_state_broadcaster --ros-args --params-file
/tmp/launch_params_q4_fl9xa'].
[ERROR] [spawner-2]: process has died [pid 14560, exit code -15, cmd
'/opt/ros/humble/lib/controller_manager/spawner --controller-manager-timeout=180
--switch-timeout=180 joint_trajectory_controller --ros-args --params-file
/tmp/launch_params_lylcf2at'].
[ERROR] [rviz2-7]: process[rviz2-7] failed to terminate '10.0' seconds after
receiving 'SIGTERM', escalating to 'SIGKILL'
[ERROR] [move_group-6]: process[move_group-6] failed to terminate '10.0' seconds
after receiving 'SIGTERM', escalating to 'SIGKILL'
[ERROR] [hal_mgr-1]: process[hal_mgr-1] failed to terminate '10.0' seconds after
receiving 'SIGTERM', escalating to 'SIGKILL'
[INFO] [rviz2-7]: sending signal 'SIGKILL' to process[rviz2-7]
[INFO] [move_group-6]: sending signal 'SIGKILL' to process[move_group-6]
[INFO] [hal_mgr-1]: sending signal 'SIGKILL' to process[hal_mgr-1]
[ERROR] [move_group-6]: process has died [pid 14568, exit code -9, cmd
'/opt/ros/humble/lib/moveit_ros_move_group/move_group --ros-args --params-
file /tmp/launch_params_1rjtkll_ --params-file /tmp/launch_params_1hqere6o'].
[move_group-6]
[ERROR] [hal_mgr-1]: process has died [pid 14558, exit code -9, cmd
'/opt/ros/humble/lib/hal_hw_interface/hal_mgr --ros-args -r __node:=hal_mgr --
params-file /tmp/launch_params_lm8avu0k'].
[INFO] [launch.user]: hal_mgr shutting down: Exited
[ERROR] [launch]: Caught exception in launch (see debug for traceback): Cannot
shutdown a ROS adapter that is not running
[ERROR] [rviz2-7]: process has died [pid 14570, exit code -9, cmd
'/opt/ros/humble/lib/rviz2/rviz2 -d
/home/User/Tormach/install/za6_moveit_config/share/za6_moveit_config/config/
moveit.rviz --ros-args --params-file /tmp/launch_params_m96fcmup --params-
file /tmp/launch_params_2ofvv7ob'].