

Move-To URCap Example

Description

The Move-To URCap provides a working example for moving the given axis group via controls presented in the toolbar.

Build

- The URCap SDK must be installed and available in the build environment
1. `cd move-to`
 2. `./build.sh`

Note: By default the build script will attempt to build the URCap then deploy to a local simulator (if available).

Example Usage

- Note: The Move-To URCap does not manage the lifecycle of any world-model or axis-group entities.
1. On the robot, execute a program or script that creates 2 Axis Groups and 3 Axes

- The program/script should finish without removing the Axis Group. Remember to configure the axis as well, the EtherCAT Axis Config URCap could also be used for this purpose.
- Example script:

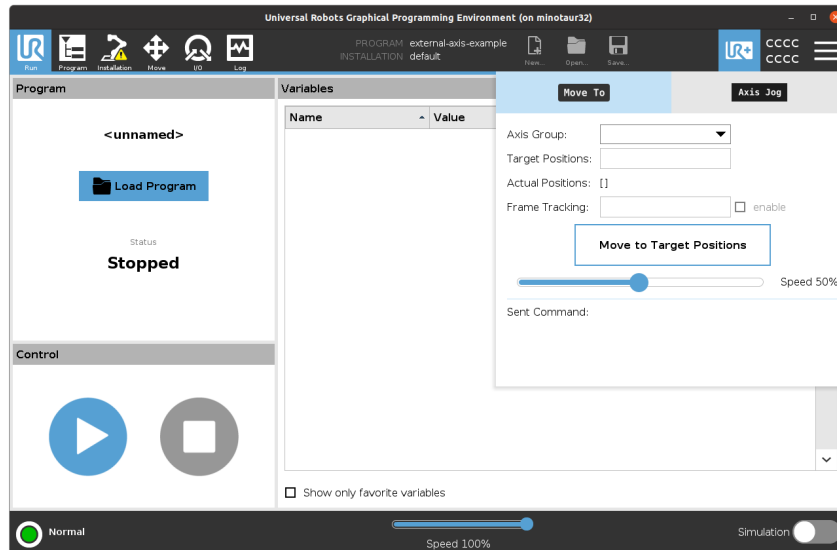
```

    AXIS_TYPE = 0 # 0:rotary, 1:linear
    AXIS_VELOCITY_LIMIT = d2r(360) # rad/s
    AXIS_ACCELERATION_LIMIT = d2r(3600) # rad/s^2
    AXIS_ENCODER_RESOLUTION = 3600 # counts/rev
    AXIS_FEED_CONSTANT = d2r(360) # rad/rev
    AXIS_GEAR_RATIO = 1.0
    AXIS_ZERO_OFFSET = 0

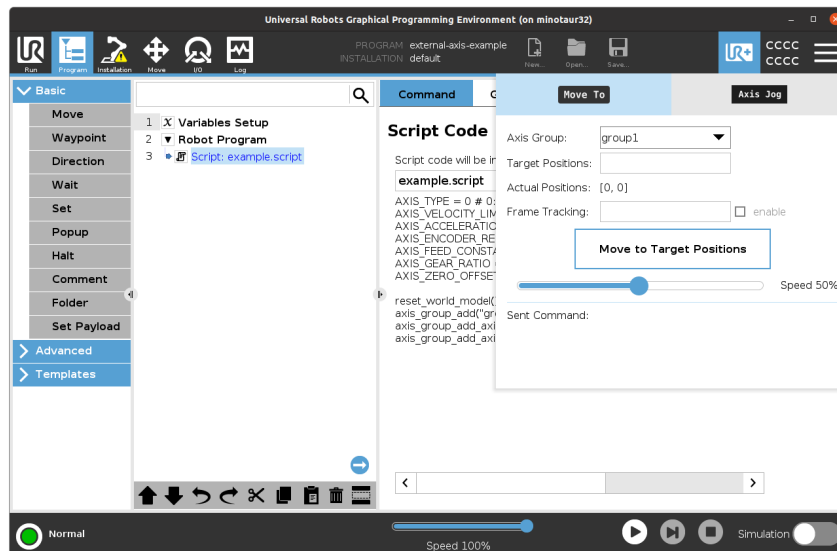
    reset_world_model()
    axis_group_add("group1", p[0, 0, 0, 0, 0, 0], "world")
    axis_group_add_axis("group1", "axis1", "", p[0, 0, 0, 0, 0, 0],
    AXIS_TYPE, AXIS_VELOCITY_LIMIT, AXIS_ACCELERATION_LIMIT)
    axis_group_add_axis("group1", "axis2", "", p[0, 0, 0, 0, 0, 0],
    AXIS_TYPE, AXIS_VELOCITY_LIMIT, AXIS_ACCELERATION_LIMIT)
    axis_group_add("group2", p[0, 0, 0, 0, 0, 0], "world")
    axis_group_add_axis("group2", "axis3", "", p[0, 0, 0, 0, 0, 0],
    AXIS_TYPE, AXIS_VELOCITY_LIMIT, AXIS_ACCELERATION_LIMIT)

```

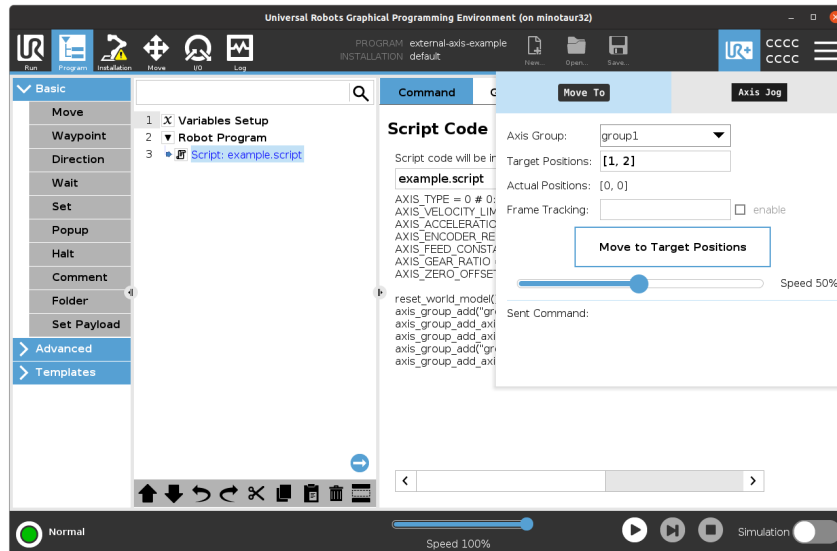
2. After the program has finished executing, open the Move To panel of the toolbar



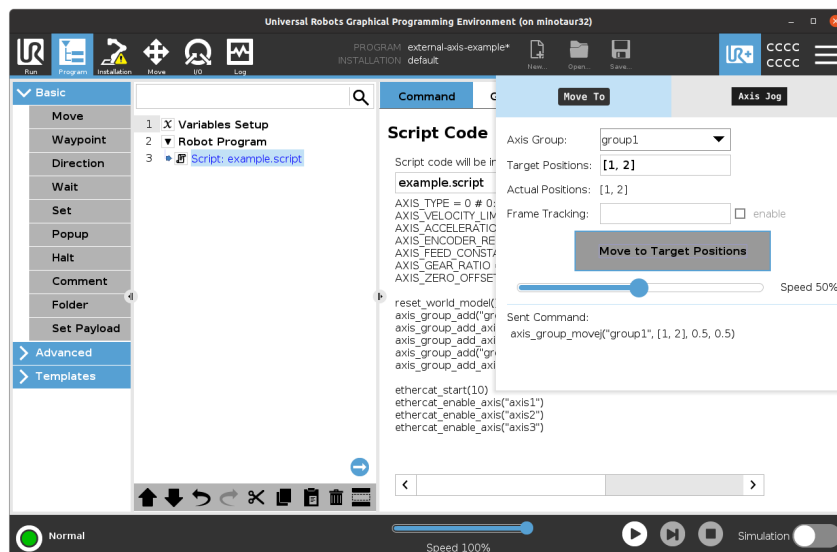
3. Select the group to move from the Axis Group dropdown



4. Enter the target positions specific to the desired Axis Group to move



5. Move specified Axis Group by holding down the 'Move to Target Positions' button
 - The background color will change from white to grey indicating that the motion is in progress. The **Sent Command** field will update to indicate the command that has been sent to the robot via the Primary Interface
 - If the 'Frame Tracking' checkbox is checked, the robot will perform frame tracking as the axis group is moving.



6. Halt jogging by releasing the held-down button
 - The axis group motion will halt, and the background color will change back to white indicating that the motion has stopped.