

This unit contains a few additional steps, needed in order to work with MoveIt and the simulation factory.

These changes are required because we are using a newer version of MoveIt.

Important Notes:

1. Only do this steps once, after creating a new MoveIt configuration package using the MoveIt Setup Assistant.
2. You only need to edit two files:

- hrwros_moveit_config/launch/move_group.launch
- hrwros_moveit_config/launch/trajecory_execution.launch.xml

1: Remap /joint_states to /combined_joint_states

In order to complete the MoveIt configuration, it's necessary to remap the /joint_state topic to /combined_joint_states, this allows us to handle the different robots on the simulations.

To achieve this, follow the following steps:

Step 1: Open the file move_group.launch in the newly generated hrwros_moveit_config/launch folder.

Step 2: Go to line 96, just under the string <param name="disable_capabilities" value="\$(arg disable_capabilities)"/>

Step 3: Add the following string below this line:

```
<remap from="/joint_states"
to="/combined_joint_states"/>
```

After that, Lines 95 and 96 of `move_group.launch` file should look like this:

```
    <param name="disable_capabilities" value="$(arg
disable_capabilities)" />
    <remap from="/joint_states"
to="/combined_joint_states"/>
```

2: Remove unneeded Planning Pipelines

The MSA generates launch files for two additional Planning Pipelines (CHOMP and Pilz Industrial Motion),

Those are not needed and can generate error messages during launch, so we can remove them,

To achieve this, follow the following steps:

Step 1: Open the file `move_group.launch` in the newly generated `hrwros_moveit_config/launch` folder.

Step 2: Go to line 55, where the string `<!-- CHOMP -->` is found.

Step 3: Delete or comment out lines 55 to 58, that's where the CHOMP pipeline is included.

Step 4: Go to line 60, where the string `<!-- Pilz Industrial Motion-->` is found.

Step 5: Delete or comment out lines 60 to 63, that's where the Pilz Industrial Motion pipeline is included.

3 - Change trajectory_execution/allowed_start_tolerances

In order to ensure the correct work of the controllers. It's also necessary to change the `allowed_start_tolerances` parameters.

To achieve this, follow the following steps:

Step 1: Open the file `trajectory_execution.launch.xml` in the newly generated `hrwros_moveit_config/launch` folder.

Step 2: Go to line 16, find the string `<param name="trajectory_execution/allowed_start_tolerance" value="0.01"/> <!-- default 0.01 -->`

Step 3: Change the parameter value to `"0.1"`

Line 14 should look like this:

```
<param
name="trajectory_execution/allowed_start_toleran
ce" value="0.1"/> <!-- default 0.01 -->
```

4 - Remove unused arguments from trajectory execution

The `trajectory_execution.launch.xml` file generated contains the unused argument `"execution_type"` that can cause errors during launch.

In order to ensure the correct this, you just need to delete this argument from the file.

To achieve this, follow the following steps:

Step 1: Open the file `trajectory_execution.launch.xml` in the newly generated `hrwros_moveit_config/launch` folder.

Step 2: Go to line 21, find the string `<arg name="execution_type" value="$(arg execution_type)" />`

Step 3: Delete or comment out that line, to remove the argument from the include statement.

This is the last change!! you can continue working now!!