

# STEP BY STEP GUIDE,

## IMPORTING THE KST TO KUKA'S SUNRISE WORKBENCH

### ABOUT

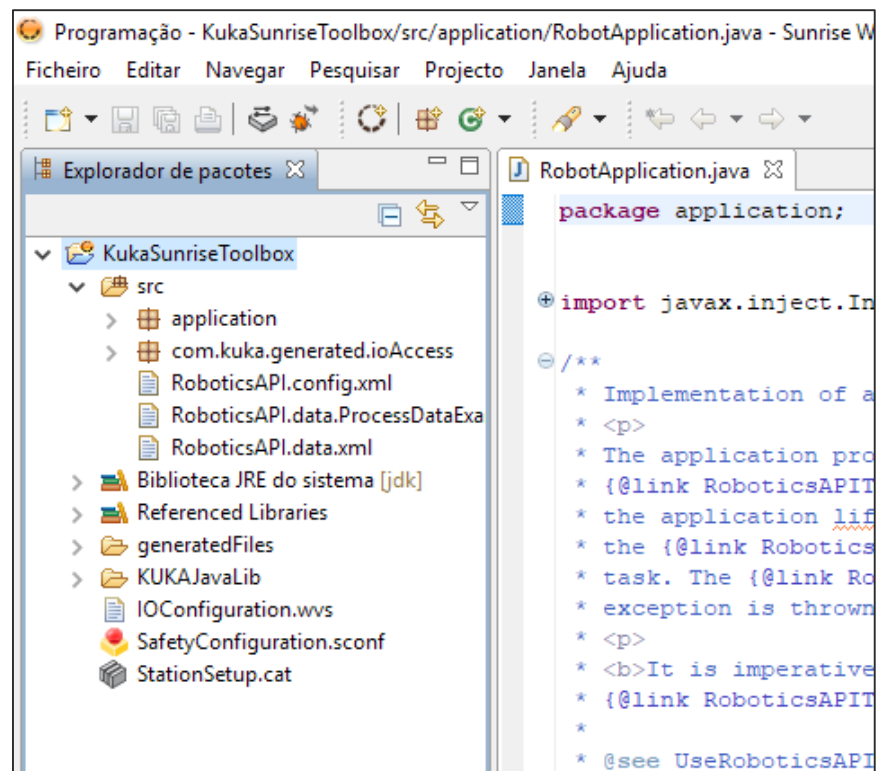
This documentation is used to guide the user through synchronizing the KST\_X.XX server into his/her own KUKA iiwa controller. A video tutorial on this topic is also available at the link:

<https://youtu.be/fhzCyQRUNiA?list=PLz558OYgHuZd-Gc2-OrylTKEXefAmrvae>

### COPYING KST SERVER FILES TO SUNRISE.WORKBENCH

- 1- Open the **Sunrise.Workbench**.
- 2- Open an existing project, or create a new project, for example in Figura 1 a new project was created with the name **KukaSunriseToolbox**.

Figura 1 New project in SunriseWorkbench



- 3- Then create a new package by right clicking on the **src** folder, from the drop down menu click on **new**, then click on **package** as shown in Figura 2 (in Portuguese).

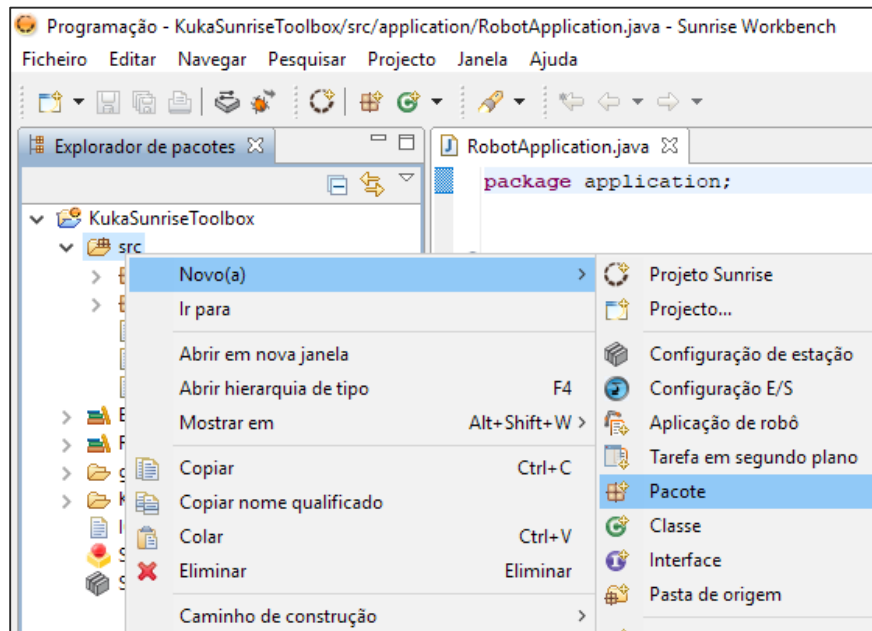


Figura 2 Create new package

- 4- Name the newly created package **lbrExampleApplications**.
- 5- Then, if you have a touch-pneumatic flange unzip the file **KST\_1.7\_iiwa\_pneumaticFlange.rar**, on the other hand if you have any other type of flange then unzip the file **KST\_1.7\_iiwa\_universal\_noFlange.rar**. Those files are found in the folder **KUKA\_Sunrise\_server\_source\_code** inside the **KST** repository, after unzipping copy the Java files, and paste them directly under the newly created package as demonstrated in Figura 3.

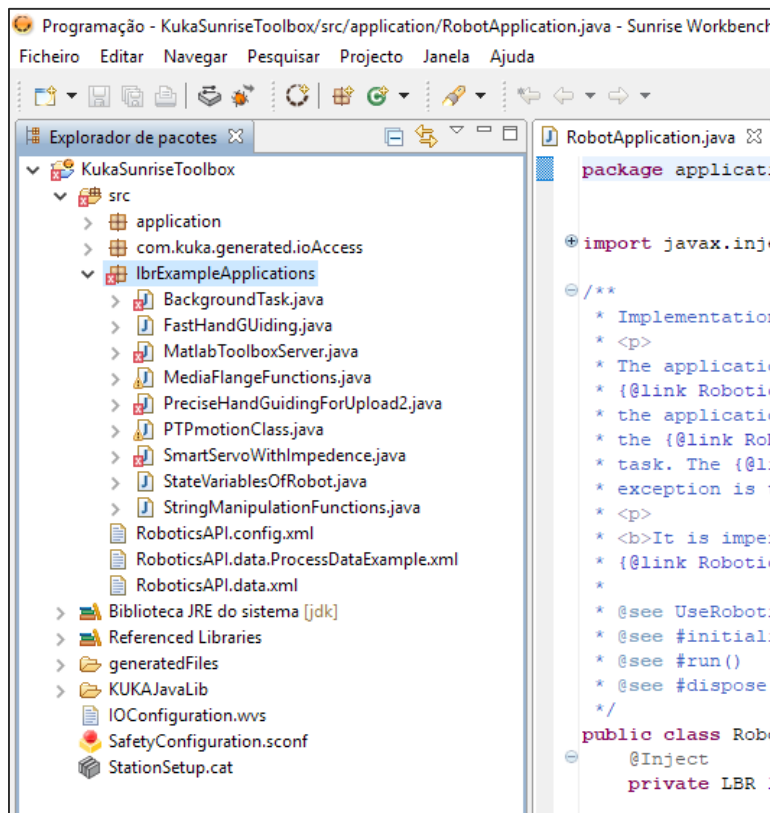


Figura 3 Copy Java files into the lbrExampleApplications package

## ADD A REFERENCE TO DIRECTSERVO AND SMARTSERVO

In case you noticed an error icon near the copied java files do not panic, this happens if your project does not have a reference to **DirectServo** and **SmartServo** libraries which are utilized by the toolbox. To add a reference to them, double click on the file **StationSetup.cat**, then choose the page titled **software** as shown in Figura 4. From the **software** page check the entries **Direct Servo Motion Extension** and **Smart Servo Motion Extension**, once done hit the save button, you notice that the error signs disappear. Now you can synchronize the project to the controller.

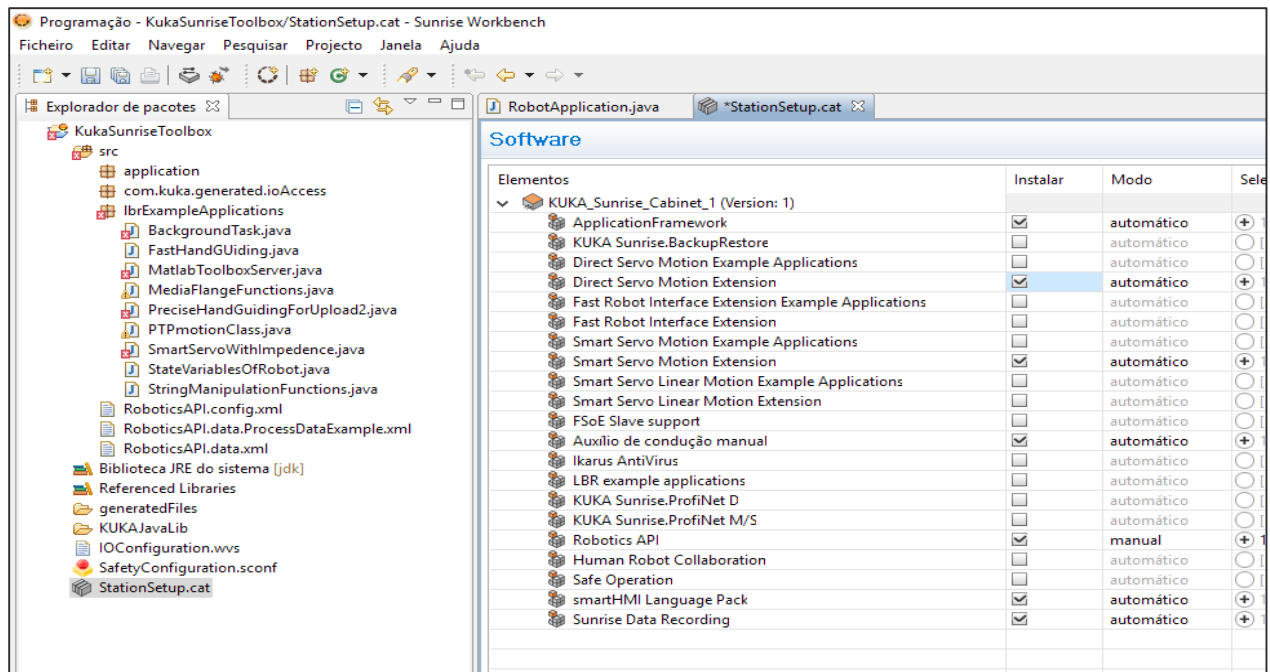


Figura 4 Add a reference to DirectServo and to SmartServo

## AFTER SYNCHRONIZATION

After synchronization the user can find the **MatlabToolboxServer** application in the teach pendant of the robot, shown in Figura 5. Before connecting to the robot from **Matlab**, the user shall start the **MatlabToolboxServer** application from the teach pendant, once started the server will await a connection during 60 seconds, if a connection is not established during this time the server application, **MatlabToolboxServer**, will turn off automatically, and the user has to restart it manually before connecting to the controller from **Matlab**.

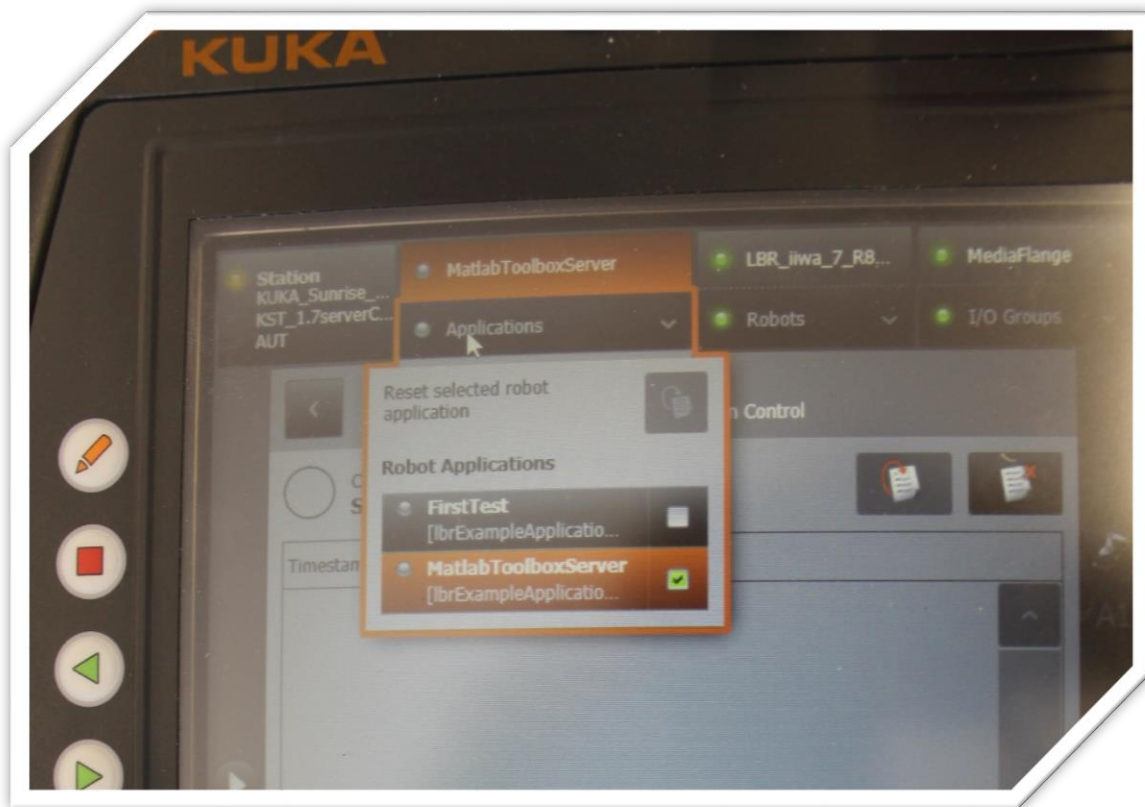


Figura 5 MatlabToolboxServer application in the teach pendant of the robot