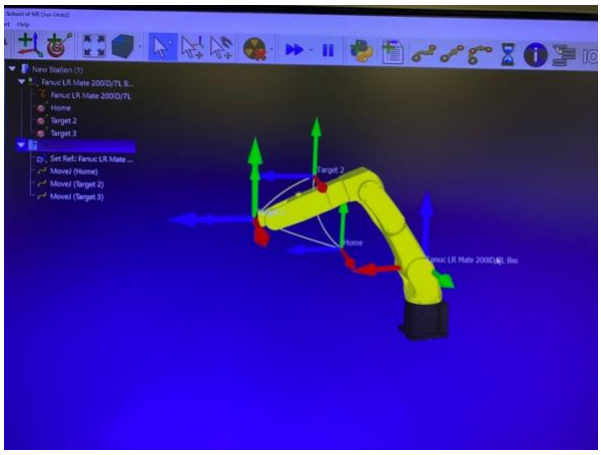
RoboDk-Fanuc Connection Setup

by Shanlong Yu

With successful RoboDk driver installation on the Fanuc robot, project simulation in RoboDk can both ran in user interface and on robot simultaneously.

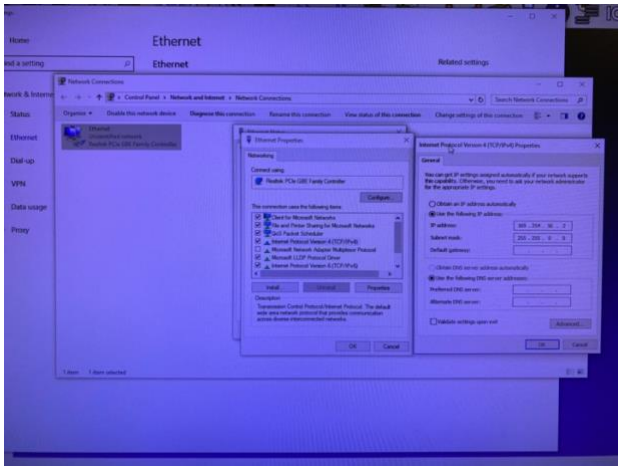
Installation Steps:

Step 1:
Install RoboDk with latest version and create a new station with the corresponding robot model from RoboDk's online library (Fanuc LR Mate 200iD/7L).



Installation Step 1

Step 2:
Connect computer and Fanuc robot with ethernet, and change the computer IP address (TCP/IPv4) to 169.254.16.2 with subnet mask 255.255.0.0



Installation Step 2

Step 3:
On the teach pendant (TP) of the Fanuc robot, setup robot IP address.
{Menu — Setup — Host Comm — TCP/IP — (ENTER)}
Enter the robot IP 169.254.16.144 and computer IP 169.254.16.2 as shown.

Installation Step 3

Step 4:
On TP, setup on Ethernet/IP
{Menu — I/O — Ethernet/IP}
Enter Connection1 configuration as shown (4 words) and set Enable to True.
After restarting the robot, Status should go from Pending to Online as shown.

Installation Step 4

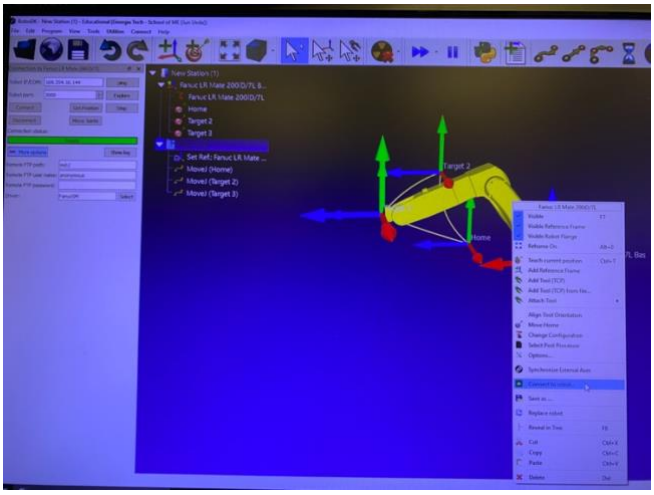
Step 5:
Follow RoboDk Instructions on how to setup Fanuc robot drivers.
https://robodk.com/doc/en/Robots-Fanuc.html#Fanuc
Processes include: Driver files download and transfer the files to robot TP with a USB.
Please make sure that the driver file is up to date and corresponds to the latest RoboDk version.
Make sure the robot IP used in setup is 169.254.16.144

Trouble Shooting:

With the ethernet addresses and connection setup correctly, you should be able to both ping the robot IP address from the computer using either terminal or RobotDk (connect to robot – ping) and ping the computer IP address from the robot TP from {Menu-Setup-Host Comm-TCP/IP-(ENTER)-PING}.
Ethernet hardware connection problem may be solved by switching ethernet cable to a different ethernet portal inside the Fanuc PC case.

Connection Steps:

Step 1 (Computer):
Open RoboDk software with the corresponding workstation, and right click the robot and click connect to robot in the drop-down list. Input the robot IP address (169.254.16.144)

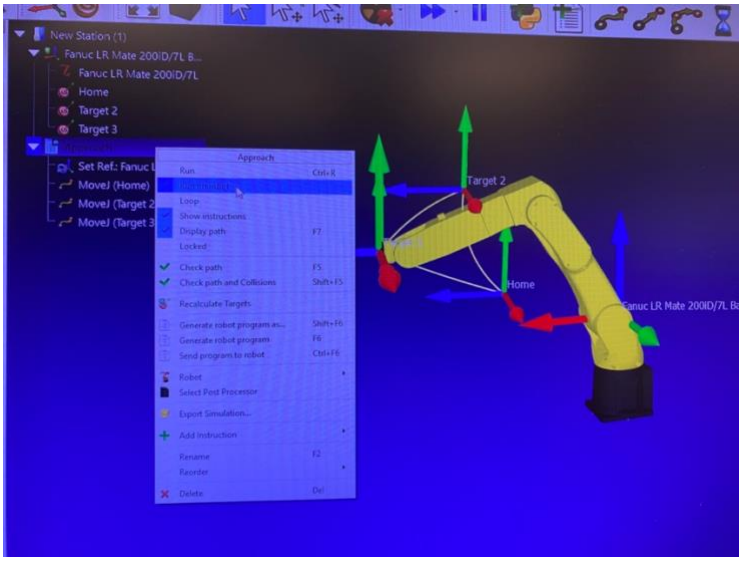


Connection Step 1

Step 2 (Robot TP):
Initialize the robot, then press FCTN9 (button on TP) and click Abort All.
Then, press Select—73 RDK_S3 (Fanuc driver file that you transferred to the TP with USB) — Enter — (Shift+Reset) — (Shift+FWD).
If run successfully, we should see RDK_S3 LINE 516/8 T1 Running Joint on the top of TP screen with Busy and Run status.

Connection Step 2

Step 3 (Computer):
Should say Ready and then click connect. Hold the Deadman switch.
Running a simple joint movement program and right click select run on robot.
Finally, we should see you the robot's movement synchronizes with RoboDk' simulation.



Connection Step 3