Setup Guidelines for UDEV Rules

Purpose: When a device is plugged into the Jetson/Host computer, Ubuntu assigns that device a ‘node name’ according to udev rules. You can see various node names using $ls /dev. USB devices, specifically, are assigned ttyUSB\* or ttyACM\* node names. Depending on the order the devices were plugged in, they may be assigned different node names which is an issue if we are hard-coding the node name for our ROS codes to look. So, we must edit the udev rules to set a static node name every time the devices are plugged in.

Source: <https://domoticz.com/wiki/Assign_fixed_device_name_to_USB_port>

1. Ensure the ttyACM or ttyUSB package is installed. If the module is not installed: <https://www.jetsonhacks.com/2017/11/19/install-ttyacm-module-nvidia-jetson-tx-development-kits/>
2. Retrieve information about the device:
   1. Plug in device
   2. Use $ dmesg | grep ttyACM to find which ttyACM port was assigned
   3. Use $ udevadm info -a -n /dev/ttyACM\* replacing ‘\*’ with your assigned port
   4. Scroll through the information and note down the following
      1. ATTRS{idVendor} = 0483
      2. ATTRS{idProduct} = 5740
      3. SUBSYSTEMS
   5. Enter root control $ sudo -i
   6. Enter rules directory # cd /etc/udev/rules.d
   7. Create/edit a new rules file # gedit 99-"any name".rules
   8. Use the previous information you found about the device to enter the following information into the .rules file.

For example:

SUBSYSTEMS=="usb", ATTRS{idVendor}=="0483", ATTRS{idProduct}=="5740", MODE="0666", SYMLINK+="sensors/vesc"

* 1. Save and close the .rules file
  2. Load and trigger the udev changes # udevadm control --reload && trigger
  3. Check that the changes are successful: plug in the device and check the device node name list # ls /dev

NOTES:

* Another good way to check dev node name of device $ ls -l /dev/serial/by-id
* If you use a path for the SYMLINK, you need to use that full path to reference the device (so in the example use “dev/sensors/vesc” not “dev/vesc” nor “dev/sensors”)