**[WebCams](http://localhost/trac/general/wiki/WebCams)**

Notes on setting up new driver cam from WPILibPi (formerly FRCVision).

**Install**

* Start from the most current WPILibPi image, found on the WPILibPi repo: [​WPILibPi repo](https://github.com/wpilibsuite/WPILibPi/releases).
* Download the current image (as of this writing, 2021.3.1): [​Image](https://github.com/wpilibsuite/WPILibPi/releases/download/v2021.3.1/WPILibPi_image-v2021.3.1.zip)
* Burn to an SD card (best choice Raspberry Pi Imager)
* Login to 'pi', either directly or over ssh to 'wpilibpi.local' on a local LAN
* Make sure that you are in write mode (the prompt will either have '(ro)' [for read-only] or '(rw)' [for writeable] appended) by typing the command 'rw'
* Run raspi-config:
* sudo raspi-config
* Select 'Change Password' under System Settings and set a new password for the 'pi' account (**Write it down!**)
* Also under System Settings, select the Hostname option and set a new host name for the Pi
* Select 'Finish' and reboot the Pi
* Login to the 'pi' account
* Check the date with the 'date' command. Fix if wrong.
* Do an apt update (the releaseinfo-change option is because buster is old):
* apt update --allow-releaseinfo-change
* Do an apt upgrade (this could take a while, if there are a lot of upgrades):
* mount -o remount,rw /
* mount -o remount,rw /boot
* apt upgrade
* Reboot the Pi again
* Login, set filesystem to writable ('rw' command)
* Install some needed packages:
* sudo apt-get install python3-pip git vim tree lsof i2c-tools lshw aptitude
* Install apps for rpi-clone:
* sudo apt-get install rsync parted util-linux mount bsdmainutils dosfstools
* Clean things up
* sudo apt-get clean
* sudo apt-get autoremove
* Install Python extensions (probably already installed, but just to be safe):
* sudo python3 -m pip install picamera
* sudo python3 -m pip install numpy
* sudo python3 -m pip install pynetworktables
* Install node and extensions. Grab the latest LTS version from unofficial-builds.nodejs.org [wget [​https://unofficial-builds.nodejs.org/download/release/v16.9.1/node-v16.9.1-linux-armv6l.tar.gz](https://unofficial-builds.nodejs.org/download/release/v16.9.1/node-v16.9.1-linux-armv6l.tar.gz) NodeJS].
* sudo mkdir -p /usr/local/lib/nodejs
* sudo tar ztf node-v16.9.1-linux-armv6l.tar.gz
* mv node-v16.9.1-linux-armv6l /usr/local/lib/nodejs/
* ln -s /usr/local/lib/nodejs/node-v16.9.1-linux-armv6l/bin/node node
* ln -s /usr/local/lib/nodejs/node-v16.9.1-linux-armv6l/bin/npm npm
* Test for successful install, by checking versions:
* node -v
* npm -v

In this case, the commands return 'v16.9.1' and '7.21.1', respectively.