RPi SETUP

Topi December 29, 2020

1. Burn 32 bit buster image using Rpi imager.
2. Create file “ssh” into boot partition.
3. Create file: wpa_supplicant.conf into boot partition.

```
country=SE
ctrl_interface=DIR=/var/run/wpa_supplicant GROUP=netdev
update_config=1

network={
ssid="#Telia-D5B7C8"
psk="*G41H*2r#pE-faR4"
}
```

4. So the wpa did not work with the telia ssid - needed to change that to nkai wifi and then worked... What the heck... Anyhow, then in `/etc/wpa_supplicant/` go and edit the file `sudo nano wpa_supplicant.conf` and add the other ssids...
5. `sudo pat update && sudo apt upgrade`
6. We try to install `https://github.com/mpromonet/v4l2rtspserver.git`
   - `sudo apt install git cmake`
   - `git clone https://github.com/mpromonet/v4l2rtspserver.git`
   - `cd v4l2rtspserver && sudo cmake .  && sudo make && sudo make install`
   - Now you can run: `sudo v4l2rtspserver /dev/video0`
   - On you local machine: open vlc, media -> open network stream -> `rtsp://<rpi ip>:8554/unicast`
   - WORKS! Latency around 2sec.
   - `sudo raspistill -v -o test.jpg`
7. Installed database `https://github.com/andymccurdy/redis-py`: `sudo apt get redis`, client: `pip3 install redis`
8. Redis is a server that is running on RPi. It is running there! Start, by `redis-server`
9. Subscribe from rpi to redis server - by python scipt.
10. On jetson write things into the database/server.

Enabling servo control using 16ch adafruit controller board.

1. create virtual env. `python3 -m venv venv`
2. activate it: `source venv/bin/activate`
3. `sudo apt-get install python-smbus`
4. `sudo apt-get install i2c-tools`
5. Read the i2c devices: `sudo i2cdetect -y 1`

6. install circuit python servokit: `pip3 install adafruit-circuitpython-servokit`
7. add topiko to i2c group for permissions: `sudo adduser topiko i2c`

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