Connect to Jackal PC

- Turn on Jackal :D
- **Connect to WiFi** ULU02 Base Station
- ssh administrator@192.168.131.1x1
  with x **being the individual ending for each Jackal (**0, 1, 2, 3, 4, 5**)**
- **password:** clearpath

Connect to Jetson

- ssh nvidia@192.168.131.1x2
  with x **being the individual ending for each Jackal (**0, 1, 2, 3, 4, 5**)**
- **password:** nvidia

Send data from laptop to Jackal (cmd on laptop without ssh)

- scp -r <dir on laptop> administrator@192.168.131.1x1:<path destination on Jackal>
- <path destination on Jackal> **is e.g.** ./folder_in_home/

Set up Ubuntu laptop for ros master (only e.g. to listen to topics in rviz)

- **Add lines to /etc/hosts:**
  <jackal pc ip> <jackal pc hostname>
  <jackal jetson ip> <jackal pc hostname>-jetson
  - **E.g.**
    192.168.131.151 cpr-j100-0408
    192.168.131.152 cpr-j100-0408-jetson
- **Create .sh file with following lines:**
  export ROS_MASTER_URI=http://<jackal pc ip>:11311
  export ROS_IP=<laptop ip>
  - **E.g.**
    export ROS_MASTER_URI=http://192.168.131.151:11311
    export ROS_IP=192.168.131.214

Launch ROS nodes

- Zed camera
  - **In /catkin_ws/src/zed-ros-wrapper/zed_wrapper/launch:** roslaunch zed_jackal.launch
  - **Or just** roslaunch zed_wrappe zed_no_tf.launch **for only camera topic**
  - **Works before as normal pc webcam**
- LIDAR
  - **Flip hardware switch next to LIDAR**
  - roslaunch os1_jackal.launch **on the Jetson**
    - os1_jackal.launch **contains settings for LIDAR (IP, HZ, resolution)**
  - **For 2d laser scan in addition** roslaunch point2laser.launch

Fix errors:

- Occurrence: Error after roslaunch of LIDAR
- Error: TF_REPEATED_DATE ignoring data with redundant timestamp for frame base_link …
- Reason: Time of Jackal PC and Jetson differs
- Fix:
  - **Check with** timedatectl
  - **On Jackal PC:** sudo ntpdate -s ntp.ubuntu.com
  - On Jetson: sudo date –set="$(ssh administrator@<Jackal PC IP> date)"