LiDAR Configurations for Jackal and PC (Ubuntu 18.04)
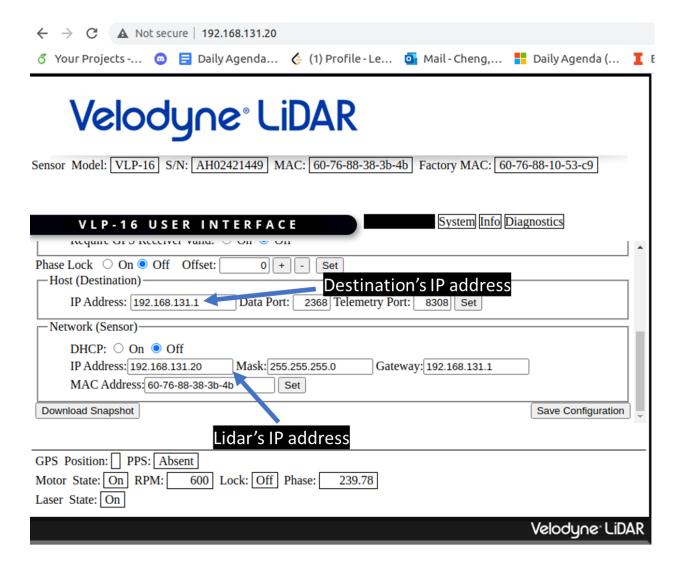
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The Velodyne VLP-16 Lidar is connected to Jackal and PC through an ethernet cable. The IP address for Velodyne VLP-16 Lidar is set to **192.168.131.20**, **and should not be changed for any reason**.

The configuration page can be found by typing the Lidar's IP address in a browser.
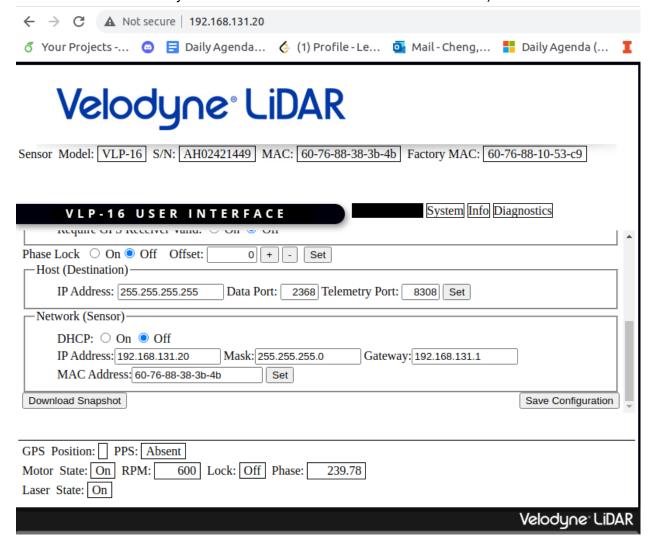
Connecting to Jackal

For Jackal's application, the destination's IP address is set to **192.168.131.1** (Jackal's IP)

Theoretically, it does not require any additional configuration for connecting the VLP-16 Lidar to Jackal.

Connecting to an Ubuntu PC

For other applications, the destination's IP address is set to **255.255.255.255** (It allows you to send the Lidar data to any device that the ethernet cable is connected to.)

In addition, it requires two additional steps to configure the ethernet port to the given IP address.

```
$ sudo ifconfig eth0 192.168.131.10
$ sudo route add 192.168.131.20 eth0
```

Note: the name of your ethernet port may not be eth0. The name can be found by typing
`$ ifconfig` command in your Ubuntu terminal.

The default launch file for the VLP-16 Lidar has a different IP address. In order for the Lidar to work properly, the IP address must be changed to **192.168.131.20**.

The launch file can be found in the following directory. Depending on the file name, it might be slightly different on your own PC.

```
file:///home/nvidia/catkin_ws/src/velodyne/velodyne_pointcloud/launch
/VLP16_points.launch
```
Find this line inside the launch file (it might have an empty IP address):

```
<arg name="device_ip" default="192.168.1.201" />
```

and change it to the following:
```
<arg name="device_ip" default="192.168.131.20" />
```

Note some of you may find this [tutorial](#) helpful. However, it only works for VLP-16 Lidar with the default IP setting, which is different from what we have on the Jackal.