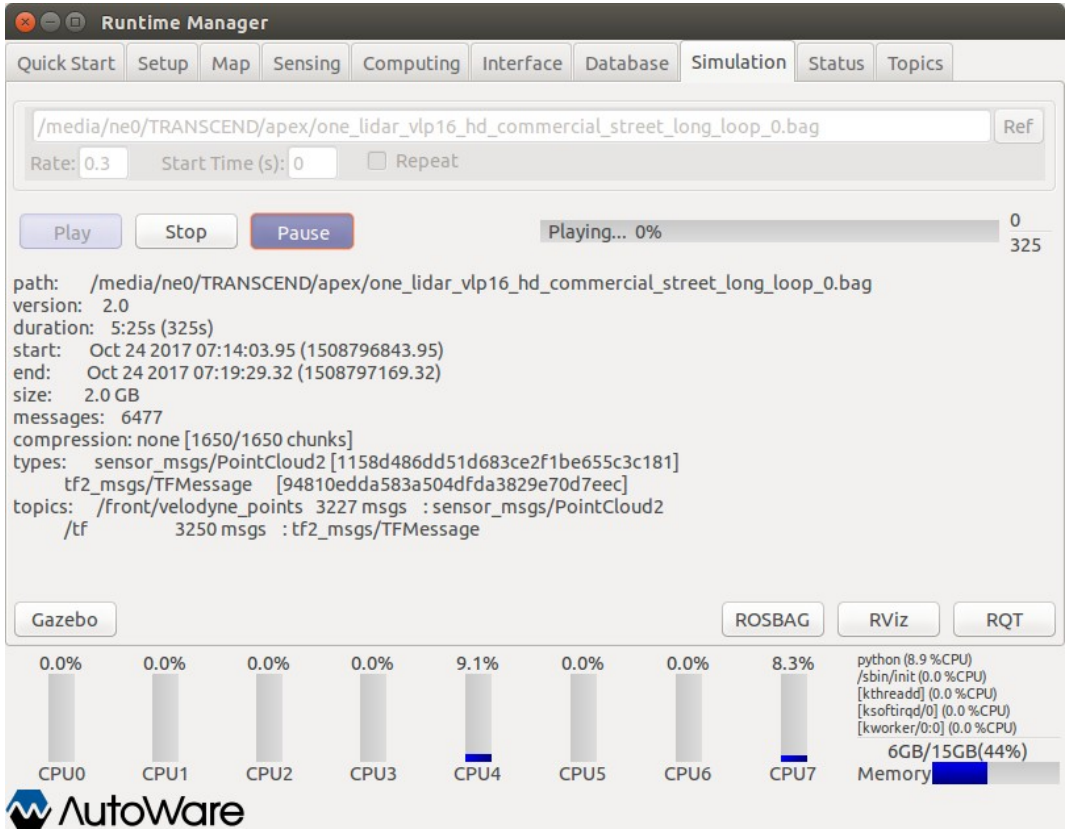
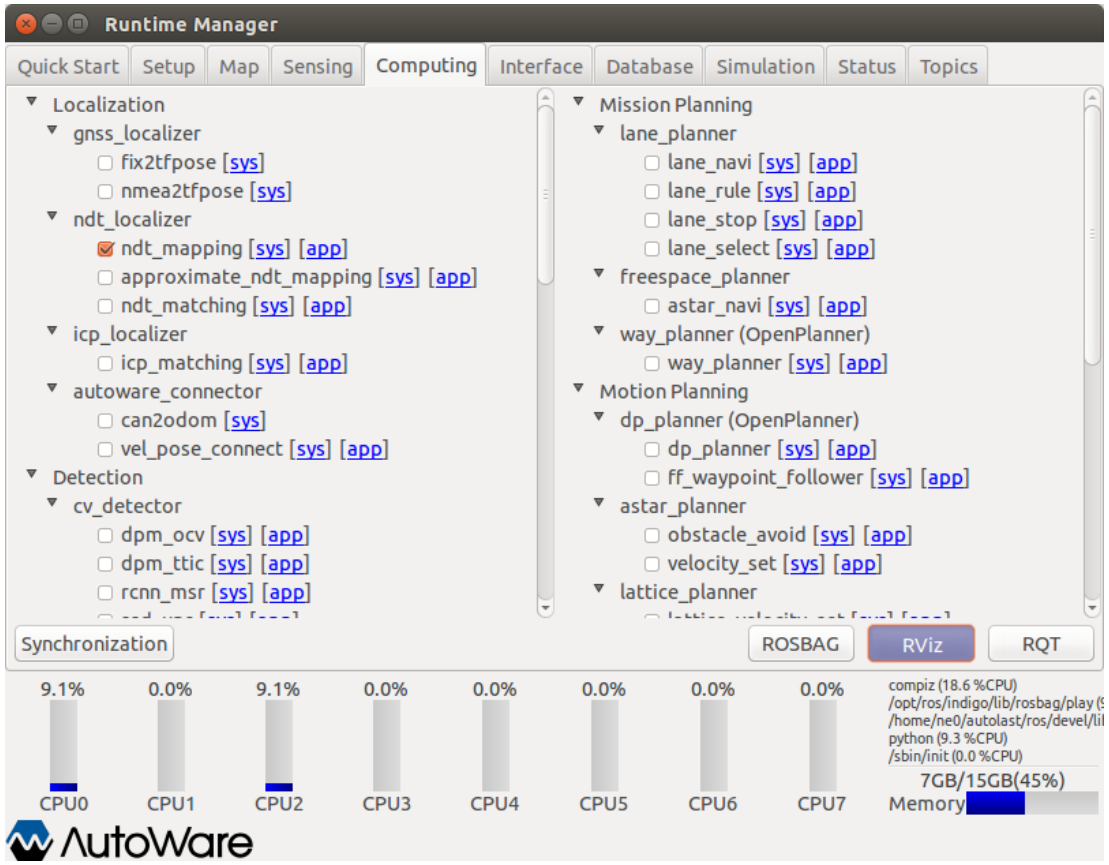
Autoware NDT Mapping manual

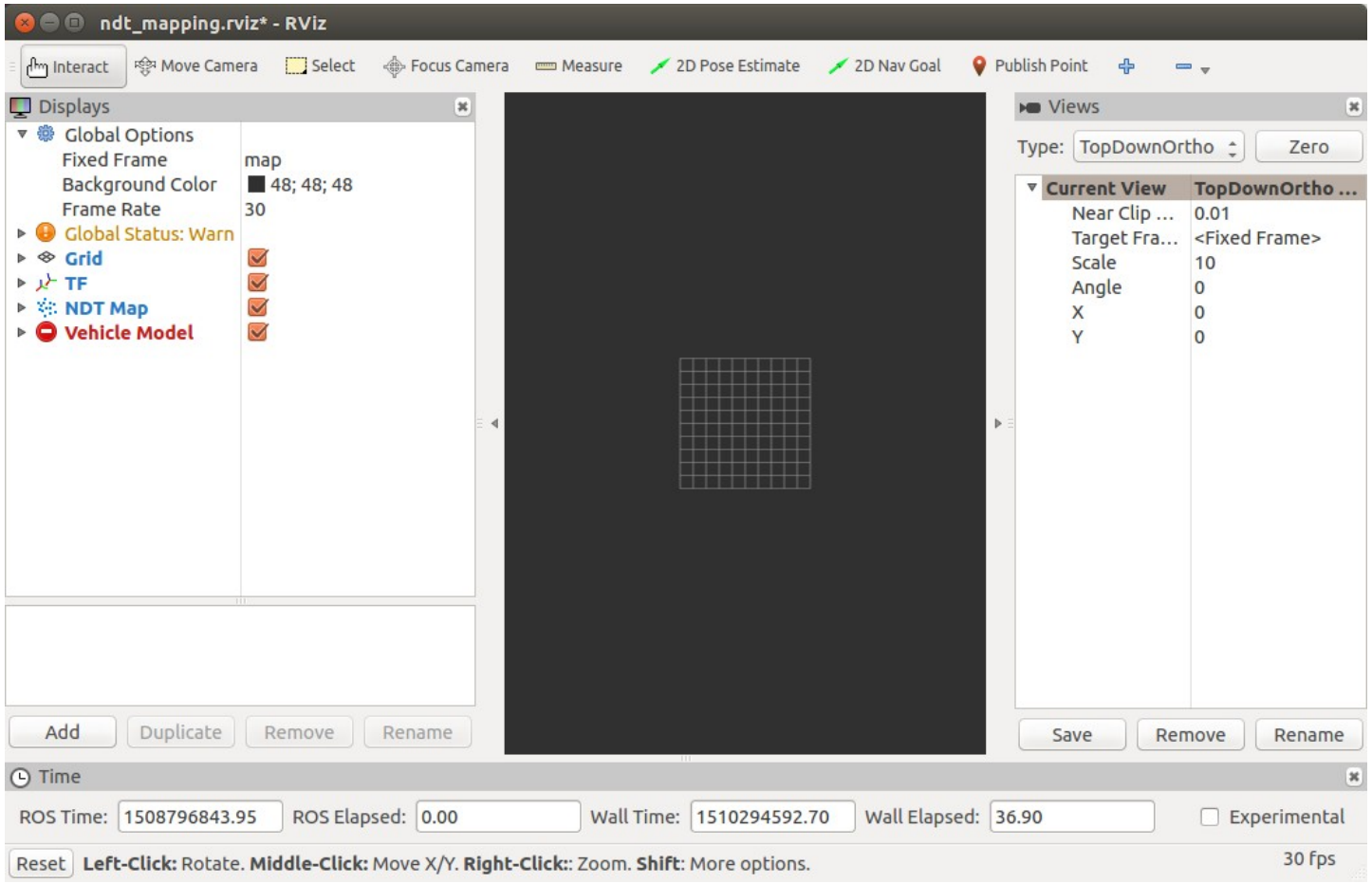
1. Go to **Autoware/ros** directory
2. Run Autoware using **“./run”** command
3. Go to Simulation tab and Load a ROSBAG
4. Click **Play** and immediately **PAUSE**



5. Click **Computing** tab and select **ndt_mapping**



5. Click **RViz** button at the bottom
6. In **Rviz** click File menu and then click **Open Config** to select visualization template for **ndt_mapping.rviz** located in **Autoware/src/.config/rviz**



7. ndt_mapping will read from **/points_raw**

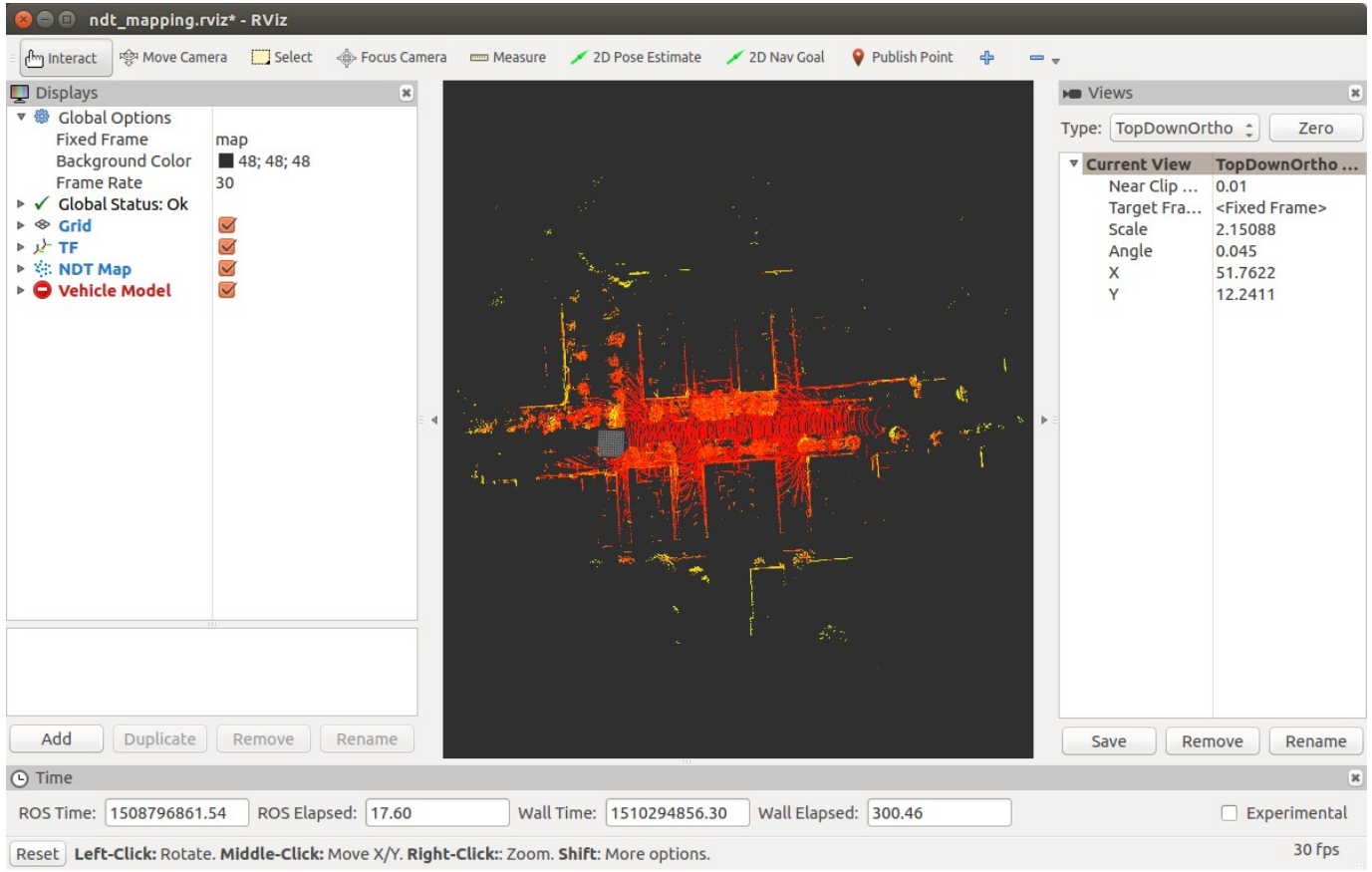
IF the pointcloud is being published in a different topic, use the relay tool in a new terminal window

```
rosrun topic_tools relay /front/velodyne_points /points_raw
```

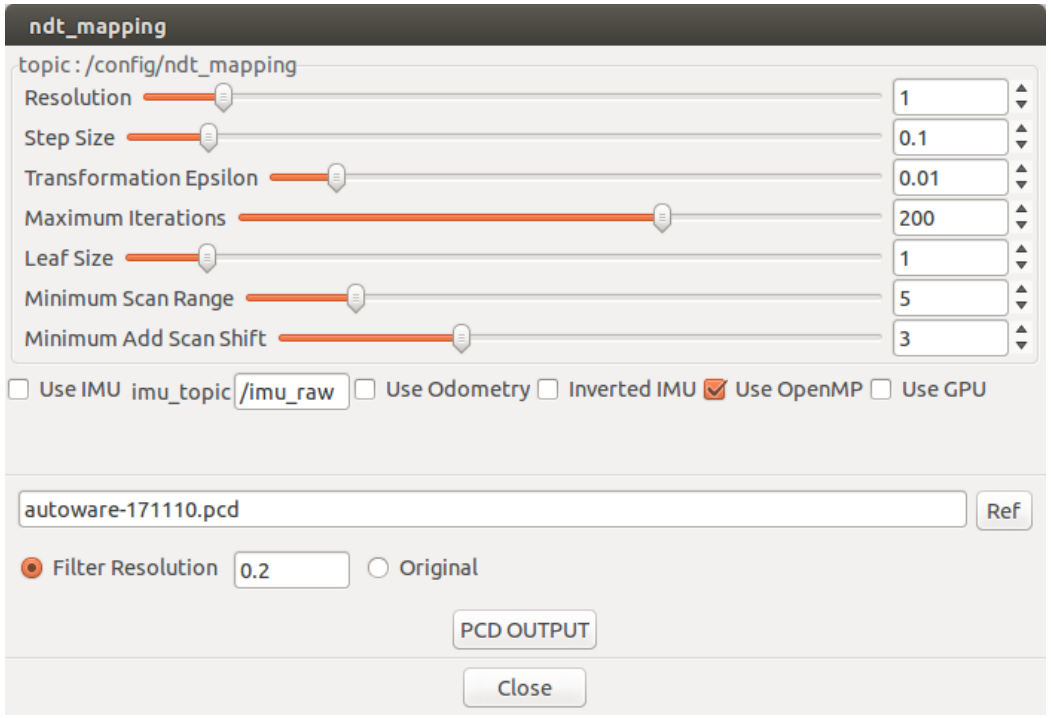
This will forward the topic `/front/velodyne_points` to `/points_raw`

8. Go back to **Simulation** tab and click **Pause** to start mapping

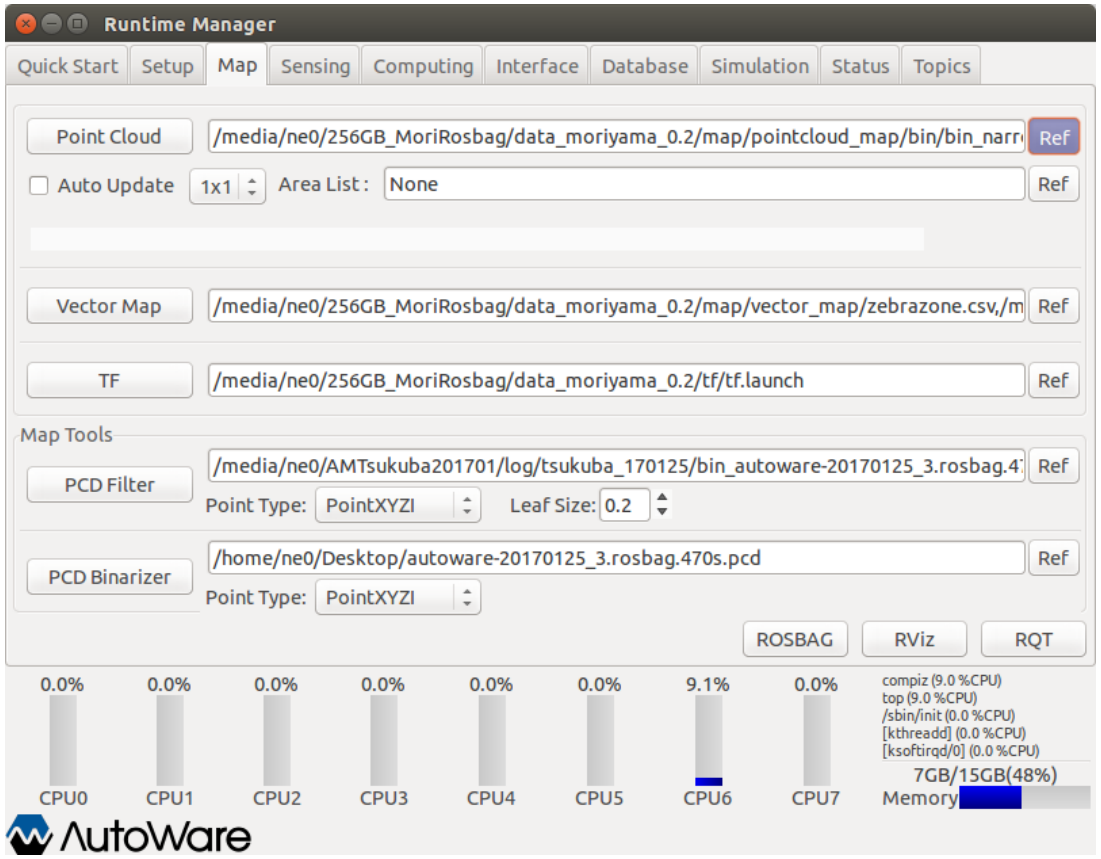
9. Mapping process can be seen from **Rviz**



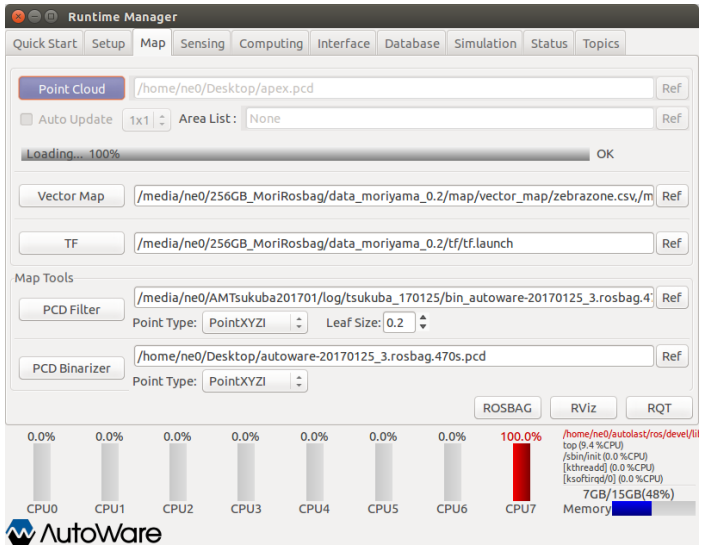
10. Once the desired area is mapped. Click **[app]** button next to ndt_mapping
11. Select the desired path specified using the **Ref** button
12. Press the PCD OUTPUT to generate the file.
13. Uncheck the ndt_mapping node to stop.



Verify Map



1. Select **Map** tab in runtime Manager and click on **Ref** button
2. Select the recently created file
3. Click on the **PointCloud** button and wait until the progress bar reaches Loading... 100%



4. Open RVIZ, Click the ADD button
5. Select the **By Topic** Tab
6. Double Click on **/points_map PointCloud2**
7. The map will be displayed (remember to set the frame to **map**)