Localization not working #3904

🗨 Closed   ✅ Answered by danicannt   **danicannt** asked this question in **Q&A**

Category

🙏 Q&A

Labels

component:localiza...

3 participants

---

danicannt on Oct 16, 2023

Hi, I am trying to initialize autoware, and when I send to it an initial pose I keep receiving the following messages:

```
[ndt_scan_matcher-31] [ERROR 1697455320.674554703] [localization.pose_estimator.ndt_scan_matcher]: Cannot find the reference position for map updates. Please check if the EKF odometry is provided to NDT. (map_update_timer_callback() at /home/dakar/source/external/autoware/src/universe/autoware.universe/localization/ndt_scan_matcher/src/map_update_module.cpp:89)
[component_container_mt-69] [INFO 1697455320.674642141] [default_ad_api.node.localization]: server call: /api/localization/initialize (log() at /home/dakar/source/external/autoware/install/component_interface_utils/include/component_interface_utils/rclcpp/interface.hpp:55)
[component_container_mt-69] [INFO 1697455320.675554172] [default_ad_api.node.localization]: client call: /localization/initialize (log() at /home/dakar/source/external/autoware/install/component_interface_utils/include/component_interface_utils/rclcpp/interface.hpp:55)
[pose_initializer_node-32] [INFO 1697455320.675766212] [localization.util.pose_initializer_node]: server call: /localization/initialize (log() at /home/dakar/source/external/autoware/install/component_interface_utils/include/component_interface_utils/rclcpp/interface.hpp:55)
[pose_initializer_node-32] [INFO 1697455320.676886668] [localization.util.pose_initializer_node]: EKF Deactivation succeeded (send_request() at /home/dakar/source/external/autoware/src/universe/autoware.universe/localization/pose_initializer/src/pose_initializer/ekf_localization_trigger_module.cpp:50)
[pose_initializer_node-32] [INFO 1697455320.677822453] [localization.util.pose_initializer_node]: NDT Deactivation succeeded (send_request() at /home/dakar/source/external/autoware/src/universe/autoware.universe/localization/pose_initializer/src/pose_initializer/ndt_localization_trigger_module.cpp:50)
[pose_initializer_node-32] [INFO 1697455320.677951163] [localization.util.pose_initializer_node]: server exit: /localization/initialize (log() at /home/dakar/source/external/autoware/install/component_interface_utils/include/component_interface_utils/rclcpp/interface.hpp:55)
```

So autoware does not initialize.

The map is loading properly both the vector map and the pointcloud map is well referenced but don't know how to debug this problem properly

↑ 1

✅ **Answered by danicannt** on Oct 18, 2023

I have been able to tune properly the CycloneDDS configuration, I'll add here my steps to allow to others to replicate what I am trying:

I've to add this line (SocketReceiveBufferSize) on both of the cyclone dds computers config files:

View full answer ↓

---

2 comments · 7 replies

[Oldest | Newest | Top]

---

yukkysaito on Oct 16, 2023   Maintainer   edited ▾

@danicannt Is it tutorial?
Can you tell me your environment?

The error is that map matching fails because the initial position is specified where the point cloud map does not exist.

↑ 1   7 replies

⋮   **Show 2 previous replies**

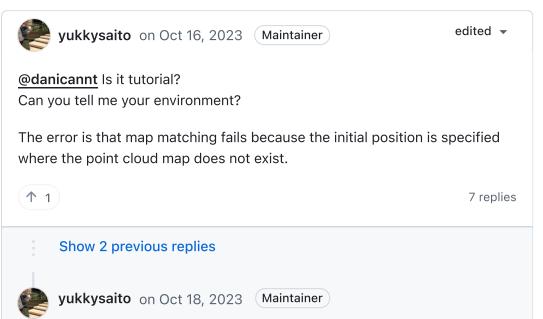**yukkysaito** on Oct 18, 2023   Maintainer

I don't have your computer environment and don't know up to the CycloneDDS setup, maybe the ROS community would be better. 🙏
If you need help with the Autoware layers, it would be helpful if you could give me the map and the rosbag data to reproduce.

Autostone-c on Oct 18, 2023

Carla 0.9.13 and autoware   humble

danicannt on Oct 18, 2023   Author

That's it. Autoware is running on Humble and and Carla is running on Galactic on Ubuntu 20

Autostone-c on Oct 19, 2023

i guess you are run autoware on ubuntu22.04   and carla on ubuntu20.04   it also has Galatic installed   But how do you ensure that the versions of cyclonedds on both machines are consistent

danicannt on Oct 19, 2023   Author

I am using Carla on a Ubuntu 20 computer with Ros Galactic, and the other computer has Ubuntu 22 with ros Humble.

The only way I have been able to check is to check the frequency of the topics on both computers and with Wire-shark been tracing what packages were being send in both computers

Do you have any other method which would allow us to check if the consistence of the cyclone-dds config between two computers is well configured?

---

danicannt on Oct 18, 2023   Author   edited ▾
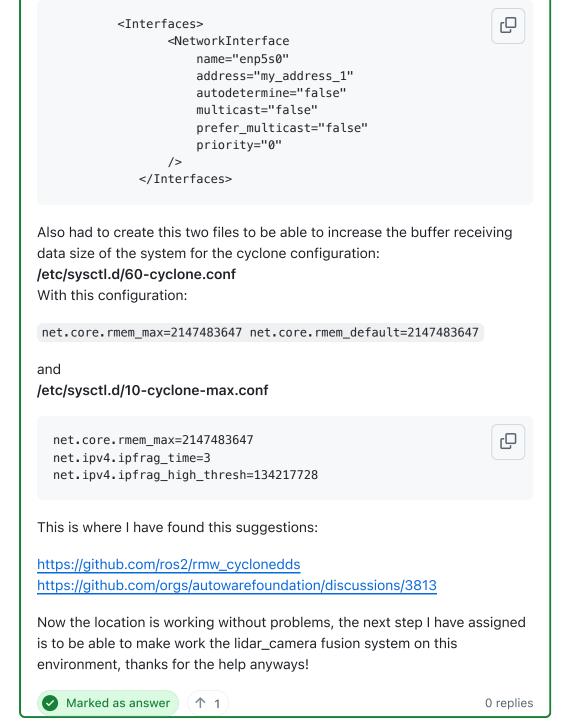
I have been able to tune properly the CycloneDDS configuration, I'll add here my steps to allow to others to replicate what I am trying:

I've to add this line (SocketReceiveBufferSize) on both of the cyclone dds computers config files:

```
    <Internal>
        <SocketReceiveBufferSize min="10MB"/>
        <Watermarks>
            <WhcHigh>500kB</WhcHigh>
        </Watermarks>
    </Internal>
```

Also in interfaces have added the name of the interface that I am using and have set the priority to "0", but I don't know if this had any repercussion on the the performance:

```
        <Interfaces>
                <NetworkInterface
                        name="enp5s0"
                        address="my_address_1"
                        autodetermine="false"
                        multicast="false"
                        prefer_multicast="false"
                        priority="0"
                />
        </Interfaces>
```

Also had to create this two files to be able to increase the buffer receiving data size of the system for the cyclone configuration:
/etc/sysctl.d/60-cyclone.conf
With this configuration:

`net.core.rmem_max=2147483647 net.core.rmem_default=2147483647`

and
/etc/sysctl.d/10-cyclone-max.conf

```
net.core.rmem_max=2147483647
net.ipv4.ipfrag_time=3
net.ipv4.ipfrag_high_thresh=134217728
```

This is where I have found this suggestions:

https://github.com/ros2/rmw_cyclonedds
https://github.com/orgs/autowarefoundation/discussions/3813

Now the location is working without problems, the next step I have assigned is to be able to make work the lidar_camera fusion system on this environment, thanks for the help anyways!

✔ Marked as answer   ↑ 1   0 replies

Answer selected by **danicannt**