

Automatic parking can be performed on planning_simulator, but when deploying the actual vehicle, it is stuck in the planning stage and cannot engage. #4090



Answered by maxime-clem

wodone asked this question in Q&A



wodone on Jan 2

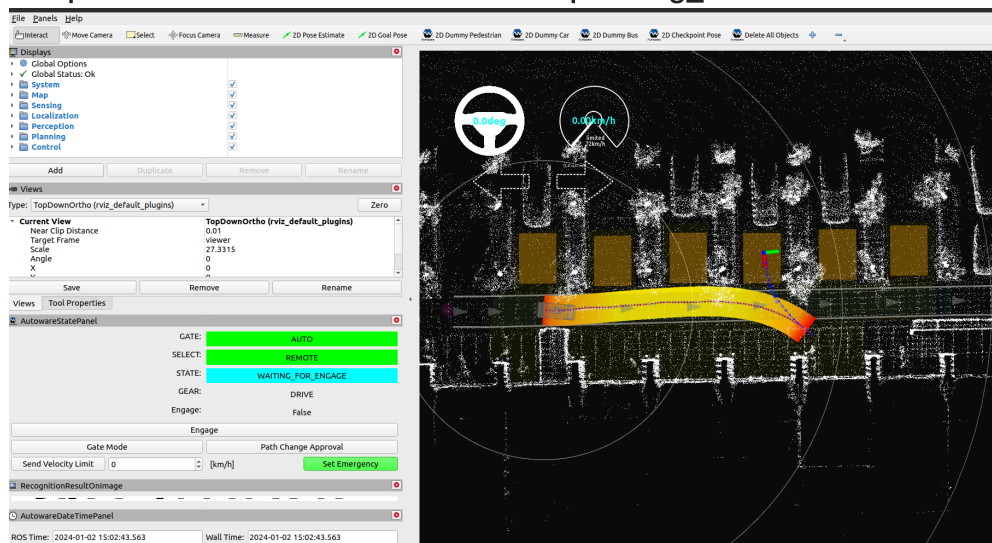
edited ▾

We drew the parking spaces on the osm map and verified the automatic parking function in planning_simulator. Everything was normal. But when we deploy this map to an actual vehicle, the automatic parking function cannot be performed. The path for automatic parking can be planned, but it cannot be engaged. The status is always stuck in the "planning" state and does not switch to the "wait for engage" state.

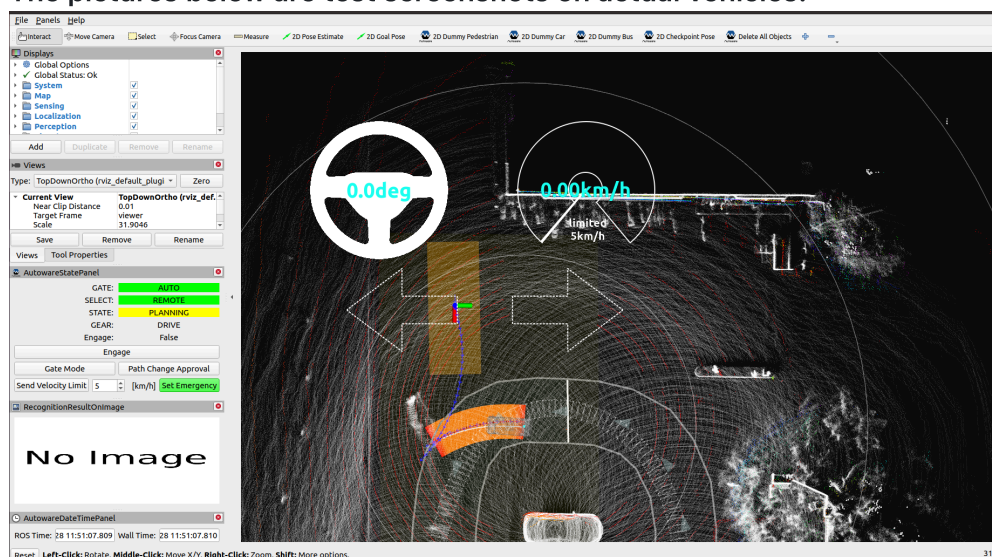
operating system ubuntu20.04

ros: ros2 galactic

The picture below is a test screenshot on planning_simulator



The pictures below are test screenshots on actual vehicles.



Category



Q&A

Labels

None yet

3 participants



↑ 1



Answered by **maxime-clem** on Feb 8

Sorry for the late reply. [@wodone](#) were you able to test a more recent version of Autoware to see if it fixes the issue ?

[View full answer](#) ↓

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maxime-clem on Jan 8

Collaborator

Thank you for reporting this issue. Can you confirm that you are able to engage your vehicle in other situations and that this issue only occurs for automated parking ?

To make it easier to identify the issue, please share the log file and/or a ROS bag recording. Please also specify which version of Autoware you are using.

↑ 1

❤ 1

7 replies



wodone on Jan 8

Author

Thank you very much for your reply and help! I can confirm that I am able to engage my vehicle in other situations and that this issue only occurs for automated parking. In situations other than automatic parking, autoware can engage normally. My Autoware version is galactic branch in github.

My Autoware version

The screenshot shows the GitHub repository for 'autoware.universe'. The 'galactic' branch is selected in the 'Switch branches/tags' dropdown menu. The repository has 82 branches and 0 tags. The commit history shows several recent commits, including updates to CODEOWNERS, skipping building tensorflow packages, renaming emergency stop variables, adding documentation, and improving localization. The repository is public and has 35 watchers, 443 forks, and 687 stars.

ros2 log file

[autoware_log.zip](#)



maxime-clem on Jan 11

Collaborator

Thank you for sharing a log file. Unfortunately there is no obvious issue that can be identified from the log file.

There could be a bug with the `galactic` branch which prevents engaging a real vehicle when starting with the freespace planner. Have you tried driving on a lane first and then changing the goal to the parking space ?

Next I will try to see if there this issue occurs with the current version of Autoware, or if it was already identified and fixed by previous updates.



wodone on Jan 15 Author

Thank you very much for your reply! I have tried driving on a lane first and then changing the goal to the parking space. When I driving on a lane first and then changing the goal to the parking space, it can engage and work normal. At the same time, when I wanted to get out of the parking space, the problem arose. It seems that as long as the vehicle is in the "parking_lot" area(When drawing the osm map, the parking space must be within the "parking_lot" area), the planning problem will occur. Now, we try to upgrade autoware to the latest version to solve this problem.



1



maxime-clem on Feb 8 Collaborator

Sorry for the late reply. @wodone were you able to test a more recent version of Autoware to see if it fixes the issue ?



Marked as answer

Answer selected by **maxime-clem**



maxime-clem on May 8 Collaborator

@wodone I am marking this as answered but feel free to unmark it if you encounter the issue again.



chivas1000 on May 24

edited ▼

@wodone I am marking this as answered but feel free to unmark it if you encounter the issue again.

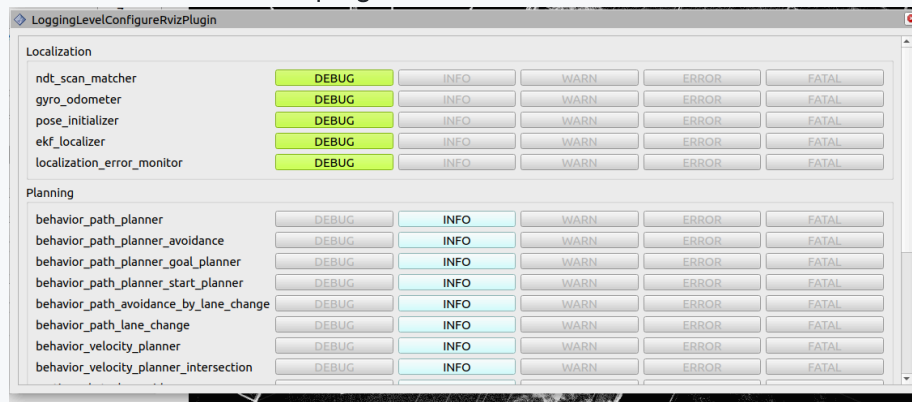
Hi @maxime-clem , this issue has been encounted and seems to be like this issue:

<https://github.com/orgs/autowarefoundation/discussions/4768>

We've also met this issue in autoware.universe main branch(at about Jan. 2024)(ubuntu 22.04, ros2 humble), as in [#4768](#) , the car can park in, but it cannot drive out of the park and cannot engage, also I've found that when this problem occurred, the terminal shows that "planning component state is unhealthy. Autonomous is not available" and the button "AUTO" are not available, but if the engage service are sent, the car have chances to drive out of the parking lot.

It would be grateful if you could give any hints why the planning component are unhealthy, or where could we find the unhealthy check relating code.

Plus, would you mind telling how do I enable the RCLCPP_DEBUG message since it do not show in the terminal, and even if I click "DEBUG" button in rviz plugins.



log:

```
[component_container_mt-35] [INFO] [1716532322.404152570]
[default_ad_api.node.operation_mode]: planning component state is
unhealthy. Autonomous is not available.
[topic_state_monitor_node-8] [WARN] [1716532323.500949656]
[system.topic_state_monitor_scenario_planning_trajectory]:
/planning/scenario_planning/trajectory topic rate has dropped to the
error level.
[component_container_mt-35] [INFO] [1716532325.404355297]
[default_ad_api.node.operation_mode]: planning component state is
unhealthy. Autonomous is not available.
[topic_state_monitor_node-8] [WARN] [1716532326.500949902]
[system.topic_state_monitor_scenario_planning_trajectory]:
/planning/scenario_planning/trajectory topic rate has dropped to the
warning level.
[component_container_mt-35] [INFO] [1716532328.604097483]
[default_ad_api.node.operation_mode]: planning component state is
unhealthy. Autonomous is not available.
[topic_state_monitor_node-8] [WARN] [1716532329.504348602]
[system.topic_state_monitor_scenario_planning_trajectory]:
/planning/scenario_planning/trajectory topic rate has dropped to the
warning level.
```

Best regards.



maxime-clem on May 24 Collaborator

```
[topic_state_monitor_node-8] [WARN] [1716532329.504348602]
[system.topic_state_monitor_scenario_planning_trajectory]:
/planning/scenario_planning/trajectory topic rate has
dropped to the warning level.
```



This means that the publishing rate of the trajectory is too low so this might be a performance related issue. You can see the configuration here:

https://github.com/autowarefoundation/autoware_launch/blob/main/autoware_launch/config/system/component_state_monitor/topics.yaml#L105-L116

Bellow 5Hz there is a warning. Bellow 1Hz there is an error.

If there is a warning or error the autonomous mode cannot be engaged.

If you need a quick (but dangerous ⚠️) solution, you can comment out these lines from the `topics.yaml` file. However it would be better to understand why the topic rate drops so low.