## Autoware is apparently only using 1 CPU process. Is this normal? #3530

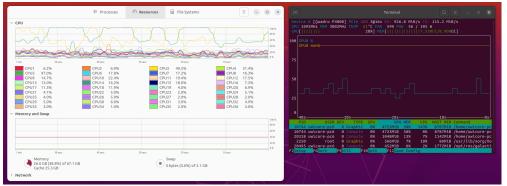
Unanswered

MarioAlmelaUMH asked this question in Q&A



MarioAlmelaUMH on May 30, 2023

Hello, I'm working with Autoware in tandem with Carla Simulator and I'm noticing some performance issues. I've set up a basic environment and profiled the whole system as shown in this image:



As you can see, I have 2 CPU processes alternating to cap at 100% usage. The rest of the processes are not used as much and the GPU usage is around 50% at max.

I presume the two processes capping are Autoware and Carla (I'm launching both of them in the same computer). My question is: is there a way to configure Autoware to make more use of the other processes and the GPU? I followed the standard installation guide and installed CUDA and all the other GPU related libraries, so maybe I'm launching Autoware the wrong way?

In case Autoware is working as expected and it's a hardware problem, what are the recommended specs to run Autoware? My current specs are these:

Memory: 62.5 GiB

Processor: Intel® Core™ i9-9980XE CPU @ 3.00GHz × 36

• Graphics: NVIDIA Corporation GP104GL [Quadro P4000]

Should it be better to install two GPUs on my computer (one for Autoware and the other one for Carla)? Or is it mandatory to run each software in a different machine?

Thank you for your answers.

**1** 

2 comments

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Autoware should be using multiple CPUs by default. Could you try running some of the demos in the following page without Carla and see if it still use only 1 core?

- https://autowarefoundation.github.io/autowaredocumentation/main/tutorials/ad-hoc-simulation/planning-simulation/
- https://autowarefoundation.github.io/autowaredocumentation/main/tutorials/ad-hoc-simulation/rosbag-replaysimulation/

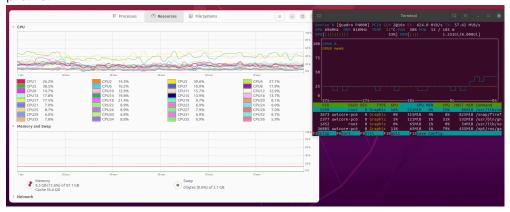


0 replies



MarioAlmelaUMH on May 30, 2023 (Author)

You are right. When I use the ad-hoc simulation, it shows a way healthier profile:



I guess the profile problem is a Carla thing, but do you know what could be happening?

Thanks for your quick answers.



0 replies