

Q. Running AWSIM and Autoware with two machines #2997

Unanswered sethut1224 asked this question in Q&A



sethut1224 on Nov 2, 2022

I want to running awsim and autoware with two machines

Nvidia Orin(Autoware)
Desktop(AWSIM)

However, AWSIM documentaion instruct to set LOCAL_HOST_ONLY option
I understand that AWSIM and autoware run only in the local machine.

Is there way to run autoware and AWSIM in seperate machine?

↑ 1

Category

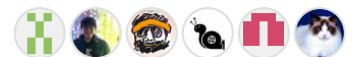


Q&A

Labels

None yet

6 participants



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HansRobo on Nov 11, 2022 Collaborator

@sethut1224 Thank you for having interest in AWSIM!
But I'm sorry, I don't know how to do it.

@mackierx111 Could you please reply to @.sethut1224 ?

↑ 1



1

0 replies



mackierx111 on Nov 13, 2022 Collaborator

@sethut1224

yes. It can run on two machines.

We recommend that you do not set the LOCAL_HOST_ONLY option and
connect the two PCs with ethernet cables.

ROS2 environment variables and *dds_config.xml must be set appropriately.

This is a video my friend made.

<https://www.youtube.com/watch?v=L2eVASikblU>

↑ 2



3

4 replies



Autostone-c on Jul 1, 2023

Recently, I also ran autoware(awsim-stable branch) on Orin and conducted joint debugging with the AWSIM simulation platform on another x86, but running autoware on Orin was too laggy and too laggy, and path planning and traffic light recognition were basically impossible. Where should I optimize this performance



yuasabe on Jul 2, 2023 Collaborator

When running Autoware and AWSIM on separate machines connected via an Ethernet cable, you would need to set up the `*dds_config.xml` file correctly with the `NetworkInterfaceAddress` of the Ethernet adapter explicitly specified. An example of it is shown in the answer below.

Otherwise, if both the Autoware and AWSIM machines are connected on the same Wi-Fi network, for example, they will both try to send ROS 2 data over the lossy Wi-Fi connection. Hence, the ROS 2 messages from AWSIM will be very laggy, making the performance of Autoware seem slow.



Autostone-c on Jul 2, 2023

i will try it But I have observed that when autoware runs on Orin, the CPU usage of each node is still very high. Have you ever encountered it?



Autostone-c on Jul 3, 2023

hi i have made adjustments according to your configuration file, but it still does not work. It is still too laggy. My Orin is ubuntu 20.04, but I am running autoware (awsim-stable branch). I am wondering if it is due to some dependent libraries being unusable? Do you have any good suggestions for this?



yuasabe on Nov 14, 2022 Collaborator

Thank you [@mackierx111](#) for introducing the video.

Just for reference, I connected the two PCs directly with an Ethernet cable and created two files in each of the two computers: `setup_source` and `cyclonedds.xml`.

`setup_source` file:

```
export CYCLONEDDS_URI=file://$PWD/cyclonedds.xml
export ROS_DOMAIN_ID=1
```



`cyclonedds.xml` file:

Make sure to specify your network interface here.

```
<?xml version="1.0" encoding="UTF-8" ?>
<CycloneDDS xmlns="https://cdds.io/config" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="https://cdds.io/config https://cdds.io/config/cyclonedds.xml">
```



```
<Domain id="any">
  <General>
    <NetworkInterfaceAddress>enp3s0</NetworkInterfaceAddress>
  </General>
</Domain>
</CycloneDDS>
```

Then, I ran the following commands before running Autoware and AWSIM on each of the computers.

```
source setup_source
```



In my case, Autoware and AWSIM ran so much more smoothly (with a higher FPS) than before with two computers so I think I will continue using this setup!

↑ 1

👍 2

0 replies



Autostone-c on Jul 3, 2023

hi have you done this Orin autoware + x86 awsim

↑ 1

1 reply



whbcumtb on Sep 21, 2023

edited ▼

I encountered the same performance issue when I run autoware on Orin and AWSIM on x86, and I will try the answer from [yuasabe](#).
Thanks in advance.