Performance analysis of a multi-container Autoware deployment #5012

oguzkaganozt started this conversation in **Design**

oguzkaganozt on Jul 18 Maintainer edited

Motivation

Now that the **Open AD Kit** containers are being used by different parties on different demos/activities etc. Testing **multi-containe**r behaviour and conducting a performance analysis can lead the way through the best possible aproach on how to upsteam multi-container deployment to the Autoware.

Test Suite 1: Reaction analyzer tool + AWSIM
Test Suite 2: Ros Trace Tools

Possible Approach

Phase 1
Utilizing Reaction Analyzer Tool for measuring end-to-end latency of the system with 2 containers (planning & perception) by using pre-recorded rosbags and map.

Phase 2
Replicating TUM's take on modular Autoware's setup on a smaller scale by using **7 modular containers** with the help of Reaction Analyzer Tool for measuring end-to-end latency of the system

Definition of done

Performance analysis report comparing **bare-metal, Phase-1 and Phase-2** deployment results in a summarized format.

↑ 4

Category
Design

Labels
type:containers
component:openad...

2 participants

3 comments

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oguzkaganozt on Aug 29 Maintainer Author

planning_control-2024-08-26-16-35-52-reaction-results.csv
perception_planning-2024-08-26-16-41-39-reaction-results.csv

↑ 1 0 replies

tejalbarnwal 2 weeks ago

Hi **@oguzkaganozt** , could you please list some observations you made from the CSV files above?

↑ 1 0 replies

tejalbarnwal 2 weeks ago

Also, reaction analyser tools help you to have latency checks; how do you plan to have throughput checks ?
Additionally, do you know of any measurement tools for checking networking overhead caused by multi-container docker-based deployment?

↑ 1 0 replies