

Perception Containerization #4646

New issue

Closed

3 of 7 tasks

oguzkaganozt opened this issue on Apr 22 · 2 comments



oguzkaganozt commented on Apr 22

Contributor

Checklist

- ☒ I've read the [contribution guidelines](#).
- ☒ I've searched other issues and no duplicate issues were found.
- ☒ I've agreed with the maintainers that I can plan this task.

Description

Produce stand-alone perception container to further iterate containerization efforts in Open AD Kit. With this last container, the first phase of the Open AD Kit will be concluded with the following containers:

- planning-control
- perception-localization
- simulator
- visualizer



After that users would be able to deploy distinct Autoware workloads that are **OTA-ready**.

Purpose

- Enable users to deploy Autoware easily on different platforms with the help of pre-built containers.
- Make it easier to orchestrate whole Autoware workloads with the help of container orchestration tools
- Ensure resource optimization and enhance efficiency of the entire host system.
- Isolate runtime environments of distinct functionalities, increasing deterministic behavior of the whole system and also enhancing bug traceability.

Possible approaches

Standardization and Compatibility

Assignees

oguzkaganozt

Labels

component:openadkit

component:perception

type:ci

type:containers

Projects

Open AD Kit Working Group

Status: Done +1 more

Milestone

No milestone

Development

No branches or pull requests

1 participant



- Develop standardized, cross-platform compatible container images for all Autoware components.

Orchestration

- Utilize Kubernetes for managing container lifecycle, deploying updates, and scaling workloads effectively.

Resource Management Optimization

- Integrate tools for dynamic resource allocation and optimization to enhance system efficiency and performance.

Documentation and Community Engagement

- Provide comprehensive documentation and engage with the community for feedback and continuous improvement.

Definition of done

- ☐ Compose perception container,
- ☐ Provide at least one orchestration tool for the containers
- ☐ Validate containerized deployment on multiple HW platforms (arm, x86)
- ☐ Document new containers and compose a getting started guide for the new containerized deployment



oguzkaganozt added type:new-feature component:perception type:installation type:ci type:containers component:openadkit labels on Apr 22



oguzkaganozt self-assigned this on Apr 22



oguzkaganozt added this to **Open AD Kit Working Group** on Apr 22



oguzkaganozt moved this to **Foundation** in **Open AD Kit Working Group** on Apr 22



oguzkaganozt moved this from **Foundation** to **Execution** in **Open AD Kit Working Group** on Apr 22



oguzkaganozt commented on Apr 22 Contributor Author

Deep investigation of reaction and end-to-end latency has been made thanks to [@brkay54](#). Hopefully we can leverage these data along with containerization performance analysis:

- <https://docs.google.com/spreadsheets/d/1vPWfAfba6vsPu4sFLXpypNAc3NqCepM11d6rKnp2u4Y/edit#gid=0>



oguzkaganozt commented on Apr 22 Contributor Author

Rosbags and necessary maps has provided thanks to Robeff:

- <https://drive.google.com/drive/folders/1VLPVCE7xOaY7eS38y3I2EiYBQQWmbDVG>



oguzkaganozt removed type:installation
type:new-feature labels on May 2



oguzkaganozt closed this as completed on Jul 26



github-project-automation bot moved this from Execution to Done in **Open AD Kit Working Group** on Jul 26