

# 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