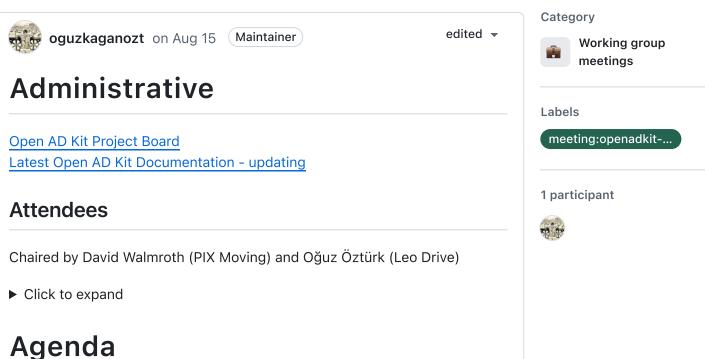


# Open ADKit Working Group Meeting 15/08/2024 #5098

oguzkaganozt started this conversation in Working group meetings



# DevOps Dojos: Build/Run: Open AD Kit Modular **Images**

- Agenda item maintainers: @oguzkaganozt , @youtalk
  - Explanation of docker build stages
  - **! ; feat(docker): refine devel image** #5045
  - Performance Analysis of Modular Containers
  - Modular containers discussion

# **DevOps Dojos: Ros Node Configuration Updates**

- Agenda item maintainers: @kaspermeck-arm

Call for volunteers

Step-by-step Documentation

Step-by-step Video Tutorial

Spreadsheet for node updates

### Remote RViz Visualization

- Agenda item maintainers: @oguzkaganozt, @kaspermeck-arm
  - https://github.com/orgs/autowarefoundation/discussions/5099

Given the benefits of modern web technologies and the need for flexibility, WebRTC with rosbridge(ROS Web Tools) with the help of <u>aiortc</u> would be the ideal choice.

Related idea: RobotWebTools/rosbridge\_suite#757

#### Related past issues and discussions:

- <a href="https://github.com/orgs/autowarefoundation/discussions/2545">https://github.com/orgs/autowarefoundation/discussions/2545</a> & <a href="mailto:feat(tier4\_autoware\_api\_launch">feat(tier4\_autoware\_api\_launch)</a>: add <a href="mailto:rosbridge">rosbridge</a> autoware.universe#779
- https://github.com/orgs/autowarefoundation/discussions/2664

### Some reference projects related to use WebRTC&Websockets with ROS 2:

- https://github.com/RobotWebTools/rosbridge\_suite
- https://github.com/foxglove/ros-foxglove-bridge
- https://github.com/pgaston/teleopros2
- https://github.com/abizovnuralem/go2\_ros2\_sdk
- https://github.com/jdgalviss/jetbot-ros2/tree/main
- https://github.com/introlab/opentera-webrtc & https://github.com/introlab/opentera-webrtc-ros
- https://github.com/v-kiniv/rws
- X2GO

Aspect	X11 Forwarding	VNC	NoMachine	Wel
Primary Function	Remote application visualization	Full desktop remote access	High- performance remote desktop	Real-t media data strear
Protocol	X11 over SSH	RFB (Remote Framebuffer Protocol)	NX protocol	WebR (Peer- peer)
Compression	Minimal (SSH encryption overhead)	Various (e.g., Tight, H.264)	Advanced compression and caching	High- efficie comp
Bi-Directional ROS Messaging	No	No	No	Yes
Platform Independence	Limited	Limited	Limited	High
Ease of Setup	Low	Moderate	Moderate to High	High
Security	Integrated with SSH	Requires secure	Built-in secure	Requi secur

Aspect	X11 Forwarding	VNC	<u>NoMachine</u>	Wel
		tunnel (e.g., SSH)	connection	(DTLS
Performance	Moderate	Moderate	High	High

# **Technical Optimizations for Container Management**

- Agenda item maintainers: @youtalk , @oguzkaganozt
  - O More Strict Dependency Control for ROS Nodes #4599
    - The list of Top 25 ROS nodes that includes most <depend> tags
    - Last years's huge PR related -> \(\frac{1}{6}\) build: remove unused <a href="deepend">depend</a>
       in package.xml files autoware.universe#3606
    - Example of the motivation

### **Open AD Kit Bugs & Feature Requests**

- Agenda item maintainers: @idorobotics, @oguzkaganozt
  - Assess open-ad-kit related bugs, issues or feature requests from community channels (github, discord, or other platforms)

## **Open AD Kit Hardware Availability**

- Agenda item maintainers: @HamburgDave, @samet-kutuk
  - ORIN: Recently successfully tested
    - https://github.com/futurenowx/autoware
  - AADP: Being used on various demos
  - ADLINK presented their autonomy HW lineup in Ref. Des. WG. BSP does not yet support Yocto(?).
  - 7Starlake: we heard that some eval units can be made available for testing

# 2024 Demo Planning and Activities

- Agenda item maintainers: @HamburgDave, @samet-kutuk
  - AutoTech Detroit (June 5-6):
     https://docs.google.com/presentation/d/1UD\_0tlhRgfjmQami1nyKxh5feY
     5TGre4YTOAG1AZWik/edit?usp=sharing
  - (Potential) AVTE California / Aug 28-29
  - (Potential) IEEE ITSC / Sep 24-27
  - (Potential) IROS 2024 / Oct 14-18
  - (Potential) ROSCon / Oct 21-23

# Active pursuit to find more collaborators - Agenda item maintainers: @samet-kutuk, @HamburgDave - Outreach to external collaborators needed to further increase the WG's productivity **1** 3 comments Oldest Newest Top oguzkaganozt on Aug 15 (Maintainer) (Author) • https://github.com/tier4/caret **1**) 0 replies oguzkaganozt on Aug 15 (Maintainer) (Author) Enable access to modular container branch for demos 0 replies **1** oguzkaganozt on Aug 15 (Maintainer) (Author)

