

Reference Design WG Meeting (11/06/2024) #5404

chishengshih started this conversation in **Working group meetings**



chishengshih 2 weeks ago

Collaborator

edited ▾

Date: 2024-11-06

Time: 14:00 (UTC)

Administrative

- [Previous meeting minutes](#)
- [Reference Design project board](#)
- [Reference Design Roadmap](#)

Participants:

- ☒ Daniel Shih (Tier4/NTU)
- ☒ Stephen Li
- ☐ Rahul Razdan (Razdan Research Institute)
- ☐ Mahesh Menase
- ☐ Eddie Liu (ADLink)
- ☒ ChenYing Kuo (ADLink):
- ☐ Yoshihito Takashima (Tier IV)
- ☒ Paul Yeh (Tier IV)
- ☐ Armagan Arslan (Hardware/Opening AD Kit WG)
- ☒ David Walmroth (Opening AD Kit WG)
- ☐ Chetan (Marvel)
- ☒ Ryohsuke Mitsudome (Tier4)
- ☐ William Yuankai He: (Detrio, MI, Uni. of Delaware (soon))
- ☐ Markus Schratter (Virtual Vehicles Research, Austria)
- ☐ Abinesh L (DanLaw)
- ☐ Lucaus Xingang Liu (Autocore)
- ☐ Gernot Heiser (seL4)
- ☐ Nilay Sener
- ☐ Mark Jin (PixMoving)
- ☐ Tomonori Kaneko (eSol)

Category



Working group meetings

Labels

meeting:reference-...

1 participant



- ☐ Akihiko Tsukuda (eSol)
- ☒ Christ John (Tier4)
- ☐ Bonolo (AWF)
- ☐ Samet Kutuk
- ☐ oguz (LeoDrive)
- ☐ Ahmet (Robeff)
- ☐ Ben (Benoit le Bourgeois) (VDK)
- ☐ Ozkan (Robeff)
- ☐ Coskun (Robeff)
- ☒ Hiroshi Igata (TierIV)
- ☐ Hans/Ming-Hong (KWT)
- ☐ Mark (KWT)
- ☐ Jun Su (MiiVii Tech)
- ☐ Armagan Arslan (LeoDrive)
- ☐ Nancy Lee (PixMoving)
- ☐ Armagan Arslan (LeoDrive)

Agenda:

- New Member Introduction
- Update on Zenoh at ROSCon

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2 comments

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- New members: Manish ES
- ROS 2 with Zenoh:
- rmw_zenoh is released on ROSCon 2024
- Better performance, out-of-box configuration., and
- ROS 2 nodes establish zenoh sessions in peer mode but with multicast UDP disabled.
- Gossip scouting is relied upon by peers and the router for discovery.
- P2P data transmission. (Different from DDS in ROS2?) (P.6)
- Why Zenoh router when ROS2 removes roscore? (P.7)
 - ** Better connectivity management, traffic shaping, security and access control.
 - ** easier for configuration.
 - ** Compared to ROS1, the system needs to be restarted when roscore crashes. In Zenoh, the problem is solved.

- The status of rmw_zenoh: (P.8)
 - ** ROS 2 version: only used in Iron, Jazzy, and Rolling.
 - ** Zenoh 1.0.0 version waiting in review, upgraded from Zenoh 0.11.0
 - ** Future:
 - *** Using zenoh-cpp instead of zenoh-c
 - *** Support SHM in ROS 2

- Demo (P.9)
 - ** The communication remains even the zenoh router crashes.
 - ** restart Zenoh daemon does not affect the system operations.

- github repo for the demo at ROSCon 2024:
 - ** seven exercises to practice Zenoh.

- Video demo for Zenoh on Robots

- How autoware can adopt Zenoh (P.10)
 - ** Best way: use rmw_zenoh directly
 - ** Alternative: Zenoh-bridge-ros2dds

1. Zenoh Carla Bridge

2. Fleet management system prototype

- Architecture of the CARLA Bridge:
 - ** connect multiple containerized Autoware to CARLA.
- Architecture of the Fleet Management Systems using Zenoh (P.12)
- Remote driving using FMS.

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Update for Zenoh:

- [PDF](#)
- [Video](#)

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