

Press release

## **RTI Introduces Enhanced ROS 2 Support to Accelerate Development of Scalable Robotics Systems**

Application Developers Can Now Leverage Connex DDS Scalability and Productivity Tools With the ROS 2 Ecosystem

**SUNNYVALE (USA)/London, November 10, 2020 – Real-Time Innovations (RTI), the largest software framework provider for smart machines and real-world systems, today announced the availability of the Connex 6 ROS Middleware Wrapper (RMW) Layer, bringing the field-proven, production-grade strength of RTI Connex<sup>®</sup> 6 to the latest release of the Robot Operating System (ROS 2). Robotics software developers can now leverage the ROS 2 ecosystem together with RTI Connex Tools to more rapidly develop, test and debug distributed robotics systems. RTI will showcase the new Connex RMW layer at ROS World on November 12.**

ROS 2 offers an open-source framework for building robotic systems. RTI is the leading supplier of software compliant with the Data Distribution Service™ (DDS) standard, which provides the connectivity backbone for ROS 2. The new Connex 6 RMW layer now provides a best-of-both-worlds solution by connecting the ROS 2 ecosystem with RTI's latest software and Connex Tools.

“RTI was founded out of the Stanford Robotics lab so robotics is deeply rooted in our DNA,” said Gerardo Pardo-Castellote, CTO at RTI. “We work with our customers beginning in the research phase of their system development all the way through to production where performance, reliability and scalability become critical. We recognize the value of participating in the ROS ecosystem and are proud to offer new ways to utilize RTI Connex DDS for a production-grade solution.”

### **The new Connex RMW layer offers:**

- The flexibility of the ROS 2 platform combined with complete access to RTI Connex tools for improved distributed system visualization and debugging capabilities
- Support for RTI Connex DDS Professional in Connex 6, used for industrial and military robotics applications where reliability and scalability are of paramount importance
- Support for RTI Connex DDS Micro
- Support for future releases of the Connex Product Suite

“We developed the new Connex RMW layer from the ground up to better take advantage of Connex APIs and features,” said Andrea Sorbini, Senior Software Engineer at RTI and technical lead for the project. “This allowed us to simplify the code and greatly improve the performance of the RMW layer, while also providing more turnkey access to RTI’s powerful distributed system development tools.”

“The new RMW brings the system-level visibility and monitoring capabilities of Connex DDS to ROS 2,” said Neil Puthuff, Senior Software Integration Engineer at RTI. “It enables advanced tools, such as RTI Admin Console and RTI Monitor to work seamlessly in a ROS 2 environment. No other current RMW offers this level of visibility and we look forward to continuing to help our customers simplify complex system development.”

### **RTI in Robotics**

RTI delivers the connectivity framework for safe, secure, reliable operations in complex, cooperative and autonomous robotics systems. RTI’s software is proven in robotics systems around the world including automotive, medical, manufacturing, aerospace & defense, and more.

RTI Connex DDS is active in over 250 autonomous vehicle projects and more than 50 commercial autonomous systems, such as Aptiv, Baidu Apollo, Voyage and Xpeng Motors. In June 2020, RTI joined the [Autoware Foundation](#), an open alliance for autonomous driving technology, where RTI is leveraging its experience with ROS 2 to help advance the foundation’s Autoware.IO and Autoware.Auto initiatives. RTI is the only DDS vendor to be

named an [AUTOSAR Development Partner](#) and contributes to the development of the AUTOSAR standard for highly autonomous vehicles.

RTI Connex DDS can also be found at the core of NASA's rovers and space robots, leveraged by the European Space Agency's robotic arm, and implemented in TechnipFMC's semi-autonomous underwater ROVs. It is also widely used in building and running robotics projects in leading universities around the world. More recently, RTI Connex DDS was used by the collegiate teams entered in the [Indy Autonomous Challenge](#) (IAC) as they participated in the September hackathon, one of several leading up to the IAC final race at the Indianapolis Motor Speedway on October 23, 2021.

**RTI will be showcasing the Connex RMW Layer at ROS World 2020 on November 12 in RTI's virtual booth [here](#). For more information, please visit: <https://roscon.ros.org/world/2020/>.**

Join RTI in a one-hour interactive Tech Talk to learn more about the integration between ROS 2 and RTI Connex DDS. Register [here](#).

Read more about RTI's work in the robotics industry [here](#).

### **Availability**

The Connex RMW Layer is publicly available at [https://github.com/rticommunity/rmw\\_connexdds](https://github.com/rticommunity/rmw_connexdds) under an Apache 2.0 license. For more information, please contact: [robotics@rti.com](mailto:robotics@rti.com).

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**About RTI (www.rti.com):**

Real-Time Innovations (RTI) is the largest software framework provider for smart machines and real-world systems. The company's RTI Connex<sup>®</sup> product enables intelligent architecture by sharing information in real time, making large applications work together as one.

With over 1,500 deployments, RTI software runs the largest power plants in North America, connects perception to control in vehicles, coordinates combat management on US Navy ships, drives a new generation of medical robotics, controls hyperloop and flying cars, and provides 24/7 medical intelligence for hospital patients and emergency victims.

RTI is the best in the world at connecting intelligent, distributed systems.

These systems improve medical care, make our roads safer, improve energy use, and protect our freedom.

RTI is the leading vendor of products compliant with the Object Management Group<sup>®</sup> (OMG) Data Distribution Service<sup>™</sup> (DDS) standard. RTI is privately held and headquartered in Sunnyvale, California with regional headquarters in Spain and Singapore.

Download a free 30-day trial of the latest, fully-functional Connex DDS software today: <https://www.rti.com/downloads>.

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