DATASHEET

RTI Connext Anywhere

WORLD'S FIRST SOFTWARE FRAMEWORK DESIGNED TO ENABLE THE RAPID DEVELOPMENT, DEPLOYMENT AND UPGRADES OF WIDELY-DISTRIBUTED TELEOPERATION APPLICATIONS

HIGHLIGHTS

Transport-independent DDS-compliant APIs

Low-latency, high-throughput, reliable and secure communication over mobile and wide area networks

Automatic discovery and peer-to-peer connectivity without multicast and across NATs

Tools to accelerate design, development, testing and integration

How do you support teleoperation in today's widely distributed autonomous systems? RTI Connext® Anywhere is the first software framework designed for demanding systems that require high-fidelity real-time communication, even over diverse mobile, wide area and public networks.

CONNEXT ANYWHERE: SOFTWARE FRAMEWORK FOR WIDELY DISTRIBUTED AUTONOMOUS SYSTEMS

A key benefit of autonomous systems is that a single operator can efficiently control multiple robots, vehicles or other machines, regardless of proximity. This is particularly valuable when devices are mobile, or deployed in inaccessible or inhospitable locations.

Until now, supporting wide-area teleoperations has been very time-consuming and costly. Unlike systems deployed only on local networks, developers have had to accommodate the lower quality of wide area communication, the constraints and complexity of public infrastructure, and disruptions caused by roaming. Each deployment may also require customization for its specific network topology and service providers.

Based on the Data Distribution Service™ (DDS) standard, Connext Anywhere is the first software framework to address these challenges. It allows development of modular applications that are easy to deploy over diverse network types, configure for deployment-specific environments, and upgrade to add capabilities and take advantage of new technologies such as 5G. This can accelerate time-to-market, while maximizing long-term agility.

PRODUCT HIGHLIGHTS

Connext Anywhere offers new capabilities that simplify the development and configuration of today's more complex and increasingly autonomous systems. These features can help accelerate the development of modular applications, without requiring software changes to support diverse network types. Its connectivity APIs free developers from needing to know or accommodate the capabilities of the underlying networks.

Capabilities in Connext Anywhere allow users to:

Develop modular systems using RTI's network-agnostic DDS-compliant APIs that can easily be deployed over disparate transports — from shared memory to LANs to WANs — without source code changes. These APIs also allow developers to quickly support deployment-specific networking environments and emerging technologies such as 5G, when available.

Achieve low latency and high throughput over mobile and wide area networks without custom development using RTI Real-Time WAN Transport. RTI's UDP-based protocol delivers data reliably over unreliable connections and even when switching networks. Built-in lossless data compression further maximizes effective throughput.

Enable dynamic discovery between applications using RTI Cloud Discovery Service to establish peer-to-peer communication across networks without multicast and with Network Address Translation (NAT), including public networks and clouds. This minimizes deployment-specific configuration and maximizes scalability.

Maximize productivity, system reliability and security with the rich and field-proven foundation provided by Connext® Professional and Connext® Secure. Fine-grained security controls minimize overhead while satisfying authorization, authentication and privacy needs.

BENEFITS

Faster Time to Market: Connext Anywhere offers a mature, field-tested and robust connectivity framework that can help accelerate time to market for new and innovative production-grade applications.

Proven Foundation Lowers Risk and Costs: Connext products offer a trusted and proven connectivity foundation to help avoid the risk and opportunity costs of going down the wrong path.

Supports the Full Product Lifecycle: Connext products can be utilized throughout the project lifecycle — from proof-of-concept or prototype, through deployment at scale. Users can quickly prototype and develop distributed systems on complex network topologies using built-in configuration profiles and graphical development and debugging tools.

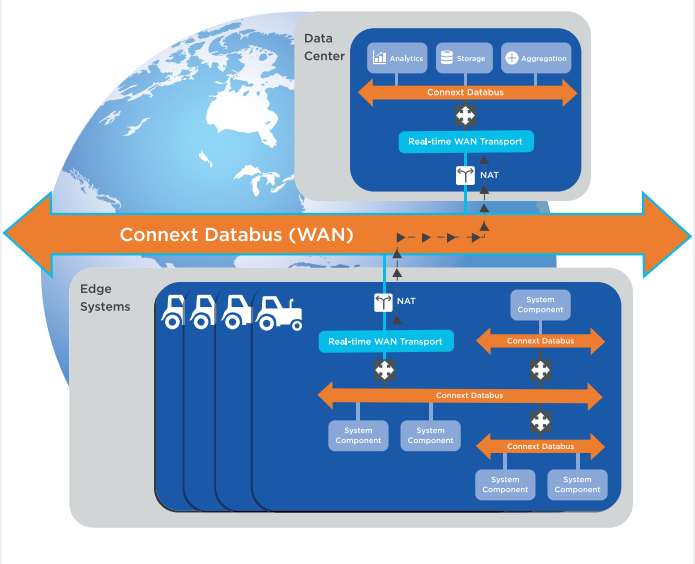

Figure 1: An example scenario of an Edge-to-Data Center deployment for a fleet of tractors using a Routing Service in the tractors and in the data center. This is one of the many deployment configurations that RTI Real-Time WAN Transport supports.

ABOUT RTI

Real-Time Innovations (RTI) is the largest software framework company for autonomous systems. RTI Connext® is the world's leading architecture for developing intelligent distributed systems. Uniquely, Connext shares data directly, connecting AI algorithms to real-time networks of devices to build autonomous systems.

RTI is the best in the world at ensuring our customers' success in deploying production systems. With over 1,800 designs, RTI software runs over 250 autonomous vehicle programs, controls the largest power plants in North America, coordinates combat management on U.S. Navy ships, drives a new generation of medical robotics, enables flying cars, and provides 24/7 intelligence for hospital and emergency medicine. RTI runs a smarter world.

RTI is the leading vendor of products compliant with the Object Management Group® (OMG®) Data Distribution Service (DDS™) standard. RTI is privately held and headquartered in Sunnyvale, California with regional offices in Colorado, Spain and Singapore. Download a free 30-day trial of the latest, fully-functional Connext software today: www.rti.com/downloads.

Your systems. Working as one.

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