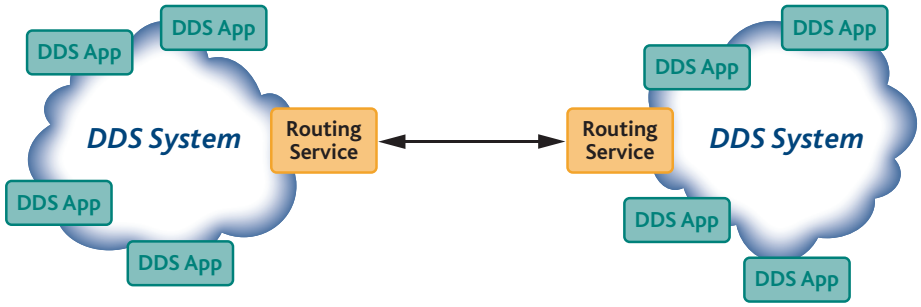
RTI Routing Service for DDS

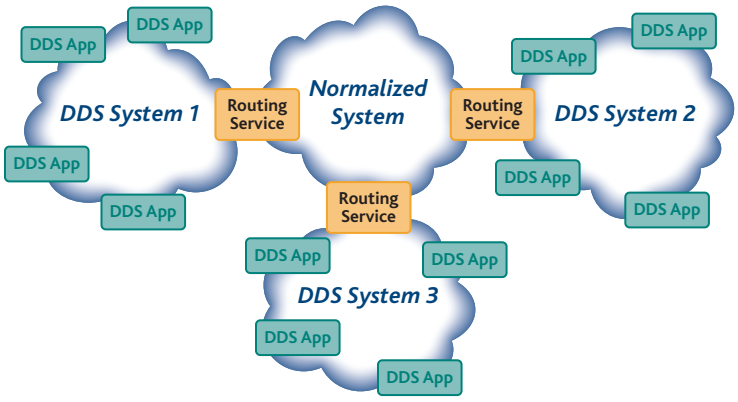
HIGHLIGHTS

- Eases integration and scaling of real-time systems across WANs and Systems of Systems (SoS)
- Allows applications to communicate seamlessly, even if they are deployed in different locations or support different external interfaces
- Deploys without changes to existing applications; integrates existing systems without source code modification
- Transforms and filters data, allowing disparate systems to communicate seamlessly
- Supports distributed development teams: develop and integrate locally, test remotely, without destabilizing the core application
- Enables remote-site data analysis and verification



RTI Routing Service dramatically eases the scaling and integration of real-time systems across Wide Area Networks (WANs), DDS domains, Communities of Interest, and Systems of Systems (SoS)

RTI Routing Service dramatically eases the scaling and integration of real-time systems across Wide Area Networks (WANs) and Systems of Systems. It allows applications to seamlessly communicate even if they are deployed in different locations or support different external interfaces. RTI Routing Service can be deployed without any changes to existing applications, and it has the flexibility to meet your future scalability requirements. This dramatically reduces the time and cost required to integrate and maintain applications across geographically dispersed networks and Communities of Interest.



RTI Routing Service decouples the topic and type definitions used within a system from the external interfaces used for system of systems integration.

RTI Routing Service works by forwarding and transforming data as it flows between applications. As a result, applications do not have to accommodate differences in data types or natively support WAN communication.

WAN/LAN Support

RTI Routing Service integrates and partitions DDS systems across a LAN or WAN. Data can be passed through, transformed or filtered. It supports the DDS wire interoperability protocol (RTPS) for compatibility with RTPS compliant DDS implementations, including RTI Data Distribution Service. Supported features include:

- **Secure Global (WAN) Deployment**—Deploy across multiple sites, using IP multicast for efficient, broad data distribution while bridging sites with secure TCP connections for easy firewall traversal.
- **Large-scale Integration of Systems**—Build modular systems out of existing applications. Data can be contained in private domains within subsystems, while select global data is available across domains. Control scope of discovery.
- **Data model evolution**—transform data on the fly, seamlessly bridging between different versions of data structures and interface definitions.

- **Distributed Development Team Support**—Locally test and integrate core applications across multiple sites, while presenting stable external interfaces; selectively expose and accept data from remote sites for integration testing.
- **Remote System Testing**—Connect remotely to live, deployed systems; perform live analytics, fault-condition analysis, and data verification.

Data Transformation

RTI Routing Service supports the following scenarios for DDS-to-DDS data transformations, allowing you to manage the evolution of your data model at the subsystem level. This includes the ability to:

- Transform data on the fly, changing topic names, type definitions and QoS
- Seamlessly bridge between different generations of DDS topic definitions

Custom Solutions via RTI Professional Services

With the help of RTI Professional Services, RTI routing technologies can be leveraged and adapted to meet your custom integration requirements, such as bridging legacy systems and increasing data security.

Legacy Bridging

RTI routing technologies can be used to bridge legacy applications built using NDDS 3.x and other legacy technologies. This solution can manage the nuances of DDS communication with legacy messaging technologies, including the challenges of reliability, durability, and discovery.

Bridging examples include:

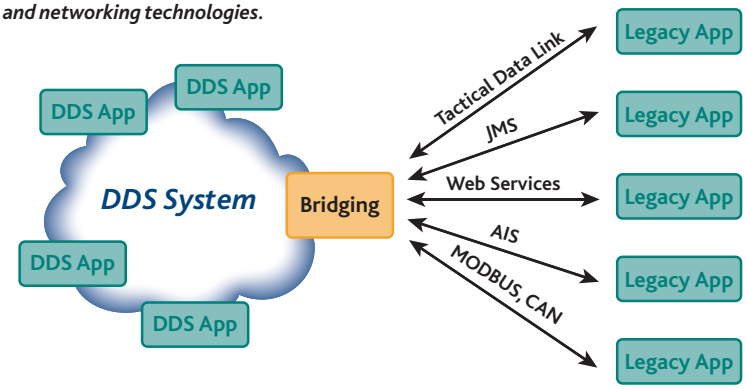
- NDDS 3.x pub/sub activity to RTI Data Distribution Service 4.x
- RTI Data Distribution Service to non-RTPS implementations of DDS
- Service mediation between DDS-based systems and an Enterprise Service Bus (ESB)
- RTI Data Distribution Service to SOA or Web Services
- AIS to RTI Data Distribution Service
- Raw TCP/IP or UDP/IP sockets to RTI Data Distribution Service
- Legacy JMS messaging to RTI Data Distribution Service
- Legacy busses (e.g., MODBUS, CAN) to RTI Data Distribution Service

Cross-Domain Solutions

RTI routing technologies can be used to support entitlements, secure role based access, key management and encryption, and multiple levels of security (MLS) from a topic or message vantage point. RTI Services can work with you to enable:

- Security for: data isolation and cross domain solution with topic resolution, exposing only parts of the data-space to other domains, and controlled exposure of data
- Implementing cross-domain solutions with routing between DDS enclaves
- Role-based access, thus allowing DDS topics to be accessed via credentials
- Unidirectional data-paths to facilitate High Assurance Guard (HAG) functionality

RTI Professional Services can customize RTI routing technologies to bridge with your legacy messaging and networking technologies.



About RTI

Real-Time Innovations (RTI) provides high-performance infrastructure solutions for distributed real-time applications. RTI middleware delivers dramatic improvements in latency, throughput and scalability while slashing cost of ownership. A broad range of industries leverage RTI's software and design expertise, including defense, intelligence, simulation, industrial control, power generation, transportation, finance, medical and communications. Founded in 1991, RTI is privately held and headquartered in Sunnyvale, California. For more information, please visit www.rti.com.

US HEADQUARTERS
Real-Time Innovations, Inc.
385 Moffett Park Drive
Sunnyvale, CA 94089
Tel: (408) 990-7400
info@rti.com