

DATASHEET

# RTI Connex 6.1

WORLD'S LEADING ARCHITECTURE FOR DEVELOPING INTELLIGENT DISTRIBUTED SYSTEMS

## HIGHLIGHTS

### Real-Time WAN Transport and Cloud Discovery Service

for large-scale and geographically distributed systems, increasing throughput, reducing latency and easing configuration

**Integration with the Latest Platforms** to ease integration of heterogeneous systems, including support for .NET Core and common Linux distributions on Arm

**New Tools to Simplify Configuration and Development** of more complex and increasingly autonomous systems, based on the proven Data Distribution Service™ (DDS) standard

In today's widely distributed autonomous systems, every second counts. RTI Connex<sup>®</sup> 6.1 is designed to accelerate real-time connectivity and support the highest levels of autonomy — even over disparate networks, such as public and private WAN in remote environments. This standards-based framework manages complex data distribution for real-time, scalable connectivity across platforms and systems.

## THE FIRST CONNECTIVITY SOFTWARE FOR WIDELY DISTRIBUTED AUTONOMOUS SYSTEMS

Distributed autonomous systems must operate in some of the most extreme environments. These systems must run in real-time, even when deployed over highly variable Local Area Networks (LANs) and Wide Area Networks (WANs) that may be lossy and characterized by low bandwidth and high latency. For example, these systems may operate over public or private networks and use a diverse range of networking technologies from wired to WiFi, cellular and satellite. Connex 6.1 introduces new features to significantly ease the development of widely distributed systems that must perform reliably in real time over a broad range of network types.

Connex 6.1, the newest release of the RTI Connex Product Suite, includes:

- Connex<sup>®</sup> DDS Professional 6.1
- Connex<sup>®</sup> DDS Secure 6.1

## WHAT'S NEW

Connex 6.1 is the first software framework designed to address the development and deployment challenges faced by companies building remotely-operated autonomous systems. Connex 6.1 introduces features which significantly accelerate the development of real-time systems that must operate over disparate network types. Unlike other distributed software frameworks that assume reliable enterprise deployment environments, Connex 6.1 supports and optimizes communications across highly variable LAN and WAN networks. Moreover, Connex 6.1 does not require software changes to support diverse network types. Its connectivity APIs free developers from needing to know or accommodate the capabilities of the underlying networks.

Connex 6.1 solves the most prevalent challenges facing autonomous system development and deployment. New capabilities in Connex 6.1 include:

### Real-Time WAN Transport

With this feature, users can communicate reliably across Wide Area Networks, including geographically distributed systems, traverse NATs, and maintain consistent communication as

endpoints move or IP addresses change. Use it with RTI [Cloud Discovery Service](#) to create performant, scalable systems that span diverse networks. Both are available as add-ons to Connex Professional and Connex Secure.

#### C# Language Binding Based on .NET Standard 2.0

New modernized, multi-platform C# binding runs on .NET Standard 2.0-compatible systems, including .NET 5, .NET Core 2+, and .NET Framework 4.6.1+; and on Linux, macOS, Windows, and the Unity Gaming Engine. The new binding includes a redesigned C#-friendly DDS API and IDL code generation. Support for .NET Core 5 lets developers use C# and run their applications on any platform that supports .NET Standard 2.0.

#### Compressed Application Data

Enhanced built-in support for data compression improves efficiency over bandwidth-constrained networks by reducing overhead and latency while increasing effective throughput. A choice of lossless compression algorithms (zlib, LZ4, and bzip2) allows optimization of processor versus network utilization for different payload types.

#### Built-in Network Capture

This feature enables Connex to capture the network traffic that one or more DomainParticipants send or receive. This provides the ability to capture shared memory traffic, view encrypted application data, and support all platforms that Connex supports.

#### Enhanced Graphical Views in Admin Console

It is now easier to visualize components of live large-scale systems and their interconnectivity. The new “rows-and-columns” graphical view of DDS entities replaces the previous “hub and spoke” view. It also adds four new views: System, Process, Domain, and Topic, enabling developers to further sort and visualize entities. Other exciting new features include color highlighting for Quality of Service (QoS) match analysis, entity and locator information, and exportable Wireshark filters.

#### System Designer

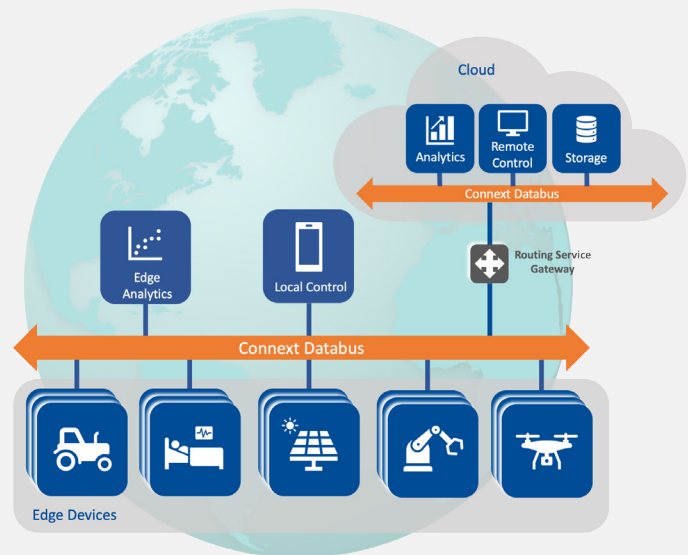
This graphical, menu-driven tool enables users to design and configure many aspects for a distributed system. System Designer also connects to RTI’s rtiiddsgen code generator to enable users to validate their QoS configuration at the push of a button.

#### Getting Started Guides

New Connex Getting Started Guides for modern C++, traditional C++, C#, and Security Plugins lead new users through fundamental concepts, including hands-on exercises.

#### Expanded Support for RTI Connector

RTI Connector for Python and JavaScript now supports the RTI Security and Monitoring plugins.



## ABOUT RTI

Real-Time Innovations (RTI) is the largest software framework company for autonomous systems. RTI Connex® is the world’s leading architecture for developing intelligent distributed systems. Uniquely, Connex 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 1,700 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 Connex software today: <https://www.rti.com/downloads>.

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