DATASHEET

RTI Connext Micro Training

HIGHLIGHTS

Concepts and benefits of the data-centric model for publish-subscribe distributed systems

Process for building Connext Micro code for any platform, including mobile platforms such as Android

Configuration of Connext Micro builds

Development of plugins and plugin interfaces

Essentials for building certifiable systems that include Connext Micro code

Connext™ Micro provides a small-footprint communications infrastructure to help applications meet stringent size, weight and power (SWaP) requirements well beyond the reach of traditional messaging middleware. It also serves as the foundation for safety- or security-certifiable components in critical systems that are not well-served with commercial off-the-shelf (COTS) software. Now, RTI Connext Micro training can help equip your team with the skills to rapidly take advantage of all the features and capabilities of this compact, safety-certifiable middleware for avionics and resource-constrained environments.

RTI CONNEXT MICRO

Connext Micro is an innovative, comprehensive software communications infrastructure for resource-limited devices – those with minimal memory, Flash, CPU power or no operating system. It can also be safety and security certified.

It is based on the Object Management Group (OMG) Data Distribution Service (DDS) standard that delivers low-latency, high-throughput, scalability and Quality of Service (QoS) capabilities for complex real-time distributed systems.

TRAINING COURSE

In this two-day course, participants will learn the benefits of taking the DDS real-time publish-subscribe paradigm to safety-critical avionics platforms with constrained resources. They will be able to begin effectively using RTI Connext Micro as part of their distributed systems.

PARTICIPANT REQUIREMENTS

This course was designed for all software architects and developers. It will be useful whether or not they have prior DDS experience. Source code and hands-on examples use C, so some C programming experience will be helpful.

LEARNING OBJECTIVES

After completing this two-day course, participants will be able to:

- Successfully complete selected hands-on exercises using the Connext Micro API
- Explain the potential of a data-centric model for publish-subscribe distributed systems
- Build Connext Micro source code for any platform, including non-mainstream platforms
- Configure the Connext Micro build process and plug in component implementations for your environments
- Build certifiable systems that include Connext Micro code

COURSE OUTLINE

Overview
Introduction to Connext DDS: the value of DDS

Fundamentals of Connext DDS
Principles of DDS, provisions of the DDS specification, and how Connext Micro relates to the specification

Application Development
DDS programming model, the importance of data, and how to achieve desired behavior through Quality of Service (QoS) and Discovery information

Features and API of Connext Micro
Capabilities Connext Micro brings to system architecture and the APIs it provides

Building Connext Micro
How to set up a tool chain for your environment, use cmake and build libraries from the supplied source code

Connext Micro Architecture
Connext Micro modules and how they work with one another

Porting Connext Micro
How to port Connext Micro to other hardware, operating system, or C compiler platforms

Writing Connext Micro Plugins
Benefits of replacing the implementation of certain Connext Micro components and the interface required for a plugin

Interoperability between Connext Micro and Connext DDS
Constraints to consider when using Connext Micro with Connext DDS, Connext Tools, and other DDS implementations

Cross-Platform Development for Android
How the Connext Micro build environment supports cross-platform development and the process of developing a Connext Micro application for Android

Conclusion

INSTRUCTOR

The course instructor will be an expert engineer and member of the RTI Professional Services team. The instructor will have practical, hands-on field experience working with clients who incorporated Connext Micro into their complex distributed systems.

RTI PROFESSIONAL SERVICES

Your success with developing complex distributed systems is the primary objective of the RTI Professional Services team. Our engineering experts help you mitigate project risk, increase productivity, and delivery quality on a shorter schedule.

Contact us today at solutions@rti.com to request this course or discuss other design, development, training or support needs.

ABOUT RTI

Real-Time Innovations (RTI) is the largest software framework provider for smart machines and real-world systems. The company's RTI Connext® 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® (OMG) Data Distribution Service™ (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 Connext DDS software today: https://www.rti.com/downloads.

Your systems. Working as one.

CORPORATE HEADQUARTERS
232 E. Java Drive, Sunnyvale, CA 94089
Telephone: +1 (408) 990-7400
Fax: +1 (408) 990-7402
info@rti.com

rti.com
rti_software
rtisoftware
company/rti
connextpodcast
rti_software