

RTI Connex DDS

Core Libraries

What's New in Version 5.3.1



© 2018 Real-Time Innovations, Inc.
All rights reserved.
Printed in U.S.A. First printing.
March 2018.

Trademarks

Real-Time Innovations, RTI, NDDS, RTI Data Distribution Service, DataBus, Connex, Micro DDS, the RTI logo, IRTI and the phrase, "Your Systems. Working as one," are registered trademarks, trademarks or service marks of Real-Time Innovations, Inc. All other trademarks belong to their respective owners.

Copy and Use Restrictions

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form (including electronic, mechanical, photocopy, and facsimile) without the prior written permission of Real-Time Innovations, Inc. The software described in this document is furnished under and subject to the RTI software license agreement. The software may be used or copied only under the terms of the license agreement.

Third-Party Copyright Notices

Note: In this section, "the Software" refers to third-party software, portions of which are used in Connex DDS; "the Software" does not refer to Connex DDS.

This product implements the DCPS layer of the Data Distribution Service (DDS) specification version 1.4 and the DDS Interoperability Wire Protocol specification version 2.2, both of which are owned by the Object Management, Inc. Copyright 2015 Object Management Group, Inc. The publication of these specifications can be found at the Catalog of OMG Data Distribution Service (DDS) Specifications. This documentation uses material from the OMG specification for the Data Distribution Service, section 2.

Reprinted with permission. Object Management, Inc. © OMG. 2013.

Portions of this product were developed using ANTLR (www.ANTLR.org). This product includes software developed by the University of California, Berkeley and its contributors.

Portions of this product were developed using AspectJ, which is distributed per the CPL license. AspectJ source code may be obtained from Eclipse. This product includes software developed by the University of California, Berkeley and its contributors.

Portions of this product were developed using MD5 from Aladdin Enterprises.

Portions of this product include software derived from Fmatch, (c) 1989, 1993, 1994 The Regents of the University of California. All rights reserved. The Regents and contributors provide this software "as is" without warranty.

Portions of this product were developed using EXPAT from Thai Open Source Software Center Ltd and Clark Cooper Copyright (c) 1998, 1999, 2000 Thai Open Source Software Center Ltd and Clark Cooper Copyright (c) 2001, 2002 Expat maintainers. Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions: The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

Copyright © 1994–2013 Lua.org, PUC-Rio.

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

Technical Support

Real-Time Innovations, Inc.

232 E. Java Drive

Sunnyvale, CA 94089

Phone: (408) 990-7444

Email: support@rti.com

Website: <https://support.rti.com/>

Table of Contents

What's New in 5.3.1

1	New Platforms	5
2	New Property, <code>dds.transport.shmem.builtin.host_id</code>	6
3	Modern C++ Language Binding for Request-Reply	6
4	New Installer Option for Disabling Copying of Examples	7

What's New in 5.3.1

Connex DDS 5.3.1 is a maintenance release based on feature release 5.3.0. This document highlights new platforms and improvements in 5.3.1. These enhancements have been made since 5.3.0.

For what's fixed in 5.3.1 and 5.3.0, see the [RTI Connex DDS Core Libraries Release Notes](#). For what's new in 5.3.0 and previous releases, see the *What's New* documents provided with those releases.

1 New Platforms

This release adds support for the following platforms.

Table 2.1 New Platforms in 5.3.1

Operating System	CPU	Compiler	RTI Architecture Abbreviation
OS X 10.13	x64	clang 9.0	x64Darwin17clang9.0
QNX Neutrino 7.0	ARMv8	qcc 7.0.0 with LLVM default libraries	armv8QNX7.0.0qcc_cxx5.4.0
		qcc 7.0.0 with GNU C++ libraries	armv8QNX7.0.0qcc_gpp5.4.0
	x64	qcc 7.0.0 with LLVM default libraries	x64QNX7.0.0qcc_cxx5.4.0
		qcc 7.0.0 with GNU C++ libraries	x64QNX7.0.0qcc_gpp5.4.0
RedHawk™ Linux 6.5 (Available through custom support)	i86	gcc 4.9.2	i86RedHawk6.5gcc4.9.2
	x64	gcc 4.9.2	x64RedHawk6.5gcc4.9.2
Ubuntu 16.04	ARMv8 (AArch64)	gcc 5.4.0	armv8Linux4.4gcc5.4.0

Operating System	CPU	Compiler	RTI Architecture Abbreviation
VxWorks 6.9.4.6 (Available through custom support)	PPC	Diab 5.9.1	For Kernel Modules: ppce6500Vx6.9.4.6diab5.9.1 For Real Time Processes: ppce6500Vx6.9.4.6diab5.9.1_rtp
VxWorks 7.0	x64	gcc 4.8.1.6	For Kernel Modules: pentium64Vx7.0gcc4.8.1 For Real Time Processes: pentium64Vx7.0gcc4.8.1_rtp
Wind River Linux 7	x64	gcc 4.9.1	x64WRLinux7gcc4.9.1
Windows 10 Windows Server 2008 R2 Windows Server 2016	x86 x64	Visual Studio 2017 Update 2 Visual Studio 2017 Update 2	i86Win32VS2017 x64Win64VS2017
Yocto Project® 2.2 ^a (Available through custom support)	ARM Cortex-A53	gcc 6.2.0 (aarch64-linux-gnu-gcc)	armv8Linux4.9gcc6.2.0

For details on these platforms, see the *RTI Connexx DDS Core Libraries Platform Notes*.

2 New Property, dds.transport.shmem.builtin.host_id

A new shared memory transport property, `dds.transport.shmem.builtin.host_id`, has been added. This property forces a specific host ID to be used to generate a shared memory network address. This property is useful in only a few scenarios. See Table 15.4 Properties for Builtin Shared-Memory Transport in the *RTI Connexx DDS Core Libraries User's Manual* for more information.

3 Modern C++ Language Binding for Request-Reply

This release includes a modern C++ language binding for request-reply. Request-reply was already available in C, traditional C++, Java, and C#. The modern C++ request-reply API was included as a prototype in release 5.3.0 and is now complete and fully supported in 5.3.1.

Applications can use this API and the modern C++ DDS API together. Previously, a DDS application written in modern C++ didn't have an easy way to also use request-reply.

The release includes updated API documentation and a code example (`<rti_workspace>/examples/connexx_dds/c++11/hello_world_request_reply/`).

^a For details on using this platform, please see the separate document, *RTI Connexx DDS Core Libraries Custom Support for Yocto Project 2.2 Platforms*.

4 New Installer Option for Disabling Copying of Examples

The installer now gives you the option to disable copying of examples into your **rti_workspace**. You can choose this option by selecting "Disable copying of examples to rti_workspace" on the final page of the installer. To select this option at the command line, use the flag "`--disable_copy_examples true`" when running the installer. See the *RTI Connext DDS Core Libraries Getting Started Guide* for more information about installation.