RTI Connext DDS

Core Libraries

Custom Support for
Linux 3.8.13 Platforms

Version 5.2.3

rti

Trademarks

Real-Time Innovations, RTI, NDDS, RTI Data Distribution Service, DataBus, Connext, Micro DDS, the RTI logo, 1RTI 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

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/

1 Supported Platforms

This document supplements the Release Notes and Platform Notes. It provides information specifically for the platform listed in Table 1.1 Custom Supported Linux 3.8.13 Platforms .

Table 1.1 Custom Supported Linux 3.8.13 Platforms

Operating System	CPU	Compiler	RTI Architecture Abbreviation
Linux® 3.8.13	QorIQ™ P4080/P4040/P4081	gcc 4.7.2	ppce500mcLinux3gcc4.7.2

2 Transports

Supported and enabled by default:

- Shared memory (To clean up shared memory resources, reboot the kernel.)
- UDPv4

Supported but disabled by default:

- UDPv6 (The peers list must be modified to support IPv6. Mapping of the TransportPriority QoS is supported.)

Not supported:

- TCP/IPv4

3 Features

These features are supported:

- Modern C++ API
- Multicast
- Monotonic clock
- Request/reply communication
- Control of CPU core affinity for RTI threads
- Distributed Logger

For details on these features, see the [Linux section of the Platform Notes](#).

4 Compiling and Running

Table 4.1 Building Instructions lists the compiler flags and libraries you will need to link into your application.

Table 4.2 Running Instructions shows the environment variables required to be set at run time.

Table 4.3 Library-Creation Details provides details on how these custom libraries were built. This table is provided strictly for informational purposes; you do not need to use these parameters to compile your application. You may find this information useful if you are involved in any in-depth debugging.

Table 4.1 Building Instructions

API	Library Format	Required RTI Libraries[a] [b] [c]	Required System Libraries	Required Compiler Flags
C++	Static Release	libnddscppz.a or libnddscpp2z.a libnddscz.a libnddscorez.a librticonnextmsgcppz.a	-ldl -lnsl -lm -lpthread -lrt	-DRTI_UNIX
	Static Debug	libnddscppzd.a or libnddscpp2zd.a libnddsczd.a libnddscorezd.a librticonnextmsgcppzd.a		
	Dynamic Release	libnddscpp.so or libnddscpp2.so libnddsc.so libnddscore.so librticonnextmsgcpp.so		
	Dynamic Debug	libnddscppd.so or libnddscpp2d.so libnddscd.so libnddscored.so librticonnextmsgcppd.so		
C	Static Release	libnddscz.a libnddscorez.a librticonnextmsgcz.a	-ldl -lnsl -lm -lpthread -lrt	-DRTI_UNIX
	Static Debug	libnddsczd.a libnddscorezd.a librticonnextmsgczd.a		
	Dynamic Release	libnddsc.so libnddscore.so librticonnextmsgc.so		
	Dynamic Debug	libnddscd.so libnddscored.so librticonnextmsgcd.so		

[a]The C/C++ libraries are in <NDDSHOME>/lib/<architecture> (where <NDDSHOME> is where *Connext DDS* is installed, such as /home/your user name/rti_connext_dds-5.x.y).

[b]The *rticonnextmsg* library only applies if you have the Connext DDS Professional, Evaluation, or Basic package type. It is not provided with the Connext DDS Core package type.

[c]Choose libnddscpp*.* for the Traditional C++ API or libnddscpp2*.* for the Modern C++ API.

Table 4.2 Running Instructions

RTI Architecture	Library Format	Environment Variables
ppce500mcLinux3gcc4.7.2	Static	None required
	Dynamic	LD_LIBRARY_PATH= ${NDDSHOME}/lib/*<architecture>*: ${LD_LIBRARY_PATH}ᵃ

Table 4.3 Library-Creation Details

RTI Architecture	Library Format	Compiler Flags Used by RTI
ppce500mcLinux3gcc4.7.2	Release	-m32 -mhard-float -mcpu=e500mc -O2 -pipe -feliminate-unused-debug-types -fPIC -DPOWERPC -O -Wall -Wno-unknown-pragmas -DPtrIntType=long -DCSREAL_IS_FLOAT -DCPU=e500mc -DTARGET=\"ppce500mcLinux3gcc4.7.2\" -DNDEBUG -c -Wp,-MD
	Debug	-m32 -mhard-float -mcpu=e500mc -O2 -pipe -feliminate-unused-debug-types -fPIC -DPOWERPC -O -Wall -Wno-unknown-pragmas -DPtrIntType=long -DCSREAL_IS_FLOAT -DCPU=e500mc -DTARGET=\"ppce500mcLinux3gcc4.7.2\" -g -c -Wp,-MD

ᵃ${NDDSHOME} represents the root directory of your Connext DDS installation. ${LD_LIBRARY_PATH} represents the value of the LD_LIBRARY_PATH variable prior to changing it to support Connext DDS.