

# **RTI Connex DDS**

**Core Libraries**

**Custom Support for  
RedHawk Linux 6.0 Platforms**

**Version 5.2.3**



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## **Technical Support**

Real-Time Innovations, Inc.

232 E. Java Drive

Sunnyvale, CA 94089

Phone: (408) 990-7444

Email: [support@rti.com](mailto:support@rti.com)

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

# Chapter 1 Supported Platforms

This document supplements the [Release Notes](#) and [Platform Notes](#). It provides information specifically for the platforms listed in [Custom Supported RedHawk Linux 6.0 Platforms](#).

Custom Supported RedHawk Linux 6.0 Platforms

Operating System	CPU	Compiler	RTI Architecture Abbreviation
RedHawk Linux 6.0	x64	gcc 4.4.5	x64Linux2.6gcc4.4.5

# Chapter 2 Transports

These transports are supported:

- Shared memory: Supported and enabled by default
- UDPv4: Supported and enabled by default
- UDPv6. Not enabled by default and the peers list must be modified to support IPv6. Mapping of the TransportPriority QoS is supported.

These transports are not supported:

- TCP/IPv4
- RTI Secure WAN Transport

# Chapter 3 Features

These features are supported:

- Modern C++ API
- Multicast
- Monotonic clock
- Control of CPU core affinity for RTI threads

These features are not supported:

- Native POSIX Thread Library (NPTL)
- RTI Distributed Logger

# Chapter 4 Compiling and Running

[Building Instructions](#) lists the compiler flags and libraries you will need to link into your application.

[Running Instructions](#) shows the environment variables required to be set at run time.

[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.

## Building Instructions

API	Library Format	Required RTI Libraries <sup>a bc</sup>	Required System Libraries	Required Compiler Flags
C++ (Traditional and Modern APIs)	Static Release	libniddscppz.a or libniddscpp2z.a libniddscz.a libniddscorez.a librticonnextmsgcz.a	-ldl -lnsl -lm -lpthread -lrt	-DRTI_UNIX - m64
	Static Debug	libniddscppzd.a or libniddscpp2zd.a libniddsczd.a libniddscorezd.a librticonnextmsgcppzd.a		
	Dynamic Release	libniddscpp.so or libniddscpp2.so libniddsc.so libniddscore.so librticonnextmsgcpp.so		
	Dynamic Debug	libniddscppd.so or libniddscpp2d.so libniddscd.so libniddscored.so librticonnextmsgcppd.so		

<sup>a</sup>The C/C++/Java libraries are in <NDDSHOME>/lib/<architecture>; the jar files are in <NDDSHOME>/lib/java (where <NDDSHOME> is where [RedHawkLinux60Notes\_TEMP.Core\_Italics] is installed, such as /home/your user name/rti\_connex\_dds-5.x.y).

<sup>b</sup>The \*rticonnextmsg\* library only applies if you have the Connex DDS Professional, Evaluation, or Basic package type. It is not provided with the Connex DDS Core package type.

<sup>c</sup>Choose libniddscpp\*. for the Traditional C++ API or libniddscpp2\*. for the Modern C++ API.

## Building Instructions

API	Library Format	Required RTI Libraries <sup>a bc</sup>	Required System Libraries	Required Compiler Flags
C	Static Release	libnddscz.a libnddscorz.a include: librticonnextmsgcz.a	-ldl -lnsl -lm -lpthread -lrt	-DRTI_UNIX -m64
	Static Debug	libnddsczd.a libnddscorz.d.a librticonnextmsgczd.a		
	Dynamic Release	libnddsc.so libnddscorz.so librticonnextmsgc.so		
	Dynamic Debug	libnddscd.so libnddscorz.d.so librticonnextmsgcd.so		

## Running Instructions

RTI Architecture	Library Format (Release and Debug)	Environment Variables <sup>d</sup>
x64Linux2.6gcc4.4.5	Static	None required
	Dynamic	LD_LIBRARY_PATH= \${NDDSHOME}/lib/<architecture>: \${LD_LIBRARY_PATH}

<sup>a</sup>The C/C++/Java libraries are in <NDDSHOME>/lib/<architecture>; the jar files are in <NDDSHOME>/lib/java (where <NDDSHOME> is where [[[Undefined variable RedHawkLinux60Notes\_TEMP.Core\_Italics]]] is installed, such as /home/your user name/rti\_connex\_dds-5.x.y).

<sup>b</sup>The \*rticonnextmsg\* library only applies if you have the Connex DDS Professional, Evaluation, or Basic package type. It is not provided with the Connex DDS Core package type.

<sup>c</sup>Choose libnddscpp\*. for the Traditional C++ API or libnddscpp2\*. for the Modern C++ API.

<sup>d</sup>\$NDDSHOME is where Connex DDS is installed. \$LD\_LIBRARY\_PATH represents the value of the LD\_LIBRARY\_PATH variable prior to changing it to support Connex DDS. When using nddsjava.jar, the Java virtual machine (JVM) will attempt to load release versions of the native libraries. When using nddsjavad.jar, the JVM will attempt to load debug versions of the native libraries.



## Library-Creation Details

RTI Architecture	Library Format	Compiler Flags Used by RTI
i86Linux2.6gcc4.4.5	Release	gcc -m32 -fPIC -DLINUX -DRTI_GCC4 -DRTI_LINUX26 -DRTI_LINUX -DRTI_POSIX_THREADS -DRTI_POSIX_SEMAPHORES -DRTI_CPU_AFFINITY -O -Wall -Wno-unknown-pragmas -DRTI_UNIX -DPtrIntType=long -DCSREAL_IS_FLOAT -DCPU=I80586 -DRTI_ENDIAN_LITTLE -DRTI_THREADS -DRTI_MULTICAST -DRTI_SHARED_MEMORY -DRTI_IPV6 -DTARGET=\\\"i86Linux2.6gcc4.4.5\\\" -DNDEBUG -Wp,-MD
	Debug	gcc -m32 -fPIC -DLINUX -DRTI_GCC4 -DRTI_LINUX26 -DRTI_LINUX -DRTI_POSIX_THREADS -DRTI_POSIX_SEMAPHORES -DRTI_CPU_AFFINITY -g -DRTI_PRECONDITION_TEST -Wall -Wno-unknown-pragmas -DRTI_UNIX -DPtrIntType=long -DCSREAL_IS_FLOAT -DCPU=I80586 -DRTI_ENDIAN_LITTLE -DRTI_THREADS -DRTI_MULTICAST -DRTI_SHARED_MEMORY -DRTI_IPV6 -DTARGET=\\\"i86Linux2.6gcc4.4.5\\\" -Wp,-MD