

RTI Connex DDS

Core Libraries

**Custom Support for
Debian Linux 3.12 Platforms**

Version 5.3.0



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1 Supported Platforms

This document supplements the [RTI Connex DDS Core Libraries Release Notes](#) and [RTI Connex DDS Core Libraries Platform Notes](#). It provides information specifically for the platform listed in [Table 1 Custom Supported Debian Linux 3.12 Platforms](#).

Table 1 Custom Supported Debian Linux 3.12 Platforms

Operating System	CPU	Compiler	RTI Architecture Abbreviation
Debian® Linux® 3.12	armv7a cortex-a9	gcc 4.9.3	armv7aLinux3.12gcc4.9.3cortex-a9

2 Transports

Supported and enabled by default:

- Shared memory (To clean up shared memory resources, reboot the kernel.)
- UDPv4
- UDPv6
- TCP/IPv4

Not supported:

- Secure WAN Transport
- TLS Support

3 Features

These features are supported:

- C API
- Traditional and Modern C++ APIs
- 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 [RTI Connex DDS Core Libraries Platform Notes](#).

4 Compiling and Running

[Table 2 Building Instructions](#) lists the compiler flags and libraries you will need to link into your application.

[Table 3 Running Instructions](#) shows the environment variables required to be set at run time.

[Table 4 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 2 Building Instructions

API	Library Format	Required RTI Libraries ^{abc}	Required System Libraries	Required Compiler Flags
C++ (Traditional and Modern APIs)	Static Release	libniddscppz.a or libniddscpp2z.a libniddscz.a libniddscorez.a librticonnextmsgcppz.a	-ldl -lnsl -lm -lpthread -lrt	-DRTI_UNIX
	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		

^aThe C/C++ libraries are in <NDDSHOME>/lib/<architecture> (where <NDDSHOME> is where Core Libraries is installed, such as /home/your user name/rti_connex_dds-5.x.y).

^bThe *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.

^cChoose libniddscpp*.* for the Traditional C++ API or libniddscpp2*.* for the Modern C++ API.

Table 2 Building Instructions

API	Library Format	Required RTI Libraries ^{abc}	Required System Libraries	Required Compiler Flags
C	Static Release	libnddsosz.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		

Table 3 Running Instructions

RTI Architecture	Library Format	Environment Variables
armv7aLinux3.12gcc4.9.3cortex-a9	Static	None required
	Dynamic	LD_LIBRARY_PATH= \${NDDSHOME}/lib/<architecture>: \${LD_LIBRARY_PATH} ^d

^aThe C/C++ libraries are in <NDDSHOME>/lib/<architecture> (where <NDDSHOME> is where Core Libraries is installed, such as /home/your user name/rti_connex_dds-5.x.y).

^bThe *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.

^cChoose libnddscpp*.* for the Traditional C++ API or libnddscpp2*.* for the Modern C++ API.

^d\${NDDSHOME} represents the root directory of your Core Libraries installation. \${LD_LIBRARY_PATH} represents the value of the LD_LIBRARY_PATH variable prior to changing it to support Core Libraries.

Table 4 Library-Creation Details

RTI Architecture	Library Format	Compiler Flags Used by RTI
armv7aLinux3.12gcc4.9.3cortex-a9	Release	-fpic -DLINUX -march=armv7-a -mtune=cortex-a9 -mfloat-abi=hard -mfpu=vfpv3-d16 -mthumb -mtls-dialect=gnu -DPtrIntType=long -DCSREAL_IS_FLOAT -DCPU=cortex-a9 -DRTI_LINUX -DNDEBUG -Wp,-MD
	Debug	-fpic -DLINUX -march=armv7-a -mtune=cortex-a9 -mfloat-abi=hard -mfpu=vfpv3-d16 -mthumb -mtls-dialect=gnu -DPtrIntType=long -DCSREAL_IS_FLOAT -DCPU=cortex-a9 -DRTI_LINUX -Wp,-MD