# RTI Connext DDS

## Core Libraries

## Custom Support for
## Wind River Linux 7.0.0.22 Platforms

## Version 5.3.0

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# Custom Support for Wind River Linux 7.0.0.22 Platforms

## 1 Supported Platforms

This document supplements the RTI Connext DDS Core Libraries Platform Notes. It provides information specifically for the platform in the following table.

### Table 1 Custom Supported Wind River Linux 7.0.0.22 Platforms

| Operating System | CPU | Compiler | RTI Architecture Abbreviation |
|---|---|---|---|
| Wind River® Linux® 7.0.0.22 | ARM Cortex-A15 | gcc 4.9.1 | armv7aWRLinux7gcc4.9.1cortex-a15 |

## 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
- Secure WAN Transport

- TLS Support

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

[a]The C/C++ libraries are in <NDDSHOME>/lib/<architecture> (where <NDDSHOME> is where Connext DDSs 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 3 Running Instructions

| RTI Architecture | Library Format | Environment Variables |
|---|---|---|
| armv7aWRLinux7gcc4.9.1cortex-a15 | Static | None required |
| | Dynamic | LD_LIBRARY_PATH= ${NDDSHOME}/lib/<*architecture*>: ${LD_LIBRARY_PATH}[a] |

### Table 4 Library-Creation Details

| RTI Architecture | Library Format | Compiler Flags Used by RTI |
|---|---|---|
| armv7aWRLinux7gcc4.9.1cortex-a15 | Release | -march=armv7-a -mfloat-abi=hard -mfpu=neon -marm -mthumb-interwork -mtune=cortex-a15 -fPIC -DPtrIntType=long -DNDEBUG |
| | Debug | -march=armv7-a -mfloat-abi=hard -mfpu=neon -marm -mthumb-interwork -mtune=cortex-a15 -fPIC -DPtrIntType=long -g |

[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.