

RTI Monitor

Release Notes

Version 6.0.0



© 2019 Real-Time Innovations, Inc.
All rights reserved.
Printed in U.S.A. First printing.
February 2019.

Trademarks

Real-Time Innovations, RTI, NDDS, RTI Data Distribution Service, 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.

This is an independent publication and is neither affiliated with, nor authorized, sponsored, or approved by, Microsoft Corporation.

The security features of this product include software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>).

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/>

Contents

1 Supported Platforms	1
2 Compatibility	3
3 What's New in 6.0.0	
3.1 New platforms	4
3.2 Removed platforms	4
3.3 Determining Host Name and Process ID	4
3.4 Sequence number field replaced with message ID field	5
4 What's Fixed in 6.0.0	
4.1 System Types Table always indicated presence of a key	6
4.2 Possible segmentation fault when using Monitoring Library	6
5 Known Issues	7
6 Third-Party Licenses	
6.1 Apache Software License Version 2.0	8

1 Supported Platforms

RTI® Monitor is supported on the platforms in [Table 1.1 Supported Platforms](#).

Table 1.1 Supported Platforms

Operating System	Version
Linux®	All Linux platforms on x86/x64 CPUs listed in the <i>RTI Connexx® DDS Core Libraries Release Notes</i> for the same version number, except not supported on Wind River® Linux 7 platforms. Not supported on ARM® CPUs.
OS X®	All OS X platforms listed in the <i>RTI Connexx DDS Core Libraries Release Notes</i> for the same version number.
Windows®	All Windows platforms listed in the <i>RTI Connexx DDS Core Libraries Release Notes</i> for the same version number.

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

Monitor is also supported on the platforms in [Table 1.2 Custom Supported Platforms](#); these are target platforms for which RTI offers custom support. If you are interested in one of these platforms, please contact your local RTI representative or email sales@rti.com.

Table 1.2 Custom Supported Platforms

Operating System	Version
Linux	RedHawk™ Linux 6.5 (x86 and x64) Red Hat® Enterprise Linux 5.2 on x86 CPU with gcc 4.2.1

To use *Monitor*, you will also need:

- *RTI Connexx DDS* with the same version number (already included in the bundle).
- Oracle JRE 8 (already included in the bundle).

- For Windows systems: the appropriate Microsoft® Visual Studio® Redistributable libraries (already included in the Windows bundle).

2 Compatibility

For backward compatibility information between 6.0.0 and previous releases, see the *Migration Guide* on the RTI Community Portal (<https://community.rti.com/documentation>).

Monitor can be used to monitor applications built with *Connex DDS* that also use *Monitoring Library* (part of *Connex DDS*). Use the same version number for *Monitor* and *Connex DDS*.

Monitor is built on top of *Connex DDS*. Therefore, you should refer to the Compatibility section of the *RTI Connex DDS Core Libraries Release Notes* for other compatibility information.

Monitor has been tested with Oracle JRE version 8, which is included in the installation package. No other versions of Java are supported.

3 What's New in 6.0.0

3.1 New platforms

This release adds support for these platforms:

- SUSE Linux Enterprise Server 12 (x64Linux2.6gcc4.3.4)
- Ubuntu 18.04 LTS (x64Linux4gcc7.3.0)

3.2 Removed platforms

This release removes support for the following platforms:

- CentOS 5.x
- Red Hat Enterprise Linux 5.x (except 5.2 on x86 with gcc 4.2.1, which is available as a custom target platform, i86Linux2.6gcc4.2.1)
- OS X 10.10

3.3 Determining Host Name and Process ID

Monitor receives Discovery information about DomainParticipants, DataReaders, and DataWriters. Part of the DomainParticipant information includes system properties that provide *Monitor* with the host name and process ID. However, these properties can be disabled through QoS configuration. In this case, *Monitor* tries to fill in the missing information.

In previous releases in this situation, *Monitor* used the DomainParticipant's identity (GUID) to determine the host IP address and process ID. The host IP address was then used to try to determine a host name (in a process similar to an nslookup). This method was not always accurate and may have resulted in an unexpected host name shown in the user interface.

Starting with this release, if the necessary information isn't provided in the system properties, *Monitor* will use 127.0.0.1 for the IP address (and lookup the name from that address) and zero for the

process ID. If you see either of these values in the user interface, please reconfigure your QoS settings to allow the system properties to reach *Monitor*.

3.4 Sequence number field replaced with message ID field

In the Distributed Logger Panel, the Sequence Number field has been replaced with a new Message ID field. This field is set on the source of the log messages and enables the identification of message loss on the distributed logger side.

4 What's Fixed in 6.0.0

4.1 System Types Table always indicated presence of a key

The System Types Table always indicated "yes" for the "Keyed" column if monitoring data was available for that type. This happened even if the type did not use a key. This problem has been resolved.

[RTI Issue ID MONITOR-240]

4.2 Possible segmentation fault when using Monitoring Library

There was a rare race condition when using Monitoring Libraries that may have led to a segmentation fault. This issue was more likely to occur if the DDS application using the monitoring libraries created and deleted entities often. This problem has been fixed.

[RTI Issue ID MONITOR-246]

5 Known Issues

- *Monitor* will show monitoring information for an application properly only if all the monitoring Description topics are published and not filtered (this is the default setting).

The ***Description** topics are needed to properly place objects in the tree views. The per-matched and per-locator topics are needed for the System Overview panel's Matches option to work properly.

- The aggregation capability will not work correctly with applications that publish monitoring data at a rate that is different than the aggregation rate used in *Monitor*.
- *Monitor* does not support DomainParticipants that use WireProtocolQosPolicyAutoKind RTPS_AUTO_ID_FROM_MAC.
- The internal DomainParticipant (1) and DataWriters (13) created by *Monitor* are incorrectly included in the counts for remote participants or remote writers in the Status panel, even though the monitoring library has been configured to exclude internally created entities in the count.
- When running the **rtimonitor** script in a terminal on an OS X system, you may see the following warning:

```
WARNING: GL pipe is running in software mode (Renderer ID=0x1020400)
```

This does not affect *Monitor's* functionality and will be addressed in a future release. [RTI ISSUE ID MONITOR-242]

6 Third-Party Licenses

Portions of *RTI Monitor* were developed using:

- **Apache® log4j™** from the Apache Software Foundation (<http://logging.apache.org/log4j/>)
- **JCommon**, licensed under the terms of the GNU Lesser General Public Licence (LGPL) version 2.1 or later (<http://www.jfree.org/jcommon/>)
- **JFreeChart** from Object Refinery Ltd. (<http://www.jfree.org/jfreechart/>), licensed under the terms of the GNU Lesser General Public Licence (LGPL) version 2.1 or later
- **SwingX** from SwingLabs (<https://mvnrepository.com/artifact/org.swinglabs.swingx>), licensed under the terms of the GNU Lesser General Public Licence (LGPL) version 2.1 or later

Additional information about Third-Party Content contained in the RTI product suite can be found in **RTI_ConnextDDS_3rdPartySoftware_Tools_Services.pdf**.

6.1 Apache Software License Version 2.0

Apache License

Version 2.0, January 2004

<http://www.apache.org/licenses/>

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document. "Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated

in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

- (a) You must give any other recipients of the Work or Derivative Works a copy of this License; and
- (b) You must cause any modified files to carry prominent notices stating that You changed the files; and
- (c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
- (d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS