RTI Monitor

Release Notes

Version 5.1.0





© 2013 Real-Time Innovations, Inc. All rights reserved. Printed in U.S.A. First printing. December 2013.

Trademarks

Real-Time Innovations, RTI, and Connext are trademarks or registered trademarks of Real-Time Innovations, Inc. All other trademarks used in this document are the property of 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.

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/

Release Notes

1 Supported Platforms

RTI® *Monitor* is supported on the architectures in Table 1.1.

Table 1.1 Supported Platforms

	Operating System	CPU	Compiler	RTI Architecture Abbreviation
	CentOS 5.4, 5.5 (2.6 kernel)	x86	gcc 4.1.2	i86Linux2.6gcc4.1.2
			Java Platform, Standard Edition 1.7	i86Linux2.6gcc4.1.2jdk
		x64	gcc 4.1.2	x64Linux2.6gcc4.1.2
			Java Platform, Standard Edition 1.7	x64Linux2.6gcc4.1.2jdk
	CentOS 6.0, 6.2 - 6.4 (2.6 kernel)	x86	gcc 4.4.5	i86Linux2.6gcc4.4.5
			Java Platform, Standard Edition 1.7	i86Linux2.6gcc4.4.5jdk
		x64	gcc 4.4.5	x64Linux2.6gcc4.4.5
			Java Platform, Standard Edition 1.7	x64Linux2.6gcc4.4.5jdk
	Fedora™ 12 (2.6.32 kernel)	x64	gcc 4.4.4	x64Linux2.6gcc4.4.4
	Red Hat® Enterprise Linux® 5.0 (2.6 kernel)	x86	gcc 4.1.1	i86Linux2.6gcc4.1.1
×			Java Platform, Standard Edition 1.7	i86Linux2.6gcc4.1.1jdk
Linux		x64	gcc 4.1.1	x64Linux2.6gcc4.1.1
T			Java Platform, Standard Edition 1.7	x64Linux2.6gcc4.1.1jdk
	Red Hat Enterprise Linux 5.1, 5.2, 5.4, 5.5 (2.6 kernel)	x86	gcc 4.1.2	i86Linux2.6gcc4.1.2
			Java Platform, Standard Edition 1.7	i86Linux2.6gcc4.1.2jdk
		x64	gcc 4.1.2	x64Linux2.6gcc4.1.2
			Java Platform, Standard Edition 1.7	x64Linux2.6gcc4.1.2jdk
	Red Hat Enterprise Linux 6.0-6.4 (2.6 kernel)	x86	gcc 4.4.5	i86Linux2.6gcc4.4.5
			Java Platform, Standard Edition 1.7	i86Linux2.6gcc4.4.5jdk
		x64	gcc 4.4.5	x64Linux2.6gcc4.4.5
			Java Platform, Standard Edition 1.7	x64Linux2.6gcc4.4.5jdk
	SUSE® Linux Enterprise Server 11 SP2 (2.6 kernel)	x64	gcc 4.3.4	x64Linux2.6gcc4.3.4
			Java Platform, Standard Edition 1.7	x64Linux2.6gcc4.3.4jdk

Table 1.1 Supported Platforms

	Operating System	CPU	Compiler	RTI Architecture Abbreviation
	SUSE Linux Enterprise Server 11 SP2 (3.x kernel)	x86	gcc 4.3.4	i86Linux3gcc4.3.4
ť,d			Java Platform, Standard Edition 1.7	i86Linux3gcc4.3.4jdk
cont'd	Ubuntu Server 12.04 LTS (3.x kernel)	x86	gcc 4.6.3	i86Linux3.xgcc4.4.3
Linux			Java Platform, Standard Edition 1.7	i86Linux3.xgcc4.6.3jdk
Lii		x64	gcc 4.6.3	x64Linux3.xgcc4.6.3
			Java Platform, Standard Edition 1.7	x64Linux3.xgcc4.6.3jdk
Windows	All Windows platforms listed	in the R	TI Core Libraries and Utilities Release No	otes

Monitor is also supported on the platforms listed in Table 1.2; these are target platforms for which RTI offers custom support. If you are interested in these platforms, please contact your local RTI representative or email sales@rti.com.

Table 1.2 **Custom Supported Platforms**

Operating System	CPU	Compiler	RTI Architecture Abbreviation
Red Hat Enterprise Linux 5.2 (2.6 kernel)	x86	gcc 4.2.1	i86Linux2.6gcc4.2.1
		Java Platform, Standard Edition 1.7	i86Linux2.6gcc4.2.1jdk

To use *Monitor* you will also need:

- \square *RTI Connext*TM with the same version number (already included in the bundle)
- ☐ JAVA 1.6 update 10 or later is suggested (already included in the bundle)
- ☐ For Windows systems: the Microsoft Visual C++ 2005 SP1 Redistribution libraries (already included in the Windows bundle)

2 Compatibility

Monitor can be used to monitor applications built with Connext that also use Monitoring Library. Use the same version number for all three components (Monitor, Monitoring Library, and Connext).

Monitor 5.1.0 is not compatible with previous versions of RTI Distributed Logger or RTI Connext.

3 What's New in 5.1.0

3.1 New Platforms

This release adds support for the following platforms:

- ☐ CentOS and Red Hat Enterprise Linux 6.2 6.4
- ☐ SUSE Linux Enterprise Server 11 SP2 (3.x kernel)
- ☐ Ubuntu Server 12.04 LTS (3.x kernel)

Windows 8 (32-bit and 64-bit Editions)
Windows Server 2012 R2 (64-bit Edition)

3.2 More Infomation Displayed when not using Monitoring Library

Monitor can now show Publishers, DataWriter, Subscribers, and DataReaders that are found in your system, even if *RTI Monitoring Library* is not enabled.

3.3 Ability to Sort Tree Entries Alphabetically in Description Panel

The Description Panel has a new button that sorts tree entries. When selected (the default), entries are sorted alphabetically. If unselected, entries are ordered as they were in previous releases.

3.4 Lack of Monitoring Library Information now Explicitly Reported

In previous releases, it was not clear when *Monitor* did not have all of the information necessary to fill out its display. This situation has been made more clear in this release with the addition of a small overlay icon in both the 'Physical View' and 'DDS Logical View.' The status, "Monitoring Data: not available," is also displayed in the Status Panel under the "Common Information" section.

3.5 'Samples Lost' Display Now Includes 'last_reason' Information

The 'samples lost' display now includes the 'last_reason' field, which indicates the most recent reason why samples were lost.

3.6 'Filter by Match' Capability now Shows DomainParticipant Information

DomainParticipants, DataWriters, and DataReaders.

The 'Filter by match' combo-box on the Status Panel now shows the DomainParticipant's domain ID and participant name (if one exists). This makes it easier to discern which remote DomainParticipant is being referenced.

3.7 System Overview Panel improvements

The System Overview Panel has been improved with three new display name modes and enhanced tooltips.

The existing display name mode of 'Name' has been renamed to 'Topic Name.' This mode now includes the DomainParticipant's participant name by default.
The new 'No Name' mode is useful when viewing large systems, as it removes all text from the display, making it very compact.
The new 'Entity Name' mode displays the 'name' from the EntityNameQosPolicy for DomainParticipants, DataWriters, and DataReaders.
The new 'Role Name' mode displays the 'role_name' from the EntityNameQosPolicy for

3.8 Ability to Automatically Join Active Domains

This release includes a new feature that allows Monitor to automatically join all active domains. This feature is enabled by default.

If the Auto-join feature is enabled: First, *Monitor* will join domain 0. Then all other active domains will be discovered through their announcements in domain 0. Each discovered domain will be joined if it has not already been joined. You will not be prompted to enter a domain ID when *Monitor* starts.

For more information, see Section 3.5, Joining and Leaving Domains, in the updated *Monitor User's Manual*.

3.9 Support for the filter fields in DataWriterProtocolStatus has been removed

Support for the filter fields in DataWriterProtocolStatus has been removed from the graphical interface. This follows the deprecation of these fields in *RTI Connext* 5.1.0.

4 What's Fixed in 5.1.0

4.1 Erroneous '~' Directory Created—Linux Systems Only

When running *Monitor* on a Linux system, the log file was mistakenly stored in a new directory with '~' as the root. This was a problem with the script that launched the application and has been resolved.

[RTI Issue ID MONITOR-118]

4.2 Entities not Removed if Created/Destroyed Rapidly

Entities that were created and then destroyed rapidly would sometimes remain displayed even though they should have been removed.

[RTI Issue ID MONITOR-121]

4.3 DomainParticipant Name Sometimes Contained a '?'

The name for a DomainParticipant sometimes contained a question mark ('?') character. This would happen when the DomainParticipant did not have monitoring enabled (including when using the 'rti.monitor.config.new_participant_domain_id' configuration since that DomainParticipant does not publish monitoring data). This problem has been resolved; now the DomainParticipant name will include the associated domain ID instead of a question mark.

[RTI Issue ID MONITOR-148]

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) See the Monitoring Library Getting Started Guide for details about monitoring topic filters.
The *Description topics are needed to properly place objects in the tree views. The permatched 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 <i>Monitor</i> .
<i>Monitor</i> does not support DomainParticipants that use WireProtocolQosPolicyAutoKindRTPS_AUTO_ID_FROM_MAC.
The internal DomainParticipant (1) and DataWriters (13) created by <i>Monitor</i> 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.

☐ Type information is not available when loading historical data. The Description panel will not show the equivalent IDL, the System Types Table will be empty, and type conflicts will not be reported. {RTI Issue ID DIABLO-766]

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://swingx.dev.java.net/), licensed under the terms of the GNU Lesser General Public Licence (LGPL) version 2.1 or later

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