

RTI Administration Console

Release Notes

Version 5.3.0



Your systems. Working as one.



© 2017 Real-Time Innovations, Inc.
All rights reserved.
Printed in U.S.A. First printing.
June 2017.

Trademarks

Real-Time Innovations, RTI, NDDS, RTI Data Distribution Service, DataBus, Connex, Micro DDS, the RTI logo, 1RTI 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.

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® Administration Console is supported on the following platforms. For details on these platforms, see the *RTI Connext® DDS Core Libraries Platform Notes* for this release.

- ❑ All Linux® platforms on x86 and x64 CPUs listed in the *RTI Connext DDS Release Notes* for this release except Wind River® Linux 4.
 - ❑ All Mac® OS X® platforms listed in the *RTI Connext DDS Core Libraries Release Notes* for this release. Note: see [Section 5.2](#).
 - ❑ All Windows® platforms listed in the *RTI Connext DDS Core Libraries Release Notes* for this release.
-

2 Compatibility

Admin Console is compatible with these components, with the same version number:

- ❑ *RTI Database Integration Service*
- ❑ *RTI Distributed Logger*
- ❑ *RTI Persistence Service*
- ❑ *RTI Queuing Service*
- ❑ *RTI Recording Service* (including its *Replay* and *Record* tools)
- ❑ *RTI Routing Service*

In *RTI Connext DDS* 5.1.0, the default **message_size_max** for the UDPv4, UDPv6, TCP, Secure WAN, and shared-memory transports changed to provide better out-of-the-box performance.

Admin Console 5.1.0 and higher also uses the new default value for **message_size_max**. Consequently, *Admin Console* is not out-of-the-box compatible with applications running older versions (5.0 or lower) of *Connext DDS* or *RTI Data Distribution Service*. Please see the *RTI Connext DDS Core Libraries Release Notes* for instructions on how to resolve this compatibility issue with older *Connext DDS* and *RTI Data Distribution Service* applications.

The types of the remote administration and monitoring topics are not compatible with 5.0.0. Therefore:

- ❑ *Admin Console* 5.0.0 and other 5.0.0 RTI components that perform monitoring/administration are not compatible with *Admin Console* 5.1.0.

- ❑ *Admin Console* 5.1.0 and other 5.1.0 RTI components that perform monitoring/administration are not compatible with *Admin Console* 5.0.0.

2.1 QoS Profiles for Backward Compatibility with Versions Prior to 5.2.0

Admin Console provides four built-in QoS profiles, two of which are aimed at providing backward compatibility with versions prior to 5.2.0. These two profiles are:

- ❑ **AdminConsole::Administration.510TransportCompatibility** can be configured in Settings->Administration if you want to interact with a system that uses the non-standard transport identifiers (all *Connex DDS* versions prior to 5.2.0).
- ❑ **AdminConsole::DataVisualization.510TransportCompatibility** can be used when subscribing to Topics published by an application using the non-standard transport identifiers.

3 What's New in 5.3.0

3.1 New QoS View Capabilities

The QoS view has been improved by separating out Publisher/Subscriber QoS properties when viewing DataWriter/DataReader QoS. Additionally, the DomainParticipant QoS has been added so that a more complete picture of the available QoS data is presented.

3.2 Ability to Import and Export Discovery Data

Now *Admin Console* can export discovery data to an XML file. This feature, in conjunction with the ability to import discovery data, provide a mechanism to capture a system state and share it with others. One use case for these new features is that data can be sent to RTI Support to assist customers with resolving issues.

3.3 Discovery Peers Feature

Now you can add discovery peers from the Administration Preferences page. These peers will be added to each DomainParticipant through the `add_peer()` API call.

3.4 Guidance Now Displays instead of Empty Panels

Admin Console will now display information and help in views which otherwise would have been empty. The text explains why the view doesn't have data to show and includes hyperlinks to help documentation with more background.

3.5 Shutdown Command now Available for Routing Service

Admin Console has a new shutdown command that you can use to request that *RTI Routing Service* instances shut down.

3.6 Ability to Show Host IP Address Changes

Admin Console now reflects host IP address changes. These changes can happen when a network interface is enabled (such as connecting to WiFi). The addresses shown for the host will update as the underlying DomainParticipant is updated.

3.7 Keyed Column Added to Datatypes View

A new column indicates whether or not the associated DataWriter or DataReader uses a keyed type. This column can be very helpful when debugging differences in whether or not a key is used for a Topic.

3.8 Non-Existent QoS Files now Automatically Removed from Startup List

Admin Console allows you to create a list of QoS files that should be loaded at startup (under View, Preferences). However, if you added a QoS file to the startup list and the file was later moved/deleted, you had to manually remove the file from the list, otherwise *Admin Console* reported this as an error. Starting in this release, *Admin Console* will still report the error, but it will also remove the missing file from the startup list.

3.9 Preference Given to Local HTML Documentation over RTI Community Website

When you click on a QoS to see its API Reference HTML documentation, *Admin Console* will first try to find the file in your *Connexxt DDS* installation directory. If it is not found there, *Admin Console* will use the RTI Community website to show the information.

3.10 View for Connexxt DDS Secure Log Messages

A new view has been created to display the log messages from *RTI Connexxt DDS Secure*. These are only available when the distribution of log messages is enabled in the *RTI Connexxt DDS Secure* configuration properties.

3.11 Default Character Encoding for Strings Received in Data Visualization Now UTF-8

The default character encoding for strings received when visualizing Topics has been changed to UTF-8 (from ISO-8859-1). There is also a preference where this setting can be changed. There is just a single setting which is applied to all Topic data.

4 What's Fixed in 5.3.0

4.1 Occasionally Incorrect Discovery State after OS Sleep/Wake Cycle

Admin Console sometimes reported incorrect discovery state after the operating system was asleep and then awoken. This would most often manifest in the form of missing DataWriters or DataReaders. The problem did not happen consistently on each sleep/wake cycle and many cycles may have happened without observing the problem.

This problem has been resolved.

[RTI Issue ID ADMINCONSOLE-377]

4.2 Exported IDL not Directly Usable by Code Generator

The IDL exported from *Admin Console* was not directly usable by the code generator. Modules were missing and arrays had their dimensions specified ahead of the name rather than after. This problem has been resolved.

[RTI Issue ID ADMINCONSOLE-445]

4.3 Sample Inspector Showed Misleading Information

When clicking on the Instance column of a Sample Log view when the row was in the alive state but the corresponding DDS instance had since changed state to not alive, the Sample Inspector showed the status as not alive. This problem has been resolved.

[RTI Issue ID ADMINCONSOLE-490]

4.4 Admin Console Slow/Unresponsive on Large Systems

Admin Console may have become slow or unresponsive when used on a system containing a large number of processes. These are symptoms of *Admin Console's* increased CPU and memory consumption when used in large systems. A crash may have occurred if available memory was exhausted. Typically this was not a problem unless there were a few hundred processes or more. This problem has been resolved.

[RTI Issue ID ADMINCONSOLE-493]

4.5 Replay Service State Sometimes Inaccurate

The state of Replay Service instances in the system was not always accurately reflected by *Admin Console*. This problem has been resolved. Now the state is queried on a periodic basis so that it is more accurately reflected.

[RTI Issue ID ADMINCONSOLE-497]

4.6 'Cleanup Period for Not Present Entities' Displayed Incorrectly

In the Preferences->Administration panel, after setting the cleanup period to something larger than 100 and then reopening it, the display would never show a value greater than 100. This is in spite of the higher value actually being correctly set, and in use. This problem has been resolved.

[RTI Issue ID ADMINCONSOLE-511]

4.7 Some Data Types Missing from Display

Due to a logic issue (CORE-7987) in the DDS Java APIs, there were cases in which not all of the data types for a Topic were shown. This happened when the data types both had a base class but the base class for one was different than the other. These were mistakenly considered to be the same type even though they were actually different. This problem has been resolved.

[RTI Issue ID ADMINCONSOLE-516]

4.8 Incorrect Host Name Displayed

The host name was incorrectly displayed if the application used shared memory and non-standard transport identifiers (versions prior to 5.2 or which explicitly enabled backward-compatible transport IDs). This problem has been resolved.

[RTI Issue ID ADMINCONSOLE-530]

4.9 Topics using Valuetype or Union could not be Subscribed to using XML Type File

When subscribing to a Topic that used a valuetype or union, and that type information had to be specified through an XML file, *Admin Console* failed to recognize the data type. This problem has been resolved.

[RTI Issue ID ADMINCONSOLE-545]

5 Known Issues

5.1 Preferences Dialog Shows Error Message

The Preferences dialog will show an error message when viewing the preference for XML -> XML Files -> Editor:

```
"org.eclipse.wst.sse.ui.preferences.editor not found."
```

This error message has no affect on functionality and will be removed in a future release.

[RTI Issue ID ADMINCONSOLE-199]

5.2 Limited to Single Instance of Admin Console on Mac OS X Platforms

On Mac OS X platforms, only one instance of *Admin Console* can be run at a time. This limitation is not present on other platforms.

[RTI Issue ID ADMINCONSOLE-403]

5.3 Limited Support for Keyed, Unbounded Sequences

There is limited support when using a data type that contains a field that is an unbounded sequence and that field participates in the key. The limitation is that only a subset of the total possible (2,147,483,647) sequence elements can be used. This limitation protects against high memory and CPU consumption by the application.

The limited number of fields chosen to represent the key can be seen in the Topic Data tab and when selecting data instances for the Time Chart.

[RTI Issue ID ADMINCONSOLE-399]

5.4 Additional Library Needed on Fedora 12 64-bit Systems

On Fedora 12 64-bit systems, before starting *Admin Console*, follow these steps:

1. Login as super user
2. Enter this command:

```
yum install libsoup
```

5.5 Interaction between Admin Console and RTI Recording Console

This issue only applies if you are using *Admin Console* and *Recording Console* at the same time, and you have configured *Admin Console* to join domain ID 99. In this scenario, do not use *Admin Console* to pause or disable any *Recording Console* services (their names begin with "RTI-Recorder-" or "RTI-Replay-"). Doing so may cause an error in *Recording Console*.

[RTI Issue ID RECORD-253]

5.6 Admin Console Incompatible with RTI Routing Service Configurations that use DomainParticipant Name QoS

Admin Console will not correctly display or administer instances of *RTI Routing Service* that have overridden the default DomainParticipant QoS participant_name. These names are used to identify the process as *RTI Routing Service*. You may see error messages in *Admin Console's* log such as:

```
expecting process model : RoutingService : corresponding to instance handle : {X} : to be a Routing Service instance when it is not
```

cannot add monitoring capabilities for the RoutingService since the model was not found for instance handle : {X}
unable to find a DomainRoute named : {Domain Route name} : associated with RoutingService : {Routing Service name}
unable to find a Session named : {Session name} : associated with RoutingService : {Routing Service name} : and DomainRoute : {Domain Route name}
unable to find an AutoRoute named : {Auto Route name} : associated with RoutingService : {Routing Service name} : and DomainRoute : {Domain Route name} : and Session : {Session name}
unable to find a Route named : {Route name} : associated with RoutingService : {Routing Service name} : and DomainRoute : {Domain Route name} : and Session : {Session name}

[RTI Issue ID ADMINCONSOLE-270]

6 Third-Party Licenses

Portions of *RTI Administration Console* were developed using:

- ❑ Visualization Widget from Eclipse's Nebula project (<http://www.eclipse.org/nebula/widgets/visualization/visualization.php>), licensed under the Eclipse Public License.
- ❑ Apache Commons Lang from the Apache Software Foundation (<http://commons.apache.org/lang/>)
- ❑ Apache Commons Logging from the Apache Software Foundation (<http://commons.apache.org/logging/>)
- ❑ Apache Log4j from the Apache Software Foundation (<http://logging.apache.org/log4j/1.2/index.html>) Brief description: Logging API
- ❑ GlazedLists from (<http://www.glazedlists.com/>), licensed under the terms of GNU Lesser General Public License (LGPL)
- ❑ SWFObject from (<http://code.google.com/p/swfobject/>), licensed under the MIT License (MIT)
- ❑ Apache Software License: <http://www.apache.org/licenses/>

6.1 Apache License

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 con-

tents 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