

# **RTI Limited Bandwidth Plugins**

**Installation Guide**

**Version 7.0.0**



© 2022 Real-Time Innovations, Inc.  
All rights reserved.  
Printed in U.S.A. First printing.  
September 2022.

## Trademarks

RTI, Real-Time Innovations, Connex, NDDS, 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 solely under and subject to RTI's standard terms and conditions available at <https://www.rti.com/terms> and in accordance with your License Acknowledgement Certificate (LAC) and Maintenance and Support Certificate (MSC), except to the extent otherwise accepted in writing by a corporate officer of RTI.

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/>). This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

## Notices

### *Deprecations and Removals*

Any deprecations or removals noted in this document serve as notice under the Real-Time Innovations, Inc. Maintenance Policy #4220 and/or any other agreements by and between RTI and customer regarding maintenance and support of RTI's software.

*Deprecated* means that the item is still supported in the release, but will be removed in a future release. *Removed* means that the item is discontinued or no longer supported. By specifying that an item is deprecated in a release, RTI hereby provides customer notice that RTI reserves the right after one year from the date of such release and, with or without further notice, to immediately terminate maintenance (including without limitation, providing updates and upgrades) for the item, and no longer support the item, in a future release.

### *Early Access Software*

“Real-Time Innovations, Inc. (“RTI”) licenses this Early Access release software (“Software”) to you subject to your agreement to all of the following conditions:

- (1) you may reproduce and execute the Software only for your internal business purposes, solely with other RTI software licensed to you by RTI under applicable agreements by and between you and RTI, and solely in a non-production environment;
- (2) you acknowledge that the Software has not gone through all of RTI’s standard commercial testing, and is not maintained by RTI’s support team;
- (3) the Software is provided to you on an “AS IS” basis, and RTI disclaims, to the maximum extent permitted by applicable law, all express and implied representations, warranties and guarantees, including without limitation, the implied warranties of merchantability, fitness for a particular purpose, satisfactory quality, and non-infringement of third party rights;
- (4) any such suggestions or ideas you provide regarding the Software (collectively , “Feedback”), may be used and exploited in any and every way by RTI (including without limitation, by granting sub-licenses), on a non-exclusive, perpetual, irrevocable, transferable, and worldwide basis, without any compensation, without any obligation to report on such use, and without any other restriction or obligation to you; and
- (5) TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT WILL RTI BE LIABLE TO YOU FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, EXEMPLARY OR PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY KIND, OR FOR LOST PROFITS, LOST DATA, LOST REPUTATION, OR COST OF COVER, REGARDLESS OF THE FORM OF ACTION WHETHER IN CONTRACT, TORT (INCLUDING WITHOUT LIMITATION, NEGLIGENCE), STRICT PRODUCT LIABILITY OR OTHERWISE, WHETHER ARISING OUT OF OR RELATING TO THE USE OR INABILITY TO USE THE SOFTWARE, EVEN IF RTI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.”

### **Technical Support**

Real-Time Innovations, Inc.

232 E. Java Drive

Sunnyvale, CA 94089

Phone: (408) 990-7444

Email: [support@rti.com](mailto:support@rti.com)

Website: <https://support.rti.com/>

# Contents

---

<b>Chapter 1 Download Instructions</b> .....	<b>1</b>
<b>Chapter 2 Paths Mentioned in Documentation</b> .....	<b>2</b>
<b>Chapter 3 Installation Instructions</b> .....	<b>4</b>

# Chapter 1 Download Instructions

This document provides instructions on how to download and install the *RTI® Limited Bandwidth Plugins*.

Log into the RTI Customer Portal, <https://support.rti.com/>. You will need your username and password, which are included in the letter confirming your purchase. If you do not have this letter, please contact [license@rti.com](mailto:license@rti.com). If you need help with the download process, contact [support@rti.com](mailto:support@rti.com).

Once you have logged into the portal, select the Downloads tab. Choose the appropriate version of *RTI Connex*t and look for the *RTI Limited Bandwidth Plugins* packages. Download a host and a target bundle:

- **rti\_limited\_bandwidth\_plugins\_host-7.0.0-<host platform>.rtipkg**

This includes the compiler-independent *Limited Bandwidth Plugins* dependencies (documentation and the libraries used by RTI tools and services) for the host platform.

- **rti\_limited\_bandwidth\_plugins-7.0.0-<target architecture>.rtipkg**

This contains the *Limited Bandwidth Plugins* libraries you will link against for your target architecture.

<host platform> names depend on your host (**x64Linux** for Linux® systems and **x64Win64** for Windows® systems).

<target architecture> names are described in the [RTI Connex](#)t Core Libraries Platform Notes.

# Chapter 2 Paths Mentioned in Documentation

The documentation refers to:

- **<NDDSHOME>**

This refers to the installation directory for *RTI® Connex®*. The default installation paths are:

- macOS® systems:  
**/Applications/rti\_connex\_dds-7.0.0**
- Linux systems, *non-root* user:  
**/home/<your user name>/rti\_connex\_dds-7.0.0**
- Linux systems, *root* user:  
**/opt/rti\_connex\_dds-7.0.0**
- Windows® systems, user without Administrator privileges:  
**<your home directory>\rti\_connex\_dds-7.0.0**
- Windows systems, user with Administrator privileges:  
**C:\Program Files\rti\_connex\_dds-7.0.0**

You may also see **\$NDDSHOME** or **%NDDSHOME%**, which refers to an environment variable set to the installation path.

Wherever you see **<NDDSHOME>** used in a path, replace it with your installation path.

**Note for Windows Users:** When using a command prompt to enter a command that includes the path **C:\Program Files** (or any directory name that has a space), enclose the path in quotation marks. For example:

```
"C:\Program Files\rti_connex_dds-7.0.0\bin\rtiddsgen"
```

Or if you have defined the **NDDSHOME** environment variable:

```
"%NDDSHOME%\bin\rtiddsgen"
```

- *<path to examples>*

By default, examples are copied into your home directory the first time you run *RTI Launcher* or any script in **<NDDSHOME>/bin**. This document refers to the location of the copied examples as *<path to examples>*.

Wherever you see *<path to examples>*, replace it with the appropriate path.

Default path to the examples:

- macOS systems: **/Users/<your user name>/rti\_workspace/7.0.0/examples**
- Linux systems: **/home/<your user name>/rti\_workspace/7.0.0/examples**
- Windows systems: **<your Windows documents folder>\rti\_workspace\7.0.0\examples**

Where 'your Windows documents folder' depends on your version of Windows. For example, on Windows 10, the folder is **C:\Users\<your user name>\Documents**.

Note: You can specify a different location for **rti\_workspace**. You can also specify that you do not want the examples copied to the workspace. For details, see *Controlling Location for RTI Workspace and Copying of Examples* in the *RTI Connex Installation Guide*.

# Chapter 3 Installation Instructions

You do not need root/administrator privileges:

1. Install the *Connex* host and target bundles as described in the [RTI Connex Installation Guide](#).
2. Make sure you have a compatible version of *Connex*, as described in the [RTI Limited Bandwidth Plugins Release Notes](#).
3. Install *the Limited Bandwidth Plugin* host and target packages on top of *Connex*:
  - **rti\_limited\_bandwidth\_plugins-7.0.0-<host platform>.rtipkg**
  - **rti\_limited\_bandwidth\_plugins-7.0.0-<target architecture>.rtipkg**

**<host platform>** depends on your host (such as **x64Linux** on Linux® systems and **x64Win64** on Windows® systems).

**<target architecture>** is one of the supported platforms, see the [RTI Limited Bandwidth Plugins Release Notes](#).

After installation, the Limited Bandwidth Plugins libraries will be in **<NDDSHOME>/lib/<target architecture>**. Please see the [RTI Limited Bandwidth Plugins User's Manual](#) for an overview of each plugin's capabilities and configuration instructions. Examples are provided in these directories:

- **<path to examples>/connex\_dds/c/limited\_bandwidth\_plugins:**
  - lbpdiscovery
  - lbtrtps
  - zrtps



- **<path to examples>/connext\_dds/c++11/limited\_bandwidth\_plugins:**
  - dil-stacking
  - lbediscovery