Trademarks

RTI, Real-Time Innovations, Connext, 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 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/). This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

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 Paths Mentioned in Documentation ................................................................. 1  
2 Download Instructions ..................................................................................... 3  
3 Installation Instructions
   3.1 Installing on Windows Systems ................................................................. 4  
   3.2 Installing on Linux and Other Systems .................................................... 5  
   3.3 Installing Cloud Discovery Service (Optional) ........................................... 6  
4 Additional Documentation ................................................................................. 7  

iii
1 Paths Mentioned in Documentation

The documentation refers to:

- `<NDDSHOME>`

  This refers to the installation directory for RTI® Connext® DDS. The default installation paths are:
  
  - macOS® systems:
    `/Applications/rti_connext_dds-6.1.0`
  
  - Linux systems, non-root user:
    `/home/<your user name>/rti_connext_dds-6.1.0`
  
  - Linux systems, root user:
    `/opt/rti_connext_dds-6.1.0`
  
  - Windows® systems, user without Administrator privileges:
    `<your home directory>\rti_connext_dds-6.1.0`
  
  - Windows systems, user with Administrator privileges:
    `C:\Program Files\rti_connext_dds-6.1.0`

You may also see `SNDDSHOME` 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_connext_dds-6.1.0\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/6.1.0/examples`
- Linux systems: `/home/<your user name>/rti_workspace/6.1.0/examples`
- Windows systems: `<your Windows documents folder>\rti_workspace\6.1.0\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 Connext DDS Installation Guide*. 
2 Download Instructions


You will need your username and password to log into the portal; these are included in the letter confirming your purchase or license-managed (LM) copy. If you do not have this letter, please contact license@rti.com.

Once you have logged into the portal, select the Downloads link, then select the appropriate version of Real-Time WAN Transport for your platform. Download both of the following:

- `rti_real_time_wan_transport-6.1.0-host-<host platform>.rtipkg`
  
  For example: `rti_real_time_wan_transport-6.1.0-host-x64Linux.rtipkg`.

- `rti_real_time_wan_transport-6.1.0-<target architecture>.rtipkg`
  
  For example: `rti_real_time_wan_transport-6.1.0-target-x64Linux4gcc7.3.0.rtipkg`.

Architecture names are described in the RTI Connext DDS Core Libraries Platform Notes. See also the RTI Real-Time WAN Transport Release Notes for any updates.

Optionally, you can download and install RTI Cloud Discovery Service for use with Real-Time WAN Transport. Cloud Discovery Service is required if the DomainParticipants communicating over a WAN are behind cone NATs (see the RTI Connext DDS Core Libraries User's Manual for more information):

- `rti_cloud_discovery_service-6.1.0-<host platform>.rtipkg`
  
  For example: `rti_cloud_discovery_service-6.1.0-x64Linux.rtipkg`.

If you need help with the download process, contact support@rti.com.
3 Installation Instructions

3.1 Installing on Windows Systems

You do not need administrator privileges. All directory locations are meant as examples only; adjust them to suit your site. <NDDSHOME> is described in 1 Paths Mentioned in Documentation on page 1.

1. Install the Real-Time WAN Transport host and target .rtipkg files on top of RTI Connext DDS.

First install the host .rtipkg file.

Then install the target .rtipkg file. There are two ways to install the target file: from RTI Launcher or from the command line.

**To install from RTI Launcher:**

a. Start RTI Launcher:

```
cd <NDDSHOME>
bin\rti_launch
```

a. From the **Configuration** tab, click on **Install RTI Packages**.

b. Use the + sign to add the .rtipkg files that you want to install.

c. Click **Install**.

**To install from the command line:**

```
cd <NDDSHOME>/bin
./rtipkginstall <path to .rtipkg file>
```

This will install files into the existing rti_connext_dds-6.x.y directory. The installer will put the Real-Time WAN Transport libraries in <NDDSHOME>/lib/<architecture>.
3.2 Installing on Linux and Other Systems

2. If not already included, add `<NDDSHOME>/lib/<architecture>` to your Path environment variable. For example (enter this on one line):

```bash
set PATH=<NDDSHOME>/lib/<architecture>;%PATH%
```

3. To verify your installation, find the `Real-Time WAN Transport` library (`nddsrwt`) in `<install dir>/lib/<target architecture>`.

See the `RTI Connext DDS Core Libraries Platform Notes` for a list of the `Real-Time WAN Transport` libraries for your platform.

3.2 Installing on Linux and Other Systems

All directory locations are meant as examples only; adjust them to suit your site. `<NDDSHOME>` is described in 1 Paths Mentioned in Documentation on page 1.

1. Install the `Real-Time WAN Transport` host and target `.rtipkg` files on top of `RTI Connext DDS`.

   First install the host `.rtipkg` file.

   Then install the target `.rtipkg` file. There are two ways to install: from `RTI Launcher` or from the command line.

   To install from `RTI Launcher`:
   a. Start `RTI Launcher`:

   ```bash
   cd <NDDSHOME>/bin
   ./rtilauncher
   ```

   a. From the Configuration tab, click on Install RTI Packages.
   b. Use the + sign to add the `.rtipkg` files that you want to install.
   c. Click Install.

   To install from the command line:

   ```bash
   cd <NDDSHOME>/bin
   ./rtipkginstall <path to .rtipkg file>
   ```

   This will install files into the existing `rti_connext_dds-6.x.y` directory. The installer will put the `Real-Time WAN Transport` libraries in `<NDDSHOME>/lib/<architecture>`.

2. If it is not already included, add `<NDDSHOME>/bin` to your PATH environment variable:

   ```bash
   export PATH=<NDDSHOME>/bin:$PATH
   ```

3. If it is not already included: add `<NDDSHOME>/lib/<architecture>` to your library search path (pointed to by the `LD_LIBRARY_PATH` environment variable on Linux systems, `DYLD_LIBRARY_PATH` on macOS systems).
3.3 Installing Cloud Discovery Service (Optional)

For example (enter this on one line):

```
export LD_LIBRARY_PATH=<NDDSHOME>/lib/<architecture>:${LD_LIBRARY_PATH}
```

4. To verify your installation, find the Real-Time WAN Transport library (libnddsrwt) in `<install dir>/lib/<target architecture>`.

See the RTI Connext DDS Core Libraries Platform Notes for a list of the Real-Time WAN Transport libraries for your platform.

3.3 Installing Cloud Discovery Service (Optional)

Install Cloud Discovery Service from RTI Launcher or the command line just as you did above. For details, see the "Installation" chapter of the RTI Cloud Discovery Service documentation.
4 Additional Documentation

The following documentation on *Real-Time WAN Transport* is provided with the *RTI Connext DDS* distribution.

- **User's Manual:**
- **API Reference HTML documentation:** Under the **Modules** tab, navigate to **RTI Connext DDS API Reference, Transports, Built-in Transport Plugins, Real-Time WAN Transport**.

<NDDSHOME> and <path to examples> are described in 1 Paths Mentioned in Documentation on page 1.