

# **RTI Real-Time WAN Transport**

## **Installation Guide**

**Version 6.1.0**



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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).

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# 1 Paths Mentioned in Documentation

The documentation refers to:

- **<NDDSHOME>**

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

- macOS® systems:  
**/Applications/rti\_connex\_dds-6.1.0**
- Linux systems, non-*root* user:  
**/home/<your user name>/rti\_connex\_dds-6.1.0**
- Linux systems, *root* user:  
**/opt/rti\_connex\_dds-6.1.0**
- Windows® systems, user without Administrator privileges:  
**<your home directory>\rti\_connex\_dds-6.1.0**
- Windows systems, user with Administrator privileges:  
**C:\Program Files\rti\_connex\_dds-6.1.0**

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-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 Connex DDS Installation Guide*.

## 2 Download Instructions

Download *Real-Time WAN Transport* from the RTI Support Portal, accessible from <https://support.rti.com/>.

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](mailto: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 Connex 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 Connex 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](mailto: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 Connex 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\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:

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

This will install files into the existing **rti\_connex\_dds-6.x.y** directory. The installer will put the *Real-Time WAN Transport* libraries in <NDDSHOME>\lib\<architecture>.

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

```
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*:

```
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:

```
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:

```
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).



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 Connex DDS* distribution.

- Release Notes: `<NDDSHOME>/doc/manuals/addon_products/realtime_wan_transport/release_notes/RTI_RealTime_WAN_Transport_ReleaseNotes.pdf`
- User's Manual:  
`<NDDSHOME>/doc/manuals/connex_dds_professional/users_manual/RTI_ConnexDDS_CoreLibraries_UsersManual.pdf`
- API Reference HTML documentation: Under the **Modules** tab, navigate to **RTI Connex 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](#).