RTI CORBA Compatibility Kit

Installation Guide

Version 6.0.0

Trademarks

Real-Time Innovations, RTI, NDDS, RTI Data Distribution Service, Connext, 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

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/).

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 Installation

This document describes how to download and install *RTI® CORBA Compatibility Kit*, and compile OCI's distribution of TAO. It assumes that you have already installed *RTI Connext® DDS*.

To use *CORBA Compatibility Kit*, you will need *RTI Connext DDS* with the same version number, and:

- For C++ development: OCI's distribution of TAO:

  OCI's TAO is provided in source and must be compiled for your architecture.

- For Java development: JacORB:

  JacORB is provided in source-version only from the RTI Support Portal, accessible from https://support.rti.com/. A binary version is also available from the JacORB download website, http://www.jacorb.org/download.html.

1.1 Download Instructions

Download the *CORBA Compatibility Kit* and OCI's distribution of TAO or JacORB distributions from the RTI Support Portal, accessible from https://support.rti.com/.

You will need your username and password to log into the RTI Support Portal; these are included in the letter confirming your purchase or evaluation 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 **CORBA Compatibility Kit** and either OCI's distribution of TAO or JacORB:

- For *CORBA Compatibility Kit*, select **rti_corba-<version>.rtipkg**
- For C++ development, select the **ACE+TAO tar.gz** package corresponding to the sup-

ported architectures you want, as listed in the *RTI Corba Compatibility Kit Release Notes*.

- For Java, select **JacORB-<version>-source.zip**.

If you need help with the download process, contact **support@rti.com**.

1.2 Installing OCI's Distribution of TAO

1. Download OCI's ACE 5.6a - TAO 1.6a or ACE 6.4.1 - TAO 2.4.1 from the RTI Support Portal (https://support.rti.com/) as described in the 1.1 Download Instructions on the previous page.

2. Extract the archive to the desired location. For example, the following will extract TAO 1.6a under **/opt/ACE_wrappers**:

```
tar -xzvf ACE+TAO-1.6a.tar.gz -C /opt/
```

3. To compile and install TAO, please see the instructions provided in the installation directory or online at www.theaceorb.com.

1.3 Installing DOC's Distribution of TAO

TAO can also be obtained from the Distributed Object Computing (DOC) Group:

1. Download ACE 6.4.1-TAO 2.4.1 from http://download.dre.vanderbilt.edu/previous_versions/. (Look for "ACE+TAO-6.4.1.")

2. Install ACE+TAO using the installation instructions ("Building TAO") in the *CORBA Programmers Guide* at http://www.remedy.nl/opensource/corbapg.html.

1.4 Installing JacORB

1. Download JacORB 3.3 source code from the RTI Support Portal as described in the 1.1 Download Instructions on the previous page.

2. Extract the archive to the desired location. This will generate a new directory, **JacORB-3.3**.

3. To compile and install JacORB-3.3, see installation instructions in **JacORB-3.3/doc/install.html**.

If you do not want to compile the JacORB distribution: you can download the binaries from the official JacORB download website, http://www.jacorb.org/download.html. These binaries were compiled with JDK 1.5. You may get a 'java.lang.UnsupportedClassVersionError' exception if you try to use these binaries with an older JRE version. In this case, you should compile the JacORB distribution for the specific JRE version that you want to use.

1.5 Installing CORBA Compatibility Kit

Install *CORBA Compatibility Kit* on top of *RTI Connext® DDS*. Use the same version for each—if you have *Connext DDS* 6.*x.y*, install *CORBA Compatibility Kit* 6.*x.y*.

Note: In the following instructions, <NDDSHOME> represents the installation directory for *Connext DDS*. The default installation paths are:

- UNIX-based systems, non-*root* user:

  /home/*your user name*/rti_connext_dds-*version*

- UNIX-based systems, *root* user:

  /opt/rti_connext_dds-*version*

- Windows systems, user without Administrator privileges:

  <*your home directory*>\rti_connext_dds-*version*

- Windows systems, user with Administrator privileges:

  C:\Program Files\rti_connext_dds-*version*

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_connext_dds-version\bin\rtiddsgen"
```

or if you have defined the NDDSHOME environment variable:

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

On UNIX-based systems:

1. There are two ways to install *CORBA Compatibility KIT*: from *RTI Launcher* or from the command line.

To install from RTI Launcher:

    a. Start *RTI Launcher* from the command line:

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

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

    c. Use the + sign to add the **.rtipkg** file that you want to install.

    d. Click **Install**.

To install from the command line:

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

2. Verify Installation:

To verify that the files have been properly installed, enter the following:

```
<NDDSHOME>/bin/rtiddsgen -corba
```

You should see the syntax for *rtiddsgen*. If the package was not installed correctly, you will see an error message that **-corba** is not supported.

On Windows systems:

1. There are two ways to install *CORBA Compatibility Kit*: from *RTI Launcher* or from the command line.

To install from *RTI Launcher*:

    a. Start *RTI Launcher* from the Windows Start menu or from command line:

```
cd <NDDSHOME>\bin
rtilauncher
```

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

    c. Use the + sign to add the **.rtipkg** file that you want to install.

    d. Click **Install**.

To install from the command line:

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

2. Verify Installation:

To verify that the files have been properly installed, enter the following:

```
<NDDSHOME>\bin\rtiddsgen -corba
```

You should see the syntax for *rtiddsgen*. If the package was not installed correctly, you will see an error message that **-corba** is not supported.

2 The Next Steps

Start exploring! We recommend the following starting points:

1. CORBA Example Applications

   Run the C++ or Java CORBA examples, which are copied to your home directory the first time you run *RTI Launcher* or any of the scripts in the **bin** directory (such as *rtiddsgen*).
   - On UNIX-based systems, the examples are here:
     /home/*your user name*/rti_workspace/6.0.0/examples/corba/<*language*>
   - On Windows systems, the examples are here:
     C:\Users*your user name*\Documents\rti_workspace\6.0.0\examples\corba\<*language*>

   Start by reading **Instructions.pdf**, which will guide you through the steps to create a CORBA-DDS publisher and subscriber, based on an IDL file. The example shows you how to create applications that use CORBA and Connext DDS, with a common set of types for both APIs.

2. CORBA Latency and Throughout Examples

   To measure the performance of C++ CORBA types generated by *CORBA Compatibility Kit*, you can run the CORBA performance examples that are provided in these folders:
   - **examples/corba/c++/latency_cck**
   - **examples/corba/c++/throughput_cck**

   Details are in the **README.txt** file in the examples.

3. User's Manual

   See the *RTI Connext DDS Core Libraries User's Manual* for an introduction to *CORBA Compatibility Kit*, instructions on generating CORBA-compatible code with *rtiddsgen*, and supported IDL types. You can access the manual in **<*Connext DDS installation directory*>/doc/manuals/connext_dds/RTI_ConnextDDS_CoreLibraries_UsersManual.pdf**, or through a link in the API Reference HTML documentation's main page.

4. API Reference HTML Documentation

   Open **<Connext DDS installation directory>/README.html**, scroll down to **Optional Products** and select **RTI CORBA Compatibility Kit**. The API Reference HTML documentation contains instructions on how to generate code with *rtiddsgen* and describes the supported IDL types.

5. Community Portal

   Visit the RTI Community Portal, community.rti.com, then select the Knowledge Base, which includes articles on best practices, solutions, code examples, and a glossary.