

RTI TLS Support

Core Libraries and Utilities

Installation Guide

Version 5.0



Your systems. Working as one.



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Third-Party Software

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>).

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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/>

Installation

RTI® *TLS Support* is an optional product for use with the TCP transport that is included with *RTI Connex*TM (formerly *RTI Data Distribution Service*). If you choose to use *TLS Support*, it must be installed on top of a *Connex* installation with the same version number; it can only be used on architectures that support TCP transport.

The distribution file uses the naming convention, **RTI_TLS_Support-5.0.x-<architecture>.tar.gz** (or **.zip** on Windows systems), where *<architecture>* will match your system architecture and *x* is a release-specific number. (System architecture names are described in the *RTI Core Libraries and Utilities Release Notes*.) For example:

- ❑ **RTI_TLS_Support-5.0.x-i86Linux2.6gcc4.1.2.tar.gz**
- ❑ **RTI_TLS_Support-5.0.x-i86Win32VS2005.zip**

TLS Support also requires OpenSSL 0.9.8x (or higher). It is available from RTI's Customer Portal, or you may obtain it from another source.

To see a simple 'Hello, World' example application that uses TCP and TLS, look in the **hello-WorldTCP** and **Hello_builtin_tcp** directories under *<install dir>/examples/C*.

1 Installing on Linux Systems

You do not need administrator privileges. All directory locations are meant as examples only; adjust them to suit your site.

1. Make sure you have GNU's version of the tar utility, **gtar** (which handles long file names), and GNU's version of the unzip utility, **gunzip**.
2. Install *TLS Support* on top of *Connex*.
 - a. Move the distribution file, **RTI_TLS_Support-5.0.x-<architecture>.tar.gz**, to the *same* directory where you installed *Connex* 5.0.x. For instance, if you already have **/local/rti/ndds.5.0.x**, then move the downloaded file to **/local/rti** and change to that directory:

```
> cd /local/rti
```
 - b. Use **gunzip** to uncompress the file. For example (your filename will be different):

```
> gunzip RTI_TLS_Support-5.0.x-i86Linux2.6gcc4.1.2.tar.gz
```
 - c. Use **gtar** to extract the distribution from the uncompressed file. For example:

```
> gtar xvf RTI_TLS_Support-5.0.x-i86Linux2.6gcc4.1.2.tar
```

This will extract files into the existing **ndds.5.0.x** directory; including placement of the **rtiwnserver** application in **/local/rti/ndds.5.0.x/scripts**.

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- d. Include `$NDDSHOME/lib/<architecture>` in your `LD_LIBRARY_PATH` environment variable, if it is not already included. For example:

```
> setenv LD_LIBRARY_PATH \
${NDDSHOME}/lib/i86Linux2.6gcc4.1.2:${LD_LIBRARY_PATH}
```

3. Install OpenSSL 0.9.8x:

- a. Move the downloaded OpenSSL distribution file to a directory of your choice, such as `/local/rti`, and change to that directory:

```
> cd /local/rti
```

- b. Use **gunzip** to uncompress the OpenSSL file. For example (your filename may be different):

```
> gunzip openssl-0.9.8x-sparcSol2.10gcc3.4.2.tar.gz
```

- c. Use **gtar** to extract the distribution from the uncompressed file. For example:

```
> gtar xvf openssl-0.9.8x-sparcSol2.10gcc3.4.2.tar
```

This will extract files into `/local/rti/openssl-0.9.8x`.

- d. Include the resulting `/bin` directory in your `PATH`:

```
> setenv PATH \
/local/rti/openssl-0.9.8x/sparcSol2.10gcc3.4.2/bin:$PATH
```

- e. Include the resulting `/lib` directory in your `LD_LIBRARY_PATH`:

```
> setenv LD_LIBRARY_PATH \
/local/rti/openssl-0.9.8x/sparcSol2.10gcc3.4.2/lib:${LD_LIBRARY_PATH}
```

- f. To verify your installation, enter:

```
> openssl version
```

2 Installing on Windows Systems

You do not need administrator privileges. All directory locations are meant as examples only; adjust them to suit your site.

1. Right-click the distribution file and extract the contents in the *same* directory where you installed *Connex* 5.0.x. For instance, if you already have `c:\Program Files\RTI\ndds.5.0.x`, then extract to `c:\Program Files\RTI`.
2. Add the *TLS Support lib* directory to your **Path** environment variable if it is not already included: `%NDDSHOME%\lib\<architecture>`. (If you need help with this process, please see the *RTI Core Libraries and Utilities Getting Started Guide*.)
3. Install OpenSSL 0.9.8x:

- a. Right-click the OpenSSL distribution file and extract the contents in a directory of your choice. We suggest using the same directory where you installed *Connex* 5.0.x. For instance, if you already have `c:\Program Files\ndds.5.0.x`, then extract to `c:\Program Files\RTI`. The extracted files will be in `c:\Program Files\RTI\openssl-0.9.8x`.

- b. Add the resulting **bin** directory to your **Path** environment variable: `c:\rti\openssl-0.9.8x\<architecture>\bin`. (If you need help with this process, please see the *RTI Core Libraries and Utilities Getting Started Guide*.)

- c. To verify your installation, open a command prompt and enter:

```
> openssl version
```