

# *RTI CORBA Compatibility Kit*

## **Release Notes**

Version 5.2.3



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### **Technical Support**

Real-Time Innovations, Inc.  
232 E. Java Drive  
Sunnyvale 94089

Phone: (408) 990-7444  
Email: [support@rti.com](mailto:support@rti.com)  
Website: <https://support.rti.com/>

# Release Notes

## 1 Supported Platforms

RTI® CORBA Compatibility Kit is supported on the following architectures:

- ❑ ACE 5.6a - TAO 1.6a

Operating System		CPU	Compiler	RTI Architecture Abbreviation
Linux®	Red Hat® Enterprise Linux 5.1, 5.2, 5.4, 5.5	x86	gcc 4.1.2	i86Linux2.6gcc4.1.2
		x64	gcc 4.1.2	x64Linux2.6gcc4.1.2
	Red Hat Enterprise Linux 5.2 with Real-Time Extensions	x86	gcc 4.1.2	i86Linux2.6gcc4.1.2
LynxOS®	LynxOS 5.0	PPC 7400	gcc 3.4.3	ppc7400Lynx5.0.0gcc3.4.3

- ❑ Java (JacORB 2.2.4)

Operating System		CPU	Compiler	RTI Architecture Abbreviation
Linux	CentOS 5.4, 5.5	x86	gcc 4.1.2	i86Linux2.6gcc4.1.2
		x64	gcc 4.1.2	x64Linux2.6gcc4.1.2
	CentOS 6.0, 6.2 - 6.4, 7	x86	gcc 4.4.5	i86Linux2.6gcc4.4.5
		x64	gcc 4.4.5	x64Linux2.6gcc4.4.5
	Red Hat Enterprise Linux 5.0	x86	gcc 4.1.1	i86Linux2.6gcc4.1.1
		x64	gcc 4.1.1	x64Linux2.6gcc4.1.1
	Red Hat Enterprise Linux 5.1, 5.2, 5.4, 5.5	x86	gcc 4.1.2	i86Linux2.6gcc4.1.2
		x64	gcc 4.1.2	x64Linux2.6gcc4.1.2
	Red Hat Enterprise Linux 6.0 - 6.5, 6.7	x86	gcc 4.4.5	i86Linux2.6gcc4.4.5
		x64	gcc 4.4.5	x64Linux2.6gcc4.4.5
	Red Hat Enterprise Linux 7	x86	gcc 4.8.2	i86Linux3gcc4.8.2
		x64	gcc 4.8.2	x64Linux3gcc4.8.2
	SUSE® Linux Enterprise Server 11 SP2 (3.x kernel)	x86	gcc 4.3.4	i86Linux3gcc4.3.4
	SUSE Linux Enterprise Server 11 SP2, SP3 (2.6 kernel)	x64	gcc 4.3.4	x64Linux2.6gcc4.3.4
	Ubuntu® 14	x86	gcc 4.8.2	i86Linux3gcc4.8.2
x64		gcc 4.8.2	x64Linux3gcc4.8.2	

Operating System	CPU	Compiler	RTI Architecture Abbreviation
Solaris™	All Solaris architectures listed in the <i>RTI Connexxt DDS Core Libraries Release Notes</i>		
Windows®	All Windows architectures listed in the <i>RTI Connexxt DDS Core Libraries Release Notes</i>		

Please see the *RTI Connexxt™ DDS Core Libraries Platform Notes* for more information on these supported architectures, including their required system libraries, compiler flags, etc.

## 2 Compatibility with CORBA

When used with the `-corba` option, *rtiddsgen* generates type-specific code that is compatible with the OMG CORBA-IDL mapping. As a result, the generated code will be compatible with a large set of CORBA distributions. RTI tests compatibility against the OCI CORBA source-code distribution for C++, JacORB for Java, and ACE+TAO from the Distributed Object Computing (DOC) Group for Distributed Real-time and Embedded (DRE).

This version of *CORBA Compatibility Kit* is intended for *RTI Connexxt DDS* with the same version number and:

- ❑ The DOC Group's distribution of ACE 6.0.1 - TAO 2.0.1 for C++ for the architectures listed in [Section 1](#). (<http://download.dre.vanderbilt.edu/>)
- ❑ OCI's distribution of ACE 5.6a - TAO 1.6a for C++ for the architectures listed in [Section 1](#). (<http://www.theaceorb.com/downloads/index.html>)
- ❑ JacORB 2.2.4 for Java for architectures listed in [Section 1](#). (<http://www.jacorb.org/download.html>)

## 3 What's New in 5.2.3

- ❑ Added support for Windows 10, Windows Server 2012 R2, Red Hat Enterprise Linux 6.7, and CentOS 7.0

## 4 Previous Releases

### 4.1 What's New in 5.2.0

- ❑ Added support for Windows 8/8.1, Windows Server 2012 R2, Red Hat Enterprise Linux 6.5 and 7, Ubuntu 14, and SUSE 11 SP3 (x64)
- ❑ Removed support for AIX, Windows Vista, and Windows XP platforms

### 4.2 What's Fixed in 5.2.0

#### 4.2.1 Visual Studio Compiler Crashed when Using Generated C++ Code for CORBA

The generated C++ code for CORBA made the Visual Studio® compiler crash. This issue has been resolved. Please note that Visual Studio and Windows are not officially supported for CORBA ACE/TAO.

[RTI Issue ID CODEGEN-670]

## 5 Additional Instructions for LynxOS 5.0 and OCI ACE 5.6a - TAO 1.6a

If you are building for Lynx target version 5.0.0 and using the OCI ACE 5.6a - TAO 1.6a package, you will need to make the following change:

In `ACE_wrappers/include/makeinclude/platform_lynxos.GNU` (line #110), replace:

```
LIBS      += -lnetinet -lnsl
```

with:

```
ifeq (5.0.0,$(VERSION))
  LIBS      += -lnetinet
else
  LIBS      += -lnetinet -lnsl
endif
```

The above modification omits the `libnsl` library for version 5.0.0. This change is needed because according to LinuxWorks, the Name Service library (`libnsl`) is not supported in Lynx 5.0.0. Including `libnsl` will cause a link error when building for CORBA.

## 6 Known Issues

### 6.1 Unsupported IDL Types

When using `rtiddsgen` with the `-corba` option, some IDL types are *not* supported. For more information about supported IDL types, see the *Data Types and Data Samples* chapter in the *RTI Connext DDS Core Libraries User's Manual*.

### 6.2 Extensible Types Not Supported

*RTI CORBA Compatibility Kit* does not support the "Extensible and Dynamic Topic Types for DDS" (DDS-XTypes) specification from the Object Management Group (OMG).

Specifically, *RTI CORBA Compatibility Kit* does not support the following features:

- Optional members
- Mutable types
- Extensible types. You may still mark a type as Extensible using the Extensibility annotation. However, both the *DataWriter* and *DataReader* must have the same type definition to interoperate. For example:

*DataWriter*:

```
struct BaseType {
    long m1;
};
```

*DataReader*:

```
struct DerivedType {
    long m1;
    long m2;
};
```

```
};
```

When using *RTI CORBA Compatibility Kit*, the *DataWriter* and *DataReader* above will match. However, the *DataReader* will fail to deserialize the samples from the *DataWriter*.

[RTI Issue ID CORE-6247]

### 6.3 LNK2005 Error When Using an ACE-TAO Class that Inherits from a Template Base Class (Windows Only)

If you create a Windows DLL that uses an ACE-TAO class, and that class inherits from a template base class, you may see a LNK2005 error complaining about one or more multiple defined symbols.

This is a known issue when using Microsoft® Visual Studio®.

As a possible workaround, you can explicitly import the template base class in the IDL file using the **//@copy-c-declaration** directive. For example, if you see the following error:

```
TAO.lib(TAO.dll): error LNK2005: "public: class
TAO_Unbounded_Sequence<unsigned short> & __thiscall
TAO_Unbounded_Sequence<unsigned short>::operator=(class
TAO_Unbounded_Sequence<unsigned short> const &)"
(??4?$TAO_Unbounded_Sequence@G@@QA>>EAAV0@ABV0@@Z) already defined in Send-
Data.obj TAO.lib(TAO.dll) : error LNK2005: "public: unsigned short const *
__thiscall TAO_Unbounded_Sequence<unsigned short>::get_buffer(void) const
" (?get_buffer@?$TAO_Unbounded_Sequence@G@@QBEPBGXZ) already defined in
SendDataPlugin.obj TAO.lib(TAO.dll) : error LNK2005: "public: unsigned
short * __thiscall TAO_Unbounded_Sequence<unsigned
short>::get_buffer(bool)"
(?get_buffer@?$TAO_Unbounded_Sequence@G@@QAEPAG_N@Z) already defined in
SendDataPlugin.obj
```

You can add the following line at the beginning of your IDL file:

```
//@copy-c-declaration template class __declspec(dllimport)
TAO_Unbounded_Sequence<unsigned short>;
```