

# *RTI CORBA Compatibility Kit*

## **Release Notes**

Version 5.1.0



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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

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## 1 Supported Platforms

RTI<sup>®</sup> CORBA Compatibility Kit 5.1.0 is supported on the following architectures:

### ❑ ACE 6.0.1 - TAO 2.0.1

Operating System		CPU	Compiler	RTI Architecture Abbreviation
Linux <sup>®</sup>	Fedora <sup>®</sup> 12 (kernel 2.6.32)	x64	gcc 4.4.4	x64Linux2.6gcc4.4.4
	Fedora 12 (kernel 2.6.32) with gcc 4.5.1	x64	gcc 4.5.1, glibc 2.9	x64Linux2.6gcc4.5.1
	Fedora 12 (kernel 2.6.32)	Cell BE <sup>™</sup>	gcc 4.5.1, glibc 2.9	cell64Linux2.6gcc4.5.1
	SELinux (kernel v2.6.32)	PPC 4xxFP	gcc 4.5.1, glibc 2.9	ppc4xxFPLinux2.6gcc4.5.1

### ❑ ACE 5.6a - TAO 1.6a

Operating System		CPU	Compiler	RTI Architecture Abbreviation
Linux	Red Hat <sup>®</sup> 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 <sup>®</sup>	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	
AIX®	All AIX architectures listed in the <i>RTI Core Libraries and Utilities Release Notes</i>			
Linux	SUSE® Linux Enterprise Server 11 SP2 (3.x kernel)	x86	gcc 4.3.4	i86Linux3gcc4.3.4
	SUSE Linux Enterprise Server 11 SP2 (2.6 kernel)	x64	gcc 4.3.4	x64Linux2.6gcc4.3.4
	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	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 - 6.4	x86	gcc 4.4.5	i86Linux2.6gcc4.4.5	
	x64	gcc 4.4.5	x64Linux2.6gcc4.4.5	
Solaris™	All Solaris architectures listed in the <i>RTI Core Libraries and Utilities Release Notes</i>			
Windows®	All Windows architectures listed in the <i>RTI Core Libraries and Utilities Release Notes</i>			

Please see the *RTI Core Libraries and Utilities 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 Connex™* (formerly *RTI Data Distribution Service*) 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 5.1.0

This release adds support for the following platforms:

- AIX 7.1
- CentOS and Red Hat Enterprise Linux 6.2 - 6.4
- SUSE Linux Enterprise Server 11 SP2 (3.x kernel, x86)
- Windows 8
- Windows Server 2012 R2

### 4 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.

## 5 Known Issues

### 5.1 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 Core Libraries and Utilities User's Manual*.

### 5.2 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. Please see <http://support.microsoft.com/default.aspx?scid=kb;en-us;309801> for more information.

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>;
```