

RTI CORBA Compatibility Kit

Release Notes

Version 6.0.0



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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/>).

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1 Supported Platforms

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

Table 1.1 ACE 5.6a - TAO 1.6a

Operating System	CPU	Compiler	RTI Architecture Abbreviation
LynxOS®5.0	PPC7400	gcc 3.4.3	ppc7400Lynx5.0.0gcc3.4.3

Table 1.2 ACE 6.0a - TAO 2.0a

Operating System	CPU	Compiler	RTI Architecture Abbreviation
CentOS™ 7.0 Red Hat®Enterprise Linux® 7.0 , 7.3, 7.5 Ubuntu® 14.04 LTS	x86	gcc 4.8.2	i86Linux3gcc4.8.2

Table 1.3 ACE 6.4.1 + TAO 2.4.1

Operating System	CPU	Compiler	RTI Architecture Abbreviation
CentOS 6.0, 6.2-6.4 Red Hat Enterprise Linux 6.0 - 6.5, 6.7, 6.8	x64	gcc 4.4.5	x64Linux2.6gcc4.4.5
CentOS 7.0 Red Hat Enterprise Linux 7.0, 7.3, 7.5 Ubuntu 14.04 LTS	x64	gcc 4.8.2	x64Linux3gcc4.8.2

Table 1.4 Java (JacORB 3.3)

Operating System	
Linux	All Linux platforms on x86/x64 CPUs listed in the <i>RTI Connex DDS Core Libraries Release Notes</i> for the same version number, except not supported on Wind River® Linux 7.
Solaris™	All Solaris platforms listed in the <i>RTI Connex DDS Core Libraries Release Notes</i> for the same version number. Note: Solaris platforms are only available by request.
Windows®	All Windows platforms listed in the <i>RTI Connex DDS Core Libraries Release Notes</i> for the same version number .

Please see the *RTI Connex 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 Connex DDS* with the same version number and:

- ACE 5.6a - TAO 1.6a for C++ for the platforms in [Table 1.1 ACE 5.6a - TAO 1.6a](#).
- ACE 6.0a - TAO 2.0a for C++ for the platforms in [Table 1.2 ACE 6.0a - TAO 2.0a](#).
- ACE 6.4.1 - TAO 2.4.1 for C++ for the platforms in [Table 1.3 ACE 6.4.1 + TAO 2.4.1](#).
- JacORB 3.3 for Java for the platforms in [Table 1.4 Java \(JacORB 3.3\) on page 2](#).

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/>. See the *RTI Corba Compatibility Kit Installation Guide* for instructions.

For backward compatibility information between 6.0.0 and previous releases, see the *Migration Guide* on the RTI Community Portal (<https://community.rti.com/documentation>).

3 What's New in 6.0.0

This release adds support for the following platforms:

Table 3.1 ACE 6.0a - TAO 2.0a

Operating System	CPU	Compiler	RTI Architecture Abbreviation
CentOS™ 7.0 Red Hat® Enterprise Linux® 7.0 , 7.3 Ubuntu® 14.04 LTS	x86	gcc 4.8.2	i86Linux3gcc4.8.2

Table 3.2 ACE 6.4.1 - TAO 2.4.1

Operating System	CPU	Compiler	RTI Architecture Abbreviation
CentOS 7.0 Red Hat Enterprise Linux® 7.0 , 7.3 Ubuntu 14.04 LTS	x64	gcc 4.8.2	x64Linux3gcc4.8.2
CentOS 6.0, 5.2-6.4 Red Hat Enterprise Linux 6.0 - 6.5, 6.7, 6.8	x64	gcc 4.4.5	x64Linux2.6gcc4.4.5

Platforms that used to be supported with JacORB 2.2.4 are now supported with JacORB 3.3 instead.

In addition, support has been added for these platforms when using JacORB 3.3:

Table 3.3 Java (JacORB 3.3)

Operating System	CPU	Compiler	RTI Architecture Abbreviation
CentOS 7.0 Red Hat Enterprise Linux 7.0, 7.3 Ubuntu 14.04 LTS	x86	gcc 4.8.2	i86Linux3gcc4.8.2

Operating System	CPU	Compiler	RTI Architecture Abbreviation
SUSE Linux Enterprise Server 12	x64	gcc 4.3.4	x64Linux2.6gcc4.3.4
Ubuntu 18.04 LTS	x64	gcc 7.3.0	x64Linux4gcc7.3.0

4 What's Fixed in 6.0.0

4.1 Deserialization error in unions without default discriminator when using JacORB 3.x

Although JacORB 3.x was not officially supported in previous releases, if you had tried to use it with a union type without a default discriminator (see type below), the *DataReader* would have printed deserialization errors and the samples would not have been provided to the application.

Unions with a boolean discriminator and case values for TRUE and FALSE were not affected. Unions with an enum discriminator with a case value for each possible enum value were not affected.

```
union CharUnion switch (char)
{
    case 'B':
        octet octet_mem;
    case 'S':
        short short_mem;
/* There is no default discriminator */
};

struct StructWithUnion {
    CharUnion member_1;
};
```

This problem has been resolved.

[RTI Issue ID CODEGEN-827]

4.2 Linking errors for generated example using ACE-TAO

The compilation of the generated example (using the **-example** flag) for the *Corba Compatibility Kit* and ACE-TAO may have failed with linking errors if you did not use the command-line option **-orb** when generating the example code.

For example, the example generated with this command line failed to compile:

```
../scripts/rtiddsgen -corba MyTypeC.h -example ppc7400Lynx5.0.0gcc3.4.3 MyType.idl
```

The example generated with this command line did compile:

```
../scripts/rtiddsgen -corba MyTypeC.h -orb ACE_TAO1.6 -example ppc7400Lynx5.0.0gcc3.4.3  
MyType.idl
```

This problem has been fixed. Now the first example will compile.

[RTI Issue ID CODEGEN-834]

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 Additional Instructions for gcc 4.8

The 'as-needed' behavior in gcc 4.8 differs from earlier versions. You may need to add the following to `platform_macros.GNU`:

```
LDFLAGS += -Wl,--no-as-needed
```

7 Known Issues

7.1 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*.

7.2 Extensible Types Not Supported

CORBA Compatibility Kit support for the "Extensible and Dynamic Topic Types for DDS" (DDS-XTypes) specification from the Object Management Group (OMG) is very limited. For details, see the "Supported IDL Types" chapter in the *RTI Connext DDS Core Libraries User's Manual* (see the section "Support for Extensible Types").