

# **RTI Persistence Service**

**Release Notes**

**Version 7.0.0**



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# 1 Supported Platforms

*RTI® Persistence Service* is included with *RTI Connex®*. If you choose to use it, it must be installed on top of *Connex* with the same version number.

See the column for *Persistence Service* in the table of [Supported Platforms for Compiler-Dependent Products, in the RTI Connex Core Libraries Release Notes](#).

RTI tests *Persistence Service* with a file-system only, using PERSISTENT mode.

## 2 Compatibility

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

## 3 What's New in 7.0.0

### 3.1 Support for External Databases is Discontinued

External databases are no longer supported by Persistence Service.

The Release Notes for 6.1.1 included a deprecation notice, in keeping with the Real-Time Innovations, Inc. Maintenance Policy #4220.

### 3.2 Default `journal_mode` and `synchronization` changed to WAL and NORMAL, respectively

In this release, the default values for the following configuration parameters have changed:

- `<journal_mode>` has changed from DELETE to WAL
- `<synchronization>` has changed from OFF to NORMAL

This change provides the best out-of-the-box performance without sacrificing database integrity in the event of a crash or power failure.

### 3.3 Third-Party Software Upgrade

The following third-party software used by *Persistence Service* has been upgraded:

Third-Party Software	Previous Version	Current Version
SQLite®	3.37.2	3.39.0

For information on third-party software used by *Connex* products, see the "3rdPartySoftware" documents in your installation: `<NDDSHOME>/doc/manuals/connex_dds_professional/release_notes_3rdparty`.

## 4 What's Fixed in 7.0.0

### 4.1 Schema Files not Compliant with DDS-XML Specification

The following change has been made to the schema file `rti_persistence_service.xsd`, and its included files, to make them compliant with the DDS-XML specification (<https://www.omg.org/spec/DDS-XML/1.0/PDF>):

- Renamed `<participant_qos>` to `<domain_participant_qos>`

The old tag is still accepted by the Connex XML parser and the XSD schema to maintain backward compatibility.

[RTI Issue ID PERSISTENCE-213]

### 4.2 Samples Published Out of Order from Same Virtual GUID were Dropped

If *Persistence Service* received samples for a given virtual GUID with sequence numbers out of order, *Persistence Service* dropped samples with sequence numbers lower than the highest received sequence number. This issue has been resolved.

[RTI Issue ID PERSISTENCE-250]

### 4.3 Fatal Error when Persisting Unkeyed Topics upon Restore or IP Mobility Event

*Persistence Service* generated the following fatal error and shut down when persisting unkeyed Topics if all of the following conditions were met:

- `<use_durability_service>` was set to true in the `<persistence_group>` OR `<writer_qos>/<writer_data_lifecycle>/<autopurge_disposed_instances_delay>` was set to zero in



the <persistence\_group>

- <writer\_in\_memory\_state> was set to false in the <persistence\_group>.
- There was an IP mobility event (for instance, an interface went down) OR *Persistence Service* was started with the **-restore** command-line option set to true.

The error backtrace was as follows:

```
#4 WriterHistoryOdbcPlugin_logAndCheckODBCError ??? [0x31590B]
#5 WriterHistoryOdbcPlugin_handleODBCError ??? [0x315CE5]
#6 WriterHistoryOdbcPlugin_beginDisposedInstanceIteration ??? [0x34B202]
```

This problem has been resolved.

[RTI Issue ID PERSISTENCE-255]

# 5 Known Issues

**Note:** For an updated list of critical known issues, see the Critical Issues List on the RTI Customer Portal at <https://support.rti.com>.

## 5.1 Coherent Changes not Propagated as Coherent Set

*Persistence Service* will propagate the samples inside a coherent change. However, it will propagate these samples individually, not as a coherent set.

## 5.2 TopicQueries not Supported in PERSISTENT Mode

Getting TopicQuery data from a *Persistence Service* instance configured to store data on disk is not currently supported.

**Note:** Getting TopicQuery data from a *Persistence Service* instance running in TRANSIENT (storing data in memory) mode is supported.

[RTI Issue ID PERSISTENCE-143]

## 5.3 <comm\_ports> not Supported when Using Real-Time WAN Transport

*Persistence Service* can use the *RTI Real-Time WAN Transport*. However, the port configuration using <comm\_ports> or the property `dds.transport.UDPv4_WAN.builtin.comm_ports` is not currently supported by *Persistence Service*.

[RTI Issue ID PERSISTENCE-206]

## 5.4 Persistence Service DataReaders Ignore Serialized Key Propagated with Dispose Updates

*Persistence Service DataReaders* ignore the serialized key propagated with dispose updates. *Persistence Service DataWriters* cannot propagate the serialized key with dispose, and therefore ignore the **serialize\_key\_with\_dispose** setting on the *DataWriter* QoS.

[RTI Issue ID PERSISTENCE-221]

## 6 Available Documentation

The following documentation is provided with the *Persistence Service* distribution. (The paths show where the files are located after *Persistence Service* has been installed in `<NDDSHOME>`):

- General information, configuration, use cases, and execution of *Persistence Service*:  
*RTI Connex Core Libraries User's Manual*  
(`<NDDSHOME>/doc/manuals/connext_dds_professional/users_manual/RTI_ConnexDDS_CoreLibraries_UsersManual.pdf`)

- Example code

By default, the *Persistence Service* examples are copied here:

- macOS systems:

```
/Users/your user name/rti_workspace/version/examples/persistence_service/  
<language>/hello_world_persistence
```

- Linux systems:

```
/home/your user name/rti_workspace/version/examples/persistence_service/  
<language>/hello_world_persistence
```

- Windows systems:

```
<your home directory>\rti_workspace\version\examples\persistence_service\  
<language>/hello_world_persistence
```

- Overview of persistence and durability features:  
Open `<NDDSHOME>/ReadMe.html`, choose your desired API (C, C++, or Java), then select **Modules, RTI Connex API Reference, Durability and Persistence**.