

# OMG: RPC Over DDS (DDS-RPC)

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Table 1: Data sheet for RPC Over DDS (DDS-RPC)

|                     |                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------|
| Title               | RPC Over DDS                                                                                    |
| Acronym             | DDS-RPC                                                                                         |
| Version             | 1.0                                                                                             |
| OMG Document Number | formal/17-04-01                                                                                 |
| Release Date        | April 2017                                                                                      |
| About Specification | <a href="https://www.omg.org/spec/DDS-RPC/">https://www.omg.org/spec/DDS-RPC/</a>               |
| Document            | <a href="https://www.omg.org/spec/DDS-RPC/1.0/PDF">https://www.omg.org/spec/DDS-RPC/1.0/PDF</a> |

**Note:** The following is an excerpt from the actual document. It is provided here as a convenience and is not authoritative. Refer to the original document as the authoritative reference.

## Scope

*The Data Distribution Service is widely used for [data\\_centric](#) publish/subscribe communication in real-time distributed systems. Large distributed systems often need more than one style of communication. For instance, data distribution works great for one-to-many dissemination of information. However, certain other styles of communication namely request/reply and remote method invocation are cumbersome to express using the basic building blocks of DDS. Using two or more [middleware](#) frameworks is often not practical due to complexity, cost, and maintenance overhead reasons. As a consequence, developing a standard mechanism for request/reply style bidirectional communication on top of DDS is highly desirable for [portability](#) and [interoperability](#). Such facility would allow commands to be naturally represented as remote method invocations. This presents a solution to this problem.*

*This specification defines a [1831](#) framework using the basic building blocks of DDS, such as topics, types, DataReaders, and DataWriters to provide request/reply [semantics](#). It defines distributed services, described using a service interface, which serves as a shareable contract between service provider and a service consumer. It supports synchronous and asynchronous method invocation. Despite its similarity, it is not intended to be a replacement for [CORBA](#).*

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