OMG: RPC Over DDS (DDS-RPC)

return to the DDS Family of Standards

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	https://www.omg.org/spec/DDS-RPC/
Document	https://www.omg.org/spec/DDS-RPC/1.0/PDF

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.