

Overview of Reliable RPC

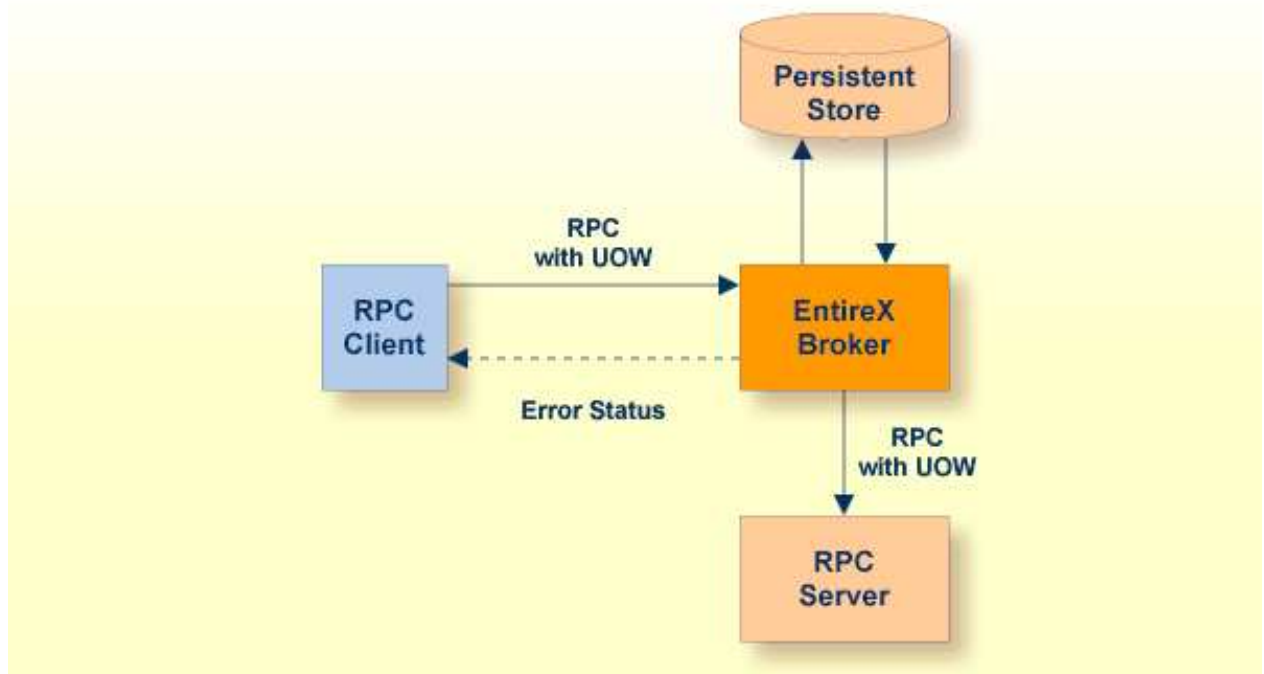
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Introduction to Reliable RPC

In the architecture of modern e-business applications (such as SOA), loosely coupled systems are becoming more and more important. Reliable messaging is one important technology for this type of system.

Reliable RPC is the EntireX implementation of a reliable messaging system. It combines EntireX RPC technology and persistence, which is implemented with units of work (UOWs).

- Reliable RPC allows asynchronous calls ("fire and forget")
- Reliable RPC is supported by most EntireX wrappers
- Reliable RPC messages are stored in the Broker's persistent store until a server is available
- Reliable RPC clients are able to request the status of the messages they have sent



Reliable RPC is used to send messages to a persisted Broker service. The messages are described by an IDL program that contains only IN parameters. The client interface object and the server interface object are generated from this IDL file, using the respective Software AG component.

Reliable RPC is enabled at runtime. The client has to set one of two different modes before issuing a reliable RPC request:

- `AUTO_COMMIT`
- `CLIENT_COMMIT`

While `AUTO_COMMIT` commits each RPC message implicitly after sending it, a series of RPC messages sent in a unit of work (UOW) can be committed or rolled back explicitly using `CLIENT_COMMIT` mode.

The server is implemented and configured in the same way as for normal RPC.

Broker Configuration

A Broker configuration with `PSTORE` is recommended. This enables the Broker to store the messages for more than one Broker session. These messages are still available after Broker restart. The attributes `STORE`, `PSTORE`, and `PSTORE-TYPE` in the Broker attribute file can be used to configure this feature. The lifetime of the messages and the status information can be configured with the attributes `UWTIME` and `UWSTAT-LIFETIME`. Other attributes such as `MAX-MESSAGES-IN-UOW`, `MAX-UOWS` and `MAX-UOW-MESSAGE-LENGTH` may be used in addition to configure the units of work. See *Broker Attributes*.

The following rules apply:

Java

The result of the method `RPCService.getStatusOfMessage` depends on the configuration of the unit of work status lifetime. If the status is not stored longer than the message, the method returns (not available).

C

The result of the procedure `ERXGetReliableStatus` depends on the configuration of the unit of work status lifetime in the EntireX Broker configuration. If the status is not stored longer than the message, the procedure returns the error code 00780305 (no matching UOW found).

COBOL

The result of the generic RPC function call "RS" - get reliable status depends on the configuration of the unit of work status lifetime in the EntireX Broker configuration. See `COMM-FUNCTION` in the COBOL Wrapper documentation. If the status is not stored longer than the message, the function call returns the error code 00780305 (no matching UOW found).

.NET

The result of the function `Service.GetReliableStatus` depends on the configuration of the unit of work status lifetime in the EntireX Broker configuration. If the status is not stored longer than the message, the function returns the error code 00780305 (no matching UOW found).

DCOM

The result of the function `RPCService.get_StatusOfMessage` depends on the configuration of the unit of work status lifetime in the EntireX Broker configuration. If the status is not stored longer than the message, the function returns the error code 00780305 (no matching UOW found).