

About this Documentation

Remote procedure call (RPC) techniques establish a framework for communication between server and client systems that can be collocated on the same computer or based on a network of identical or heterogeneous machines and operating systems. Several basically similar methods are known.

This documentation describes the theory of operation and the use of the RPC techniques provided by Natural to enable the design and to simplify the application of distributed software systems. For information on other products that may be involved in a Natural RPC-based environment, see the documentation of EntireX RPC for 3GL, Entire Network, EntireX Broker.

For full details of the functions provided to maintain remote procedure calls, refer to the Natural *SYSRPC Utility* documentation.

This documentation is organized under the following headings:

●	Introducing Natural RPC	Provides basic information, such as Natural RPC operation in non-conversational and conversational mode; describes the database transactions on the client and server side and contains a list of important key terms used in the SYSRPC utility and the Natural RPC documentation.
●	Prerequisites and Preparatory Information	Provides an overview of the general prerequisites and, a short description of the facilities that are available in Natural for implementing a Natural Remote Procedure Call (RPC) environment, and information on the specific mapping of Software AG IDL data types, groups, arrays and structures to the Natural programming language.
●	Restrictions and Limitations	Informs you about some restrictions and limitations that you should observe when using the Natural RPC.
●	Setting up a Natural RPC Environment	Describes the fundamental steps you must perform for all client and server Naturals to set up a Natural RPC environment.
●	Starting a Natural RPC Server	How to start a Natural RPC server on the different platforms.
●	Terminating a Natural RPC Server	Describes the various methods of terminating a Natural RPC server.
●	Terminating an EntireX Broker Service	Describes the various methods of terminating an EntireX Broker service.
●	Operating a Natural RPC Environment	How to operate a Natural RPC environment.
●	Using a Conversational RPC	How to use the Natural RPC in conversational mode: opening/closing a conversation, defining a conversation context, modifying the system variable *CONVID if multiple conversations are used in parallel.
●	Reliable RPC	Describes the Reliable RPC, which is the Natural RPC implementation of a reliable messaging system.
●	Using a Remote Directory Server (RDS)	Describes the principle and the usage of an RDS: how to create an RDS interface, a remote directory service routine; information about the RDS directory service program RDSSCDIR required to read directory information from a work file.
●	Using Security	How to use the Natural RPC with Natural Security or EntireX Security.
●	EntireX Broker Support	Special considerations concerning EntireX Broker support.

Note:

This document applies to all platforms on which Natural can be used. But, depending on the Natural documentation set you are currently using, the following differences exist:

- The examples of using the Natural utility SYSRPC exhibit platform-specific maps (with either GUI or CUI interface).

- Under Natural for Windows, UNIX and OpenVMS, the RPC-specific parameters are available as profile parameters.
- Under Natural for Mainframes the parameters are available as keyword subparameters of profile parameter RPC or parameter macro NTRPC.
- For information on limitations concerning the OpenVMS platform, see the Natural Remote Procedure Call (RPC) section in the current Natural for OpenVMS Release Notes.