Calculating Size Requirements

You can calculate the buffer size (in bytes) stubless RPC calls require for sending data from the client to the server or vice versa. The indication of the size helps you configure the middleware layer used; for example, the Broker attribute file when EntireX Broker is used. If desired, you can also perform size calculations for stub subprograms (interface objects), even though sizes are already calculated when generating the stub subprograms.

Size calculations are performed with either the **Stub Mass Calculation** function or the direct command `SYSRPC CSMASS` whereby the direct command can be used in online or batch mode. Either method will invoke a window that indicates the send and receive lengths required by the specified subprogram(s).

This section contains information on:

- Using the Stub Mass Calculation Function
- Using the SYSRPC CSMASS Command
- Name Specification and Compression

Using the Stub Mass Calculation Function

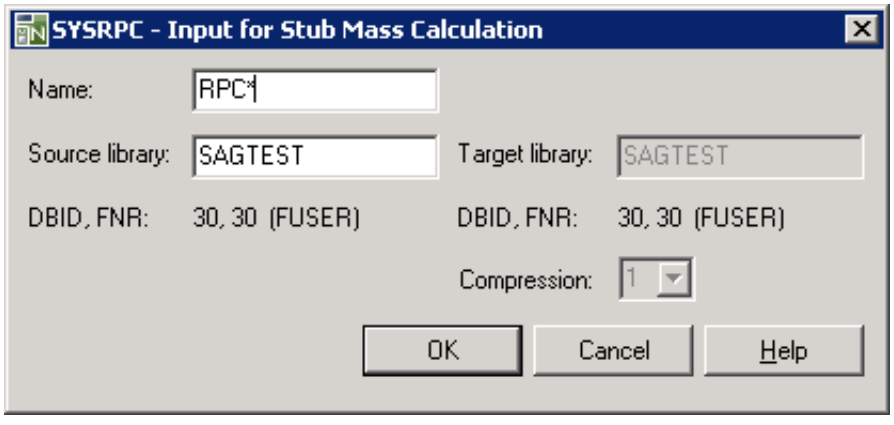
This section provides instructions for calculating size requirements by using the **Stub Mass Calculation** function.

To perform Stub Mass Calculation

1. In the **SYSRPC - Remote Procedure Call** window, from the **Tools** menu, choose **Stub Mass Calculation**.

   Or:
   In the **SYSRPC - Remote Procedure Call** window, press CTRL+F5.

   An **SYSRPC - Input for Stub Mass Calculation** dialog box similar to the example below appears:



2. In the **Name** text box, enter the name of the subprogram for which to calculate the size or specify a range of names. The text box is preset to an asterisk (*) for all subprograms. For valid names, see *Name* in *Specification and Compression*.

   If required, in the **Source Library** text box, enter the name of the library that contains the subprograms specified. The text box is preset to the name of the current library.

   The **Target Library** text box does not apply to the mass calculation function.

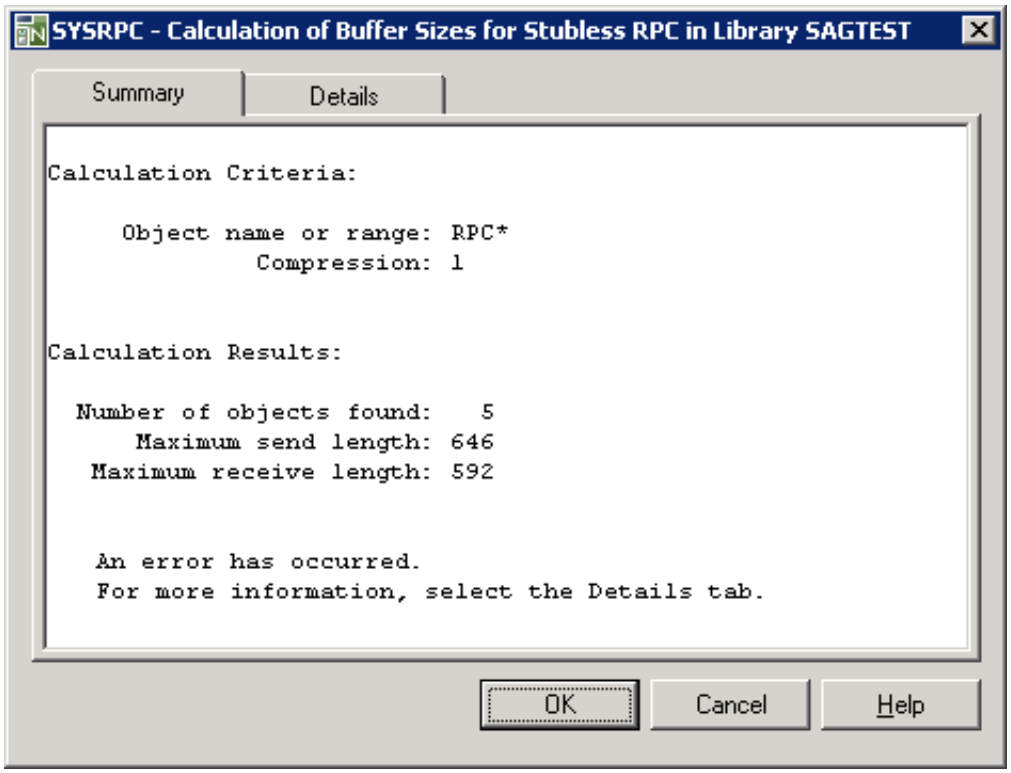
   DBID, FNR are read-only text boxes that display the database ID (DBID), the file number (FNR) and the type of Natural file (FNAT = system, FUSER = user) for the source and target libraries entered.

   From the **Compression** drop-down list box, select compression type **0**, **1** or **2** (default is **1**); see *Using Compression* described in *Operating a Natural RPC Environment* in the *Natural Remote Procedure Call (RPC)* documentation.

3. Choose **OK**.

   The **SYSRPC - Calculation of Buffer Sizes for Stubless RPC in Library** window appears for the library specified (here: **SAGTEST**) with the tabbed pages **Summary** and **Details**.

   The **Summary** page contains a report that indicates the send and receive length requirements of the subprograms (objects) selected as shown in the following example:



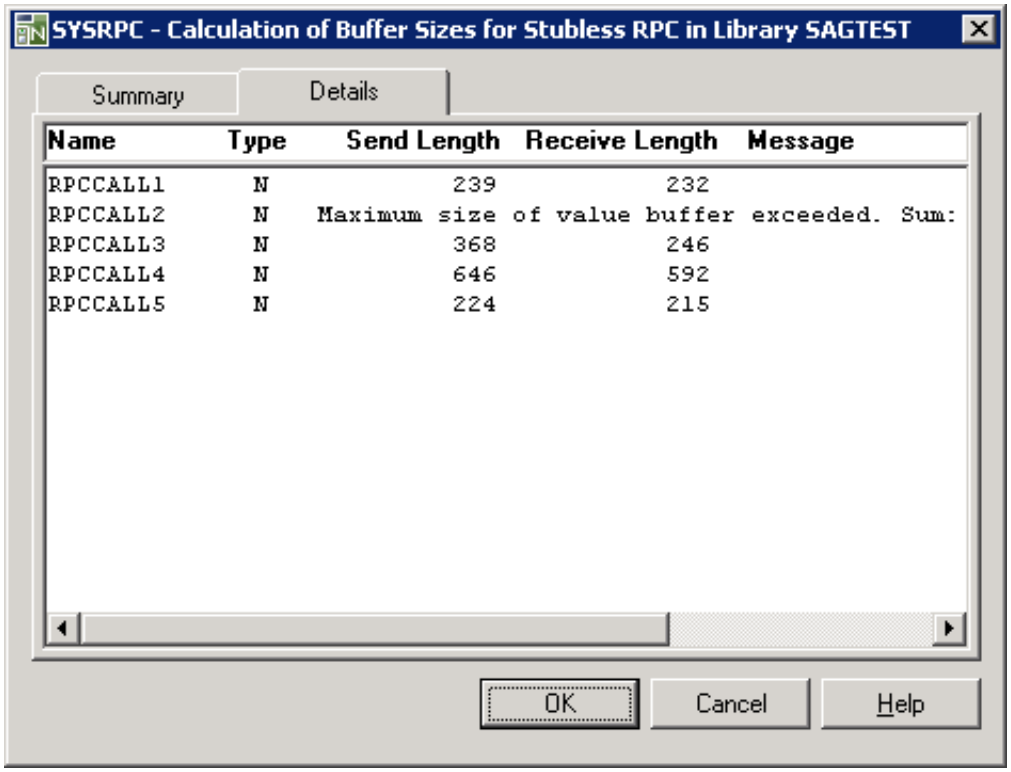
   The report is organized in two sections, which contain the following information:

- **Calculation Criteria:**
  The criteria based on which the calculation was made: a single object name or a range of names (here: `RPC*`) and the compression (here: `1`).

- **Calculation Results:**
  The number of objects selected for the size calculation. The maximum buffer sizes all selected objects require for sending and receiving data from the client.

If the size calculation fails, a message at the bottom of the page indicates this error.

The **Details** page contains a list of all objects selected for the calculation similar to the example shown below:



The list is sorted in alphabetical order of object names (**Name** column) and contains information on the following:

- the type of object used for the calculation (here: `N` for type subprogram) in the **Type** column,
- the buffer sizes each object requires for sending (**Send Length**) and receiving (**Receive Length**) data from the client,
- and a possible comment on each object calculation in the **Message** column.

If the size calculation fails, an error message is displayed next to the objects affected (here: `RPCCALL2`).

Using the SYSRPC CSMASS Command

You can enter the command `SYSRPC CSMASS` in the Command line for calculating size requirements online.

The report produced by the command corresponds to the report described for the **Stub Mass Calculation** function.

The syntax that applies to the command `SYSRPC CSMASS` is illustrated in the diagram below:

SYSRPC CSMASS [*name*] [*compression*]

The syntactical items *name* and *compression* are explained in the section *Name Specification and Compression*.

Name Specification and Compression

You can specify the objects (subprograms) to be selected for size calculation and the type of compression to be used:

- Name
- Compression

Name

You can specify an object name or a range of names. If you do not specify a name or a range of names, the size of all subprograms contained in the current library will be calculated.

Valid name specifications are described below where *value* is any combination of one or more alphanumeric characters:

Input	Objects Selected
*	All subprograms. This is the default setting.
value	A subprogram with a name equal to *value*.
*value**	All subprograms with names that start with *value*.
value<	All subprograms with names less than or equal to *value*
value>	All subprograms with names greater than or equal to *value*.

Compression

You can specify any of the following compression types: `0`, `1`, `2`. The specification of compression is optional. The default type used for stub generation is `1`.

See also *Using Compression* described in *Operating a Natural RPC Environment* in the *Natural Remote Procedure Call (RPC)* documentation.