

# Generating Multiple Stubs

You can generate single or multiple stub subprograms (interface objects) in either online or batch mode by using the **Stub Mass Generation** function or the command `SYSRPC SGMASS`. Either method will invoke a window that indicates the send and receive lengths required by the specified subprogram(s).

Using the command or function, field attributes will be generated as described in *Specifying Parameters* in the section *Generating Single Stubs with Parameter Specification*.

You generate stub subprograms from subprograms.

This section contains information on:

- Using the Stub Mass Generation Function
- Using the SYSRPC SGMASS Command
- Name Specification and Compression

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## Using the Stub Mass Generation Function

This section provides instructions for generating single or multiple stub subprograms (interface objects) by using the **Stub Mass Generation** function.

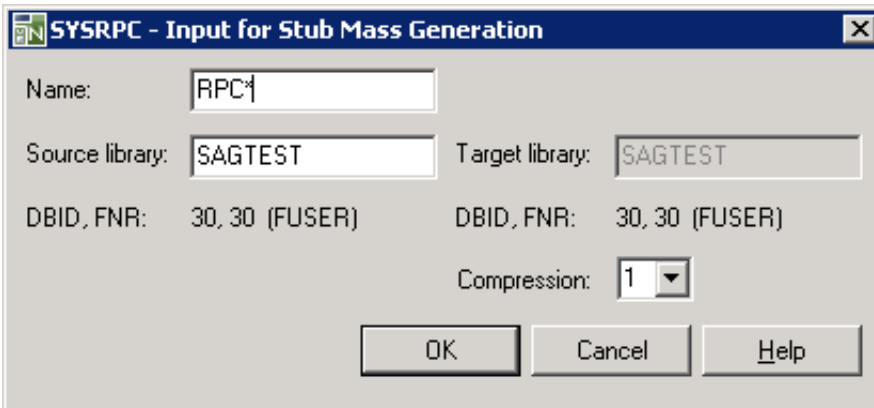
### ▶ To perform the Stub Mass Generation function

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

Or:

In the **SYSRPC - Remote Procedure Call** window, press CTRL+F6.

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



The screenshot shows a dialog box titled "SYSRPC - Input for Stub Mass Generation". It contains the following fields and controls:

- Name:** A text box containing "RPC\*"
- Source library:** A text box containing "SAGTEST"
- Target library:** A text box containing "SAGTEST"
- DBID, FNR:** Two text boxes, both containing "30, 30 (FUSER)"
- Compression:** A dropdown menu with "1" selected
- Buttons:** "OK", "Cancel", and "Help" buttons at the bottom.

2. In the **Name** text box, enter the name of the stub subprogram to be generated or specify a range of names. The text box is preset to asterisk (\*), indicating all subprograms. For valid entries, see *Name* in *Name Specification and Compression*.

The name(s) of the stub subprogram must be identical to the name(s) of the remote CALLNAT program(s).

**Important:**

If you do not specify a name, with few exceptions (see below), all subprograms in the current library will be converted to stub subprograms.

If required, in the **Source library** text box, enter the name of the library that contains the subprogram(s) from which you want to generate the stub subprogram(s). The text box is preset to the name of the current library.

**Target library** is a read-only text box that contains the name of the current library into which the stub subprograms are generated.

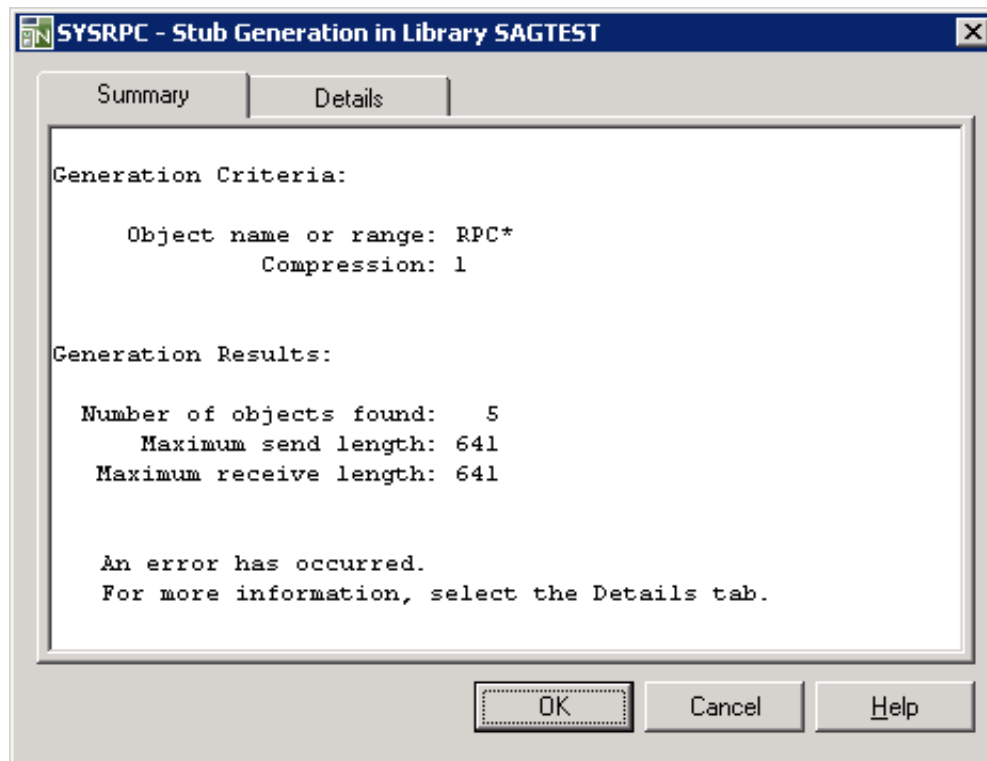
**DBID, FNR** are non-modifiable text boxes that display the database ID (DBID), the file number (FNR) and the type of Natural file (FNAT = system, FUSER = user) for the source and target libraries entered.

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 - Stub Generation 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:

- **Generation Criteria:**

The criteria based on which the stub subprograms were generated: a single object name or a range of names (here: RPC\*) and the compression (here: 1).

- **Generation Results:**

The number of objects selected for the stub generation.

The maximum buffer sizes all generated stub subprograms require for sending and receiving data from the client.

If the stub generation fails, a message at the bottom of the page indicates this error.

The **Details** page contains a list of all generated stub subprograms similar to the example shown below:

Name	Type	Send Length	Receive Length	Message
RPCCALL1	N	239	232	
RPCCALL2	N	Maximum size of value buffer exceeded. Sum:		
RPCCALL3	N	373	391	
RPCCALL4	N	641	641	
RPCCALL5	N	224	236	

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

- the type of object from which the stub subprogram was generated (here: N for 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 stub generation in the **Message** column.

If the stub generation fails, an error message is displayed next to the objects affected (here: RPCCALL2).

## Using the SYSRPC SGMASS Command

You can enter the command `SYSRPC SGMASS` in the Command line for generating stub subprograms (interface objects) online.

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

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

```
SYSRPC SGMASS [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 stub generation and the type of compression to be used:

- Name
- Compression

### Name

You can specify an object name or a range of names. The specification of an object name or a range of names is optional.



**Warning:**

**If you do not specify an object name or a range of names, with few exceptions (see below), all subprograms in the current library will be converted to stub subprograms.**

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

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

### Exceptions to Names

In the Natural system library SYSRPC, SYSRPC SGMASS exempts from stub generation all subprograms with names that start with any of the following prefixes: RDS, RPC, NAT, NAD or NSC.

In user libraries, SYSRPC SGMASS exempts from stub generation the subprogram NATCLTGS.

### 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.