Generating Stubs or PDAs from IDL Files

An IDL (Interface Definition Language) file contains definitions of the interface between client and server.

The **Stub Generation from IDL** function provides the option to generate stub subprograms (interface objects) and/or parameter data areas (PDAs) from EntireX IDL files.

You can generate stubs from IDL files by using either the **Stub Generation from IDL** function or the command SYSRPC SGIDL.

The following section provides instructions for using the **Stub Generation from IDL** function.

▶ **To generate stubs or PDAs from an IDL file**

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

   Or:
   In the **SYSRPC - Remote Procedure Call** window, press CTRL+F7.

   Or:
   In the Command line, enter SYSRPC SGIDL.

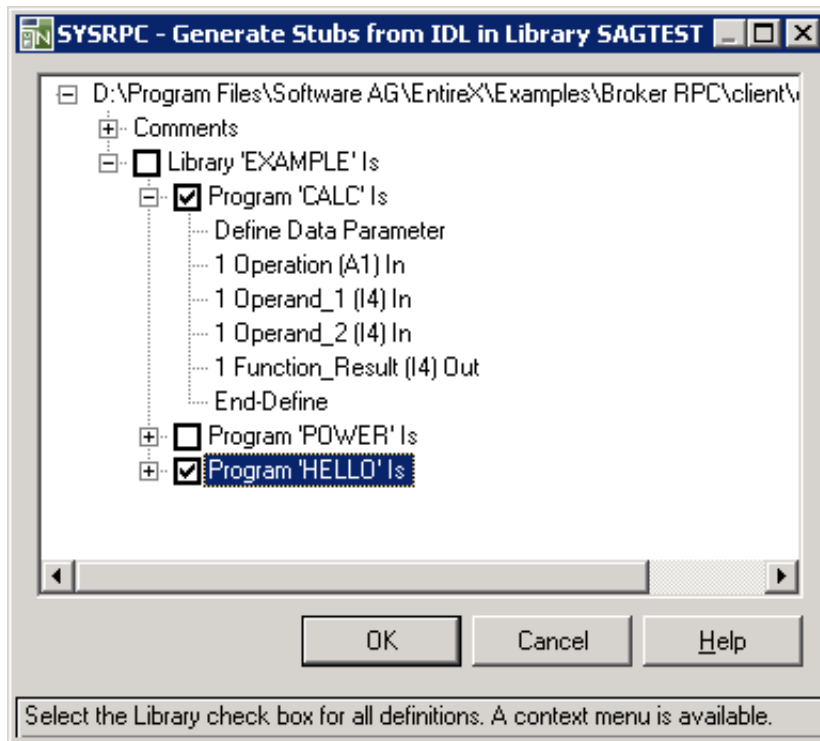   The **Input for Stub Generation from IDL File** dialog box appears.

2. In the **Path or file name** text box, enter the complete path to the folder or the file that contains the IDL definitions or choose **Browse** to select a file from a folder.

   If required, in the **Library** text box, enter the name of the library into which you want to generate the stub subprogram. The text box is preset to the name of the current library.

   DBID, FNR is a non-modifiable text box that displays the database ID (DBID), the file number (FNR) and the type of Natural file (FNAT = system, FUSER = user) for the specified library.

3. Choose **OK**.

   The **Generate Stubs from IDL** window similar to the example below appears for the specified library:

All definitions contained in the selected IDL file are displayed in a tree view where the **Library** node indicates an EntireX RPC IDL library and each set of IDL definitions is contained in a **Program** node. The **Comments** node contains commentary text such as a description of the definitions contained in an IDL file.

4. Select the node(s) that contain the sets of IDL definitions from which you want to generate the stub subprogram(s) or PDA(s):

   ● **For stub subprograms:**
     Select the check box of a **Library** node to generate stub subprograms from all **Program** nodes contained in that **Library** node.

     Or:
     Select the check boxes of individual **Program** nodes to generate stub subprograms from the specified **Program** nodes only.

     You can change the name of a stub subprogram by using a selection list as described in *Building a Selection List*. Otherwise, the stub subprogram will be named after the corresponding **Program** node.

   ● **For PDAs:**
     Select the **Library** node(s) or the required **Program** node(s) and choose **Mark for parameter data area** from the context menu.

     A list appears that displays the set(s) of IDL definitions for each node selected as shown in the example of a selection list below. The check boxes of all IDL definitions are selected for PDA generation. You can deselect a PDA by clearing the check box next to it in either the tree view or the selection list as described in *Building a Selection List*.

You can change the name of a PDA as described in *Building a Selection List*. Otherwise, the PDA will be named after the corresponding **Program** node where the following conversion rules apply:

○ For a node name of 7 characters, an A is added to the PDA name. For example, node name PDATEST1 is converted to PDA name PDATESTA.

○ For a node name of 6 characters or less, an A is added to the PDA name in the 8th position and each empty position between node name and A is filled with a dash (-). For example, node name TEST1 is converted to PDA name TEST1--A.

5. Choose **OK**.

For each item selected, a message box appears confirming successful generation of the stub subprogram or the PDA.
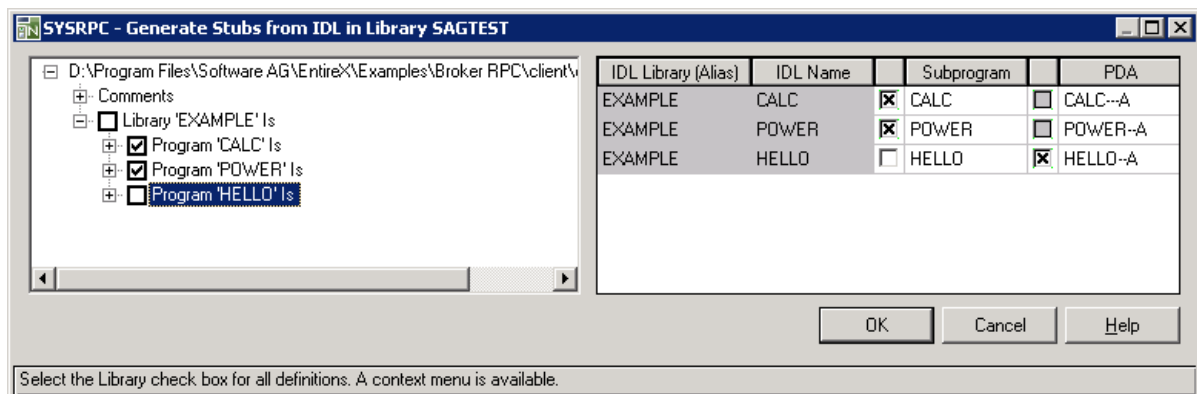
Building a Selection List

You can use a selection list to change the name of a stub subprogram (interface object) or a PDA, or deselect or select the nodes from which to generate a stub subprogram and/or a PDA.

▶ **To build a selection list**

1. In the **Generate Stubs from IDL** window, select the check box of a **Library** node or the check box(es) of **Program** node(s) and choose **Build selection list to rename or mark object types** from the context menu.

A selection list appears that displays the selected **Program** nodes as shown in the example below:

The selection list displays all nodes selected in the tree view where the **IDL Library (Alias)** column corresponds to the **Library** node and the **IDL Name** column corresponds to the **Program** node. In the example above, the **Program** nodes CALC and POWER are selected for stub generation and the **Program** node HELLO is selected for PDA generation.

2. In the **Subprogram** and/or **PDA** columns, select the check boxes of the sets of IDL definitions from which you want to generate stub subprograms and/or PDAs.

You can deselect an item by clearing a check box.

3. If you want to change the name of a stub subprogram or a PDA, select the required table cell and replace the current entry.

4. If you want to remove one or more table rows, select the required rows and choose **Clear Row(s)** from the context menu.

5. If you want to close the selection list, choose **Close Table** from the context menu.