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Subject: Re: IDL(rsi) + FORTRAN(digital) + DLL(windows nt)  
Posted by [Steve.Lionel](#) on Thu, 20 May 1999 07:00:00 GMT  
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On Thu, 20 May 1999 16:31:22 +0200, Michel Kruglanski  
<expo-sciences@jsb.be> wrote:

- > I want to access Fortran subroutines from IDL V5.2 using the
- > CALL\_EXTERNAL function under Windows NT 4.0.
- > I plan to transform the fortran code into a dynamic library (DLL) with
- > the help of the Digital Fortran V5.0C.
- > I have tried a single example but I have only succeeded to crash IDL.

I see that your Fortran DLL code has a PRINT \* statement in it. This assumes that a console is present for the PRINT. While you can call the Win32 API AllocConsole to create the console, you might consider using the Win32 API MessageBox to put up a "Hello" box.

--

Send Visual Fortran support requests to [vf-support@compaq.com](mailto:vf-support@compaq.com)

Steve Lionel (<mailto:Steve.Lionel@compaq.com>)  
Fortran Engineering  
Compaq Computer Corporation, Nashua NH

Compaq Fortran web site: <http://www.compaq.com/fortran>  
Compaq Fortran Message Board:  
[http://forum.compaq.com:80/mb8/system/fortran\\_login.html](http://forum.compaq.com:80/mb8/system/fortran_login.html)

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Subject: Re: IDL(rsi) + FORTRAN(digital) + DLL(windows nt)  
Posted by [Steve.Lionel](#) on Fri, 21 May 1999 07:00:00 GMT  
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On Fri, 21 May 1999 10:14:09 +0200, Michel Kruglanski  
<michel.kruglanski@bira-iasb.oma.be> wrote:

- > I succeeded already to apply this subroutine under OpenVMS
- > HP-UX and SunOS without including platform-specific codes
- > neither in the Fortran code nor in the IDL code (except the
- > name of the sharable object/executable, i.e. test.exe, test.sl,
- > test.so or test.dll, respectively)
- > Since some of the Fortran subroutines include WRITE(6,\*) statement,
- > is it a way to force IDL to accept a console without modifying
- > the Fortran code (even through an option to DF)?

I assume that on the OpenVMS, HP and Sun systems this application was run from a command prompt, yes? On Windows, this IDL would seem to be written as a Windows application that doesn't use a console. So the environment is already very different.

There is not currently a way to get DVF to automatically create the console if none exists. That's probably a good idea for a future update. You can use the AllocConsole Win32 API routine to create the console.

--

Send Visual Fortran support requests to [vf-support@compaq.com](mailto:vf-support@compaq.com)

Steve Lionel (<mailto:Steve.Lionel@compaq.com>)  
Fortran Engineering  
Compaq Computer Corporation, Nashua NH

Compaq Fortran web site: <http://www.compaq.com/fortran>  
Compaq Fortran Message Board:  
[http://forum.compaq.com:80/mb8/system/fortran\\_login.html](http://forum.compaq.com:80/mb8/system/fortran_login.html)

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Subject: Re: IDL(rsi) + FORTRAN(digital) + DLL(windows nt)  
Posted by [Michel Kruglanski\[1\]](#) on Fri, 21 May 1999 07:00:00 GMT  
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Steve Lionel wrote:

>

> I see that your Fortran DLL code has a PRINT \* statement in it. This  
> assumes that a console is present for the PRINT. While you can call  
> the Win32 API AllocConsole to create the console, you might consider  
> using the Win32 API MessageBox to put up a "Hello" box.  
>

Effectively, when I remove the print statement, IDL doesn't crash anymore. So, the problem seems to be that the Windows version of IDL has no console. Is there a solution without using Windows specific statements in the Fortran code?

My point is: I have written several Fortran subroutines that I distribute as object library on several platforms (OpenVMS, VAX/VMS, HP-UX, SunOS, DecOSF, Windows). Since most of the users of this library are using IDL, I have decided to write an IDL interface using the CALL\_EXTERNAL function. Therefore I am writing a Fortran subroutine dedicated to be the interface between IDL and several subroutines of my library.

I succeeded already to apply this subroutine under OpenVMS

HP-UX and SunOS without including platform-specific codes  
neither in the Fortran code nor in the IDL code (except the  
name of the sharable object/executable, i.e. test.exe, test.sl,  
test.so or test.dll, respectively)

Since some of the Fortran subroutines include WRITE(6,\*) statement,  
is it a way to force IDL to accept a console without modifying  
the Fortran code (even through an option to DF)?

Michel K.  
BIRA/IASB

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Subject: Re: IDL(rsi) + FORTRAN(digital) + DLL(windows nt)  
Posted by [L. Paul Mix](#) on Mon, 24 May 1999 07:00:00 GMT  
[View Forum Message](#) <> [Reply to Message](#)

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> On Fri, 21 May 1999 10:14:09 +0200, Michel Kruglanski  
> <michel.kruglanski@bira-iasb.oma.be> wrote:  
>  
>> I succeeded already to apply this subroutine under OpenVMS  
>> HP-UX and SunOS without including platform-specific codes  
>> neither in the Fortran code nor in the IDL code (except the  
>> name of the sharable object/executable, i.e. test.exe, test.sl,  
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>> Since some of the Fortran subroutines include WRITE(6,\*) statement,  
>> is it a way to force IDL to accept a console without modifying  
>> the Fortran code (even through an option to DF)?  
>

My experience with IDL's call\_external is that it is always dangerous to  
try to access stdin or stdout, but file access seems ok.

One solution is to call a wrapper routine which opens a scratch file to  
which the subroutines write.

When the work is finished, the wrapper routine rewinds the scratch file,  
reads each line and uses the IDL routine: IDL\_Message to put the  
information on the current IDL console.

This technique seems to work for Windows, MAC, and UNIX (SUN, HP, DEC,  
SGI) for both idl and idlde.

You will need to append a char(0) after the last non-blank character to  
convert the Fortran string to a C string.

L. Paul Mix  
Distinguished Member of the Technical Staff  
Electromagnetics and Plasma Physics Analysis

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Subject: Re: IDL(rsi) + FORTRAN(digital) + DLL(windows nt)  
Posted by [Michel Kruglanski\[1\]](#) on Tue, 25 May 1999 07:00:00 GMT  
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Steve Lionel wrote:

>  
> [...]  
>  
> There is not currently a way to get DVF to automatically create the  
> console if none exists. That's probably a good idea for a future  
> update. You can use the AllocConsole Win32 API routine to create the  
> console.  
>

Could you provide an example of a Fortran77 routine that  
accesses the "AllocConsole Win32 API routine" and also the  
command line options for df? I tried it using the DF help  
but I didn't succeed.  
Thank you in advance for your help.

Michel Kruglanski  
BIRA-IASB

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