
Subject: IDL calling a Fortran routines

Posted by [jianguang.guo](#) on Mon, 23 May 2005 14:41:23 GMT

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Hi,I'm a new guy for IDL.I want to call a fortran routine from idl.The guide of the IDL tell me that the easy way is by using call_external. It seems that most examples are under unix or other OS. When I call fortran code via C wrapper,I does not know how to get the "example.dll"(I try to run the 'example_c2f.c' from the external development guide,but fail). I use IDL6.0 under win2000. I hope to get some detailed examples on win.Thanks

Subject: Re: IDL calling a Fortran routines

Posted by [Haje Korth](#) on Thu, 26 May 2005 12:37:04 GMT

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I am glad I could help.

<jianguang.guo@gmail.com> wrote in message

news:1117076953.859993.84790@f14g2000cwb.googlegroups.com...

> bingo,you're right. I get the desired result,thank you very much

>

> cheers,

>

> Jianguang Guo

>

> Haje Korth wrote:

>> Link is part of Visual Studio, but dumpbin works fine too. It seems like
>> the

>> export is there and its all in capitalized letters. You need to

>> capitalize

>> 'SUM_ARRAY' in your call, its case sensitive.

>>

>> Haje

>

Subject: Re: IDL calling a Fortran routines

Posted by [Haje Korth](#) on Fri, 27 May 2005 16:44:01 GMT

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On unix you don't have to export anything.Everything should work without the export statement. The nice thing is though that ivf under linux will still compile and just ignore the dll_export staement. So one version of the code compiles on both OS. gnu f should work too, but I don't use it.

Haje

<ismxray@yahoo.com> wrote in message
news:1117204688.370902.38980@g49g2000cwa.googlegroups.com...
> Can we do the same thing on Linux using intel Fortran 8.1 or even gnu
> Fortran?
> I tried but it cannot recognize the "dll_export".
>

Subject: Re: IDL calling a Fortran routines
Posted by ismxray@yahoo.com on Sun, 29 May 2005 03:36:21 GMT
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I can use intel fortran v8.1 compile the testing program but not g77.
However, when I try to call the subroutine in IDL, I got the following

error messages:

```
IDL>x=findgen(10)
```

```
IDL>sum=0.0
```

```
IDL>aa=call_external('example1.so', $  
  'SUM_ARRAY',x,n_elements(x),sum)
```

```
% CALL_EXTERNAL: Error loading sharable executable.  
      Symbol: SUM_ARRAY, File = example1.so
```

```
/home/tangsk/software/idl61/idl_6.1/bin/bin.linux.x86/libidl .so.6.1:  
undefined symbol:  
      SUM_ARRAY
```

the command to compile is

```
f90 -c example1.f
```

```
f90 -shared -o example1.so example1.o
```

Did I missed some parameters while compiling? Thanks!

The fortran code is:

```
C-----  
      SUBROUTINE SUM_ARRAY(argc, argv) !Called by IDL  
      INTEGER*4 argc, argv(*)         !Argc and Argv are integers  
  
      j = LOC(argc)                   !Obtains the number of arguments (argc)  
      !Because argc is passed by VALUE.
```

```
C      Call subroutine SUM_ARRAY1, converting the IDL parameters
```

c to standard FORTRAN, passed by reference arguments:

```
CALL SUM_ARRAY1(%VAL(argv(1)), %VAL(argv(2)), %VAL(argv(3)))  
RETURN  
END
```

c This subroutine is called by SUM_ARRAY and has no
c IDL specific code.

c

```
SUBROUTINE SUM_ARRAY1(array, n, sum)  
INTEGER*4 n  
REAL*4 array(n), sum  
  
sum=0.0  
DO i=1,n  
sum = sum + array(i)  
ENDDO  
RETURN  
END
```

Subject: Re: IDL calling a Fortran routines
Posted by ismxray@yahoo.com on Sun, 29 May 2005 18:58:34 GMT
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Problem solved. there is an extra "_" for the subroutine names
compiled by f90.
