Subject: Re: Call_external
Posted by Inigo Garcia on Thu, 12 Jun 1997 07:00:00 GMT
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Harald Frey wrote:
>
> I have changed from VMS to UNIX and now I got a problem with
> call_external and
> I'm not sure if it is an IDL or a UNIX problem. I work under
> { sparc sunos unix 4.0.1c}.
>
> The FORTRAN program example.f according to the User's Guide 18-14
>
> C -------------------------
>   subroutine sum_array(array,n,sum)
>
>   integer*4 n
>   real*4 array(n),sum
>
>   sum=0.0
>   do i=1,n
>   sum=sum+ array(i)
>   print*, sum, array(i)
>   enddo
>
>   return
>   end
> C -------------------------
>
> And the IDL program test_call.pro
>
> ; ------------------------
> pro test_call
>
> x=findgen(10)
> s=call_external('example.so','_sum_array_',x,n_elements(x),/ f_value)
>
> end
> ; ------------------------
>
> Compiling the FORTRAN program with (User's Guide 18-21)
>
> f77 -c -pic example.f
> ld -o example.so example.o
>
> Gives the error message
>
> % ld -o example.so example.o

> Undefined first referenced
> symbol in file
> __e_wsle example.o
> __s_wsle_nv example.o
> __do_l_out example.o
> ld: fatal: Symbol referencing errors. No output written to example.so
>
> Trying
> ld -G -o example.so example.o
>
> compiles without error message but then in IDL I get
>
> IDL>.r test_call
> IDL> test_call
> % CALL_EXTERNAL: Error loading sharable executable.
> Symbol: _sum_array_, File = example.so
> ld.so.1: /usr/local/idl/bin/bin.solaris2/idl: fatal:
> dlsym:
> can't find symbol: _sum_array_
> % Execution halted at: TEST_CALL 4 test_call.pro
> % $MAIN$
>
> Where is the problem?
>
> Harald Frey
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Hi Harald:

The compiling to use a Fortran subroutine from IDL is the second one you mention, the "ld -G -o example.so example.o". The error you get is due to the fact that IDL does not find the entry "_sum_array_" in the file "example.so". The most probable thing is that the entry is called "sum_array_", at least in Solaris is that way. To verify the enties that one of your subroutines have, you can use the command "nm example.o".

Anyway, with your program written like this nothing is going to work, because you need to use an Interface between IDL and the Fortran Routine. How to do this is explained in the Online Help of IDL, in the Advanced Development Guide, CALL_EXTERNAL Section. The example files are in the /external/sharelib/ directory of the main IDL directory.

Enjoy it !!

I~nigo.
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