
Subject: Re: CALL_EXTERNAL in Linux Fedore Core2???

Posted by [David G. Grier](#) on Wed, 08 Sep 2004 03:58:59 GMT

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Hi There,

umesh wrote:

```
> Hi!
>
> I am trying to call a simple C program (test.c) from a IDL program using
> CALL_EXTERNAL. The C program is,
>
> #include <stdio.h>
>
> #include <math.h>
>
> #include"/usr/local/rsi/idl_6.0/external/include/idl_export.h "
>
> float Scale;
> int test(int argc, char *argv[])
>
> {
>
>     Scale      = *(float *) argv[0];
>
>
>     Scale = pow(Scale, 5);
>
>     return(1);
>
> }
>
>
> IDL program is
>
> PRO test
>
>     sc = 5.0
>     xx=CALL_EXTERNAL('/home/upadiga/work/IDLwork/test', $
> '/home/upadiga/work/IDLwork/test', $
>     sc)
```

Here's the problem. The shared object file is
"/home/upadiga/work/IDLwork/test.so", not
"/home/upadiga/work/IDLwork/test".
That's why the file's not being found.

Furthermore, the object within the library is
"test", not
"/home/upadiga/work/IDLwork/test".

Finally, it's not a good idea to call any routine
"test" because "test" tends to mean something
specific already on most machines.

Hope this helps.

TTFN,

David

```
>
> print, sc
> end
>
> In directory /home/upadiga/work/IDLwork/test
>
> I have followed following compilation and linking procedures!!
>
>> gcc -c -fPIC test.c
>> ld -shared -o test.so test.o
>
> Then in the IDL command line,
>
> IDL>.r test
> IDL>test
>
> I get the following error message.
>
> % CALL_EXTERNAL: Error loading sharable executable.
>       Symbol: /home/upadiga/work/IDLwork/test, File =
> /home/upadiga/work/IDLwork/test
>       /home/upadiga/work/IDLwork/test: cannot open shared
> object file: No such file or
>       directory
> % Execution halted at: TEST          4
> /home/upadiga/work/IDLwork/test.pro
> %          $MAIN$
>
>
> Experts out there, could you please tell me how should I compile and link
> the shared library!? I am using IDL6.0 on Linux (Fedora Core2 64bit OS).
>
> Thanks a lot
>
```

> umesh

--

```
=====
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=====
```

Subject: Re: CALL_EXTERNAL in Linux Fedore Core2???

Posted by [Bob\[2\]](#) on Wed, 08 Sep 2004 11:46:13 GMT

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David Grier's remarks are good.

Also: You are including `idl_export.h`, so it would also be wise to use `IDL_INT` for the return type of your 'test' procedure in C -- after you rename the procedure to something less troublesome, like 'braintest'. Then in the `call_external`, you will want to set `/IVALUE`. I think you might not have seen these errors yet, since IDL did not find the right shared object and did not find the symbol.

Also, look through the messages in the list, if you haven't already done so. There have been several about `call_external`.

- Bob

umesh wrote:

> Hi!

>

> I am trying to call a simple C program (test.c) from a IDL program using

> CALL_EXTERNAL. The C program is,

>

> #include <stdio.h>

>

> #include <math.h>

>

> #include"/usr/local/rsi/idl_6.0/external/include/idl_export.h "

>

> float Scale;

> int test(int argc, char *argv[])

> xx=CALL_EXTERNAL('/home/upadiga/work/IDLwork/test', \$

> '/home/upadiga/work/IDLwork/test', \$

> sc)

Subject: Re: CALL_EXTERNAL in Linux Fedore Core2???

Posted by [umesh](#) on Wed, 08 Sep 2004 21:13:06 GMT

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Hi David and Bob,

Thanks a lot for your reply. I changed the names of the files to
braintest.c and braintest.pro and changed the return value to IDL_INT
(;-))

PRO braintest

```
sc = 5.0
xx=CALL_EXTERNAL('/home/upadiga/work/IDLwork/braintest.so','braintest',
sc)
print, sc
end
```

```
#include <stdio.h>
```

```
#include <math.h>
```

```
#include "/usr/local/rsi/idl_6.0/external/include/idl_export.h"
```

```
float Scale;
```

```
IDL_INT braintest(int argc, char *argv[])
```

```
{
```

```
Scale = *(float *) argv[0];
```

```
Scale = pow(Scale, 5);
```

```
return(1);
```

```
}
```

and compiled with

```
gcc -c -fPIC braintest.c
ld -shared -o braintest.so braintest.o
```

IDL>.r braintest

IDL>braintest

gives me the error message:

```
% CALL_EXTERNAL: Error loading sharable executable.  
    Symbol: braintest, File =  
    /home/upadiga/work/IDLwork/braintest.so  
    /home/upadiga/work/IDLwork/braintest.so: cannot open  
shared  
    object file: No such file or directory  
% Execution halted at: BRAINTEST      4  
  /home/upadiga/work/IDLwork/braintest.pro  
%          $MAIN$
```

This is very similar to the earlier one.

The file "braintest.so" is there in "/home/upadiga/work/IDLwork/" directory.

I copied the shared library file "braintest.so" to
"/usr/local/rsi/idl_6.0/bin/bin.linux.x86/" and tried again. The error
message is the same. I then copied the "braintest.so" to
"/home/upadiga/.idl/idl_6_0_linux_x86_m32_f64/compile_dir/" and ran the
idl program again but the error message is same!!

Is there any problem in my compilation and loading commands. Do I have to
make some file to direct the dll (like I used make in IDL5.5 on
Windows2000).

Please let me know!

Thanks again,

umesh

If not, I am not sure where is the problem!?
