
Subject: DLMS & IRIX

Posted by [mallors](#) on Thu, 13 Apr 2000 07:00:00 GMT

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Hi all,

Does anyone have any experience using DLMS under IRIX 6.5? I have a DLM that works fine under Linux, but fails under IRIX. I then tried the IDL example called "testmodule" that comes with the distribution, and it fails with the same error under IRIX - the DLM cannot be loaded:

```
% cd test
% cp /usr/local/rsi/idl/external/dlm/* .
% vi Makefile <change IRIX to IRIX64>
% make
% idl
```

```
IDL> DLM_LOAD, 'testmodule'
% DLM_LOAD: Error loading sharable executable.
  Symbol: IDL_Load, File = /usr/people3/mallors/test/testmodule.so
  1291373:/usr/local/rsi/idl_5.2/bin/bin.sgi/idl: rld: Fatal Error:
  Cannot Successfully map soname
  '/usr/people3/mallors/test/testmodule.so' under any of the
  filenames /usr/people3/mallors/test/testmodule.so
% Execution halted at: $MAIN$
IDL> exit
%
% file /usr/people3/mallors/test/testmodule.so
/usr/people3/mallors/test/testmodule.so:
  ELF N32 MSB mips-4 dynamic lib MIPS - version 1
```

I did have to change the testmodule Makefile a little since it looks for the system called "IRIX", and uname on my system is "IRIX64". I tried setting the IDL_DLM_PATH environment variable as well (and even LD_LIBRARY_PATH), but no luck.

-bob

--
~~~~~

Robert S. Mallozzi

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Subject: Re: DLMs & IRIX

Posted by [mallors](#) on Fri, 14 Apr 2000 07:00:00 GMT

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In article <38F74A43.CD541F69@ion.le.ac.uk>,

Nigel Wade <nmw@ion.le.ac.uk> writes:

> "Robert S. Mallozzi" wrote:

>>

>> Hi all,

>>

>> Does anyone have any experience using DLMs under

>> IRIX 6.5? I have a DLM that works fine under Linux,

>> but fails under IRIX. I then tried the IDL example

>> called "testmodule" that comes with the distribution,

>> and it fails with the same error under IRIX - the

>> DLM cannot be loaded:

>> [ example cut ]

>

> It's most likely the SGI ABI problem.

>

> IDL used to be a o32 binary, so any external code had to be built

> using the -o32 compiler flag. I cannot remember which version

> was the first to become N32, 5.1 was o32 and 5.2.1 is n32, but I

> don't know what 5.2 is.

>

> You can check by the command :

> file /usr/local/rsi/idl\_5.2/bin/bin.sgi/idl

>

> If it is listed as ELF 32-bit MSB then you need to build the DLMs

> with the -o32 flag.

>

> All I had to change to build the testmodule DLM was to change the

> IRIX to IRIX64 in the Makefile. My default compiler options are

> abi=n32:isa=mips3:proc=r4k and this worked with IDL 5.2.1.

Thank you sir, that did it. IDL 5.2 is o32, so adding the -o32 flag to the compiler and linker did the trick.

-bob

--

```
~~~~~  
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 Mail Code SD 50
http://gammaray.msfc.nasa.gov/ Marshall Space Flight Center
http://cspar.uah.edu/~mallozzir/ Huntsville, AL 35812
~~~~~
```

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Subject: Re: DLMS & IRIX  
Posted by [Nigel Wade](#) on Fri, 14 Apr 2000 07:00:00 GMT  
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"Robert S. Mallozzi" wrote:

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Subject: Re: DLMs & IRIX  
Posted by [Nigel Wade](#) on Tue, 18 Apr 2000 07:00:00 GMT  
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>  
  
>  
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> Thank you sir, that did it. IDL 5.2 is o32, so adding the -o32  
> flag to the compiler and linker did the trick.  
>  
> -bob  
>

Glad to be of help.

Don't forget, though, that when you next upgrade IDL (even to 5.2.1) that all those DLMS, and any libraries they use, will have to be re-compiled as N32 objects.

Don't you just love working with sgi?

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Nigel Wade, System Administrator, Space Plasma Physics Group,  
University of Leicester, Leicester, LE1 7RH, UK

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