
Subject: Re: getpid in Mac Os X
Posted by [Michael Wallace](#) on Fri, 11 Jun 2004 15:36:36 GMT
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```
> IDL>pid=CALL_EXTERNAL('/usr/lib/libc.dylib','getpid')
> % CALL_EXTERNAL: Error loading sharable exectuble.
> Symbol: getpid, FILE=/usr/lib/libc.dylib
> not a Mach-O MH-BUNDLE file type
```

I am no OS X expert nor a CALL_EXTERNAL expert, but I nevertheless have a theory about what's happening. You might want to double-check this theory with RSI to make sure that I'm not way off base.

It seems that IDL is looking for a file with the MH_BUNDLE file type flag. MH_BUNDLE is typically used by code which is loaded at runtime. The file extension on such files is .bundle.

The /usr/lib/libc.dylib has MH_DYLIB as the file type flag. MH_DYLIB is meant for dynamic shared libraries. I'm not sure why IDL can't load this file at runtime as it can on Linux, but my guess is that the library is only "shared" in the linker sense of the term rather than the executable sense. Keep in mind this is just a guess -- I don't know enough of the internal workings of OS X libraries to say for sure.

Whatever the case, a better solution to the problem would be to create a little DLM as an interface into the libc library rather than trying to call commands out of the library directly. On OS X, you could create a bundle file which calls the getpid() function in libc. IDL shouldn't have a problem loading this bundle.

-Mike

Subject: Re: getpid in Mac OS X
Posted by [MKatz843](#) on Fri, 11 Jun 2004 21:56:11 GMT
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Here's a possible solution. It's more of a stopgap than anything elegant....

When you spawn, 'ps' you get output that looks like this

```
PID TT STAT    TIME COMMAND  486 std Ss    0:00.27 -csh
614 std S+     0:23.30 /Applications/idl_6.0/bin/bin.darwin.ppc/idl
734 std R+     0:00.05 tcsh -c ps
```

So we'll use that output to look for the corrent line, and identify the ID as 614 in this case

=== code snippet ===

```
pid = -1 ;--- default value means unknown PID

if (!version.os EQ 'darwin') then begin ;--- we're on a Mac
  spawn, 'ps', list ;--- this returns a long list of processes
  ;--- My IDL app lives in /Applications, so here I'm looking for
a
  ; line that has "/Applications" and "idl" in the line.
  ; If your IDL app lives somewhere else, change this to
something else
  ;--- Find which process might be the right one.
  w = where((strpos(list, 'Applications') GT 0) and (strpos(list,
'idl') GT 0), count)
  if (count GT 0) then $
    pid = long( (strsplit(list(w), ' ', /EXTRACT))(0) )
endif
=== end of code snippet ===
```

Miguel Angel Cordoba <cordoba_nospam@grahi.upc.es> wrote in message
news:<40C9B961.8000605@grahi.upc.es>...

```
> Hi,
> I want to get the process identification (pid) of my IDL. In
> Linux I get the pid calling:
>
> pid=CALL_EXTERNAL('/usr/lib/i686/libc.so.6','getpid')
>
> but this library doesn't exist in Mac Os X. I had probed with
> the '/usr/lib/libc.dylib' but didn't work. Any ideas?
>
> IDL>pid=CALL_EXTERNAL('/usr/lib/libc.dylib','getpid')
> % CALL_EXTERNAL: Error loading sharable exectuble.
> Symbol: getpid, FILE=/usr/lib/libc.dylib
> not a Mach-O MH-BUNDLE file type
>
> Thanks a lot.
>
> --
>
> _____
> Miguel Angel Cordoba
```

Subject: Re: getpid in Mac OS X

Posted by [Miguel Angel Cordoba](#) on Mon, 14 Jun 2004 13:07:15 GMT

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Thank you,
but this solution only works if only one IDL process is running. In my
case there are 4 processes and I need all the PID's.

Regards.

M. Katz wrote:

```
> Here's a possible solution. It's more of a stopgap than anything
> elegant....
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>   endif
> === end of code snippet ===
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> Miguel Angel Cordoba <cordoba_nospam@grahi.upc.es> wrote in message
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>
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>> Hi,
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```
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>> Thanks a lot.  
>>  
>> --  
>>  
>> _____  
>> Miguel Angel Cordoba  
>>  
>>  
  
--
```

Miguel Angel Cordoba <mailto:cordoba@grahi.upc.es>
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<http://www.cidem.com/xarxait>

Subject: Re: getpid in Mac Os X
Posted by [Miguel Angel Cordoba](#) on Mon, 14 Jun 2004 13:29:08 GMT
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Thank you Mike,
probably this is the problem. Probably I'll create a dlm with then calls to
the getpid() function.

Regards.

Michael Wallace wrote:

```
>> IDL>pid=CALL_EXTERNAL('/usr/lib/libc.dylib','getpid')  
>> % CALL_EXTERNAL: Error loading sharable exectuble.  
>> Symbol: getpid, FILE=/usr/lib/libc.dylib  
>> not a Mach-O MH-BUNDLE file type  
>  
>  
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> have a theory about what's happening. You might want to double-check  
> this theory with RSI to make sure that I'm not way off base.  
>
```

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> flag. MH_BUNDLE is typically used by code which is loaded at runtime.
> The file extension on such files is .bundle.
>
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> is meant for dynamic shared libraries. I'm not sure why IDL can't
> load this file at runtime as it can on Linux, but my guess is that the
> library is only "shared" in the linker sense of the term rather than
> the executable sense. Keep in mind this is just a guess -- I don't
> know enough of the internal workings of OS X libraries to say for sure.
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> Whatever the case, a better solution to the problem would be to create
> a little DLM as an interface into the libc library rather than trying
> to call commands out of the library directly. On OS X, you could
> create a bundle file which calls the getpid() function in libc. IDL
> shouldn't have a problem loading this bundle.
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> -Mike

--

Miguel Angel Cordoba

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Subject: Re: getpid in Mac OS X
Posted by [MKatz843](#) on Mon, 14 Jun 2004 19:43:45 GMT
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Miguel Angel Cordoba wrote:

> Thank you,
> but this solution only works if only one IDL process is running. In my
> case there are 4 processes and I need all the PID's.

OK, so all that takes is a few strokes of the pen...

The function below returns a list. Below the code snippet is an example run.

Note that this is Darwin (OS X) specific. It wouldn't take much to make it work on Linux.

-----code-----

```

function idl_pids
  pid = -1 ;--- default value appropriate for Mac, PC

  if (!version.os EQ 'darwin') then begin
    spawn, 'ps', list
    print, '-----'
    print, list
    print, '-----'
    w = where((strpos(list, 'Applications') GT 0) $
      and (strpos(list, 'idl') GT 0), count)
    if (count LT 1) then begin
      print, 'idl_pids error: no valid jobs'
      return, -1
    endif
    pid = lonarr(count)
    for i=0,count-1 do $
      pid(i) = long( (strsplit(list(w(i)), ' ', /EXTRACT))(0) )
    endif

  return, pid
end
----- end of code -----

```

```

IDL> print, idl_pids()
-----
  PID TT STAT   TIME COMMAND 11879 std  Ss   0:00.06 -csh
11898 std  S+   0:03.54 /Applications/idl_6.0/bin/bin.darwin.ppc/idl
11947 std  S+   0:00.02 tcsh -c ps 11885 p2  Ss   0:00.06 -csh
11901 p2  S+   0:03.36 /Applications/idl_6.0/bin/bin.darwin.ppc/idl
11891 p3  Ss   0:00.07 -csh
11894 p3  S+   0:03.75 /Applications/idl_6.0/bin/bin.darwin.ppc/idl
-----
    11898    11901    11894

```

Get rid of the print statements if you like.
M. Katz

Subject: Re: getpid in Mac OS X
 Posted by [Miguel Angel Cordoba](#) on Tue, 15 Jun 2004 09:22:44 GMT
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Thank you,
 but the problem is that I need the PID off the process. If I execute three
 processes all off them needs his PID and with 'ps' list I think that
 it's not possible.
 With the 'ps' method I can find the three PID's but I can't know who is his
 owner.

With the "call_external" method in all the programs I execute this to get the PID off the process.

SOLARIS:

```
my_pid=CALL_EXTERNAL('/lib/sparcv9/libc.so','getpid')
```

LINUX

```
my_pdi=CALL_EXTERNAL('/lib/i686/libc.so.6','getpid')
```

then the problem in Mac Os X is the error:

```
IDL>pid=CALL_EXTERNAL('/usr/lib/libc.dylib','getpid')
% CALL_EXTERNAL: Error loading sharable exectuble.
Symbol: getpid, FILE=/usr/lib/libc.dylib
not a Mach-O MH-BUNDLE file type
```

Any ideas?. Thank you.

M. Katz wrote:

> Miguel Angel Cordoba wrote:

>

>

>> Thank you,

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>>

>>

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> OK, so all that takes is a few strokes of the pen...

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> -----code-----

> function idl_pids

> pid = -1 ;--- default value appropriate for Mac, PC

>

> if (!version.os EQ 'darwin') then begin

> spawn, 'ps', list

> print, '-----'

> print, list

> print, '-----'

> w = where((strpos(list, 'Applications') GT 0) \$

> and (strpos(list, 'idl') GT 0), count)

> if (count LT 1) then begin

```

> print, 'idl_pids error: no valid jobs'
> return, -1
> endif
> pid = lonarr(count)
> for i=0,count-1 do $
>   pid(i) = long( (strsplit(list(w(i)), ' ', /EXTRACT))(0) )
> endif
>
> return, pid
> end
> ----- end of code -----
>
> IDL> print, idl_pids()
> -----
> PID TT STAT TIME COMMAND 11879 std Ss 0:00.06 -csh
> 11898 std S+ 0:03.54 /Applications/idl_6.0/bin/bin.darwin.ppc/idl
> 11947 std S+ 0:00.02 tcsh -c ps 11885 p2 Ss 0:00.06 -csh
> 11901 p2 S+ 0:03.36 /Applications/idl_6.0/bin/bin.darwin.ppc/idl
> 11891 p3 Ss 0:00.07 -csh
> 11894 p3 S+ 0:03.75 /Applications/idl_6.0/bin/bin.darwin.ppc/idl
> -----
> 11898 11901 11894
>
> Get rid of the print statements if you like.
> M. Katz
>
>
--

```

Miguel Angel Cordoba

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