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Subject: Re: Need prog to give size of a structure in bytes  
Posted by [Michael Hartman](#) on Fri, 20 Nov 1998 08:00:00 GMT  
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Is there a reason why the N\_Tags routine with LENGTH keyword set would not give you what you are looking for?

Joe Means wrote:

> I need prog to give size of a structure in bytes, and I don't find one in the  
> IDL 5.1 distribution. Has anyone else written one?  
> Joe Means  
> --  
>  
> From:  
> Joseph E. Means, Assistant Professor     Forest Science Department  
> Internet: Means@fsl.orst.edu             Oregon State University  
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--  
Michael Hartman  
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Subject: Re: Need prog to give size of a structure in bytes  
Posted by [Brian Jackel](#) on Fri, 20 Nov 1998 08:00:00 GMT  
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Not an obvious place to look, but from the docs:

=====  
The N\_TAGS function returns the number of structure tags contained in a structure expression. It optionally returns the size, in bytes, of the structure.

...  
Keywords

#### LENGTH

Set this keyword to return the length of the structure, in bytes.

Note: The length of a structure is machine dependent. The length of a given structure will vary depending upon the host machine. IDL pads and aligns structures in a manner consistent with the host machine's C compiler.

=====

I'm not sure if this works recursively (ie. structures in structures). If not, and you need that, then drop me a line. I've got some old code that does the general case, but it's got some hardwired assumptions about how big certain variable type are. Probably safe....

Hope this helps.

Brian Jackel

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Subject: Re: Need prog to give size of a structure in bytes  
Posted by [Joe Means](#) on Fri, 20 Nov 1998 08:00:00 GMT  
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I like your idea, David, but the length= from help is not close to the size of the file when it is written out in binary.

IDL> help, /struct, headout

\*\* Structure SMALLFOOTHEADER, 7 tags, length=272:

```
VERSION      STRING  'smallfooheader1 '  
TOTSHOTCOUNT LONG      0  
DATUM        STRING  '83'  
DATATYPE     STRING  'utm'  
NUMFILES     INT      1  
SHOTCOUNTS  LONG     Array[20]  
FILENAMES    STRING  Array[20]
```

While the size of the file when written and closed is 1496 bytes. The filename strings are each 70 characters long. Any ideas on this?

--Joe

David Fanning wrote:

> Snip....

>

> Help, struct, /Structure, Output=structInfo

> stuffIWant = structInfo[0]

> lengthInBytes = Parselt(stuffIWant)

>

> I'll leave the Parselt routine as an exercise for the reader. ;-)

>

> Cheers,

>

> David

>

> P.S. RSI warns you that following the instructions above  
> may lead to heartache. I echo their comments.

---

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Subject: Re: Need prog to give size of a structure in bytes  
Posted by [davidf](#) on Fri, 20 Nov 1998 08:00:00 GMT  
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Joe Means (means@fsl.orst.edu) writes:

> I need prog to give size of a structure in bytes, and I don't find one in the  
> IDL 5.1 distribution. Has anyone else written one?

I haven't written one, but here is how I might do it.  
The "help" information contains the size of the structure  
in bytes. I might capture this help information and parse the  
information out of it. I'm not sure, however, if this is  
the \*actually\* size of the structure (taking into account  
byte boundaries, etc.) or just the number of bytes in the  
fields of the structure. Anyway, to get the info, I would  
do this:

```
Help, struct, /Structure, Output=structInfo  
stuffIWant = structInfo[0]  
lengthInBytes = Parselt(stuffIWant)
```

I'll leave the Parselt routine as an exercise for the reader. ;-)

Cheers,

David

P.S. RSI warns you that following the instructions above  
may lead to heartache. I echo their comments.

--

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>  
Toll-Free IDL Book Orders: 1-888-461-0155

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Subject: Re: Need prog to give size of a structure in bytes  
Posted by [R.Bauer](#) on Thu, 26 Nov 1998 08:00:00 GMT  
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Joe Means wrote:

> I need prog to give size of a structure in bytes, and I don't find one in the  
> IDL 5.1 distribution. Has anyone else written one?  
> Joe Means  
> --  
>

Dear Joee

I will describe the way to do it:

```
help, structure,/str ,output=o
print,o[0]
** Structure <1843940>, 123 tags, length=55400, refs=1:
print,(str_sep((str_sep(o[0], '<'))[1], '>'))[0]
1843940
```

The keyword output was added by version 5.1 I believe.

regards  
R.Bauer

>  
> From:  
> Joseph E. Means, Assistant Professor     Forest Science Department  
> Internet: Means@fsl.orst.edu             Oregon State University  
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