
Subject: Re: Structure of Structure
Posted by [thompson](#) on Fri, 20 Mar 1998 08:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

Stephan Oerder <Oerder@nv.et-inf.uni-siegen.de> writes:

> I have a problem :
> IDL/WAVE informs me that my big structure have too many tags !!!
> So I decided to to devide the big structure into two smaller ones...
> I try to create a structure of a structure :

```
> fr_1 = { STRUCT_1_NAME, $  
>           Test_1:bytarr(12), $  
>           Test_2:bytarr(12), $  
>           Test_3:bytarr(12) $  
>         }  
  
> fr_2 = { STRUCT_2_NAME, $  
>           Test_a:bytarr(12), $  
>           Test_b:bytarr(12), $  
>           Test_c:bytarr(12) $  
>         }  
  
> fr  = { STRUCT_NAME, $  
>         struct_var_2 : {STRUCT_1_NAME}, $  
>         struct_var_2 : {STRUCT_2_NAME}, $  
>       }
```

> This is not working !!!!
> How can I create a structure of a structure ???
> Stephan

Your problem is extremely simple. You have a couple of simple typos in the final command. (It happens to the best of us.) If you instead enter in

```
fr  = { STRUCT_NAME, $  
       struct_var_1 : {STRUCT_1_NAME}, $  
       struct_var_2 : {STRUCT_2_NAME} $  
     }
```

it should work fine.

Bill Thompson

Subject: Re: Structure of Structure
Posted by [Theo Brauers](#) on Fri, 20 Mar 1998 08:00:00 GMT

create_structure is a build-in function of IDL. It should work on all systems. As far as I remember there was a problem with structures of structures in IDL3.xx or IDL 4.xx but who cares? I am using IDL 5.0.3 on WinNT.

Theo

Stephan Oerder wrote:

```
>
> Thanks a lot !!!
> I tried it already on a PC-IDL-System !!!! 
> But we need it on a VAX-VMS-System !!!
> Do you (or somebody else) have the PRO-File of "Create_Struct(...)" ???
> Stephan
>
> Theo Brauers wrote:
>> You may try:
>>
>> m1 = create_struct('a', 0, 'b', bytarr(12))
>> m2 = create_struct(name='m2_str', 'a', 0, 'c', fltarr(12))
>> ; array of structures
>> m3 = replicate(m2, 3)
>>
>> m = create_struct('a1', m1)
>> m = create_struct(m, 'a2' , m2)
>> m = create_struct(m, 'a3' , m3)
>>
>> Best, Theo
>> -----
>> Dr. Theo Brauers
>> Institut fuer Atmosphaerische Chemie (ICG-3)
>> Forschungszentrum Juelich
>> 52425 JUELICH, Germany
>> Tel. +49-2461-61-6646 Fax. +49-2461-61-5346
```

--

Dr. Theo Brauers
Institut fuer Atmosphaerische Chemie (ICG-3)
Forschungszentrum Juelich
52425 JUELICH, Germany
Tel. +49-2461-61-6646 Fax. +49-2461-61-5346

Subject: Re: Re: Structure of Structure
Posted by [Stephan Oerder](#) on Fri, 20 Mar 1998 08:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

Thanks a lot !!!

I tried it already on a PC-IDL-System !!!!

But we need it on a VAX-VMS-System !!!

Do you (or somebody else) have the PRO-File of "Create_Struct(...)" ???

Stephan

Theo Brauers wrote:

> You may try:

>

> m1 = create_struct('a', 0, 'b', bytarr(12))

> m2 = create_struct(name='m2_str', 'a', 0, 'c', filtarr(12))

> ; array of structures

> m3 = replicate(m2, 3)

>

> m = create_struct('a1', m1)

> m = create_struct(m, 'a2' , m2)

> m = create_struct(m, 'a3' , m3)

>

> Best, Theo

> -----

> Dr. Theo Brauers

> Institut fuer Atmosphaerische Chemie (ICG-3)

> Forschungszentrum Juelich

> 52425 JUELICH, Germany

> Tel. +49-2461-61-6646 Fax. +49-2461-61-5346

Subject: Re: Structure of Structure

Posted by [Theo Brauers](#) on Fri, 20 Mar 1998 08:00:00 GMT

[View Forum Message](#) <> [Reply to Message](#)

You may try:

m1 = create_struct('a', 0, 'b', bytarr(12))

m2 = create_struct(name='m2_str', 'a', 0, 'c', filtarr(12))

; array of structures

m3 = replicate(m2, 3)

m = create_struct('a1', m1)

m = create_struct(m, 'a2' , m2)

m = create_struct(m, 'a3' , m3)

Best, Theo

Stephan Oerder wrote:

>

> I have a problem :

> IDL/WAVE informs me that my big structure have too many tags !!!

> So I decided to to devide the big structure into two smaller ones...
> I try to create a structure of a structure :
>
> fr_1 = { STRUCT_1_NAME, \$
> Test_1:bytarr(12), \$
> Test_2:bytarr(12), \$
> Test_3:bytarr(12) \$
> }
>
> fr_2 = { STRUCT_2_NAME, \$
> Test_a:bytarr(12), \$
> Test_b:bytarr(12), \$
> Test_c:bytarr(12) \$
> }
>
> fr = { STRUCT_NAME, \$
> struct_var_2 : {STRUCT_1_NAME}, \$
> struct_var_2 : {STRUCT_2_NAME}, \$
> }
>
> This is not working !!!!
> How can I create a structure of a structure ???
> Stephan

--

Dr. Theo Brauers
Institut fuer Atmosphaerische Chemie (ICG-3)
Forschungszentrum Juelich
52425 JUELICH, Germany
Tel. +49-2461-61-6646 Fax. +49-2461-61-5346

Subject: Re: Structure of Structure
Posted by [David Foster](#) on Mon, 23 Mar 1998 08:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

Stephan Oerder wrote:

>
> <snip of Bill's solution>
>
>> Bill Thompson
>
> Thanks 1000 * times !!!
>
> This was not the main problem !!!
> My problem is that under IDL 3.xx and IDL 4.xx
> IDL have a problem with Structure of Structure definitions.

> I tested your routine under IDL 3.xx and IDL 4.xx (PC, Vax-VMS) and it
> was not working .
> But under IDL 5.0 (Alpha) it works...
> -> let's update...
> Stephan

The problem may not be with the definition of a stucture within a structure, but may simply be that IDL prior to version 5.0 had a maximum number of structure tags allowed (don't know the number off the top of my head). Nesting the structures may not help as this was an internal limitation.

Dave

--

~~~~~  
David S. Foster      Univ. of California, San Diego  
Programmer/Analyst    Brain Image Analysis Laboratory  
foster@bial1.ucsd.edu   Department of Psychiatry  
(619) 622-5892      8950 Via La Jolla Drive, Suite 2240  
La Jolla, CA 92037  
~~~~~

Subject: Re: Structure of Structure

Posted by [Stephan Oerder](#) on Mon, 23 Mar 1998 08:00:00 GMT

[View Forum Message](#) <> [Reply to Message](#)

William Thompson wrote:

>
> Stephan Oerder <Oerder@nv.et-inf.uni-siegen.de> writes:
>
>> I have a problem :
>> IDL/WAVE informs me that my big structure have too many tags !!!
>> So I decided to to devide the big structure into two smaller ones...
>> I try to create a structure of a structure :
>
>> fr_1 = { STRUCT_1_NAME, \$
>> Test_1:bytarr(12), \$
>> Test_2:bytarr(12), \$
>> Test_3:bytarr(12) \$
>> }
>
>> fr_2 = { STRUCT_2_NAME, \$
>> Test_a:bytarr(12), \$
>> Test_b:bytarr(12), \$
>> Test_c:bytarr(12) \$
>> }

```
>
>> fr = { STRUCT_NAME, $
>>     struct_var_2 : {STRUCT_1_NAME}, $
>>     struct_var_2 : {STRUCT_2_NAME}, $
>>     }
>
>> This is not working !!!!  

>> How can I create a structure of a structure ???  

>> Stephan  

>  

> Your problem is extremely simple. You have a couple of simple typos in the  

> final command. (It happens to the best of us.) If you instead enter in  

>  

> fr = { STRUCT_NAME, $  

>     struct_var_1 : {STRUCT_1_NAME}, $  

>     struct_var_2 : {STRUCT_2_NAME} $  

>     }  

>  

> it should work fine.  

>  

> Bill Thompson
```

Thanks 1000 * times !!!

This was not the main problem !!!

My problem is that under IDL 3.xx and IDL 4.xx

IDL have a problem with Structure of Structure definitions.

I tested your routine under IDL 3.xx and IDL 4.xx (PC, Vax-VMS) and it
was not working .

But under IDL 5.0 (Alpha) it works...

-> let's update...

Stephan

Subject: Re: Structure of Structure

Posted by [Thomas A. McGlynn](#) on Tue, 24 Mar 1998 08:00:00 GMT

[View Forum Message](#) <> [Reply to Message](#)

Stephan Oerder wrote:

```
>
> Thanks a lot !!!
> I tried it already on a PC-IDL-System !!!!  

> But we need it on a VAX-VMS-System !!!  

> Do you (or somebody else) have the PRO-File of "Create_Struct(...)" ???  

> Stephan  

>
> Theo Brauers wrote:  

>> You may try:
```

```
>>
>> m1 = create_struct('a', 0, 'b', bytarr(12))
>> m2 = create_struct(name='m2_str', 'a', 0, 'c', fltarr(12))
>> ; array of structures
>> m3 = replicate(m2, 3)
>>
>> m = create_struct('a1', m1)
>> m = create_struct(m, 'a2' , m2)
>> m = create_struct(m, 'a3' , m3)
>>
>> Best, Theo
>> -----
>> Dr. Theo Brauers
>> Institut fuer Atmosphaerische Chemie (ICG-3)
>> Forschungszentrum Juelich
>> 52425 JUELICH, Germany
>> Tel. +49-2461-61-6646 Fax. +49-2461-61-5346
```

You might also want to look at a function I wrote a few years ago called MRD_STRUCT. It takes two string array arguments. The first gives the names of the structure columns and the second gives a prototype for what the column should look like.

E.g., A call would might look like:

```
names = ["name_for_col1", "name_for_col2",...]
vals = ["dblarr(10,10)", "0L", "intarr(3,2,4), ..."]

str = mrd_struct(names, vals)
```

with additional optional arguments to create an array of structures or to define the structure type. If you request a structure of more than 128 elements, then the routine automatically creates substructures, putting the first 64 elements in the top level structure, the next 64 in a structure as the 65th element and so forth. I believe this has run successfully on VAXes for versions of IDL > 3.6.

It's available in the IDL Astronomy library at:

http://idlastro.gsfc.nasa.gov/ftp/pro/structure/mrd_struct.pro

Good luck,

Tom McGlynn
tam@silk.gsfc.nasa.gov

Subject: Re: Structure of Structure
Posted by [alpha](#) on Wed, 25 Mar 1998 08:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

"Thomas A. McGlynn" <tam@silk.gsfc.nasa.gov> writes:

> Stephan Oerder wrote:
> with additional optional arguments to create an array of
> structures or to define the structure type. If you request a
> structure of more than 128 elements, then the routine automatically
> creates substructures, putting the first 64 elements in the
> top level structure, the next 64 in a structure as the 65th element
> and so forth. I believe this has run successfully on VAXes
> for versions of IDL > 3.6.

this is similar to my IDL 5.0 bug i found in idl 4.01 at 23.Dec. 96
which is known to RSI as an internal kernel-Bug of IDL!

i wrote a programm that hung the maschine:

pro fail

```
for te=1,105 do begin
  anzahl=te
  tname=strarr(anzahl)
  for i=0,anzahl-1 do tname(i)='TN_'+strcompress(string(i),/remove_all)

  ttyp=strarr(anzahl)
  ; zum ausuchen / try one of it
  ttyp(*)="String-test"
  ttyp(*)="fltarr(10)"
  ttyp(*)="dcomplexarr(102)"

  ziel=byte(0)
  estring='ziel={}
  for i=0,anzahl-1 do begin
    if i gt 0 then estring=estring+','
    estring=estring+tname(i)+':'+ttyp(i)
  endfor
  estring=estring+')'

  if execute(estring) then begin
    print,' Execute OK: ',te
  endif else begin
    goto,abbruch
  endelse
endfor
```

```
abbruch:  
print, ' Execute failed at ',te  
end
```

Even worse is the switching of the data-type every time!

Panther

> It's available in the IDL Astronomy library at:

> http://idlastro.gsfc.nasa.gov/ftp/pro/structure/mrd_struct.pro

> Good luck,

> Tom McGlynn
> tam@silk.gsfc.nasa.gov

--
Panther in the Jungle _...--``\--....__ _...,_ ``<._ ``-+'~=.
-BELIEVE AND DECEIVE- _.-' _.-"/'; ` ``(_` ``-+'~=.
http://www.ang-physik _.-' _.-'._ \ `(`^`)
.uni-kiel.de/~hendrik ((.-' (< _ ;_...__ ; ``
