
Subject: Re: Getting memory overflow on array concat; wh

Posted by [knipp](#) on Sat, 28 Jan 1995 13:35:24 GMT

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In article r43@umd5.umd.edu, bleau@umdsp.umd.edu writes:

> Hello. I'm a fairly new user of IDL; so is a user of mine, on whose behalf I
> am posting this message. We are using IDL V2.0 on OpenVMS VAX.
>
> The task is to read in a set of numbers from a disk file into a 2-dimensional
> array. The disk file has 3 numbers per line, about 4000 lines. I include at
> the end of this post the IDL code which does the read. Problem is, the code
> never finishes; IDL runs out of memory beforehand. I increased the user's max
> memory allotment, and the program went a little further before running out of
> memory. Back-of-envelope calculations showed the user needs about 48Kb to hold
> this data, of 93 pages (512 bytes/page). IDL itself uses ~6000 pages. I gave
> her account an upper limit of 25000 pages; enough room for IDL and a 810666x3
> array! What is going on???

>

> I suspect the array concatenation operator is the culprit, but I can't say why.

> Here's the relevant code fragment, which is within a loop:

```
> READF, 1, temp  
> IF first THEN BEGIN  
>   data = temp  
>   first = "  
> ENDIF ELSE BEGIN  
>   data = [data,temp]  
> ENDELSE
```

> Both data and temp have been previously declared FLTARR(1,parameters), where
> parameters is 3. The help command, when given after the crash, shows DATA as
> being something like (3100,3), and only 2% of the symbol space used.

>

> As I said, this doesn't make sense. My hunch is there's a side effect of array
> concatenation that eating up memory, never releasing it. Has anyone has
> experience with this type of programming bug and how to fix it?

>

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>

... (stuff deleted)

>

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Your idea about "eating up memory, never releasing it" is to my understanding correct. You may overcome your problem by

- define array DAT=FLTARR(1,n_lines)
- read in using a FOR - loop:
FOR i=0, n_lines-1I do
 READF, unit, tmp
 DAT(*,i) = tmp
ENDFOR

- if you do not know the number of lines in your data-file, and want IDL to get that number

- open the file
- get the filesize via FSTAT
- define BFILE = bytarr(file-size)
- readu, unit, bytarr
- count number of linefeeds (pos = where(BFILE eq 10b))
n_lines = n_elements(pos) (if pos(0) ne -1)
- close file
- set BFILE=0 (relesing memory !!)
- define your data-array

Hop this helps

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