
Subject: question about 'Unable to allocate memory: to make array error' message
(and I think there is enough memory)

Posted by [JP](#) on Fri, 03 Oct 2014 01:54:22 GMT

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Guys, I'm trying to run a process in which I fall into a 'unable to allocate memory' issue, but I think I have enough memory and for some reason IDL doesn't know it.

I run my process and request 60GB of RAM.

I create first a `fltarr(16000000,19,6)`
if my numbers are right that's ~6.8 GB of memory

I then try to create another `fltarr` of `(16000000,19,19)`
again, if my numbers are correct, that is ~21.5 GB, total of ~28GB. When I try to do that IDL sends a "% Unable to allocate memory: to make array." error.
Below my code and the output from the process.

Any ideas?

Thanks

JP

```
pro test_memory_raijin
  compile_opt idl2
  nan= !Values.F_NAN
```

```
; first make an array like the one is causing trouble
print, 'at the very beginning:' & help, /memory
```

```
x= fltarr(4000!*4000, 19, 6)
print, 'after creating x:' & help, /memory
```

```
; now create another large array
sizeX = size(X)
y= fltarr(sizeX[1], sizeX[2], sizeX[2]) & y[*]=NaN
print, 'after creating y:' & help, /memory
```

```
; get rid of y
undefine, y & help, /memory
```

```
; now call medoid_2d
y= medoid_2d(x)
print, 'at the end:' & help, /memory
```

```
end
```

OUTPUT:

IDL Version 8.2.1 (linux x86_64 m64). (c) 2012, Exelis Visual Information Solutions, Inc.
Installation number: 237570.
Licensed for use by: ANU Supercomputer Facility

```
% Compiled module: TEST_MEMORY_RAIJIN.  
at the very beginning:  
heap memory used: 1181784, max: 9585806, gets: 734, frees: 292  
after creating x:  
heap memory used: 7297181928, max: 7297181928, gets: 735, frees: 292  
% Unable to allocate memory: to make array.  
Cannot allocate memory  
% Execution halted at: TEST_MEMORY_RAIJIN 13  
/home/599/jpg599/IDL_Scripts/raijin/test_memory_raijin.pro  
% $MAIN$
```

```
=====  
=====  
Resource Usage on 2014-10-03 11:40:53.507223:  
JobId: 7068191.r-man2  
Project: k88  
Exit Status: 0 (Linux Signal 0)  
Service Units: 0.08  
NCPUs Requested: 16 NCPUs Used: 16  
CPU Time Used: 00:00:18  
Memory Requested: 60gb Memory Used: 16gb  
Vmem Used: 30gb  
Walltime requested: 00:10:00 Walltime Used: 00:00:19  
jobfs request: 100mb jobfs used: 1mb  
=====  
=====
```