
Subject: Re: How to make large array

Posted by [renjie](#) on Wed, 28 Mar 2001 18:09:50 GMT

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

```
<!doctype html public "-//w3c//dtd html 4.0 transitional//en">
```

```
<html>
```

The results below are obtained in WIN98, in WIN2000 I can make single array of 512MB, can someone explain it.

<p>renjie wrote:

```
<blockquote TYPE=CITE>&nbsp;
```

```
<blockquote TYPE=CITE>
```

```
<pre></pre>
```

```
</blockquote>
```

<p>
Below are my tests, though the heap memory can be increased till the maximum of RAM+VM (my machine is 512MB+2GB), the

maximum size for a single arrary can not be larger than 256MB, I really need to make array around 1GB, if anybody can config out

what is wrong with my system. Thanks.

```
<blockquote TYPE=CITE>
```

```
<pre>IDL> b=bytarr(1024,1024,255)
```

```
IDL> help, /mem
```

heap memory used:&nbs; 267652748, max:&nbs; 535039712,

gets:&nbs;&nbs;&nbs;&nbs; 395, frees:&nbs;&nbs;&nbs;&nbs; 148

```
IDL> b=bytarr(1024,1024,256)
```

% Unable to allocate memory: to make array.

% Execution halted at:&nbs; \$MAIN\$&nbs;&nbs;&nbs;&nbs;&nbs;&

;&nbs;&nbs;&nbs;&nbs;&nbs;& ;&nbs;&nbs;&nbs;&nbs;&nbs; IDL> help, /mem

```
IDL> help, /mem
```

heap memory used:&nbs; 267652748, max:&nbs; 267652776,

gets:&nbs;&nbs;&nbs;&nbs; 398, frees:&nbs;&nbs;&nbs;&nbs; 151

```
IDL> c=bytarr(1024,1024,255)
```

```
IDL> help, /mem
```

heap memory used:&nbs; 535039699, max:&nbs; 535039727,

gets:&nbs;&nbs;&nbs;&nbs; 402, frees:&nbs;&nbs;&nbs;&nbs; 154

```
IDL> d=bytarr(1024,1024,255)
```

% Unable to allocate memory: to make array.

% Execution halted at:&nbs; \$MAIN\$&nbs;&nbs;&nbs;&nbs;&nbs;&

;&nbs;&nbs;&nbs;&nbs;&nbs;& ;&nbs;&nbs;&nbs;&nbs;&nbs; IDL> help, /mem

```
IDL> help, /mem
```

heap memory used:&nbs; 535039699, max:&nbs; 535039727,

gets:&nbs;&nbs;&nbs;&nbs; 405, frees:&nbs;&nbs;&nbs;&nbs; 157

```
IDL> d=bytarr(1024,1024,125)
```

```
IDL> help, /mem
```

heap memory used:&nbs; 666111805, max:&nbs; 666111833,

gets:&nbs;&nbs;&nbs;&nbs; 409, frees:&nbs;&nbs;&nbs;&nbs; 160</pre>

```
</blockquote>
```

Alex Schuster wrote:

<blockquote TYPE=CITE>renjie wrote:

<p>> I tried to make large array, however, in Windows,

> the largest I can made is 256MB, and in Unix is 1 GB,

> it's supposed that the limitation is 2GB, do you have any

> idea about the largest array in IDL?

<p>We have encountered a problem with IDL and NT, where IDL is only able to

allocate 800 MB of memory in one step, even if it can allocate more

memory afterwards. But 256 MB is much too low, presuming there is enough

physical+virtual memory.

<p>In Unix, I can allocate more than 1 GB:

<p>>> idl

IDL Version 5.2.1 (sunos sparc). (c) 1999, Research Systems, Inc.

Installation number: 80864-0.

Licensed for use by: MPI Forschung
<p>IDL>&nbs; b=bytarr(1024,1024,1200)

IDL> help, /mem

heap memory used: 1258497902, max: 1258497930,
gets:&nbs;&nbs;&nbs;&nbs;&nbs;
227,

 frees:&nbs;&nbs;&nbs;&nbs;&nbs;& ;nbs; 89
<p>The limit command tells you about the datasize you are allowed to

allocate, maybe this is set too low for you. And maybe there's a similar

setting for Windows?
<p> &nbs;&nbs;&nbs;&nbs;&nbs;&nbs; Alex

&nbs; Alex Schuster&nbs;&nbs;&nbs;&nbs;&nbs; Wonko@weird.cologne.de
&nbs;&nbs;&nbs;&nbs;&nbs; &nbs;&nbs;&nbs;
PGP Key available

 &nbs;&nbs;&nbs;&nbs;&nbs;&nbs; &nbs;&nbs;&nbs;&nbs;&nbs;
&nbs;&nbs;&nbs;&nbs;&nbs; &nbs;&nbs;
alex@pet.mpin-koeln.mpg.de</blockquote>
</blockquote>
</html>