Subject: Re: Array Subscripting Memory Usage (watch out!) Posted by Andre Kyme on Wed, 02 Oct 2002 23:23:21 GMT

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Dick Jackson wrote:

```
> Hi all,
```

>

- > This may be old news to some of you, but it surprised me and a couple of
- > colleagues, and I couldn't find any discussion of it on this group, so
- > I'll share it around.

>

- > I was surprised to find how much memory is used during access to a
- > subset of an array. I ran this, which makes a 1000x1000 array, and
- > accesses a subset of it using an array of subscripts:

>

- > a = bindgen(1000, 1000)
- > subscripts = Long(RandomU(seed, 500)*1000)
- > baseMem = (memory())[0]
- > help, a[subscripts, *]
- > highWaterMem = (memory())[3]
- > Print, 'Memory used during access: ', highWaterMem-baseMem

>

- > IDL> .GO
- > <Expression> BYTE = Array[500, 1000]
- > Memory used during access: 2500076

>

- > The array being extracted is 0.5 million bytes, but it took 2.5 million
- > bytes to do it! I'm guessing that there's a Long array being made behind
- > the scenes that contains the indices of the elements I'm going to get
- > back.

Dick, I ran your little program on IDL5.5 (Solaris 9) and got the following output:

<Expression> BYTE = Array[500, 1000] Memory used during access: 4500128

Yikes, I get 9N bytes needed to extract an N byte array!

Andre

Subject: Re: Array Subscripting Memory Usage (watch out!) Posted by R.Bauer on Thu, 03 Oct 2002 10:40:44 GMT

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Andre Kyme wrote:

```
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>> IDL> .GO
>> <Expression> BYTE
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>> Memory used during access:
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>
 <Expression> BYTE
                           = Array[500, 1000]
  Memory used during access:
                                  4500128
>
  Yikes, I get 9N bytes needed to extract an N byte array!
> Andre
Dear Andre
did you have set LONG by compile option to 64bit Long?
Reimar
Forschungszentrum Juelich
```

email: R.Bauer@fz-juelich.de

http://www.fz-juelich.de/icg/icg-i/	http:/	//www.f	z-iue	lich.d	le/ica/	/ica-i/
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a IDL library at ForschungsZentrum Juelich http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_lib_intro. html