
Subject: IDL array subscripting issue
Posted by [David B](#) on Thu, 12 Feb 2015 17:22:08 GMT
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Now this is probably a simple and quick problem for someone with experience. I think I may have missed the point or fallen victim to a problem with an obvious solution.

=====

```
IDL> a = INDGEN(10)
IDL> b = [0,10]
IDL> print, a[b]
    0    9
IDL> b = [0,9]
IDL> print, a[b]
    0    9
```

=====

Why?!

David B

Subject: Re: IDL array subscripting issue
Posted by [David B](#) on Thu, 12 Feb 2015 17:23:38 GMT
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By the way as an extension:

```
IDL> print, a[10]
% Attempt to subscript A with <INT    (    10)> is out of range.
% Execution halted at: CLOUDWALKER    556
```

Subject: Re: IDL array subscripting issue
Posted by [Fabzi](#) on Thu, 12 Feb 2015 17:29:45 GMT
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On 12.02.2015 18:22, David B wrote:

```
> =====
>
> IDL> a = INDGEN(10)
> IDL> b = [0,10]
> IDL> print, a[b]
>    0    9
> IDL> b = [0,9]
> IDL> print, a[b]
>    0    9
```

>
> =====
> Why?!

This is a strange but documented feature of IDL:

http://www.exelisvis.de/docs/Using_Arrays_as_Array_Su.html

See "Array Subscripts and Clipping".

Depending on what you want, this is a feature of a bug. I learned to like it as a feature, personally.

Cheers,

Fabien

Subject: Re: IDL array subscripting issue
Posted by [David Fanning](#) on Thu, 12 Feb 2015 18:05:21 GMT
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David B writes:

>
> Now this is probably a simple and quick problem for someone with experience. I think I may have missed the point or fallen victim to a problem with an obvious solution.
> =====
>
> IDL> a = INDGEN(10)
> IDL> b = [0,10]
> IDL> print, a[b]
> 0 9
> IDL> b = [0,9]
> IDL> print, a[b]
> 0 9
>
> =====
> Why?!

Here is an explanation:

http://www.idlcoyote.com/code_tips/oobindices.html

This can be a particularly pernicious "bug" to track down in your code. Personally, I've lost a lot of hair over this one. :-(

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>

Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: IDL array subscripting issue

Posted by [Paul Van Delst\[1\]](#) on Thu, 12 Feb 2015 18:26:16 GMT

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On 02/12/15 12:29, Fabien wrote:

> On 12.02.2015 18:22, David B wrote:

>> =====

>>

>> IDL> a = INDGEN(10)

>> IDL> b = [0,10]

>> IDL> print, a[b]

>> 0 9

>> IDL> b = [0,9]

>> IDL> print, a[b]

>> 0 9

>>

>> =====

>> Why?!

>

> This is a strange but documented feature of IDL:

>

> http://www.exelisvis.de/docs/Using_Arrays_as_Array_Su.html

>

> See "Array Subscripts and Clipping".

>

> Depending on what you want, this is a feature of a bug. I learned to

> like it as a feature, personally.

I really like the use of negative indices to reference from the end of the array. The above url has the following "note" in the section about clipping:

<quote>

Note: Because of the confusion between the clipping of array subscripts and the use of negative indices (see the next section), it is best to avoid using code that relies on this clipping behavior.

</quote>

Just sayin'. Not judging.

cheers,

paulv

Subject: Re: IDL array subscripting issue
Posted by [Fabzi](#) on Thu, 12 Feb 2015 18:36:10 GMT
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On 12.02.2015 19:26, Paul van Delst wrote:

>
> I really like the use of negative indices to reference from the end of
> the array. The above url has the following "note" in the section about
> clipping:
>
> <quote>
> Note: Because of the confusion between the clipping of array subscripts
> and the use of negative indices (see the next section), it is best to
> avoid using code that relies on this clipping behavior.
> </quote>
>
> Just sayin'. Not judging.

Haha, I knew this one would come, and I agree

I mean that I like the fact that `array[[-1,2,3,-1]]` is not throwing an error, even before negative indices were added to IDL.

say that you're code relies on following:

```
inds = [-1,2,3,-1]
out = arr[inds]
p = where(inds lt 0, cnt)
if cnt ne 0 then out[p] = !VALUES.F_NAN
```

How would write the snippet above with
STRICTARRSUBS compile_opt?

Subject: Re: IDL array subscripting issue
Posted by [David B](#) on Fri, 13 Feb 2015 09:32:57 GMT
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Thanks all!

The can cause issue say when you concatenate new elements onto your array upon which the

index is subscripting, as then your array reference becomes incorrect. I have just handled the case on its own and shifted the array value down to its proper value so:

```
index[WHERE(index EQ n_elements(array))]
```

David
