Subject: Changing variable type
Posted by on Mon, 16 May 2016 10:43:52 GMT
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Is there a way in IDL to change the type of an array, specifically a 16-bit integer into a 16 bit unsigned integer?

No, I do not mean b = uint(a). This makes a new array and keeps the values. I want to change the variable type of the existing array (from 2 to 12), so the bit values are interpreted differently. Is this possible?

/Mats

Subject: Re: Changing variable type
Posted by Helder Marchetto on Mon, 16 May 2016 11:31:43 GMT
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On Monday, May 16, 2016 at 11:43:54 AM UTC+1, Mats Löfdahl wrote:
> Is there a way in IDL to change the type of an array, specifically a 16-bit integer into a 16 bit unsigned integer?
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Hi Mats,
I think you're looking for the offset keyword in the uint function, but I'm not 100% sure (because this also makes a copy of the variable... there is no /temporary keyword)

```
IDL> a = -1
IDL> help, a
A               INT       =       -1
IDL> print, uint(a,0)
   65535
```

Would this do what you want?

Cheers,
Helder

Subject: Re: Changing variable type
Posted by Helder Marchetto on Mon, 16 May 2016 11:34:51 GMT
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On Monday, May 16, 2016 at 12:31:45 PM UTC+1, Helder wrote:
> On Monday, May 16, 2016 at 11:43:54 AM UTC+1, Mats Löfdahl wrote:
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Sorry, you wanted an array, so you have to do this:

```
IDL> a = indgen(20)
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IDL> a
      0       1       2       3       4       5       6       7       8       9       0      -1      -2      -3      -4      -5      -6
     -7      -8      -9
IDL> print, uint(a,0,20)
      0       1       2       3       4       5       6       7       8       9       0   65535   65534   65533   65532
  65531   65530   65529   65528   65527
```

Does it make sense?

Cheers,
Helder

Subject: Re: Changing variable type
Posted by on Mon, 16 May 2016 12:19:51 GMT
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Den måndag 16 maj 2016 kl. 13:34:52 UTC+2 skrev Helder:
> On Monday, May 16, 2016 at 12:31:45 PM UTC+1, Helder wrote:

>> On Monday, May 16, 2016 at 11:43:54 AM UTC+1, Mats Löfdahl wrote:
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I'd like to avoid making new variables if possible.

I guess I was thinking that IDL variables in reality were some sort of objects, and there would be methods that just change the type property. Or something like that.

Subject: Re: Changing variable type

On Monday, May 16, 2016 at 1:19:53 PM UTC+1, Mats Löfdahl wrote:
> Den måndag 16 maj 2016 kl. 13:34:52 UTC+2 skrev Helder:
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Well, there's the idl_variable method convert:
a.convert(type=12)
but it also creates a new variable.

I don't see another way around unless you use some DLL trick to modify the variable internally. But maybe some IDL gurus know more about this stuff... I never ventured beyond using the offset options.

Cheers,
Helder

Subject: Re: Changing variable type
Posted by on Mon, 16 May 2016 12:51:14 GMT
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Den måndag 16 maj 2016 kl. 14:37:24 UTC+2 skrev Helder:
> On Monday, May 16, 2016 at 1:19:53 PM UTC+1, Mats Löfdahl wrote:
>> Den måndag 16 maj 2016 kl. 13:34:52 UTC+2 skrev Helder:
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Oh, that looks almost like what I envisioned! Thanks! Where can I read about these methods? I tried searching for "variable methods" in www.harrisgeospatial.com/docs but the hits don't look like they would lead to a list of such methods.

Anyway, I believe what would be needed is a procedure form of that method. So one could do

a.convert, type=12

(I tried it, doesn't work in IDL 8.5.1...)

Subject: Re: Changing variable type
Posted by on Mon, 16 May 2016 13:05:23 GMT
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Den måndag 16 maj 2016 kl. 14:51:18 UTC+2 skrev Mats Löfdahl:
> Where can I read about these methods? I tried searching for "variable methods" in www.harrisgeospatial.com/docs but the hits don't look like they would lead to a list of such

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Duh! Searching for idl_variable was the obvious answer to that...

Subject: Re: Changing variable type
Posted by Helder Marchetto on Mon, 16 May 2016 13:12:00 GMT
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On Monday, May 16, 2016 at 1:51:18 PM UTC+1, Mats Löfdahl wrote:
> Den måndag 16 maj 2016 kl. 14:37:24 UTC+2 skrev Helder:
>> On Monday, May 16, 2016 at 1:19:53 PM UTC+1, Mats Löfdahl wrote:
>>> Den måndag 16 maj 2016 kl. 13:34:52 UTC+2 skrev Helder:
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>
> Anyway, I believe what would be needed is a procedure form of that method. So one could do
>
> a.convert, type=12
>
> (I tried it, doesn't work in IDL 8.5.1...)

Hi,
I obviously tried the convert method as a procedure call, but didn't work :-)

Cheers,
Helder

Subject: Re: Changing variable type
Posted by lecacheux.alain on Mon, 16 May 2016 15:36:15 GMT
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Le lundi 16 mai 2016 12:43:54 UTC+2, Mats Löfdahl a écrit :
> Is there a way in IDL to change the type of an array, specifically a 16-bit integer into a 16 bit unsigned integer?
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>
> /Mats

Would not a = uint(a,0,Size(a, /DIM)) do what you want ("the bit values are interpreted differently") ?
alx.

Subject: Re: Changing variable type
Posted by on Mon, 16 May 2016 16:19:18 GMT
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Den måndag 16 maj 2016 kl. 17:36:18 UTC+2 skrev alx:
> Le lundi 16 mai 2016 12:43:54 UTC+2, Mats Löfdahl a écrit :
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Right, I was confused there. But the main thing was not having to create a new variable.

Subject: Re: Changing variable type
Posted by andrewcool777 on Sun, 29 May 2016 02:03:59 GMT
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On Tuesday, 17 May 2016 01:49:20 UTC+9:30, Mats Löfdahl wrote:
> Den måndag 16 maj 2016 kl. 17:36:18 UTC+2 skrev alx:
>> Le lundi 16 mai 2016 12:43:54 UTC+2, Mats Löfdahl a écrit :
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>> alx.
>
> Right, I was confused there. But the main thing was not having to create a new variable.

IDL> b=2
IDL> a=temporary(b)
IDL> help,a
A   INT   =   2
IDL> help,b
B   UNDEFINED = <Undefined>

Andrew

a=temporary(b)

Subject: Re: Changing variable type
Posted by 876.sabri on Sun, 06 Nov 2016 07:40:32 GMT
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On Monday, May 16, 2016 at 3:13:54 PM UTC+4:30, Mats Löfdahl wrote:
> Is there a way in IDL to change the type of an array, specifically a 16-bit integer into a 16 bit unsigned integer?
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Hi
I want to make a ps and plot with data.dbl format dataes from PLUTO code
  I typed
set_plot,'x'
filename='fig1.png'
display,x1=x1,x2=x2,vx2
write_png,filename,tvrd()
pload
pload,0,/silent
loadct,5,/silent
END
 run this and I have a png without any pictures
error: Display: image is not valid

Subject: Re: Changing variable type
Posted by 876.sabri on Mon, 07 Nov 2016 08:01:57 GMT
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On Sunday, November 6, 2016 at 11:10:34 AM UTC+3:30, 876....@gmail.com wrote:
> On Monday, May 16, 2016 at 3:13:54 PM UTC+4:30, Mats Löfdahl wrote:
>> Is there a way in IDL to change the type of an array, specifically a 16-bit integer into a 16 bit unsigned integer?
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