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:
>>> 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:
>>>> > 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
>>>>
>>>> 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
>>>
>>> Sorry, you wanted an array, so you have to do this:
>>> IDL> a = indgen(20)
>>> IDL> a[10:19] = -indgen(10)
>>> 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
>>

>> 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.
>
> 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

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...)
