Subject: Re: -32768
Posted by Dick Jackson on Sat, 22 Mar 2014 23:56:29 GMT
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fawltylanguage@gmail.com wrote, On 2014-03-22, 1:58pm:
> On Saturday, March 22, 2014 9:20:36 PM UTC+1, Dick Jackson wrote:
>> On Friday, March 21, 2014 11:02:08 AM UTC-7, Yngvar Larsen wrote:
>>> On Friday, 21 March 2014 00:44:17 UTC+1, Chris Torrence wrote:
>>>> On Thursday, March 20, 2014 3:30:49 PM UTC-6, Yngvar Larsen wrote:
>>
>>>> Jim P. is correct that the minus sign is really an operator. So it really is a runtime error to write "a = 32768s", regardless of whether you are then going to take the negative of it.
>>
>>> Fair enough. In that case, what is missing is a way to enter a literal negative number. "-376768" _is_ a valid 16-bit signed integer after all! Not really a problem, since negation of a single number hardly is a big performance hit... Also, the OPs problem hasn't hit me at all during the 15+ years I've been using IDL. And there are at least 3 simple (bit silly) workarounds, already mentioned in this thread.
>>
>> And for our further pedantry, if you really need to know which is most time efficient (at least on my MacBook, IDL 8.2):
>>
>> IDL> tic & for i=1,1e7 do a=FIX(-32768) & toc
>> % Time elapsed: 1.7954290 seconds.
>>
>> IDL> tic & for i=1,1e7 do a=FIX('8000'X) & toc ; Hex code depends on hardware "endian-ness"
>> % Time elapsed: 1.4319592 seconds.
>>
>> IDL> tic & for i=1,1e7 do a=not 32767S & toc
>> % Time elapsed: 1.1942451 seconds.
>>
>> IDL> tic & for i=1,1e7 do a=-32767S-1S & toc ; The winner!
>> % Time elapsed: 1.1435649 seconds.
>>
>> Notice how much longer this takes compared to a simple, positive literal:
>>
>> IDL> tic & for i=1,1e7 do a=32767S & toc
>> % Time elapsed: 0.39454412 seconds.
>
>
> I think the winner is: a='8000'XS
>
> regards,
> Lajos

Ooh, right you are! (I missed that one) Excellent, thank you.

Again, though, the hex code depends on hardware "endian-ness".

IDL> tic & for i=1,1e7 do a='8000'XS & toc
% Time elapsed: 0.38863897 seconds.

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Cheers,
-Dick

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