
Subject: Re: reading netcdf-4 ubyte datatype
Posted by [alison](#) on Fri, 28 Jan 2011 19:08:22 GMT
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David,
I don't see a way off-hand to attach a file to this post, so here is the content of a "test_read.cdl" file which can be used to create a netcdf4 file with "ncgen -k 3 test_read.cdl".

```
netcdf test_read {  
variables:  
  ubyte myvar;  
data:  
    myvar = 255;  
}
```

This creates a little netcdf4 file containing a single variable of type ubyte (unsigned byte) whose value is 255. Trying to read this file in IDL I get this:

```
IDL> ncid = ncd_f_open('test_read.nc')  
% Loaded DLM: NCDF.  
IDL> varid = ncd_f_varid(ncid,'myvar')  
IDL> ncd_f_varget, ncid, varid, x  
% NCDF_VARGET: File format error. Varid 0 has a unknown type  
% Execution halted at: $MAIN$  
IDL>
```

Conversely, if I try to create a netcdf4 file from within IDL and store an unsigned byte into it, there is not a "ubyte" option available to the ncd_f_vardef command, and if I use the "byte" option, like this:

```
x = 255b  
ncid = ncd_f_create('test_write.nc',/netcdf4_format,/clobber)  
varid = ncd_f_vardef(ncid,'myvar',/byte)  
ncd_f_varput, ncid, varid, x
```

Then, "ncdump test_write.nc" shows that the resulting netcdf4 file contains this:

```
netcdf test_write {  
variables:  
  byte myvar ;  
data:  
  
    myvar = -1 ;  
}
```

This is not the desired result, as the 255 has become -1. It seems that IDL just doesn't support unsigned bytes in netcdf. Can you verify this? or am I missing something here?
Alison

On Jan 28, 10:44 am, David Fanning <n...@dfanning.com> wrote:

> Alison writes:
>> I am using IDL 8.0 for Linux. I also notice that if I write an IDL
>> "byte" variable (which is unsigned) to a netcdf file, it is written as
>> a netcdf "byte" type (signed), when it should be "ubyte" (unsigned).
>> There doesn't appear to be any way to control the datatype which IDL
>> is automatically choosing when reading/writing from netcdf file. Is
>> there a way to represent my 8-bit unsigned data so that it is handled
>> properly in both IDL and netcdf-4?
>
> Do you have an example of such a file we can test with?
>
> Cheers,
>
> David
>
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming:<http://www.idlcoyote.com/>
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")
