
Subject: NetCDF4 problem

Posted by [DK](#) on Thu, 07 Apr 2016 13:52:27 GMT

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Hi,

I'm using IDL 7.1. How can I read the NetCDF4 files using this version of IDL?

Thanks!

Subject: Re: NetCDF4 problem

Posted by [Paul Van Delst\[1\]](#) on Thu, 07 Apr 2016 14:36:38 GMT

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On 04/07/16 09:52, deathknight wrote:

> Hi,

>

> I'm using IDL 7.1. How can I read the NetCDF4 files using this version of IDL?

NetCDF4 support wasn't added until v8.0 so the best (only?) way is to upgrade your IDL install.

Similarly, HDF5 support wasn't added until v8.3 (?) so that route is a no go.

I'm sure there are attempts that could be made, e.g. separately build the zlib/HDF5/netCDF4 libraries into DLLs[*] and then link it into IDL in some fashion. Insert picture of me wildly waving my arms about because I really have no idea how to do that in IDL...but I know others who read this newsgroup do. Whether or not any current advice will apply to an old IDL version is the kicker.

Simplest, and maybe even least expensive (in terms of time-\$\$), is an upgrade.

Not much help, I know.

cheers,

paulv

[*] FWIW, building the zlib/HDF5/netCDF4 libraries is ridiculously easy. The instructions at the UCAR netCDF website are simple to follow.

Subject: Re: NetCDF4 problem

Posted by [Michael Galloy](#) on Thu, 07 Apr 2016 17:03:25 GMT

On 4/7/16 8:36 am, Paul van Delst wrote:

> On 04/07/16 09:52, deathknight wrote:

>> Hi,

>>

>> I'm using IDL 7.1. How can I read the NetCDF4 files using this version
>> of IDL?

>

> NetCDF4 support wasn't added until v8.0 so the best (only?) way is to
> upgrade your IDL install.

I think that is correct.

> Similarly, HDF5 support wasn't added until v8.3 (?) so that route is a
> no go.

HDF5 support has been in IDL since 5.6:

http://harrisgeospatial.com/docs/H5_OPEN.html

I would read the NetCDF 4 file using the HDF 5 routines. If you want simpler routines than the low level interface, check out my HDF 5 routines:

<https://github.com/mgalloy/mglib/tree/master/src/hdf5>

The routine to use is MG_H5_GETDATA. You will need the files in that directory (plus at least objects/idl_object__define.pro to run on IDL 7.1).

Mike

--

Michael Galloy

www.michaelgalloy.com

Modern IDL: A Guide to IDL Programming (<http://modernidl.idldev.com>)

Subject: Re: NetCDF4 problem

Posted by [Paul Van Delst\[1\]](#) on Thu, 07 Apr 2016 17:45:30 GMT

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On 04/07/16 13:03, Michael Galloy wrote:

> On 4/7/16 8:36 am, Paul van Delst wrote:

>> On 04/07/16 09:52, deathknight wrote:

>>> Hi,

>>>

>>> I'm using IDL 7.1. How can I read the NetCDF4 files using this version
>>> of IDL?

>>

>> NetCDF4 support wasn't added until v8.0 so the best (only?) way is to
>> upgrade your IDL install.
>
> I think that is correct.
>
>> Similarly, HDF5 support wasn't added until v8.3 (?) so that route is a
>> no go.
>
> HDF5 support has been in IDL since 5.6:

Oops! I was going by the version of addition of the H5_LIST() procedure
in the documentation.

(I often use H5_PARSE() to read random netCDF4 files that I want to have
a look at and...checking the docs....yep, it was introduced in v5.6.
Embarrassed cough...)

Thanks for the correction.

> http://harrisgeospatial.com/docs/H5_OPEN.html
>
> I would read the NetCDF 4 file using the HDF 5 routines. If you want
> simpler routines than the low level interface, check out my HDF 5 routines:
>
> <https://github.com/mgalloy/mglib/tree/master/src/hdf5>
>
> The routine to use is MG_H5_GETDATA. You will need the files in that
> directory (plus at least objects/idl_object__define.pro to run on IDL 7.1).

Apologies to the OP for the incorrect info regarding HDF5 support in IDL
v7.1.

cheers,

paulv

Subject: Re: NetCDF4 problem
Posted by [DK](#) on Fri, 08 Apr 2016 12:32:21 GMT
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> On 04/07/16 09:52, deathknight wrote:
>> Hi,
>>
>> I'm using IDL 7.1. How can I read the NetCDF4 files using this version of IDL?
>
> NetCDF4 support wasn't added until v8.0 so the best (only?) way is to

> upgrade your IDL install.

That's what I think, too...hoping I was wrong.. Thank you for your explanation!

Subject: Re: NetCDF4 problem

Posted by [DK](#) on Fri, 08 Apr 2016 12:37:42 GMT

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> On 4/7/16 8:36 am, Paul van Delst wrote:

>> On 04/07/16 09:52, deathknight wrote:

>>> Hi,

>>>

>>> I'm using IDL 7.1. How can I read the NetCDF4 files using this version
>>> of IDL?

>>

>> NetCDF4 support wasn't added until v8.0 so the best (only?) way is to
>> upgrade your IDL install.

>

> I think that is correct.

>

>> Similarly, HDF5 support wasn't added until v8.3 (?) so that route is a
>> no go.

>

> HDF5 support has been in IDL since 5.6:

>

> http://harrisgeospatial.com/docs/H5_OPEN.html

>

> I would read the NetCDF 4 file using the HDF 5 routines. If you want
> simpler routines than the low level interface, check out my HDF 5 routines:

>

> <https://github.com/mgalloy/mglib/tree/master/src/hdf5>

>

> The routine to use is MG_H5_GETDATA. You will need the files in that
> directory (plus at least objects/idl_object__define.pro to run on IDL 7.1).

>

Could you please show me more about how to use these routines on IDL 7.1?

I added all the .pro files from your website into the /lib and run:

IDL> result=mg_h5_getdata('E:\netcdf4.nc')

and I got the error: MG_H5_GETDATA: no variable requested

Thank you very much!

Subject: Re: NetCDF4 problem

Posted by [Michael Galloy](#) on Fri, 08 Apr 2016 15:22:39 GMT

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On 4/8/16 6:37 AM, deathknight wrote:

```
>> On 4/7/16 8:36 am, Paul van Delst wrote:
>>> On 04/07/16 09:52, deathknight wrote:
>>>> Hi,
>>>>
>>>> I'm using IDL 7.1. How can I read the NetCDF4 files using this version
>>>> of IDL?
>>>
>>> NetCDF4 support wasn't added until v8.0 so the best (only?) way is to
>>> upgrade your IDL install.
>>
>> I think that is correct.
>>
>>> Similarly, HDF5 support wasn't added until v8.3 (?) so that route is a
>>> no go.
>>
>> HDF5 support has been in IDL since 5.6:
>>
>> http://harrisgeospatial.com/docs/H5\_OPEN.html
>>
>> I would read the NetCDF 4 file using the HDF 5 routines. If you want
>> simpler routines than the low level interface, check out my HDF 5 routines:
>>
>> https://github.com/mgalloy/mglib/tree/master/src/hdf5
>>
>> The routine to use is MG_H5_GETDATA. You will need the files in that
>> directory (plus at least objects/idl_object__define.pro to run on IDL 7.1).
>>
>
> Could you please show me more about how to use these routines on IDL 7.1?
> I added all the .pro files from your website into the /lib and run:
> IDL> result=mg_h5_getdata('E:\netcdf4.nc')
> and I got the error: MG_H5_GETDATA: no variable requested
>
> Thank you very much!
>
```

Yes, you have to specify the variable/attribute that you want:

```
IDL> var = mg_h5_getdata('E:\netcdf4.nc', 'group/myvar')
IDL> attr = mg_h5_getdata('E:\netcdf4.nc', 'group/myvar.attr')
```

Mike

--

Michael Galloy

Subject: Re: NetCDF4 problem

Posted by [Michael Galloy](#) on Fri, 08 Apr 2016 15:24:58 GMT

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On 4/7/16 11:45 AM, Paul van Delst wrote:

> On 04/07/16 13:03, Michael Galloy wrote:

>> On 4/7/16 8:36 am, Paul van Delst wrote:

>>> On 04/07/16 09:52, deathknight wrote:

>>>> Hi,

>>>>

>>>> I'm using IDL 7.1. How can I read the NetCDF4 files using this version
>>>> of IDL?

>>>

>>> NetCDF4 support wasn't added until v8.0 so the best (only?) way is to
>>> upgrade your IDL install.

>>

>> I think that is correct.

>>

>>> Similarly, HDF5 support wasn't added until v8.3 (?) so that route is a
>>> no go.

>>

>> HDF5 support has been in IDL since 5.6:

>

> Oops! I was going by the version of addition of the H5_LIST() procedure
> in the documentation.

In IDL 8.3, they added some top level routines like H5_LIST, H5_GETDATA,
and H5_PUTDATA, but the low-level routines (plus H5_BROWSER and
H5_PARSE) have been there for a long time.

Mike

--

Michael Galloy

www.michaelgalloy.com

Modern IDL: A Guide to IDL Programming (<http://modernidl.idldev.com>)

Subject: Re: NetCDF4 problem

Posted by [DK](#) on Sun, 10 Apr 2016 12:50:29 GMT

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> Yes, you have to specify the variable/attribute that you want:

>

```
> IDL> var = mg_h5_getdata('E:\netcdf4.nc', 'group/myvar')
> IDL> attr = mg_h5_getdata('E:\netcdf4.nc', 'group/myvar.attr')
>
```

Hi,

I tried, but still got error like this:

```
IDL> result=mg_h5_getdata('E:\netcdf4.nc', 'varname')
% H5F_OPEN: unable to open file: Object Name:"E:\netcdf4.nc"
% Error occurred at: MG_H5_GETDATA 446 D:\Program Files
(x86)\ITT\IDL71\lib\hdf5\mg_h5_getdata.pro
% $MAIN$
% Execution halted at: $MAIN$
```

Where did I go wrong?

Thank you very much!

Subject: Re: NetCDF4 problem
Posted by [Michael Galloy](#) on Mon, 11 Apr 2016 23:06:26 GMT
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On 4/10/16 6:50 AM, deathknight wrote:

```
>
>> Yes, you have to specify the variable/attribute that you want:
>>
>> IDL> var = mg_h5_getdata('E:\netcdf4.nc', 'group/myvar')
>> IDL> attr = mg_h5_getdata('E:\netcdf4.nc', 'group/myvar.attr')
>>
>
> Hi,
>
> I tried, but still got error like this:
>
> IDL> result=mg_h5_getdata('E:\netcdf4.nc', 'varname')
> % H5F_OPEN: unable to open file: Object Name:"E:\netcdf4.nc"
> % Error occurred at: MG_H5_GETDATA 446 D:\Program Files
(x86)\ITT\IDL71\lib\hdf5\mg_h5_getdata.pro
> % $MAIN$
> % Execution halted at: $MAIN$
>
> Where did I go wrong?
>
> Thank you very much!
>
```

Just to check, could you do:

```
IDL> filename = 'E:\netcdf4.nc'  
IDL> print, file_test(filename)  
IDL> file_id = h5f_open(filename)  
IDL> help, file_id
```

Mike

--

Michael Galloy

www.michaelgalloy.com

Modern IDL: A Guide to IDL Programming (<http://modernidl.idldev.com>)

Subject: Re: NetCDF4 problem

Posted by [DK](#) on Wed, 27 Apr 2016 03:00:55 GMT

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```
> Just to check, could you do:  
>  
> IDL> filename = 'E:\netcdf4.nc'  
> IDL> print, file_test(filename)  
> IDL> file_id = h5f_open(filename)  
> IDL> help, file_id  
>
```

Sorry for not getting back to you earlier. The results are as follows:

```
IDL> filename='E:\netcdf4.nc'  
IDL> print, file_test(filename)  
      1  
IDL> file_id=h5f_open(filename)  
% Loaded DLM: HDF5.  
% H5F_OPEN: unable to open file: Object Name:"E:\netcdf4.nc"  
% Execution halted at: $MAIN$  
IDL> help, file_id  
FILE_ID      UNDEFINED = <Undefined>
```

Is that the problem of my IDL version? Thanks!

Subject: Re: NetCDF4 problem

Posted by [Michael Galloy](#) on Thu, 28 Apr 2016 20:41:19 GMT

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On 4/26/16 9:00 PM, deathknight wrote:

>


```

>> Just to check, could you do:
>>
>> IDL> filename = 'E:\netcdf4.nc'
>> IDL> print, file_test(filename)
>> IDL> file_id = h5f_open(filename)
>> IDL> help, file_id
>>
>
> Sorry for not getting back to you earlier. The results are as follows:
>
> IDL> filename='E:\netcdf4.nc'
> IDL> print, file_test(filename)
>      1
> IDL> file_id=h5f_open(filename)
> % Loaded DLM: HDF5.
> % H5F_OPEN: unable to open file: Object Name:"E:\netcdf4.nc"
> % Execution halted at: $MAIN$
> IDL> help, file_id
> FILE_ID      UNDEFINED = <Undefined>
>
> Is that the problem of my IDL version? Thanks!
>

```

This indicates the file does exist (yeah!), but can't be opened by the HDF 5 library. Perhaps is a classic netCDF file? i.e., version < 4. Can you open it using the standard netCDF library?

```

IDL> filename = 'E:\netcdf4.nc'
IDL> file_id = ncdf_open(filename)
IDL> help, file_id

```

Mike

--

Michael Galloy

www.michaelgalloy.com

Modern IDL: A Guide to IDL Programming (<http://modernidl.idldev.com>)

Subject: Re: NetCDF4 problem

Posted by [DK](#) on Fri, 29 Apr 2016 06:40:59 GMT

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```

> This indicates the file does exist (yeah!), but can't be opened by the
> HDF 5 library. Perhaps is a classic netCDF file? i.e., version < 4. Can
> you open it using the standard netCDF library?
>
> IDL> filename = 'E:\netcdf4.nc'
> IDL> file_id = ncdf_open(filename)

```

```
> IDL> help, file_id
>
```

Hi Mike, the file I tried was download from the NECP website (<http://www.esrl.noaa.gov/psd/data/gridded/data.ncep.reanalys.is.html>) resently, and it said that "We have transitioned the data files from netCDF3 to netCDF4-classic format on Monday Oct 20th, 2014." on this webpage. So I am sure the file is not a classic netCDF3 file.

I also tried the old way and got the error "NC_ERROR=-51"

```
IDL> filename='E:\netcdf4.nc'
IDL> cdfid=ncdf_open(filename)
% Loaded DLM: NCDF.
% NCDF_OPEN: Unable to open the file "E:\netcdf4.nc". (NC_ERROR=-51)
% Execution halted at: $MAIN$
```

Really appreciate your kindly help and patience.

Subject: Re: NetCDF4 problem
Posted by [Haje Korth](#) on Fri, 29 Apr 2016 11:27:55 GMT
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Have you followed these instructions:
<http://www.harrisgeospatial.com/Support/HelpArticles/TabId/185/ArtMID/800/ArticleID/4352/4352.aspx>

On Friday, April 29, 2016 at 2:41:02 AM UTC-4, deathknight wrote:

```
>> This indicates the file does exist (yeah!), but can't be opened by the
>> HDF 5 library. Perhaps is a classic netCDF file? i.e., version < 4. Can
>> you open it using the standard netCDF library?
```

```
>>
>> IDL> filename = 'E:\netcdf4.nc'
>> IDL> file_id = ncdf_open(filename)
>> IDL> help, file_id
>>
>
```

> Hi Mike, the file I tried was download from the NECP website (<http://www.esrl.noaa.gov/psd/data/gridded/data.ncep.reanalys.is.html>) resently, and it said that "We have transitioned the data files from netCDF3 to netCDF4-classic format on Monday Oct 20th, 2014." on this webpage. So I am sure the file is not a classic netCDF3 file.

> I also tried the old way and got the error "NC_ERROR=-51"

```
>
> IDL> filename='E:\netcdf4.nc'
> IDL> cdfid=ncdf_open(filename)
> % Loaded DLM: NCDF.
> % NCDF_OPEN: Unable to open the file "E:\netcdf4.nc". (NC_ERROR=-51)
```

> % Execution halted at: \$MAIN\$
>
> Really appreciate your kindly help and patience.

Subject: Re: NetCDF4 problem
Posted by [DK](#) on Sun, 01 May 2016 14:23:34 GMT
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> Have you followed these instructions:
<http://www.harrisgeospatial.com/Support/HelpArticles/TabId/185/ArtMID/800/ArticleID/4352/4352.aspx>

Great tip! It seems that NC_ERROR=-51 means "not a NetCDF file" according to the instructions... Many thanks.
