Subject: Add a variable to existing NetCDF file
Posted by laura.hike on Fri, 09 Jan 2015 20:39:26 GMT
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I know this topic was discussed previously, but the only solution given was to use Dave Fanning's suite of NetCDF tools. Seems like there should be an easier answer.

I opened an existing NetCDF file using ncdf_open with the /write option. Then I set up all the information about a new variable (name, dimensions, etc.) I then tried to create the new variable in the NetCDF file using ncdf_vardef:

newid = ncdf_vardef(id, 'swgup', [timeid,latid,lonid], /float)

In response, I get the message

% NCDF_VARDEF: Unable to define variable, not in define mode.

However, the only way I can find to enter define mode in the Exelis documentation is to create a new file using ncdf_create. There must be another way. If not, why is there a /write option in ncdf_open in the first place? It seems silly to have to copy over the whole existing file just to add a variable. From what I can see, this would take hundreds of commands for my file.

Maybe this question is only for the IDL developers, if using Dave's tools will work. I just don't understand why this should be so difficult.

Laura H.

Subject: Re: Add a variable to existing NetCDF file
Posted by David Fanning on Fri, 09 Jan 2015 20:50:07 GMT
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laura.hike@gmail.com writes:

> I know this topic was discussed previously, but the only solution given was to use Dave Fanning's suite of NetCDF tools. Seems like there should be an easier answer.

Easier than what?

Cheers,

David
--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: Add a variable to existing NetCDF file
Posted by laura.hike on Fri, 09 Jan 2015 21:09:58 GMT

Ha, ha! :^) Something that can be done simply using basic IDL commands instead of having to download a whole library. It looks like all that's missing from the existing commands is a way to enter define mode. All the other commands you need are there.

L.

On Friday, January 9, 2015 at 12:50:06 PM UTC-8, David Fanning wrote:
> laura.hike@gmail.com writes:
>
>> I know this topic was discussed previously, but the only solution given was to use Dave Fanning's suite of NetCDF tools. Seems like there should be an easier answer.
>
> Easier than what?
>
> Cheers,
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> David
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> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
> Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: Add a variable to existing NetCDF file
Posted by Lajos Foldy on Fri, 09 Jan 2015 21:32:45 GMT

On Friday, January 9, 2015 at 10:10:00 PM UTC+1, laura...@gmail.com wrote:
> Ha, ha! :^) Something that can be done simply using basic IDL commands instead of having to download a whole library. It looks like all that's missing from the existing commands is a way to enter define mode. All the other commands you need are there.

NCDF_CONTROL, id, /redef

regards,
Lajos

Subject: Re: Add a variable to existing NetCDF file
Posted by David Fanning on Fri, 09 Jan 2015 21:36:47 GMT

laura.hike@gmail.com writes:

> Ha, ha! :^) Something that can be done simply using basic IDL commands instead of having to download a whole library. It looks like all that's missing from the existing commands is a way to enter define mode. All the other commands you need are there.

Maybe you are looking for this:

  NCDF_Control, fileID, /REDEF ; Put open file in DEFINE mode.

Cheers,

David
--
David Fanning, Ph.D.
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Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: Add a variable to existing NetCDF file
Posted by laura.hike on Fri, 09 Jan 2015 22:14:09 GMT
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Oh, cool! Hidden in the generic NetCDF command, I see. All I want to do is add one variable to a file....

On Friday, January 9, 2015 at 1:36:47 PM UTC-8, David Fanning wrote:
> laura.hike@gmail.com writes:
>
>> Ha, ha! :^) Something that can be done simply using basic IDL commands instead of having to download a whole library. It looks like all that's missing from the existing commands is a way to enter define mode. All the other commands you need are there.
>
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>
>   NCDF_Control, fileID, /REDEF ; Put open file in DEFINE mode.
>
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> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
> Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: Add a variable to existing NetCDF file
Posted by David Fanning on Fri, 09 Jan 2015 22:29:53 GMT

laura.hike@gmail.com writes:

> Oh, cool! Hidden in the generic NetCDF command, I see. All I want to do is add one variable to a file....

Because this seems like an awfully easy and common thing to do, I've added an example of how to add a new variable to an already existing netCDF file in the file ncdf_file_examples.pro. You can find the new version of the file here:

  http://www.idlcoyote.com/programs/ncdf_file_examples.pro

Cheers,

David

--
David Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: Add a variable to existing NetCDF file
Posted by laura.hike on Fri, 09 Jan 2015 22:34:49 GMT

But it still won't work. Now I get a generic "Unable to define variable" error. Maybe I'll give up, write a tiny new file, and append it to the other using NCL or NCO.

On Friday, January 9, 2015 at 2:14:12 PM UTC-8, laura...@gmail.com wrote:
> Oh, cool! Hidden in the generic NetCDF command, I see. All I want to do is add one variable to a file....
>
>
>
> On Friday, January 9, 2015 at 1:36:47 PM UTC-8, David Fanning wrote:
>> laura.hike@gmail.com writes:
>>
>>> Ha, ha! :^) Something that can be done simply using basic IDL commands instead of having to download a whole library. It looks like all that's missing from the existing commands is a way to enter define mode. All the other commands you need are there.
>>
>> Maybe you are looking for this:

```
>>
>>    NCDF_Control, fileID, /REDEF ; Put open file in DEFINE mode.
>>
>> Cheers,
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>> David
>> --
>> David Fanning, Ph.D.
>> Fanning Software Consulting, Inc.
>> Coyote's Guide to IDL Programming: http://www.idlcoyote.com/
>> Sepore ma de ni thue. ("Perhaps thou speakest truth.")
```

Subject: Re: Add a variable to existing NetCDF file
Posted by laura.hike on Fri, 09 Jan 2015 22:35:58 GMT

Note: I hadn't seen your last message before writing that last one. I'll check your example.

```
On Friday, January 9, 2015 at 2:34:53 PM UTC-8, laura...@gmail.com wrote:
> But it still won't work.  Now I get a generic "Unable to define variable" error.  Maybe I'll give up,
write a tiny new file, and append it to the other using NCL or NCO.
>
>
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>>>
>>> Cheers,
>>>
>>> David
>>> --
>>> David Fanning, Ph.D.
```

Subject: Re: Add a variable to existing NetCDF file
Posted by laura.hike on Fri, 09 Jan 2015 23:02:11 GMT
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Ah, a degenerate dimension was eliminated, changing the variable array size. Got it now.

On Friday, January 9, 2015 at 2:34:53 PM UTC-8, laura...@gmail.com wrote:
> But it still won't work. Now I get a generic "Unable to define variable" error. Maybe I'll give up, write a tiny new file, and append it to the other using NCL or NCO.
>
>
> On Friday, January 9, 2015 at 2:14:12 PM UTC-8, laura...@gmail.com wrote:
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>>
>>
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