
Subject: Re: error reading a large number of binary files
Posted by [David Fanning](#) on Fri, 20 Apr 2007 23:25:57 GMT
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mark@atmos.colostate.edu writes:

- > And on repeated trials, the error always occurs in a different file.
- > And I know that none of the files are actually corrupted.
- > Interestingly, I wrote a similar program in fortran and using the
- > NAGWare compiler it has similar problems, but it worked successfully
- > using the xlf fortran compiler. However, I'd prefer to have it work
- > in IDL, but I cannot for the life of me figure out what I'm doing
- > wrong.

From your description, I would say the chances are MUCH better than they usually are that this is NOT operator error. :-)

But this might be the wrong place to look for an answer. I think I would bump this one up to ITTVIS.

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: error reading a large number of binary files
Posted by [Mark Branson](#) on Mon, 23 Apr 2007 14:45:43 GMT
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On Apr 20, 5:25 pm, David Fanning <n...@dfanning.com> wrote:

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

Thanks, David. Good suggestion. I sent a report to ITTVIS over the weekend. I'm now taking bets as to if/when I actually hear back from them... :)

BTW, I have you to blame for my lack of sleep lately. I recently bought the first three Anna Pigeon novels based on your recommendation, and you're right -- they're just about impossible to put down!

Cheers,
Mark

Subject: Re: error reading a large number of binary files
Posted by [Mark Branson](#) on Tue, 24 Apr 2007 21:11:16 GMT
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** UPDATE on the status of my problem **

I decided to reprocess the original grib files with wgrib again but this time with the -nh switch turned on, which eliminates the f77-style header record. Then in the IDL read routine I just had to turn off the /f77_unformatted switch. Well, this has worked flawlessly in the three tests I have tried!!!

That made me wonder if my problem was with IDL reading ANY fortran-style binary files, or just the ones created by wgrib. So I wrote a fortran-90 program to generate roughly the same size and number of binary files but just writing random numbers to the files, and then a simple readbin.pro IDL routine. Sure enough, it crashes in random places just like my previous set of ECWMF binary files with f77 headers did. Here's some sample output from a few trials -- these random number files are just named x001.bin, x002.bin, ..., x520.bin.

test #1

```
>>> x062.bin
>>> x063.bin
>>> x064.bin
% READU: Corrupted f77 unformatted file detected. Unit: 100, File:
x064.bin
% Execution halted at: READBIN2      10 /Users/mark/Datasets/
era40/testbin/readbin2.pro
%          $MAIN$
```

test #2

```
>>> x300.bin
>>> x301.bin
>>> x302.bin
>>> x303.bin
% READU: Corrupted f77 unformatted file detected. Unit: 100, File:
x303.bin
% Execution halted at: READBIN2      10 /Users/mark/Datasets/
era40/testbin/readbin2.pro
%          $MAIN$
```

AND the problem seems to only occur once I make the files very large. i.e., when i just wrote out 520 files of arrays of size 5, it flies through all of those with no problems.

I'd really love to get to the bottom of this problem, and I should mention that one of the ITTVIS consultants has indeed been emailing with me and has been extremely helpful. But in the meantime I will obviously proceed with the "no-header" files for this project.

Thanks to all of you who offered suggestions -- it's very helpful and encouraging!

Cheers,
Mark
