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Advice on System Limits

Alan Heckert <alan.heckert@nist.gov>   Mon, Mar 16, 2020 at 4:06 PM
To: JONATHAN HOWARD MORGAN <jonathan.h.morgan@gmail.com>, alan.heckert@nist.gov

On 3/16/20 6:48 AM, JONATHAN HOWARD MORGAN wrote:

Jonathan,

1. There are 2 issues with increasing the maximum workspace size.

   The first is to change the line PARAMETER (MAXOBV=2000000)
   in DPCOPA.INC as you noted in your e-mail.

   The second issue is related to the amount of memory available
   on your system.   If you have more than 8GB of RAM, then add the
   following to the FFLAGS and CFLAGS line

       -mcmodel=medium

   My personal Linux machine has 64GB of RAM. I have created a
   version of Dataplot with a maximum of 15,000,000 rows (I haven't
   really pushed it to see how high I could go).   How high you can raise
   MAXOBV depends on much physical memory you have. I don't really
   have any particular guidance on this other than trial and error. If
   you have 16GB, I would recommend starting with 5,000,000.

2. Do not modify MAXSTR for now. Increasing this also requires some
   code changes. I plan to increase this to 1,024 and increase the maximum
   number of characters for file names from 80 to 255. But that is probably
   a few months down the road.

   For long path names, there are two things you can currently do

   a. Dataplot has a CD command to change the current working
      directory. So to read a file, you can CD to that directory, read
      the file, and then use CD again to return to your original working
      directory.

   b. You can use the command

       SET SEARCH DIRCTORY "directory-name"

       to add a directory to the list of directories that are searched for
       READ, CALL, WRITE and other commands that access file names.

3. I haven't had much change to investigate building Dataplot on Catalina.
   The issue is really getting the gfortran/gcc compilers working.

   It looks like we are being asked to mostly telecommute for the next
   four weeks, so I suspect I'm probably not going to be able to do much
   during this time. I think I need to talk to our local Mac support people to
   see if they have any guidance on this. My primary concern is being sure
   there is a relatively simple path for getting gfortran/gcc working (I've
   seen an article describing a method for getting them to work, but it
   involved building gfortran/gcc from source and making hand edits
   to certain files before the build, which is a bit much for me to expect
   from most users).

Alan
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