Subject: Re: for loops and calls to functions/objects
Posted by Charles at AER on Tue, 15 Apr 2008 19:29:42 GMT
View Forum Message <> Reply to Message

On Apr 15, 2:59 pm, Conor <cmanc...@gmail.com> wrote:
> On Apr 15, 11:11 am, Charles at AER <cpax...@aer.com> wrote:
>
>
>
>> Dear Newsgroup,
>
>> A program I am optimizing loads a series of images from netcdf files,
>> the user may select an arbitrary number of images to display. Within
>> a for loop, the program calls a netcdf reader that initializes a
>> netcdf object, gets lat and lon info and then grabs an image. If the
>> user wants to look at 10 images, the read net cdf is called 10 times,
>> and the time to initialize the netcdf object takes 0.1 seconds, and to
>> get the image takes 0.2 seconds.   Here's the rub, if the user wants
>> to investigate 70 images, the netcdf initialization is 10 times longer
>> - about 1 second, similarly, the get method loads the image in 2
>> seconds. So to read 10 images takes 3 seconds, and to read 70 images
>> takes 210 seconds. The exponential increase is untenable. Does any
>> one understand what is happening, and are there work-arounds? Thanks.
>
>> Sincerely,
>
>> Charles
>
> I'm not sure if there's really enough info here to go on, but I'll
> hazard a guess. I don't actually know anything about netcdf files,
> but I suspect that isn't the problem. After all there is no reason
> why the time it takes to load an image should change from call to
> call, assuming all the images are the same size. My guess then is
> that you are simply running out of memory. If the first 50 images
> fill up your memory then for the next 20 images your computer is going
> to be reading and writing to a swap directory, which is a VERY slow
> process. Might that be the problem?

Hi Conor,

Thank you very much. Indeed I believe you are correct. I wrote a
separate
code to isolate the module in the intervening hours, and I found
memory leaks.
I've cleaned them all seems reasonable now. Each file now takes a
similar amount
of time to process, whether I churn over 10 or 100.

Regards,

Charles Paxson
AER