Subject: Re: Reading from process pipes in IDL?
Posted by Craig Markwardt on Thu, 21 Sep 2000 07:00:00 GMT
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landsman@mpb.gsfc.nasa.gov writes:
> In V5.3, the /COMPRESS keyword was introduced to OPENR, which allows you
> to directly access gzip'ed files in an OS-independent way. I've been
> quite happy with this feature -- you can read compressed files almost
> completely transparently. One thing to watch out for, is that
> although POINT_LUN works on compressed files, it is much slower than on
> regular files, since IDL always has to reset to the beginning on each
> POINT_LUN call for compresed files.

I agree that this IDL v5.3 feature sounds pretty cool. I wonder when we'll get it here... The seek slowdown you mentioned does not occur in my seekable pipes library. The seek is lazy, which means that no data is uncompressed until it actually needs to be read. You pay the price however, by needing a temporary storage area to hold the uncompressed data.

Craig

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Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
---------- ----------

Subject: Re: Reading from process pipes in IDL?
Posted by landsman on Thu, 21 Sep 2000 07:00:00 GMT
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In article <39C9CBD4.D6CC859A@mpipsykl.mpg.de>,
Benno Puetz <puetz@mpipsykl.mpg.de> wrote:
> I have been trying to read image data from compressed (*.gz) files.
>
> While this is possible with
>
> SPAWN, "gunzip "+file+".gz"
>
> OPENR, l, file, /GETLUN
>
> READU, ...
>
> FREE_LUN, l
>
> I would prefer a way similar to PERL's

>
>   open(FILE, "gzip -cd $file |");
>
>   ...
>
> since it would not have to decompress/compress to disk.
>
> Is this at all possible with IDL?

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Wayne Landsman landsman@mpb.gsfc.nasa.gov

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If you are running on a Unix-type operating system, then you can give my seekable pipes library a try. You can open a gzip'ed or compress'ed file and they will automatically be unzipped on the fly as you access them. You can also open any piped stream, not just gzipped files.

In addition you can seek to anywhere in the (uncompressed) file or pipe. The only restriction is that you must have enough temporary disk space to hold the unzipped file.

Here it is, listed under Input/Output:

http://cow.physics.wisc.edu/~craigm/idl/idl.html

Craig

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Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu
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Subject: Re: Reading from process pipes in IDL?
Posted by gfirem1 on Thu, 21 Sep 2000 07:00:00 GMT
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: open(FILE, "gzip -cd $file |");

Benno -

If you know the array size in advance, you can use the -c flag to gunzip to stdout and capture the output in a unit pipe:

```
IDL> imagedata=intarr(1325,800)
IDL> spawn, 'gunzip -c testdata.dat.Z', unit=dataunit
IDL> readu,dataunit,imagedata
IDL> free_lun,dataunit
IDL> help,imagedata
IMAGEDATA       INT       = Array[1325, 800]
```

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 / | , , , , , ,_   Gwyn Fireman
(__/|/(_(_)(_/|/| |_/   gfirem1@alumni.umbc.edu
  /| /|
 (_/   (_/

Subject: Re: Reading from process pipes in IDL?
Posted by George N. White III on Thu, 21 Sep 2000 07:00:00 GMT
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> --
> Benno Puetz
> Kernspintomographie
> Max-Planck-Institut f. Psychiatrie   Tel.: +49-89-30622-413
> Kraepelinstr. 10   Fax : +49-89-30622-520
> 80804 Muenchen, Germany

If your system (OS/2, unix, ??) supports named pipes, you can use them for
this sort of problem, although I have never tried them with IDL. Use
"mknod pipename p" to create a named pipe, then start a background process
to stuff data into the pipe, (e.g., "gzcat file.gz > pipename & "). In
your program, "pipename" is read as if it was an ordinary file, except

that you can't do things like Fortran backspace or rewind, or memory
mapped I/O.

--
George N. White III <gnw3@acm.org> Bedford Institute of Oceanography