Subject: Re: HDF Limits?
Posted by Liam Gumley on Thu, 22 Jul 1999 07:00:00 GMT
View Forum Message <> Reply to Message

Paul Albee wrote:
> I've been trying to generate a large HDF file, but keep having problems
> creating new data sets after I put in about 6000 data sets. Is there
> some limit wrt IDL's HDF interface?

From the HDF Limits information page at
http://hdf.ncsa.uiuc.edu/limits.html:

SD Limits due to defines
MAX_NC_OPEN - files open at a single time (MAX_FILE)
MAX_NC_ATTRS - attributes for a given object (3000)
MAX_NC_DIMS - max dimensions per datset (5000)
MAX_NC_VARS - max varibles per datset (5000)
MAX_VAR_DIMS - max per variable dimensions (32)
MAX_NC_NAME - maximum length of a name (256)

This information applies to HDF4.1r3, but I suspect it applies to
earlier versions as well. To find out which version of HDF you are using
in IDL:

hdf_lib_info, version=version
print, version

To find out which version of HDF was used to create a file:
id = hdf_open(file, /read)
hdf_lib_info, id, version=version
print, version

Note that you can often decrease the number of datasets (SDS arrays) you
need to create by using the dimensions of an SDS to contain different
parameters which are on the same grid. For example, say I wanted to
store the following information on a global 360x180 grid:

Maximum daily surface temperature
Minimum daily surface temperature
Mean daily surface temperature

I could create a separate SDS for each parameter, or I could create one
SDS which stored all three, e.g.

float Daily_Surface_Temperature(lon_index, lat_index, parameter)

and you would store a text attribute with the SDS that explains the
meaning of each parameter.

Cheers,
Liam.

--
Liam E. Gumley
Space Science and Engineering Center, UW-Madison
http://cimss.ssec.wisc.edu/~gumley
