
Subject: Re: HDF Limits?

Posted by [Liam Gumley](#) on Thu, 22 Jul 1999 07:00:00 GMT

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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 dataset (5000)

MAX_NC_VARS - max variables per dataset (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.

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