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Subject: Reading HDF5 Variable

Posted by [David Fanning](#) on Mon, 14 Feb 2005 15:14:08 GMT

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Folks,

Does anyone know if it is even \*possible\* to learn how to access a variable from an HDF5 file from the IDL documentation!?

I really don't have a week to figure this out. Does anyone have a simple example. I can see and access the data with H5\_QUERY. But I can't make any sense of the palette that is suppose to be attached to the data. It is 976 elements long. That doesn't even begin to divide by 256. :-(

What I am trying to do is extract a 2D image and its accompanying palette in order to build and save a JPEG file. (Typically I don't mind spending hours and hours researching a topic, but the FAFSA Student Aid forms are due today and I'm working on income taxes. :-(

Thanks,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

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Subject: Re: Reading HDF5 Variable

Posted by [Paul Van Delst\[1\]](#) on Mon, 14 Feb 2005 22:03:23 GMT

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Michael Wallace wrote:

>> Hey - me too! Except rather than write a conversion program each time,

>> I just pipe the hfdump[\*] utility output into the ncgen utility to

>> convert files I use. E.g.

>>

>> hfdump <hdf file> | ncgen -b <nc file>

>>

>> and I end up with a nice simple, useful netCDF file. :o)

>>

>

> Cool. I tried doing this a while back but I was never successful. Which

> versions of hfdump and ncgen are you using? If I can simply do that  
> from the command line now, that'd be so much easier.

Oopsy - I should've read the subject line closer. I've only done it for HDF4 files (v4.1r3). Sorry. When I found out HDF5 was incompatible with HDF4 (is that still true?) I avoided HDF5 like the plague and plead total ignorance when someone wants to give me a HDF5 file. ;o)

However, if the hfdump for HDF5 libraries outputs in CDL, ncgen should understand it, right? I just had a quick look at the HDF5 website and h5dump doesn't mention CDL, just XML. Bummer. Maybe h5toh4 -> h4dump -> ncgen ??

paulv

--

Paul van Delst  
CIMSS @ NOAA/NCEP/EMC

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Subject: Re: Reading HDF5 Variable  
Posted by [Michael Wallace](#) on Mon, 14 Feb 2005 22:12:59 GMT  
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>> Cool. I tried doing this a while back but I was never successful.  
>> Which versions of hfdump and ncgen are you using? If I can simply do  
>> that from the command line now, that'd be so much easier.  
>  
>  
> Oopsy - I should've read the subject line closer. I've only done it for  
> HDF4 files (v4.1r3). Sorry. When I found out HDF5 was incompatible with  
> HDF4 (is that still true?) I avoided HDF5 like the plague and plead  
> total ignorance when someone wants to give me a HDF5 file. ;o)  
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> However, if the hfdump for HDF5 libraries outputs in CDL, ncgen should  
> understand it, right? I just had a quick look at the HDF5 website and  
> h5dump doesn't mention CDL, just XML. Bummer. Maybe h5toh4 -> h4dump ->  
> ncgen ??  
>

Yeah, I was working with HDF5 rather than HDF4. While I attempt to avoid HDF5 like the plague some of my scientific colleagues do not. The hdf5 -> hdf4 -> netCDF route isn't one I've thought of before -- maybe I'll give that a try one day.

-Mike

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Subject: Re: Reading HDF5 Variable

Posted by [James Kuyper](#) on Tue, 15 Feb 2005 00:43:03 GMT

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David Fanning wrote:

- > Folks,
- >
- > Does anyone know if it is even \*possible\* to learn how
- > to access a variable from an HDF5 file from the IDL
- > documentation!?

I'm not sure what you mean by a "variable". HDF5 files contain groups, which can contain datasets, and virtually any HDF5 feature can have an attribute. I'll assume you're talking about a dataset.

- > I really don't have a week to figure this out. Does
- > anyone have a simple example. I can see and access
- > the data with H5\_QUERY. But I can't make any sense
- > of the palette that is suppose to be attached to the
- > data. It is 976 elements long. That doesn't even
- > begin to divide by 256. :-(
- >
- > What I am trying to do is extract a 2D image and its
- > accompanying palette in order to build and save a JPEG
- > file. (Typically I don't mind spending hours and hours
- > researching a topic, but the FAFSA Student Aid forms
- > are due today and I'm working on income taxes. :-(

I didn't know much of anything about HDF5 a few minutes ago, but I am quite familiar with HDF4. The IDL interface for HDF5 is sufficiently similar to the one for HDF4 that it didn't take me long to figure out the following from the IDL documentation. However, I have no easy way to obtain a test file to try it with. Since you're having problems, and this was so trivial, I presume that it either doesn't work, or that you're talking about something else.

```
file_id = H5F_Open(filename)
dataset_id = H5D_Open(file_id, dataset_name)
data = H5D_Read(dataset_id)
H5D_Close, dataset_id
H5F_Close, file_id
```

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Subject: Re: Reading HDF5 Variable

Posted by [David Fanning](#) on Tue, 15 Feb 2005 02:10:00 GMT

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James Kuyper writes:

> I'm not sure what you mean by a "variable". HDF5 files contain groups,  
> which can contain datasets, and virtually any HDF5 feature can have an  
> attribute. I'll assume you're talking about a dataset.

All I'm sayin' is, whatever you call it, you ain't  
gonna learn about it from the IDL documentation!

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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