

## Silo - Bug # 594: silo's compression test is bogus

<b>Status:</b>	Resolved	<b>Priority:</b>	Normal
<b>Author:</b>	Mark Miller	<b>Category:</b>	
<b>Created:</b>	02/10/2011	<b>Assigned to:</b>	Mark Miller
<b>Updated:</b>	08/30/2012	<b>Due date:</b>	
<b>Likelihood:</b>	2 - Rare		
<b>Severity:</b>	4 - Crash / Wrong Results		
<b>Silo Found in Version:</b>	4.8		
<b>OS:</b>	All		
<b>Support Group:</b>	Any		
<b>Subject:</b>	silo's compression test is bogus		
<b>Description:</b>	<p>One of silo's tests, compression.c, is intended to drive hdf5 in various ways using compression, etc. However, it uses only DBWrite() calls and there isn't logic in the HDF5 driver to handle setting of dxpl for H5Dwrite calls for that function. Now, even funnier is the fact that somehow, the compression test still winds up compressing datasets that get written. So, I am guessing that somehow the property list for dataset transfer (or maybe creation) is getting left around in a <code>_set-for-compression_</code> state and that is how H5Dwrite calls are ultimately getting compression applied.</p> <p>The minratio1000 test fails. I had thought the problem was in HDF5. However, it fails to write data <i>*correctly*</i>. The problem is that Silo does not detect and report the failed write even with <code>errmode</code> set to <code>FAIL</code>.</p> <p>Ok, I figured out why a Silo DBWrite call, although having no specific logic to handle compression, still winds up getting compressed. There are some <code>hid_t _pointers_</code> to dataset creation properties in the driver; <code>@P_crprops@</code> and <code>@P_ckcrprops@</code>. All <code>ccompression</code> stuff is handled via <code>@P_ckcrprops@</code>. But, under various conditions, <code>@P_crprops@</code>, which is otherwise <code>H5P_DEFAULT</code>, gets set equal to <code>@P_ckcrprops@</code> and then never gets set back. So, <code>@P_ckcrprops@</code> then effects any <code>H5Dcreate</code> call thereafter that uses <code>@P_crprops@</code>.</p>		

### History

#### 02/10/2011 12:10 am - Mark Miller

- Assigned to set to Mark Miller
- Estimated time set to 2.00
- Likelihood changed from 3 - Occasional to 2 - Rare
- Severity changed from 2 - Minor Irritation to 4 - Crash / Wrong Results
- Silo Found in Version set to 4.8

#### 02/10/2011 12:28 am - Mark Miller

- Target version set to HDF5-1.8.7

#### 02/14/2011 12:30 pm - Mark Miller

- Project changed from HPC-HDF5 to Silo

#### 08/30/2012 08:49 pm - Mark Miller

- Status changed from New to Resolved

Fixes to the HDF5 library in 1.8.8 have improved behaviour significantly.