HDF5 1.6.5

Version	HDF5 1.6.5
Release Date	2005-11-10
Download	/ftp/HDF5/releases/hdf5-1.6/hdf5-1.6.5.tar.gz
Release Notes	Release Notes

Release Notes:

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HDF5 version 1.6.5 released on Thu Nov 10 18:17:53 CST 2005
================================================================================

INTRODUCTION
============
This document describes the differences between HDF5-1.6.4 and
HDF5-1.6.5.  It contains information on the platforms tested and
known problems in HDF5-1.6.5. For more details, check the HISTORY.txt
file in the HDF5 source.

The HDF5 documentation can be found on the NCSA ftp server
(ftp.ncsa.uiuc.edu) in the directory:

     /HDF/HDF5/docs/

Documentation for the current release is also on the HDF web site:

     http://hdf.ncsa.uiuc.edu/HDF5/doc/

For more information look at the HDF5 home page at:

    http://hdf.ncsa.uiuc.edu/HDF5/

If you have any questions or comments, please send them to:

    hdfhelp@ncsa.uiuc.edu


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New Features
============
    Configuration:
    -------------------------
 - Added yodconfigure, a configure tool, that patches up the configure
```

```
  file to allow configure to launch executable via the proper
  launching command like "yod -sz 1".  AKC - 2005/11/10
- Configure now recognizes the TR variable as the location of the
        tr utility.  JML 2005/10/20

   Source code distribution:
   -------------------------
- Added g95 as a testing "platform" informally. AKC - 2005/10/04.
      - Added MD5 checksumming to snapshot releases.  Releases will now
        produce an .md5 file as well as a .tar archive.  md5sum can be
        used to verify the arvhice with the .md5 checksum.  -JL 2005/09/06

   Library:
   --------
      - Added HSYS_ERROR which retrieves the system error message and pushes
        it to the error stack.  This provides more information regarding the
  failed system call. AKC - 2005/08/04
      - Added H5F_OBJ_LOCAL flag to H5Fget_obj_count() & H5Fget_obj_ids(), to
        allow querying for objects in a file that was opened with a particular
        file ID, instead of all objects opened in the file with any file ID.
        QAK - 2005/06/01

   Parallel Library:
   -----------------
- Added mpich2 as a testing "platform" informally. AKC - 2005/10/04.
- HDF5 supports collective MPI-IO for irregular selection with HDF5
  dataset. Irregular selection is when users use API H5Sselect_hyperslab
  more than once for the same dataset.
  Currently, not all MPI-IO packages support the complicated
  MPI derived datatypes used in the implementation of irregular
  selections INSIDE HDF5.
  1) DEC 5.x wdoes not support complicated derived datatypes.
  2) For AIX 5.1:
     If your poe version number is 3.2.0.20 or lower,
     please edit powerpc-ibm-aix5.x in the directory hdf5/config/.
     Find the line with
          << hdf5_mpi_complex_derived_datatype_works >>
     and UNCOMMENT this line before the configure.
     check poe version with the following command:
     lpp -l all | grep ppe.poe
  3) For Linux cluster,:
     If mpich version is 1.2.5 or lower, collective irregular selection
     IO is not supported; internally independent IO is used.
  4) For IRIX 6.5:
     if C compiler version is 7.3 or lower, collective irregular
     selection IO is not supported; internally independent IO is used.
  5) For platforms which internally used mpich:
     If the mpich version is 1.2.5 or lower, please find the
     corresponding config (in hdf5/config) file and add
         hdf5_mpi_complex_derived_datatype_works='no'
     at the end of the configuration file. For example, on the
     NCSA SGI Altix, the internal mpich library is 1.2.5. So
         hdf5_mpi_complex_derived_datatype_works='no'
     should be added at the end of the config file ia64-linux-gnu.
     KY - 2005/09/12

   Tools:
   ------
      - Removed obsolete pdb2hdf tool.  JML - 2005/10/28
```

- Sped up h5dump on files with large numbers of objects.
  QAK - 2005/08/25

F90 API:

- Added missing h5tget_member_class_f function
  EIP 2005/04/06

C++ API:

- Added missing member functions:
H5::CompType::getMemberArrayType
H5::CompType::getMemberVarLenType
H5::AbstractDs::getArrayType
H5::AbstractDs::getVarLenType
H5::CommonFG::openArrayType
H5::CommonFG::openVarLenType
H5::PropList::copyProp -- this will replace the current
 H5::PropList::copyProp in later releases due
 to incorrect prototype.
BMR - 2005/07/27

Support for New Platforms, Languages and Compilers

- Added support for RedStorm platform (serial only.) AKC 2005/11/10
- Added support for BG/L platform (serial only.) LA 2005/11/10
- Added support for HPUX 11.23 (IA64); only C and C++ are supported
  with the +DD64 flag
  EIP 2005/10/05

Configuration

- Added support for Cray X1. JML 2005/10/03

Bug Fixes since HDF5-1.6.4 Release

Library

- Fixed collective IO in chunking-storage. HDF5 may have called the
  wrong routine when the shape of the dataspace in the file and in
  the bufferred chunk were different. This bug was fixed to make sure
  the correct routine is called. KY - 2005/10/19
- Fixed core dump when closing root groups opened through two different
  file handles that operate on the same actual file. QAK - 2005/10/02
- The ./dsets tests used to fail in the TFLOPS machine if the
  test program, dsets.c, was compiled with the -O option.
  The HDF5 library still worked correctly with the -O option. Only
  the ./dsets failed. It is fixed. AKC - 2005/09/14
- Corrected errors when performing various operations on a group opened
  by dereferencing an object reference. QAK - 2005/07/30
- Fixed a bug with named datatypes where a copy of a named datatype
  used to create a dataset would accidentally use the original
  named datatype for the dataset's datatype. QAK - 2005/07/23
- Made H5Fget_name() to be consistent and always return name of actual
  file the ID is in. (Instead of the name of the top file in a
  file mounting hierarchy). QAK - 2005/07/19

```
        - Reworked internal file mounting semantics to hopefully eliminate
            mounting problems.  We now require that files that are mounting
            together all have the same "file close degree".  QAK - 2005/07/19
        - More bug fixes on holding open files that are mounted and have
            IDs open.  QAK - 2005/07/14
        - Dataset sieve buffer cache was inadvertantly disabled; it has been
            re-enabled.  QAK - 2005/07/08
        - Don't unmount child files until the parent file actually closes.
            (Previously, if an object was holding open a file, the child files
            would get unmounted too early).  QAK - 2005/07/05
        - Fixed bug where unmounted files could cause the library to go into
            an infinite loop when shutting down.  QAK - 2005/06/30
        - Fixed bug with hyperslab selections that use selection offsets and
            operate on chunked datasets going into infinite loop or dumping
            core.  QAK - 2005/06/17
        - Corrected memory leak and possible corruption when opening a group.
            QAK - 2005/06/17
        - Added check for opaque datatype tags being too long (check against
            H5T_OPAQUE_TAG_MAX, currently set to 256).  QAK - 2005/06/14
        - Fixed various errors in maintaining names for open objects in the
            face of unusual mount & unmount operations.  QAK - 2005/06/08
        - "SEMI" and "STRONG" file close degree settings now apply only to the
            particular file ID being closed, instead of operating on all open
            file IDs for a given file.  QAK - 2005/06/01
        - Fixed error in opening object in a group that was opened in a mounted
            file which has been unmounted.  QAK - 2005/03/17

    Configuration
    -------------
- Configure can recognize -lmpich as a form of MPI library. -AKC-
  2005/9/28.
- Changed default C++ compiler for the IA64 platform from icc to
    icpc which is the preferred compiler for Intel Compiler version
    8. AKC - 2005/09/02

    Performance
    -------------
        - Optimized I/O for enumerated datatypes that are a superset of a
            source enumerated datatype.  QAK - 2005/03/19

    Tools
    -----

    Documentation
    -------------

    F90 API
    -------
       - h5pget_driver_f was returning information that could not be
         interpreted by a Fortran application program; fixed. EIP - 2005/04/10

    C++ API
    -------
- Several member functions' prototype changed due to the
  "int -> unsigned" change in the main library.  They are:
 H5::CompType::getMemberDataType(unsigned member_num)
 H5::CompType::getMemberCompType(unsigned member_num)
 H5::CompType::getMemberEnumType(unsigned member_num)
 H5::CompType::getMemberIntType(unsigned member_num)
```

```
  H5::CompType::getMemberFloatType(unsigned member_num)
  H5::CompType::getMemberStrType(unsigned member_num)
  BMR - 2005/07/27




Platforms Tested
================

    AIX 5.1  (32 and 64-bit)      xlc 6.0.0.6
                                  xlf 8.1.1.3
          xlC 6.0.0.6
      mpcc_r 6.0.0.6
                                  mpxlf_r 8.1.1.3
      xlc 5.0.2.5
      xlf 7.1.1.2
      xlC 5.0.2.5
      mpcc_r 5.0.2.5
      mpxlf_r 7.1.1.2
    AIX 5.2 (32/64 bit)           xlc 6.0.0.8
                                  xlC 6.0.0.9
                                  xlf 8.1.1.7
                                  mpcc_r 6.0.0.8
                                  mpxlf_r 8.1.1.7
    AIX 5.2 (32/64 bit, LLNL frost)    xlc 6.0.0.8
                                  xlC 6.0.0.8
                                  xlf 8.1.1.7
                                  mpcc_r 6.0.0.8
                                  mpxlf_r 8.1.1.7
    AIX 5.3 (32/64 bit)           xlc 7.0.0.0
                                  xlC 7.0.
                                  xlf 9.1.0.3
    Cray X1 water 3.0.35          Cray Standard C Version 5.4.0.7.4
                                  Cray Fortran 5.4.0.7.3
                                  Cray C++ 5.4.0.7.4
    FreeBSD 4.11                  gcc 2.95.4
                                  g++ 2.95.4
                                  gcc 3.2.3, 3.3.6, 3.4.4, 4.0.0
    HP-UX B.11.00                 HP C  HP92453-01 A.11.01.20
                                  HP F90 v2.4
                                  HP ANSI C++ B3910B A.03.13
    HP-UX B.11.23                 HP aC++/ANSI C B3910B A.06.00
                                  HP F90 v2.9
                                  HP aC++/ANSI C B3910B A.06.00
    IRIX64 6.5 (tesla -64)        MIPSpro cc 7.4.2m
                                  F90 MIPSpro 7.4.2m
                                  C++ MIPSpro cc 7.4.2m
    IRIX64 6.5 (64 & n32)         MIPSpro cc 7.3.1.3m
                                  F90 MIPSpro 7.3.1.3m (64 only)
                                  C++ MIPSpro cc 7.3.1.3m
      mpt 1.6
    Linux 2.4.20-28.7             gcc 2.96
    (eirene, verbena)             gcc 3.3.2
                                  PGI compilers (pgcc, pgf90, pgCC)
                                  version 5.2-1
                                  Absoft Fortran compiler v9.0
                             Intel(R) C++ 32-bit Version 8.1
```

```
          Intel(R) Fortran 32-bit Version 8.1
                                MPIch 1.2.6
    Linux 2.4.21-268-smp x86_64   gcc 3.3.1 (SuSE Linux, AMD)
    (mir)                         PGI 5.2-1 C and F90 (with k3-32)
                            Intel(R) C++ 32-bit Version 8.1
          Intel(R) Fortran 32-bit Version 8.1
    Linux 2.4.21-sgi306rp21 Altix
          SMP ia64                Intel(R) C++ Version 8.1
    (cobalt)                      Intel(R) Fortran Itanium(R) Version 8.1
                                  SGI MPI
    OSF1 V5.1 (QSC)               Compaq C V6.5-011
                                  HP Fortran V5.5A-3548
      Compaq C++ V6.5-036
      MPIX200_64_r13.4
    OSF1 V5.1 (PSC)               Compaq C V6.5-303
                                  HP Fortran V5.5A-3548
      Compaq C++ V6.5-040
    SunOS 5.8 32,46               Sun WorkShop 6 update 2 C 5.3
     (Solaris 2.8)                Sun WorkShop 6 update 2 Fortran 90
                                  Sun WorkShop 6 update 2 C++ 5.3
    SunOS 5.9 32,64               Sun C 5.6 2004/07/15
     (Solaris 2.9)                Sun Fortran 95 8.0 2004/07/15
                                  Sun C++ 5.6 2004/07/15
    SunOS 5.10                    Sun WorkShop 6 update 2 C 5.3
                                  Sun WorkShop 6 update 2 Fortran 95 6.2
                                  Sun WorkShop 6 update 2 C++ 5.3
                                  Patch 111685-13
    Xeon Linux 2.4.21-32.0.1.ELsmp-perfctr-lustre
    (tungsten)                   Intel(R) C++ Version 9.0
                                  Intel(R) Fortran Compiler Version 9.0
    IA-64 Linux 2.4.21.SuSE_292.til1 ia64
    (NCSA tg-login)               Intel(R) C++ Version 8.0
                                  Intel(R) Fortran Compiler Version 8.0
      mpich-gm-1.2.5..10-intel-r2
    Windows XP                    MSVC++.NET
                                  MSVC++ 6.0
                                  Intel 8.1 C++
    MAC OS X                      Darwin 7.5
                                  gcc and g++ Apple Computer, Inc. GCC
                                  version 1175, based on gcc version 3.3.2
                                  IBM XL Fortran version 8.1
                                  Absoft Fortran compiler v8.2


Supported Configuration Features Summary
========================================

Key:   y   = tested and supported
       n   = not supported or not tested in this release
       x   = not working in this release
       dna = does not apply
       ( ) = footnote appears below second table

Platform                           C        F90    F90      C++  zlib  SZIP
                                   parallel        parallel
IBM BG/L (16)        n        n    n        n    y     y
Solaris2.8 64-bit                  y        y      y(1)     y    y     y
Solaris2.8 32-bit                  y        y      y(1)     y    y     y
Solaris2.9 64-bit                  y(1)     y      y(1)     y    y     y
```

Solaris2.9 32-bit	y(1)	y	y(1)	y	y	y
Solaris2.10 64-bit	y(1)	y	n	y	y	y
Solaris2.10 32-bit	y(1)	y	n	y	y	y
IRIX64_6.5 64-bit	y(2)	y	y	y	y	y
IRIX64_6.5 32-bit	y(2)	n	n	n	y	y
HPUX11.00	y(1)	y	y	y	y	y
HPUX11.23-32bit	n	y	n	y	y	y
HPUX11.23-64bit	n	n	n	y	y	y
OSF1 v5.1	y	y	y	y	y	y
X1	y	y	y	y	y	n
AIX-5.1, 5.2 & 5.3 32-bit	y	y	y	y	y	y
AIX-5.1, 5.2 & 5.3 64-bit	y	y	y	y	y	y
WinXP Visual Studio 6.0	n	n(9)	n	y	y	y
WinXP .Net	n	n	n	y(8)	y	y
Mac OS X 10.3	n	y(10)	n	y	y	y
FreeBSD 4.11	n	n	n	y	y	y
RedHat 7.3 W (3)	y(1)	y(11)	n	y	y	y
RedHat 7.3 W Intel (3)	n	y	n	y	y	y
RedHat 7.3 W PGI (3)	n	y	n	y	y	y
RedStorm (16) n y	n	y	y n			
SuSe x86_64 gcc (3,13)	n	y(12)	n	y	y	y
SuSe x86_64 icc (3,13)	n	y(14)	n	y	y	y
Linux 2.4 Xeon C Lustre Intel (3,6)	n	y	n	y	y	y
Linux 2.4 SuSE ia64 C Intel (3,7)	y	y	y	y	y	y
Linux 2.4 SGI Altix ia64 Intel (3)	y	y	y	y	y	y

Platform	Shared libraries(4)	static-exec	Thread-safe	STREAM-VFD
IBM BG/L n y	n	n		
Solaris2.8 64-bit	y	x	y	y
Solaris2.8 32-bit	y	x	y	y
Solaris2.9 64-bit	y	x	y	y
Solaris2.9 32-bit	y	x	y	y
Solaris2.10 64-bit	y	x	y	y
Solaris2.10 32-bit	y	x	y	y
IRIX64_6.5 64-bit	y	y	y	y
IRIX64_6.5 32-bit	y	y	y	y
HPUX11.00	y	x	n	y
HPUX11.23	y	y	n	y
OSF1 v5.1	y	y	n	y
X1	n	y	n	y
AIX-5.1, 5.2 & 5.3 32-bit	n	y	n	y
AIX-5.1, 5.2 & 5.3 64-bit	n	y	n	y
WinXP Visual Studio 6.0	y	y	n	n
WinXP .Net	y	y	n	n
Mac OS X 10.3	y	y	n	y
FreeBSD 4.11	y	y	y	y
RedHat 7.3 W (3)	y	y	y	y
RedHat 7.3 W Intel (3)	n	y	n	y
RedHat 7.3 W PGI (3)	n	y	n	y
RedStorm n y	n	y		
SuSe x86_64 gcc (3,13)	n	y	n	y
SuSe x86_64 icc (3,13)	y	y(15)	n	y
Linux 2.4 Xeon C Lustre Intel (3,6)	y	y	n	y
Linux 2.4 SuSE ia64 C Intel (3,7)	y	y	n	n
Linux 2.4 SGI Altix ia64 Intel (3)	y	y	n	y

```
Compiler versions for each platform are listed in the "Platforms Tested"
table found elsewhere in this file (RELEASE.txt).  Unless otherwise noted,
compilers used are the system compilers.

Footnotes:  (1) Using mpich 1.2.6
            (2) Using mpt and mpich 1.2.6.
            (3) Linux 2.4 with GNU, Intel, and PGI compilers, as indicated.
                  W or C indicates workstation or cluster, respectively.
            (4) Shared libraries are provided only for the C library,
                except on Windows where they are provided for C and C++.
            (5) Using mpt.
            (6) Linux 2.4.21-32.0.1.  Xeon cluster with ELsmp-perfctr-lustre
                and Intel compilers
            (7) Linux 2.4.21, SuSE_292.til1.  Ia64 cluster with Intel compilers
            (8) Intel 8.1
            (9) One test of this release failed with Compaq Visual Fortran 6.6c.
                No binary fortran release will be provided. Users should build
                the library by themselves and use it at their own risk.
                We recommend that users use HDF5 1.7 instead
                or use Compaq Visual Fortran 6.0.
           (10) IBM XLF and Absoft
           (11) PGI, Absoft.  No shared libraries with Absoft;
                use '--disable-shared'.
           (12) PGI and Intel compilers for both C and Fortran
           (13) AMD Opteron x86_64
           (14) ifort
           (15) Yes with C and Fortran, but not with C++
           (16) Only serial is ported.  PFS does not work for PHDF5 yet.
           FMB/EIP - 2005/11/10


Known Problems
==============
* Intel Compilers for Linux x86_86 platforms (EM64T-based, v8.1) has
  optimization error in the data types conversion code.  Before running
  configure, edit the file config/intel-flags by changing the setting of
  PROD_CFLAGS from -O3 to -O0, then run configure.  AKC - 2005/11/10.

* Fortran testing and compiling failures on windows XP
  1. Compaq visual fortran 6.6c with VS 6.0
     The Fortran tests failed for both release, release dll, debug and debug
     dll. The failure is a random one. We won't provide fortran libraries. The
     same test passed with the 1.7.51 snapshot. You may find the 1.7.51
     snapshot under ftp://hdf.ncsa.uiuc.edu/pub/outgoing/hdf5/snapshots/.
  2. Intel fortran 8.1 under .Net environment
     The fortran library cannot even be compiled. Some users have pointed this
     to intel forum.

* When testing parallel HDF5 with the C compiler version MIPSpro 7.4.3 at IRIX
  6.5, set enviroment variable MPI_TYPE_MAX to be a bigger number, for example
  120000, in order to pass the complicated collective IO tests inside parallel
  HDF5 library. This is not a problem inside parallel HDF5 library. You can
  always set a bigger number in your system.
                                KY - 2005/10/6

* A contiguous or chunked dataset created by a sequential version may
  not be modified with a parallel version of the library.
  Use the H5Pset_alloc_time function with H5D_ALLOC_TIME_EARLY to set up the
  dataset creation property list to avoid the problem.
```

* The dataset created or rewritten with the v1.6.3 library or after can't be read with the v1.6.2 library or before when Fletcher32 EDC(filter) is enabled. There was a bug in the calculating code of the Fletcher32 checksum in the library before v1.6.3. The checksum value wasn't consistent between big-endian and little-endian systems. This bug was fixed in Release 1.6.3. However, after fixing the bug, the checksum value is no longer the same as before on little-endian system. The library release after 1.6.4 can still read the dataset created or rewritten with the library of v1.6.2 or before. SLU - 2005/7/8

* For version 6 (6.02 and 6.04) of the Portland Group compiler on AMD Opteron processor, there's a bug in the compiler for optimization(-O2). The library failed in several tests but all related to multi driver. The problem has been reported to the vendor.

* test/big fails sometimes with the message "Possible overlap with another region." The test selects regions randomly, and this error occurs when two regions overlap each other; it is a bug in the test and not in HDF5. Since the error is triggered by a random situation, it will usually disappear if the test is re-run.

* Newer SGI MIPSpro compilers (version 7.4.x) support C99 features but it has a "guard" statement in stdint.h that will #error and skip the rest of the header file if C99 option is not used explicitly. Hardset $CC to c99 will resolve the problem. AKC - 2004/12/13

* On IBM AIX systems, parallel HDF5 mode will fail some tests with error messages like "INFO: 0031-XXX ...". This is from the command poe. Set the environment variable MP_INFOLEVEL to 0 to minimize the messages and run the tests again.
  The tests may fail with messages like "The socket name is already in use". HDF5 does not use sockets (except for stream-VFD). This is due to problems of the poe command trying to set up the debug socket. Check if there are many old /tmp/s.pedb.* staying around. These are sockets used by the poe command and left behind due to failed commands. Ask your system administrator to clean them out. Lastly, request IBM to provide a means to run poe without the debug socket.

* Two h5dump xml tests(h5dump --xml thlink.h5 and h5dump --xml tmany.h5) failed on windows xp with .NET for debug and debug dll. Release and Release dll work fine.

* The h5dump tests may fail to match the expected output on some platforms (e.g. parallel jobs, Windows) where the error messages directed to "stderr" do not appear in the "right order" with output from stdout. This is not an error.

* The stream-vfd test uses ip port 10007 for testing. If another application is already using that port address, the test will hang indefinitely and has to be terminated by the kill command. To try the test again, change the port address in test/stream_test.c to one not being used in the host.

* The --enable-static-exec configure flag fails to compile for Solaris platforms. This is due to the fact that not all of the system libraries on Solaris are available in a static format.

  The --enable-static-exec configure flag also fails to correctly compile
  on IBM SP2 platform for the serial mode. The parallel mode works fine
  with this option.

  The --enable-static-exec configure flag also fails to correctly compile
  on the HPUX 11.00.

  It is suggested that you don't use this option on these platforms
  during configuration.

* The Stream VFD was not tested yet under Windows.

* Before building HDF5 F90 Library from source on Crays
  replace H5Aff.f90, H5Dff.f90 and H5Pff.f90 files in the fortran/src
  subdirectory in the top level directory with the Cray-specific files
  from the site:
  ftp://ftp.ncsa.uiuc.edu/HDF/HDF5/current/src/patches/

* Use --disable-shared configure flag if building with Absoft Fortran
  compiler.

* Information about building with PGI and Intel compilers is available in
  INSTALL file sections 5.7 and 5.8.

* In LANL QSC, the new cc compiler has problems converting small values of
  long long (absolute values less than 1**-308) to double. This triggers
  the test/dtypes to report failure in the
      Testing random sw long double -> double conversions
  If -ieee is used, the converted doubles spread over the range 0.0 to 1**-308.
  If -ieee is not used, the converted double values are mostly 0.0 but
  occasionally as 1**-308. This has been reported to the system staff.
  All other tests have passed.

* Fortran release DLL randomly failed with Compaq Visual Fortran 6.6c on
  Windows.

* Fortran DLL built with Intel 8.1 in .NET environment crushed the compiler,
  Building Fortran static library with Intel 8.1 in .NET environment
  requires manually setting the project file.
  Please contact to hdfhelp@ncsa.uiuc.edu if you need to build
  Fortran static library with Intel 8.1 with .NET environment.

* On at least one system, SDSC DataStar, the scheduler (in this case
  LoadLeveler) sends job status updates to standard error when you run
  any executable that was compiled with the parallel compilers.

  This causes problems when running "make check" on parallel builds, as
  many of the tool tests function by saving the output from test runs,
  and comparing it to an exemplar.

  The best solution is to reconfigure the target system so it no longer
  inserts the extra text. However, this may not be practical.

  In such cases, one solution is to "setenv HDF5_Make_Ignore yes" prior to
  the configure and build. This will cause "make check" to continue after
  detecting errors in the tool tests. However, in the case of SDSC DataStar,
  it also leaves you with some 150 "failed" tests to examine by hand.

A second solution is to write a script to run serial tests and filter out the text added by the scheduler. A sample script used on SDSC DataStar is given below, but you will probably have to customize it for your installation.

Observe that the basic idea is to insert the script as the first item on the command line which executes the test. The script then executes the test and filters out the offending text before passing it on.

```
#!/bin/csh

set STDOUT_FILE=~/bin/serial_filter.stdout
set STDERR_FILE=~/bin/serial_filter.stderr

rm -f $STDOUT_FILE $STDERR_FILE

($* > $STDOUT_FILE) >& $STDERR_FILE

set RETURN_VALUE=$status

cat $STDOUT_FILE

tail +3 $STDERR_FILE

exit $RETURN_VALUE
```

You get the HDF make files and test scripts to execute your filter script by setting the environment variable "RUNSERIAL" to the full path of the script prior to running configure for parallel builds. Remember to "unsetenv RUNSERIAL" before running configure for a serial build.

Note that the RUNSERIAL environment variable exists so that we can prefix serial runs as necessary on the target system. On DataStar, no prefix is necessary. However, on an MPICH system, the prefix might have to be set to something like "/usr/local/mpi/bin/mpirun -np 1" to get the serial tests to run at all.

In such cases, you will have to include the regular prefix in your

```
filter script.
```