

# HDF5 1.8.10-patch1

Version	HDF5 1.8.10-patch1
Release Date	2013-01-22
Download	<a href="ftp://HDF5/releases/hdf5-1.8/hdf5-1.8.10-patch1/">/ftp/HDF5/releases/hdf5-1.8/hdf5-1.8.10-patch1/</a>
Release Notes	<a href="#">Release Notes</a>

## Release Notes:

HDF5 version 1.8.10-patch1 released on 2013-01-22

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### INTRODUCTION

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This document describes the differences between HDF5-1.8.9 and HDF5 1.8.10, and contains information on the platforms tested and known problems in HDF5-1.8.10.

For more details, see the files HISTORY-1\_0-1\_8\_0\_rc3.txt and HISTORY-1\_8.txt in the release\_docs/ directory of the HDF5 source.

Links to the HDF5 1.8.10 source code, documentation, and additional materials can be found on the HDF5 web page at:

<http://www.hdfgroup.org/products/hdf5/>

The HDF5 1.8.10 release can be obtained from:

<http://www.hdfgroup.org/HDF5/release/obtain5.html>

User documentation for 1.8.10 can be accessed directly at this location:

<http://www.hdfgroup.org/HDF5/doc/>

New features in the HDF5-1.8.x release series, including brief general descriptions of some new and modified APIs, are described in the "What's New in 1.8.0?" document:

<http://www.hdfgroup.org/HDF5/doc/ADGuide/WhatsNew180.html>

All new and modified APIs are listed in detail in the "HDF5 Software Changes from Release to Release" document, in the section "Release 1.8.10 (current release) versus Release 1.8.9":

<http://www.hdfgroup.org/HDF5/doc/ADGuide/Changes.html>

If you have any questions or comments, please send them to the HDF Help Desk:

[help@hdfgroup.org](mailto:help@hdfgroup.org)

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## New Features

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### Configuration

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- A new tool, `cmakehdf5`, which is a build command script similar to `buildhdf5` is added and is available in the `bin` directory.  
(AKC - 2013/01/21)

### Library

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- Updated to latest autotools and changed all hard `*.sh` scripts to configure managed `*.sh.in` files. Removed overloading of autotools `TESTS` variable by examples and tests. Renamed `configure.in` to `configure.ac`. (ADB - 2012/08/23 - HDFS-8129)
- The data sieve buffer size was set for all the datasets in the file. It could waste memory if any dataset size is smaller than the sieve buffer size. Now the library picks the smaller one between the dataset size and the sieve buffer size from the file access property. See Issue 7934. (SLU - 2012/4/11)

### Parallel Library

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- Added the `H5Pget_mpio_no_collective_cause()` function that retrieves reasons why the collective I/O was broken during read/write IO access. (JKM - 2012/08/30 HDFS-8143)
- Added `H5Pget_mpio_actual_io_mode_f` (MSB - 2012/09/27)

### Tools

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- `h5import`: Changed to allow the use of `h5dump` output as input files to `h5import`. `h5dump` must include the `"-p"` option to print the properties; configuration file is captured output of `h5dump`. The restrictions are that only one dataset with a simple datatype (integer, floating-point, or string) can be processed. Integers and floating-point imports from `h5dump` must use the `"binary"` option for the data file. The string version uses the `h5dump "-y --width=1"` options to disable the indexing printouts, print single columns, and obviously NOT use the `"binary"` option. (ADB - 2012/07/19 HDFS-721)

### High-Level APIs

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- None

### Fortran API

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- Fixed a typo in return value of the `nh5dread_f_c` function (was 1

instead of 0 on success); fixed the return value to make it consistent with other Fortran functions; cleaned debug statements from the code.  
(EIP - 2012/06/23)

C++ API

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- None

Support for New Platforms, Languages, and Compilers

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- None

Bug Fixes since HDF5-1.8.10

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Library

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- The library now behaves correctly when performing large I/O operations on Mac OS-X. Previously, single I/O operations > 2 GB would fail since the Darwin read/write calls cannot handle the number of bytes that their parameter types imply.

Fixes HDFS-7975 and HDFS-8240 (DER - 07 JAN 2013)

- Fixed a bug in the core VFD that cause failures when opening files > 2 GB.  
Fixes HDFS-8124 and HDFS-8158 (DER - 07 JAN 2013)

Tools

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- The following h5stat test case failed in BG/P machines (and potentially other machines that display extra output if an MPI task returns with a non-zero code.)

Testing h5stat notexist.h5

The test script was fixed to ignore the extra output.

HDFS-8233 (AKC - 2012/12/17)

- h5diff: Fixed slowness when comparing HDF5 files with many attributes. Much slower performance was identified with later release version (from 1.8.7 to 1.8.10) compared to 1.8.6. The issue was introduced from fixing an attribute related bug for 1.8.7 release in the past.

HDFS-8145 (JKM 2012/12/13)

Testing

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- None

Bug Fixes since HDF5-1.8.9

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Configuration

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- Fixed configure --enable-production to not use -O optimization for Lion and Mountain Lion systems when gcc (i686-apple-darwin11-llvm-gcc-4.2 (GCC) 4.2.1) is used. Somehow the -O optimization will cause some of the hard conversion code in test/dt\_arith.c to fail. HDFS-8017.

(AKC - 2012/10/10)

- Fixed AIX Fortran compiler flags to use appropriate settings for debugging, profiling, and optimization situations. HDFS-8069.

(AKC 2012/09/27)

Library

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- Fixed a memory leak exposed when inserting/removing a property from a property list several times. HDFS-8022. (MSC 2012/05/18)
- The file\_image test will fail in the "initial file image and callbacks in the core VFD" sub-test if the source directory is read-only as the test fails to create its test files in the build directory. This has been fixed. HDFS-8009 (AKC - 2012/07/06)

#### Parallel Library

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- The MPI-POSIX VFD was updated to include the POSIX and Windows correctness features added that had already been added to the other VFDs. HDFS-8058/7845. (DER 2012/09/17)

#### Performance

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- Removed program perform/benchpar from the enable-build-all list. The program will be retired or moved to another location. HDFS-8156 (AKC 2012/10/01)
- Retired program perform/mpi-perf. Its purpose has been incorporated into h5perf. (AKC 2012/09/21)

#### Tools

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- h5repack: "h5repack -f NONE file1.h5 out.h5" command failed if source file contains chunked dataset and a chunk dim is bigger than the dataset dim. Another issue is that the command changed max dims if chunk dim is smaller than the dataset dim. These issue occurred when dataset size is smaller than 64k (compact size limit) Fixed both. HDFS-8012 (JKM 2012/09/24)
- h5diff: Fixed the counter in verbose mode (-v, -r) so that it will no longer add together the differences between datasets and the differences between attributes of those datasets. This change makes the output of verbose mode consistent for datasets, groups, and committed datatypes. HDFS-5919 (JKM 2012/09/10)
- h5diff: Fixed the incorrect result when comparing attribute data values and the data type has the same class but different sizes. HDFS-7942 (JKM 2012/08/15)
- h5dump: Replaced single element fwrite with block writes. HDFS-1208 (ADB 2012/08/13)
- h5diff: Fixed test failure for "make check" due to failure of copying test files when performed in HDF5 source tree. Also applied to other tools. HDFS-8107 (JKM 2012/08/01)
- ph5diff: Fixed intermittent hang issue on a certain operation in parallel mode. It was detected by daily test for comparing non-comparable objects, but it could have occurred in other operations depending on machine condition. HDFS-8003 (JKM 2012/08/01)
- h5diff: Fixed the function COPY\_TESTFILES\_TO\_TESTDIR() of testh5diff.sh to better report when there is an error in the file copying. HDFS-8105 (AKC 2012/07/22)
- h5dump: Fixed the sort by name display to maintain correct parent/child relationships between ascending/descending order. HDFS-8095 (ADB 2012/07/12)
- h5dump: Fixed the display by creation order when using option -n (print contents). HDFS-5942 (ADB 2012/07/09)
- h5dump: Changed to allow H5T\_CSET\_UTF8 to be displayed in h5dump output. Used technique similar to what was done in h5ls (matches library options).

HDFV-7999 (ADB 2012/05/23)

- h5diff: Fixed the tool so that it will not check and display the status of dangling links without setting the --follow-symlinks option. This also improved performance when comparing lots of external links without the --follow-symlinks option.

HDFV-7998 (JKM 2012/04/26)

#### F90 API

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- Fixed a typo in return value of the nh5dread\_f\_c function (was 1 instead of 0 on success); fixed the return value to make it consistent with other Fortran functions; cleaned debug statements from the code. (EIP - 2012/06/23)
- Fixed a problem writing/reading control characters to a dataset; writing a string containing alerts, backspace, carriage\_return, form\_feed, horizontal\_tab, vertical\_tab, or new\_line is now tested and working. (MSB - 2012/09/01)
- Corrected the integer type of H5S\_UNLIMITED\_F to HSIZE\_T (MSB - 2012/09/01)
- Corrected the number of continuation lines in the src files to be less than 32 lines for F95 compliance. (MSB - 2012/10/01)

#### C++ API

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- None

#### High-Level APIs:

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- Fixed problem with H5TBdelete\_record destroying all data following the deletion of a row. (MSB- 2012/7/26)
- Fixed H5LTget\_attribute\_string not closing an object identifier when an error occurs. (MSB- 2012/7/21)
- Corrected the return type of H5TBaget\_fill from herr\_t to htri\_t to reflect that a return value of 1 indicates that a fill value is present, 0 indicates a fill value is not present, and <0 indicates an error.

#### Fortran High-Level APIs:

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- None

#### Supported Platforms

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AIX 5.3 (NASA G-ADA)	xlc 10.1.0.5 xlc 10.1.0.5 xlf90 12.1.0.6
Linux 2.6.18-308.13.1.el5PAE #1 SMP i686 i686 i386 (jam)	GNU C (gcc), Fortran (gfortran), C++ (g++) compilers for 32-bit applications; Version 4.1.2 20080704 (Red Hat 4.1.2-52) Version 4.6.3 PGI C, Fortran, C++ Compilers for 32-bit applications;

	Version 11.9-0 Intel(R) C, C++, Fortran Compiler for 32-bit applications; Version 12.1 MPICH mpich2-1.4.1pl compiled with gcc 4.1.2 and gfortran 4.1.2
Linux 2.6.18-308.16.1.el5 #1 SMP x86_64 GNU/Linux (koala)	GNU C (gcc), Fortran (gfortran), C++ (g++) compilers for 32-bit applications; Version 4.1.2 20080704 (Red Hat 4.1.2-52) Version 4.6.3 PGI C, Fortran, C++ for 64-bit target on x86-64; Version 11.9-0 Version 12.5-0 Intel(R) C, C++, Fortran Compilers for applications running on Intel(R) 64; Version 12.1 (Build 20110811) Version 12.1 (Build 20120212) MPICH mpich2-1.4.1pl compiled with gcc 4.1.2 and gfortran 4.1.2
Linux 2.6.32-220.7.1.el6.ppc64 #1 SMP ppc64 GNU/Linux (ostrich)	gcc (GCC) 4.4.6 20110731 (Red Hat 4.4.6-3) g++ (GCC) 4.4.6 20110731 GNU Fortran (GCC) 4.4.6 20110731 (Red Hat 4.4.6-3)
Linux 2.6.32-220.23.1.1chaos ch5.x86_64 GNU/Linux (LLNL Aztec)	Intel C, C++, Fortran Compilers Version 12.1.5.339
IBM Blue Gene/P (LLNL uDawn)	XL C for Blue Gene/P, bgxlc V9.0 XL C++ for Blue Gene/P, bgxlC V9.0 XL Fortran for Blue Gene/P, bgxlf90 V11.1
SunOS 5.10 32- and 64-bit (linew)	Sun C 5.9 Sun OS_sparc Patch 124867-16 Sun Fortran 95 8.3 Sun OS_sparc Patch 127000-13 Sun C++ 5.9 Sun OS_sparc Patch 124863-26 Sun C 5.11 SunOS_sparc Sun Fortran 95 8.5 SunOS_sparc Sun C++ 5.11 SunOS_sparc
Windows XP files)	Visual Studio 2008 w/ Intel Fortran 10.1 (project
Windows XP x64 files)	Visual Studio 2008 w/ Intel Fortran 10.1 (project
Windows 7 compiler and gfortran)	Visual Studio 2008 w/ Intel Fortran 11.1 (cmake) Visual Studio 2010 w/ Intel Fortran 12 (cmake) Cygwin(CYGWIN_NT-6.1 1.7.15(0.260/5/3) gcc(4.5.3)  (cmake and autotools)
Windows 7 x64 compiler and gfortran)	Visual Studio 2008 w/ Intel Fortran 11.1 (cmake) Visual Studio 2010 w/ Intel Fortran 12 (cmake) Cygwin(CYGWIN_NT-6.1 1.7.15(0.260/5/3) gcc(4.5.3)  (cmake and autotools)

```

Mac OS X Snow Leopard 10.6.8 gcc i686-apple-darwin11-llvm-gcc-4.2 (GCC) 4.2.1
from Xcode 3.2.6
Darwin Kernel Version 10.8.0 g++ i686-apple-darwin11-llvm-g++-4.2 (GCC) 4.2.1
from Xcode 3.2.6
(fred) gfortran GNU Fortran (GCC) 4.6.2
Intel C (icc), Fortran (ifort), C++ (icpc)
12.1.0.038 Build 20110811

Mac OS X Snow Leopard 10.6.8 gcc i686-apple-darwin11-llvm-gcc-4.2 (GCC) 4.2.1
from Xcode 3.2.6
Darwin Kernel Version 10.8.0 g++ i686-apple-darwin11-llvm-g++-4.2 (GCC) 4.2.1
from Xcode 3.2.6
Intel 32-bit gfortran GNU Fortran (GCC) 4.6.1
(tejeda) Intel C (icc), Fortran (ifort), C++ (icpc)
12.1.0.038 Build 20110811

Mac OS X Lion 10.7.3 gcc i686-apple-darwin11-llvm-gcc-4.2 (GCC) 4.2.1
from Xcode 4.2.1
32- and 64-bit g++ i686-apple-darwin11-llvm-g++-4.2 (GCC) 4.2.1
from Xcode 4.2.1
(duck) gfortran GNU Fortran (GCC) 4.6.2

Mac OS X Mountain Lion 10.8.1 cc Apple clang version 4.0 from Xcode 4.5.1
(owl) c++ Apple clang version 4.0 from Xcode 4.5.1
gcc i686-apple-darwin11-llvm-gcc-4.2 (GCC) 4.2.1 from Xcode 4.5.1
g++ i686-apple-darwin11-llvm-g++-4.2 (GCC) 4.2.1 from Xcode 4.5.1
gfortran GNU Fortran (GCC) 4.6.2

```

#### Tested Configuration Features Summary

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In the tables below

```

y   = tested
n   = not tested in this release
C   = Cluster
W   = Workstation
x   = not working in this release
dna = does not apply
( ) = footnote appears below second table
<blank> = testing incomplete on this feature or platform

```

Platform	C	F90/ parallel	F90 F2003	F90 parallel	C++	zlib	SZIP
Solaris2.10 32-bit	n	y/y	n	n	y	y	y
Solaris2.10 64-bit	n	y/n	n	n	y	y	y
Windows 7	y	y/n	n	n	y	y	y
Windows 7 x64	y	y/n	n	n	y	y	y
Mac OS X Snow Leopard 10.6.8 32-bit	n	y/y	n	n	y	y	n
Mac OS X Snow Leopard 10.6.8 64-bit	n	y/y	n	n	y	y	y
Mac OS X Lion 10.7.3 32-bit	n	y/y	n	n	y	y	n
Mac OS X Lion 10.7.3 64-bit	n	y/y	n	n	y	y	y
Mac OS X Mountain Lion 10.8.1 64-bit	n	y/n	n	n	y	y	n
AIX 5.3 32- and 64-bit	y	y/n	y	y	y	y	y
CentOS 5.5 Linux 2.6.18-308 i686 GNU	y	y/y	y	y	y	y	y
CentOS 5.5 Linux 2.6.18-308 i686 Intel	n	y/y	n	n	y	y	y
CentOS 5.5 Linux 2.6.18-308 i686 PGI	n	y/y	n	n	y	y	y
CentOS 5.5 Linux 2.6.18 x86_64 GNU	y	y/y	y	y	y	y	y
CentOS 5.5 Linux 2.6.18 x86_64 Intel	n	y/y	n	n	y	y	y

CentOS 5.5 Linux 2.6.18 x86_64 PGI	n	y/y	n	y	y	y
Linux 2.6.32-220.7.1.el6.ppc64	n	y/n	n	y	y	y

Platform	Shared C libs	Shared F90 libs	Shared C++ libs	Thread- safe
Solaris2.10 32-bit	y	y	y	y
Solaris2.10 64-bit	n	n	n	n
Windows 7	y	y	y	y
Windows 7 x64	y	y	y	y
Mac OS X Snow Leopard 10.6.8 32-bit	y	n	y	n
Mac OS X Snow Leopard 10.6.8 64-bit	y	n	y	n
Mac OS X Lion 10.7.3 32-bit	y	n	y	y
Mac OS X Lion 10.7.3 64-bit	y	n	y	y
Mac OS X Mountain Lion 10.8.1 64-bit	y	n	y	y
AIX 5.3 32- and 64-bit	n	n	n	y
CentOS 5.5 Linux 2.6.18-308 i686 GNU	y	y	y	y
CentOS 5.5 Linux 2.6.18-308 i686 Intel	y	y	y	n
CentOS 5.5 Linux 2.6.18-308 i686 PGI	y	y	y	n
CentOS 5.5 Linux 2.6.18 x86_64 GNU	y	y	y	y
CentOS 5.5 Linux 2.6.18 x86_64 Intel	y	y	y	n
CentOS 5.5 Linux 2.6.18 x86_64 PGI	y	y	y	n
Linux 2.6.32-220.7.1.el6.ppc64	y	y	y	n

Compiler versions for each platform are listed in the preceding "Supported Platforms" table.

#### More Tested Platforms

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The following platforms are not supported but have been tested for this release.

FreeBSD 8.2-STABLE i386 (loyalty)	gcc 4.2.1 [FreeBSD] 20070719 gcc 4.6.1 20110422 g++ 4.6.1 20110422 gfortran 4.6.1 20110422
FreeBSD 8.2-STABLE amd64 (freedom)	gcc 4.2.1 [FreeBSD] 20070719 gcc 4.6.1 20110422 g++ 4.6.1 20110422 gfortran 4.6.1 20110422
Debian6.0.3 2.6.32-5-686 #1 SMP i686 GNU/Linux	gcc (Debian 4.4.5-8) 4.4.5 GNU Fortran (Debian 4.4.5-8) 4.4.5 (cmake and autotools)
Debian6.0.3 2.6.32-5-amd64 #1 SMP x86_64 GNU/Linux	gcc (Debian 4.4.5-8) 4.4.5 GNU Fortran (Debian 4.4.5-8) 4.4.5 (cmake and autotools)
Fedora17 3.5.2-1.fc17.i6866 #1 SMP i686 i686 i386 GNU/Linux	gcc (GCC) 4.7.0 20120507 (Red Hat 4.7.0-5) GNU Fortran (GCC) 4.7.0 20120507 (Red Hat 4.7.0-5) (cmake and autotools)
Fedora17 3.5.2-1.fc17.x86_64 #1 SMP x86_64 x86_64 x86_64 GNU/Linux	gcc (GCC) 4.7.0 20120507 (Red Hat 4.7.0-5)

GNU Fortran (GCC) 4.7.0 20120507 (Red Hat 4.7.0-5)  
(cmake and autotools)

SUSE 12.2 3.4.6-2.10-desktop #1 SMP PREEMPT i686 i686 i386 GNU/Linux  
gcc (SUSE Linux) 4.7.1  
GNU Fortran (SUSE Linux) 4.7.1  
(cmake and autotools)

SUSE 12.2 3.4.6-2.10-desktop #1 SMP PREEMPT x86\_64 x86\_64 x86\_64 GNU/Linux  
gcc (SUSE Linux) 4.7.1  
GNU Fortran (SUSE Linux) 4.7.1  
(cmake and autotools)

Ubuntu 12.04 3.2.0-29-generic #46-Ubuntu SMP i686 GNU/Linux  
gcc (Ubuntu/Linaro 4.6.3-1ubuntu5) 4.6.3  
GNU Fortran (Ubuntu/Linaro 4.6.3-1ubuntu5) 4.6.3  
(cmake and autotools)

Ubuntu 12.04 3.2.0-29-generic #46-Ubuntu SMP x86\_64 GNU/Linux  
gcc (Ubuntu/Linaro 4.6.3-1ubuntu5) 4.6.3  
GNU Fortran (Ubuntu/Linaro 4.6.3-1ubuntu5) 4.6.3  
(cmake and autotools)  
(Use optimization level -O1)

Cray Linux Environment (CLE) PrgEnv-pgi/4.0.46  
hopper.nersc.gov pgcc 12.5-0 64-bit target on x86-64 Linux -tp  
shanghai  
  
pgf90 12.5-0 64-bit target on x86-64 Linux -tp  
shanghai  
  
pgCC 12.5-0 64-bit target on x86-64 Linux -tp  
shanghai

#### Known Problems

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\* The C++ and FORTRAN bindings are not currently working on FreeBSD with the native release 8.2 compilers (4.2.1), but are working with gcc 4.6 from the ports (and probably gcc releases after that).  
(QAK - 2012/10/19)

\* The following h5dump test case fails in BG/P machines (and potentially other machines that use a command script to launch executables):

```
h5dump --no-compact-subset -d "AHFINDERDIRECT::ah_centroid_t[0] it=0 tl=0"  
tno-subset.h5
```

This is due to the embedded spaces in the dataset name being interpreted by the command script launcher as meta-characters, thus passing three arguments to h5dump's -d flag. The command passes if run by hand, just not via the test script.

(AKC - 2012/05/03)

\* On hopper, the build failed when RUNSERIAL and RUNPARALLEL are set to aprun -np X, because the H5lib\_settings.c file was not generated properly. Not setting those environment variables works, because configure was able to automatically detect that it's a Cray system and used the proper launch commands when necessary.  
(MSC - 2012/04/18)

- \* The data conversion test `dt_arith.c` fails in "long double" to integer conversion on Ubuntu 11.10 (3.0.0.13 kernel) with GCC 4.6.1 if the library is built with optimization `-O3` or `-O2`. The older GCC (4.5) or newer kernel (3.2.2 on Fedora) doesn't have the problem. Users should lower the optimization level (`-O1` or `-O0`) by defining `CFLAGS` in the command line of "configure" like:

```
CFLAGS=-O1 ./configure
```

This will overwrite the library's default optimization level.  
(SLU - 2012/02/07 - HДФFV-7829)

- \* The `STDIO VFD` does not work on some architectures, possibly due to 32/64 bit or large file issues. The basic `STDIO VFD` test is known to fail on 64-bit SunOS 5.10 on SPARC when built with `-m64` and 32-bit OS X/Darwin 10.7.0. The `STDIO VFD` test has been disabled while we investigate and a fix should appear in a future release.  
(DER - 2011/10/14 - HДФFV-8235)
- \* `h5diff` can report inconsistent results when comparing datasets of enum type that contain invalid values. This is due to how enum types are handled in the library and will be addressed in a future release.  
(DER - 2011/10/14 - HДФFV-7527)
- \* The `links` test can fail under the `stdio VFD` due to some issues with external links. This will be investigated and fixed in a future release.  
(DER - 2011/10/14 - HДФFV-7768)
- \* After the shared library support was fixed for some bugs, it was discovered that "make prefix=XXX install" no longer works for shared libraries. It still works correctly for static libraries. Therefore, if you want to install the HDF5 shared libraries in a location such as `/usr/local/hdf5`, you need to specify the location via the `--prefix` option during configure time. E.g, `./configure --prefix=/usr/local/hdf5 ...`  
(AKC - 2011/05/07 - HДФFV-7583)
- \* The `parallel` test, `t_shapesame`, in `testpar/`, may run for a long time and may be terminated by the alarm signal. If that happens, one can increase the alarm seconds (default is 1200 seconds = 20 minutes) by setting the environment variable, `$HDF5_ALARM_SECONDS`, to a larger value such as 3600 (60 minutes). Note that the `t_shapesame` test may fail in some systems (see the "While working on the 1.8.6 release..." problem below). If it does, it will waste more time if `$HDF5_ALARM_SECONDS` is set to a larger value.  
(AKC - 2011/05/07)
- \* The C++ and FORTRAN bindings are not currently working on FreeBSD.  
(QAK - 2011/04/26)
- \* Shared Fortran libraries are not quite working on AIX. While they are generated when `--enable-shared` is specified, the fortran and `hl/fortran` tests fail. We are looking into the issue. HL and C++ shared libraries should now be working as intended, however.  
(MAM - 2011/04/20)
- \* The `--with-mpc` configure option does not work with `Mpich2`.  
(AKC - 2011/03/10)
- \* While working on the 1.8.6 release of HDF5, a bug was discovered that can

occur when reading from a dataset in parallel shortly after it has been written to collectively. The issue was exposed by a new test in the parallel HDF5 test suite, but had existed before that. We believe the problem lies with certain MPI implementations and/or file systems.

We have provided a pure MPI test program, as well as a standalone HDF5 program, that can be used to determine if this is an issue on your system. They should be run across multiple nodes with a varying number of processes. These programs can be found at:

[http://www.hdfgroup.org/ftp/HDF5/examples/known\\_problems/](http://www.hdfgroup.org/ftp/HDF5/examples/known_problems/)  
(NAF - 2011/01/19)

- \* The library's test dt\_arith.c showed a compiler's rounding problem on Cygwin when converting from unsigned long long to long double. The library's own conversion works fine. We defined a macro for Cygwin to skip this test until we can solve the problem.  
(SLU - 2010/05/05 - HDFS-1264)
- \* All the VFL drivers aren't backward compatible. In H5FDpublic.h, the structure H5FD\_class\_t changed in 1.8. There is new parameter added to get\_eoa and set\_eoa callback functions. A new callback function get\_type\_map was added in. The public function H5FDrealloc was taken out in 1.8. The problem only happens when users define their own driver for 1.6 and try to plug in 1.8 library. Because there's only one user complaining about it, we (Elena, Quincey, and I) decided to leave it as it is (see bug report #1279). Quincey will make a plan for 1.10.  
(SLU - 2010/02/02)
- \* The --enable-static-exec configure flag will only statically link libraries if the static version of that library is present. If only the shared version of a library exists (i.e., most system libraries on Solaris, AIX, and Mac, for example, only have shared versions), the flag should still result in a successful compilation, but note that the installed executables will not be fully static. Thus, the only guarantee on these systems is that the executable is statically linked with just the HDF5 library.  
(MAM - 2009/11/04)
- \* Parallel tests failed with 16 processes with data inconsistency at testphdf5 / dataset\_readAll. Parallel tests also failed with 32 and 64 processes with collective abort of all ranks at t\_posix\_compliant / allwrite\_allread\_blocks with MPI IO.  
(CMC - 2009/04/28)
- \* On an Intel 64 Linux cluster (RH 4, Linux 2.6.9) with Intel 10.0 compilers, use -mp -O1 compilation flags to build the libraries. A higher level of optimization causes failures in several HDF5 library tests.
- \* A dataset created or rewritten with a v1.6.3 library or after cannot be read with the v1.6.2 library or before when the Fletcher32 EDC filter is enabled. There was a bug in the calculation of the Fletcher32 checksum in the library before v1.6.3; the checksum value was not 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 was no longer the same as before on little-endian system. Library releases after 1.6.4 can still read

datasets created or rewritten with an HDF5 library of v1.6.2 or before.  
(SLU - 2005/06/30)