**Newsletter #181**

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# Release of HDF5-1.13.0

We are very pleased to announce the release of HDF5-1.13.0, which can now be obtained from the [HDF5 Download](https://www.hdfgroup.org/downloads/hdf5/) page.

Information about this release can be found on the [Support Portal](https://portal.hdfgroup.org/display/support/) as follows:

* [HDF5 documentation](https://portal.hdfgroup.org/display/HDF5/HDF5)
* [Software Changes from Release to Release](https://portal.hdfgroup.org/display/HDF5/Software%2BChanges%2Bfrom%2BRelease%2Bto%2BRelease%2Bfor%2BHDF5-1.13)

HDF5-1.13.0 offers the new features and changes:

* An updated virtual object layer (VOL) API that supports DAOS, pass-through, and asynchronous VOL connectors. Click [here](https://portal.hdfgroup.org/display/support/Registered%2BVOL%2BConnectors) for the HDF5 VOL connectors registered with The HDF Group and stay tuned for announcements on releases of other VOL connectors.

Note: The new VOL API is not backward compatible with the 1.12.x VOL API. In light of this, we will not be supporting the HDF5 1.12.x VOL API in the future and VOL development should shift to targeting the VOL API in 1.13.0 and later. For many connector authors, the changes will be minimal and involve minor changes to the VOL class structure and parameter handling. For a full discussion of the VOL changes, see the VOL connector author’s guide.

* [Asynchronous APIs](https://portal.hdfgroup.org/display/HDF5/Asynchronous%2Boperations%2Bwith%2BHDF5%2BVOL%2Bconnectors) for the HDF5 VOL connectors (currently DAOS and Async VOLs) that support asynchronous HDF5 operations using the [HDF5 Event Set](https://portal.hdfgroup.org/display/HDF5/Event%2BSet) (H5ES) API. This feature allows I/O to proceed in the background while the application is performing other tasks.
* Updates to the virtual file driver (VFD) layer that will support VFD plugins, e.g., [GPU VFD](https://portal.hdfgroup.org/display/support/Contributions).
* Many performance improvements to bring HDF5 1.13.0 more in line with earlier releases of the library.
* A new tool called h5dwalk.The h5dwalk utility provides a parallel alternative to creating and running script based approaches to invoke serial HDF5 tools on a collection of hdf5 files. As a means of invoking parallel instances of a serial tool, the h5dwalk application can accept directories as input arguments. This new tool provides recursive file discovery and filtering to select HDF5 files. The resulting file collection is distributed between MPI ranks and individual files are then selected for input to a user selected application. For more information we refer you to [h5dwalk User's Guide](https://confluence.hdfgroup.org/download/attachments/74188083/2021-12-2-ParallelTools-Portal.pdf?version=1&modificationDate=1638475023303&api=v2).
* Another new tool called h5delete. Deleting HDF5 storage when using the VOL can be tricky when the VOL does not create files. The h5delete tool is a simple wrapper around the H5Fdelete() API call that uses the VOL specified in the HDF5\_VOL\_CONNECTOR environment variable to delete a "file". If the call to H5Fdelete() fails, the tool will attempt to use the POSIX remove(3) call to remove the file.

This release contains other changes that are not listed here. Please be sure to read the [Release Notes](https://support.hdfgroup.org/ftp/HDF5/releases/hdf5-1.13/hdf5-1.13.0/src/hdf5-1.13.0-RELEASE.txt) for a comprehensive list of new features and changes.

Changes that affect maintainers of HDF5-dependent applications are listed on the [HDF5 Software Changes from Release to Release](https://portal.hdfgroup.org/display/HDF5/Software%2BChanges%2Bfrom%2BRelease%2Bto%2BRelease%2Bfor%2BHDF5-1.13) page.