## A Thriving Ecosystem

The HDF Group is the steward of the HDF platform, but the platform is alive and vibrant because of its user community. It's hard to keep up with the daily HDF news arriving from all corners of the planet reporting on a new piece of software written for the HDF platform, forum posts, and publications documenting a new community standard or the "HDF experience".

Besides the core HDF5 software (file format, library) the HDF Group maintains a growing portfolio of freely available language bindings, command line-based, and GUI tools, most of which ship with the official HDF5 releases.

HDF5 users and enthusiasts have created and are maintaining a variety of add-ons, high-level libraries, plugins, language bindings, and applications. This long list includes tools such as PyTables and h5py, and plugins for applications such as ParaView and VisIt. Examples of community standards with HDFbased representations are NASA's HDF-EOS5, NeXus, CGNS, Energistics' RESQML, and SEG's H5EM-TS. The latest version of Unidata's netCDF software, netCDF-4, uses HDF5 as the data management layer.

Commercial off-the-shelf tools supporting HDF5 include IDL, Matlab, Mathematica, Intel Array Visualizer and Array Viewer, EnSight, and Tecplot.

These examples are all part of the HDF ecosystem which continues to grow and to be a steady source of motivation and inspiration for our work.

Link: http://www.hdfgroup.org/tools/

#### **The HDF Group**

The HDF Group is a not-for-profit corporation whose mission is to ensure the long-term accessibility to HDF data through the sustainable development and support of HDF technologies.

The HDF Group is dedicated to evolving HDF technologies to serve the needs of users in everchanging computational environments, while at the same time maintaining its commitment to ensure the accessibility of data stored in HDF for the coming decades, even centuries.

The HDF project started at NCSA and the University of Illinois in 1987. The HDF Group completed its transition to an independent corporation in mid-2006.



## **Contact Information**

Website: http://www.hdfgroup.org/ Help Desk: help@hdfgroup.org General inquiries: http://www.hdfgroup.org/about/contact.html

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The technology platform to make a difference in your relationship with large and complex data

# HDF5

Hierarchical Data Format (HDF) Version 5

- Data model, file format, library, tools
- Portable, self-describing, compact
- A free and open standard



#### What is Your Data Worth?



#### **How HDF5 Adds Value**

HDF5 takes a long view through all stages of the data life-cycle and avoids common last mile problems.

- HDF5 is ready for high-speed raw data acquisition
- Heterogeneous data welcome
- No limits on file size
- Create intuitive, self-contained data products
- Highly customizable product packaging (e.g., compression, encryption)
- HDF5 is supported by a large ecosystem including third-party tools for data analysis
- HDF5 is suitable for long-term data archiving

# What's in it for You?

- A free and open source (BSD license) general-purpose platform for storing, managing, archiving, and exchanging data
- Extensive facilities for data and metadata association, hierarchies, and annotation
- A self-describing file format that is portable across operating systems and architectures, and that supports flexible user-defined types
- A software library for high I/O performance, parallel I/O and out-of-core data access (partial I/O), which supports compression and other custom filters
- High-quality documentation
- A responsive helpdesk and active users' forum for community-based support

## **Premium Services: A Win-Win**

In addition to the many benefits you enjoy as a member of the HDF community, The HDF Group offers a variety of professional support services to help your organization use HDF technologies in addressing data management challenges:

- Support packages to meet small- to enterprise-sized requirements
- Customized training
- Consulting and software development

Working with us means working with a team whose level of expertise and commitment simply can't be found anywhere else.

By purchasing Premium Services you will also be supporting The HDF Group's mission—to ensure the sustainable development of HDF technologies and the ongoing accessibility of HDF-stored data via ongoing development, maintenance, and support of HDF software.

# Is HDF5 Right for You?

More often than not, there's no easy answer. You must determine which features matter to you most, such as I/O performance, MPI-IO, or compression, and how important they are now and in the future. Are you looking for a one-off solution or to win community or market acceptance for your approach? It's quite common to use HDF5 as a "format toolkit" and customize it for your needs, as opposed to the usually unwise and expensive decision to invent your own format.

Experiment! Use a package such as PyTables or a scripting language (Python + h5py module) to kick the tires, or download HDFView and open an HDF file to take a look.

Finally, engage the HDF5 community! HDF5 has been around for many years and there's a tremendous body of knowledge and wisdom out there for you to tap into.

# You're in Good Company

HDF5 is used worldwide by government, industry, and academia in a wide range of science, engineering, and business disciplines.

