

HDF Group report to LLNL
February 1 – February 28, 2011
Quincey Koziol

Summary:

During the period from February 1 to February 28, 2011 the HDF Group worked on the following tasks:

- Port and test HDF5 1.8.x releases on LLNL machines (35.5 hours)
- Build & test Silo (15.4 hours)
- Misc. Admin Tasks (8.0 hours)
- User Support (5.9 hours)
- Future Design Discussions (5.2 hours)
- Set up accounts at LLNL (2.8 hours)
- Single Chunk Index Method for Chunked Datasets (0.4 hours)

The **total number of hours** worked is **73.2** hours.

New tasks:

During this time period the following tasks were begun:

- ***Build & test Silo***
 - Begin process of building and testing Silo on local HDF Group machines, in preparation for eventual daily testing with HDF5 changes.
- ***User Support***
 - Prepare slides for tutorials, fix bugs reported by LLNL staff.
- ***Future Design Discussions***
 - Brainstorm/plan ideas for future work.
- ***Single Chunk Index Method for Chunked Datasets***
 - When a dataset's dimensions are fixed and will occupy a single chunk, add a new chunk index method that is contained entirely within the dataset's object header, so that no index data structure is required in the file.

Completed tasks:

During this time period the following tasks or sub-tasks were completed:

- *none*

Tasks in progress:

During this period of time The HDF Group worked on the following tasks:

- ***Port and test HDF5 1.8.x releases on LLNL machines, Albert Cheng*** (35.5 hours)
 - Testing 1.8.6 release on zeus and dawndev.
- ***Build & test Silo, Albert Cheng, Quincey Koziol*** (15.4 hours)
 - Build Silo on Linux, Mac, Linux cluster
- ***Miscellaneous Admin Tasks, Quincey Koziol, Albert Cheng*** (8.0 hours)
 - Planning and reporting activities.
 - User discussions, status telecons & e-mail.
 - Make snapshots, etc.
 - Travel
- ***User Support, Quincey Koziol, Raymond Lu*** (5.9 hours)
 - Prepare parallel I/O tutorial slides.
 - Investigate bug reported from silo tests (Bugzilla #1260).
- ***Future Design discussions, Quincey Koziol*** (5.2 hours)
 - On-site design discussions w/Mark.
- ***Set up accounts at LLNL, Albert Cheng, Vailin Choi*** (2.8 hours)
 - Set up VPN connections to LLNL systems.
 - Set up login on wiki.
- ***Single Chunk Index Method for Chunked Datasets, Vailin Choi*** (0.4 hours)
 - Design discussions.

Current Projects for People:

- Quincey Koziol:
 - Scope effort for implementing “stackable” VFDs
 - Design VFDs to enable poor man’s parallel I/O
 - Enable starting “core” VFD from existing buffer
 - Project management
- Albert Cheng:
 - Port and test HDF5 on LLNL machines
- Vailin Choi:
 - Scoping effort for adding single chunk index method

- Add feature to trunk (for 1.10.0 release)
- Raymond Lu:
 - User support: close bugs reported by LLNL developers

Ongoing tasks for next reporting period:

- ***Scope effort for implementing “stackable” VFDs, Quincey Koziol***
 - Discuss feature and write RFC for allowing VFDs to be “stacked” on top of each other.
- ***Design VFDs to enable poor man’s parallel I/O, Quincey Koziol***
 - Discuss feature and write RFC for VFDs that can improve “Poor Man’s Parallel” I/O on HPC systems.
- ***Enable starting “core” VFD from existing buffer, Quincey Koziol***
 - Write and circulate RFC for adding feature to library.
 - Implement feature.
- ***Single Chunk Index Method for Chunked Datasets, Vailin Choi***
 - Scope effort for adding feature to library.
 - Implement feature.
- ***Port and test HDF5 on LLNL machines, Albert Cheng***
 - Stand up daily testing on LLNL machines.
 - Investigate and add tests for “poor man’s parallel” I/O to HDF5 regression test suite.