

HDF Group report to LLNL  
December 2012  
Quincey Koziol

Summary:

During the month of December, 2012 the HDF Group worked on the following tasks:

- Metadata Aggregation (48.9 hours)
- Test HDF5 release on LLNL machines (3.7 hours)
- Project Management Tasks (0.9 hours)
- Support starting core VFD from file image in memory (0.0 hours)
- User Support (0.0 hours)
- Investigate and correct issues reported by Klocwork (0.0 hours)
- Page Buffering (0.0 hours)
- Support “single chunk” indexing method for chunked datasets (0.0 hours)

The **total number of hours** worked is **53.5** hours.

Items of Note:

Vailin has finished the main implementation of the metadata aggregation work and has sent it to me for review. There’s still some “loose ends” of forward/backward compatibility issues and tests to implement, but the main work should be in place now.

New tasks:

During this time period the following tasks were begun:

- *none*

Completed tasks:

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

- ***Metadata Aggregation***
  - Finished implementation, now in for review and possible revisions.

Deferred tasks:

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

- *none*

### Tasks in progress:

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

- ***Metadata Aggregation, Vailin Choi*** (48.9 hours)
  - Design discussions
  - Finished implementing code+tests for feature
  - Tidied up code+tests for review
  - Update time estimate and project plan
- ***Test HDF5 releases on LLNL machines, Albert Cheng*** (3.7 hours)
  - Finish up fixing bug in h5stat test script.
  - Another round of HDF5 1.8.10 release testing on udawn & Aztec.
- ***Project Management Tasks, Quincey Koziol*** (0.9 hours)
  - Set up user accounts
  - Planning and reporting activities.
  - User discussions, status telecons & e-mail.
  - Make snapshots, etc.
- ***Support starting core VFD from file image in memory, -*** (0.0 hours)
  - *Nothing to report during this time period*
- ***User Support, -*** (0.0 hours)
  - *Nothing to report during this time period*
- ***Page Buffering, -*** (0.0 hours)
  - *Nothing to report during this time period*
- ***Investigate and correct issues reported by Klocwork, -*** (0.0 hours)
  - *Nothing to report during this time period*
- ***Support “single chunk” indexing method for chunked datasets, -*** (0.0 hours)
  - *Nothing to report during this time period*

### Current Projects for People:

- Quincey Koziol:
  - Design & architecture guidance
  - Project management
- Vailin Choi:
  - Metadata aggregation design & implementation
  - Page buffering design & implementation

- “Single chunk” chunked dataset indexing method
- Albert Cheng:
  - Test HDF5 releases on HPC machines
- Mark Evans/Frank Baker:
  - Update HDF5 documentation for new feature(s)

Ongoing tasks for next reporting period:

- ***Metadata Aggregation, Vailin Choi***
  - Revise RFC describing new feature as needed
  - Implement feature.
- ***Page Buffering, Vailin Choi***
  - Write RFC describing new feature
  - Implement feature.
- ***Single Chunk Index Method for Chunked Datasets, Vailin Choi***
  - Second review.
  - Check in to subversion.
- ***Test HDF5 releases on LLNL machines, Albert Cheng***
  - Release testing on LLNL machines (in May & November).
- ***Investigate and correct issues reported by Klocwork tool, Quincey Koziol***
  - Investigate issues reported by Klocwork and correct them.

Deferred/Future tasks:

- ***Scope effort for implementing “stackable” VFDs***
  - 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***
  - Discuss feature and write RFC for VFDs that can improve “Poor Man’s Parallel” I/O on HPC systems.