

Status Report for January 15, 2009

[Previous Month](#) [Next Month](#)

Summary of progress

Work activity; whether it reached associated milestones.

NCSA

Bill (submitted on 1/14/2009)

- Made progress on nightly build of trunk, but having trouble with eups in complex packaging situations ([#398](#), [#525](#), [#560](#), [#565](#))
- Supported cleanup of security breach, mainly installing one-time-password (OTP) authentication
- Maintained development support infrastructure
 - ◆ Improving security to prevent future breaches
 - ◆ Help provide temporary home for development server

Chris (submitted on 1/22/2009)

- Vacation / personal time

David (submitted on 1/22/2009)

- Finished cleanup of security breach, with BillB
- Transferred development server services back to their original host
- Upgraded SVN repository to version 1.5
- Working with Jeff K. on project plan

Greg (submitted on 1/22/2009)

- Worked with KT on enabling support in `daf_persistence (PropertySetFormatter)` for `boost::mpi::packed_oarchive/iarchive`
- Completed Clipboard-to-Clipboard interSlice communication (sending/receiving `PropertySet::Ptr`) for two dimensional "focalplane" topology. The dimensions of the 2D topology may now be set in policy. Most recent code is checked into `pex_harness` ticket 343.
- Transition of `pex_harness` to new middleware (`daf_base/pex_exceptions`) and the associated software stack has progressed : 1) pipelines are receiving trigger events properly, 2) interSlice communication pipeline example is working, 3) `EventStage` (pipeline emits an outgoing event to next pipeline) example is working.

Steve (submitted on 1/22/2009)

- Completed converting from `DataProperty?` to `PropertySet?` for `ctrl_events` for source, tests and examples [#508](#)
- Did preliminary work for events failover

Ray (submitted on 1/xx/2009)

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LSSTC

Robyn (submitted on 1/09/2009)

Converted %Done to new 5-Level percentage.

Task	UniqID	%Done	Dropdead	Task Title	Current Status Note
7	1			SW Quality Assurance	
8	7			Develop DC3 Software Development Plan	DC3 Training Exercise; to be mandated in DC4
--	--	75%	DC4	DC3 Software Project Management (SPM) Plan	
9	507	25%	DC3b end	DC3 SQA Plan	
10	508	25%	DC3b end	DC3 V&V Plan	
11	521	100%	DC3a end	Specify test requirements for ea phase of Product dev	done
12	520	100%	DC3a end	Specify pass/fail metrics for each test type	done
13	509	50%	DC3b end	DC3 CM Plan	
14	9		DC3a end	V & V: Acquire SQA support tools	
15	10	100%	DC3b end	Configurable tool to perform software standards checking	purchased
16	479	100%	DC3a start	C++ LSST benchmark test suite packaged	done
17	522	100%	DC3a end	Benchmark potential tools	done
21	478	100%	DC3b end	Acquire	Purchased but not installed yet
22	11	75%	DC3a end	Coverage analysis tool	
23	485	100%	DC3a end	Benchmark	done
24	488	75%	DC3a end	Release for developer use	Waiting on TCT approval on 14 Jan 09
25	24	100%	DC3a end	V & V: Refine Ticket workflow to add more V & V testing	Waiting on TCT approval on 14 Jan 09
170	429		03/15/2009	non-DC3 activities	
210	493			LSST Corp	
211	495		03/15/2009	Software Quality Assurance: Planning	
212	496		03/15/2009	Prepare LSST DM Software Development Plan	In review by Lsst Subsystems
215	524	75%	03/15/2009	Software Development Plan Overview	In review by Lsst Subsystems
213	503	75%	03/15/2009	Software Quality Assurance Guideline	In review by Lsst Subsystems
214	497	75%	03/15/2009	Verification and Validation Guideline	In review by Lsst Subsystems

Ray (submitted on 1/xx/2009)

--	---	75%	03/15/2009	* Define process to track Requirements to Tested Release	Virtual process defined, need more concrete
216	523	100%	03/15/2009	* Specify test requirements for ea development phase	done
217	499	75%	03/15/2009	Configuration Management Guideline	In review by Lsst Subsystems
218	501	75%	03/15/2009	Develop std labelling for products and provenance	Need to coord w/DB&Build teams

Database Group (submitted on 1/xx/2009)

K-T (2008-12-15 to 2009-01-22)

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44/43 (build templates): Ticket #334, initial checkins started 25%
64/161 (DC2 policy capture):
    Redefining this to be incorporation of DC2 capture in DC3a context
    Ticket #315, design with Steve essentially complete 25%
65/469 (DC3 provenance capture):
    Redefining this to be capture of DC3b provenance (beyond policies) 0%
80/531 (PropertySet integration):
    daf_base done 100%
    daf_data/daf_persistence waiting on RP pex_logging 75%
82/534 (Exception integration):
    pex_exceptions, utils, daf_base done 100%
    daf_data/daf_persistence waiting on RP pex_logging 75%

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- Attended Friday Harbor meeting.
- Presented LSST DM as an example of cyberinfrastructure to the iPlant Consortium.
- Attended Conference on Innovative Database Research.
- Listened in on some of functional requirements working session.
- Updated and released pex_exceptions, utils, and daf_base.
 - ◆ Fixed [#583](#) (PropertySet test failures on 64-bit).
 - ◆ Changed to boost::unordered_map from G++ extension to solve [#548](#).
 - ◆ Reordered dependencies to solve [#567](#).
 - ◆ Added generic Python get() to PropertySet to solve [#562](#).
 - ◆ Implemented cycle prevention in PropertySets to solve [#561](#).
 - ◆ Prevented leakage of boost::bad_any_cast in PropertySet to solve [#564](#).
- Got daf_persistence and daf_data to taggable state (waiting on pex_logging).
 - ◆ Integrated PropertySet into daf_persistence to complete [#492](#).
 - ◆ Integrated PropertySet into daf_data to complete [#531](#).
- Replaced DataProperty references in pex_harness with PropertySet.
- Started work on generic package templates in devenv/templates for [#334](#).
 - ◆ Worked on SWIG files with several people (AndyB, Russell, Steve, Greg).
- At Serge's suggestion, reimplemented PropertySet using custom "any" class to gain some performance and avoid type-switches (but add template specializations). Code is complete but will not be used for now, as benefits do not clearly outweigh costs.
- Built and installed svn 1.5.4 locally.
- Discussed design of orchestration/provenance interface.
- Discussed design of orchestration/database setup interface.
- Discussed design of database setup scripts/classes.
- Got TCT approval for using Mysqldb Python package for admin tasks.

- Debugged an issue with sending `PropertySets` in events with Steve.
- Discussed design of improved FITS file retrieval/persistence.
- Helped Greg with merging MPI archives into `PropertySetFormatter`.
- Helped Russell with some build problems.
- Answered some of Martin's questions about `pex_harness/IOStage`.
- Wrote an order-insensitive comparison script for `pex_logging` tests.
- Discussed WCS determination interslice communication use case.

SciDB items:

- Design meeting at SLAC.
- Ongoing API design work.
- Made suggestions to improve proposed benchmark.
- Packaged up sample astronomy data for Philippe.

Andy H

- setup postgres on a small testbed at slac. Still waiting for the account at BNL to be set up

Serge

- updated afw to use new `PropertySet` and exceptions ([#547](#))

Jacek

- refreshed storage estimates
- implemented database setup scripts (part of [#460](#))
- implemented automated run cleanup ([#511](#))
- worked out details of database permissions ([#524](#))
- finished work on SDQA schema ([#409](#))
- added magnitudes to schema ([#401](#))
- large scale tests: email exchange with GridSQL
- SciDB/XLDB
 - ◆ SciDB meeting at SLAC
 - ◆ reviewed usecases
 - ◆ input about SciDB logo and SciDB website
 - ◆ organized SciDB steering telecon
 - ◆ side meeting with one of the SciDB developers
- others
 - ◆ Kavli Symposium
 - ◆ first discussions with ASKAP about possible collaboration
 - ◆ hiring paperwork

Major Accomplishments

Significant breakthroughs, issues resolved.

Objectives for the Next Period

What you expect to accomplish.

NCSA

- Bill:
 - ◆ Continue support of & work on nightly builds ([#398](#), [#525](#))
 - ◆ Release new VM image with new release pre-installed
 - ◆ Support cleanup of security breach
 - ◆ Security doc for PDR
 - ◇ Integrate edits from team members
 - ◇ Draw remaining perimeter diagrams
- Chris:
- David:
 - ◆ Complete revision of DC3a project plan
 - ◇ Add system integration tasks, scalability testing tasks
 - ◆ Schedule DC3a "integration week"
- Steve:
 - ◆ Work with Greg and Ray on Orchestration Layer design.
 - ◆ Preliminary implementation of Orchestration Layer.
 - ◆ Incorporate Orchestration Layer design requirements into the Events framework
- Greg:
 - ◆ Transition of pex_harness to new middleware (daf_base/pex_exceptions) continues with IOStage testing, i.e., use of daf_persistence to retrieve input data and persist output.
 - ◆ Begin development/examination of a "sliceleaders" topology wherein, amongst the full set of Slices, there exist "Slice leaders" that receive/gather data thru interSlice communication from a group of Slices. The Slice leader may then perform a by-CCD calculation while other Slices in its group do no operation.
- Ray:

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- Robyn:
 - ◆ PDR Preparation (highest priority)
 - ◇ bring LSST Software Development Plan, including DM specifics to completion
 - ◇ prepare the DM Integration and Test Plan;
 - ◇ prepare DM I&T Plan cost estimates
 - ◆ DMS Effort (in order of presumed occurrence)
 - ◇ install revised Ticket Workflow, if approved
 - ◇ reinstall automatic notification to Developers of Ticket status

- ◇ get the Coding Standards Checker installed;
 - will need assistance in getting the LSST ruleset implemented
- ◇ install pre-commit block on all SVN source commits which do not refer to a Ticket.

Database Group

Problems Encountered and Solutions Being Pursued

Budget or schedule variance, technical issues, management issues