

# Status Report for December 15, 2008

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## Summary of progress

Work activity; whether it reached associated milestones.

### NCSA

#### Bill (submitted on 12/11/2008)

- Supported recovery from security breach on ds33.ncsa.uiuc.edu
- Worked on automated build system (slowed by security breach) [#398](#), [#433](#) (complete), [#525](#)

#### Chris (submitted on 12/xx/2008)

- Installed Lustre on NCSA cluster to see if the new version had fixed the bug that bit us before; they haven't.
- Reinstalled OS on ds33 and most of the cluster after breakin.
- Investigating self-correcting (95%) disk drive technology

#### David (submitted on 12/18/2008)

- Much work related to the security breach on the LSST cluster and the server dev.lsstcorp.org (ds33.ncsa.uiuc.edu)
  - ◆ Stood up new Trac/SVN on a virtual server setup by Bill B
  - ◆ Worked with Chris C to clear ds33 of possible compromise
  - ◆ Worked on clearing LSST cluster of possible compromise, with Chris C
- Project management transition on reporting
- Took over Microsoft Project files for DM planning
- Support for SVN/Trac for LSST science book manuscript
- Coordinated DC3 telecons

#### Greg (submitted on 12/15/2008)

- Merged ticket 423 of daf\_persistence to trunk prior to its low level moddleware upgrade
- Worked on pex harness code incorporation of updated low level middleware. Pipeline and Slice catch `LsstCppException` when possible and display information on the Traceback; if a plain `Exception` is caught, available messages are displayed. `InterSlice` communication is reimplemented to send `PropertySet`'s between Slices. Testing of all of these elements in real Pipeline execution remains to be done.
- Had some discussions on ROE efforts to run some DC2 style Pipelines; some lessons learned there, but the effort halts for now and will recommence later with DC3 piplines.

## Steve (submitted on 12/xx/2008)

- Met with Greg and Ray to get further requirements for DC3 orchestration layer. This is on hold until I can get Events finished.
- Reworking Events from Data Properties to PropertySets?. This is going well, but I've run into a couple of snags that I'm consulting others on. I expect to have this working in the [#508](#) ticket by next week.

## Ray (submitted on 12/17/2008)

- Presented invited talk at the ESAC Grid Workshop (Madrid) on LSST Hardware Architecture (Travel: 12/10-12/12)
- Worked with Gehrig and NCSA Security reacting to security breach on LSST machines
- Updated pex\_logging for [#458](#)
- DC3 Management:
  - ◆ Worked with Gehrig and Freemon on project management transition
  - ◆ Assisted Gehrig with project plan modifications
- Supported package distribution server
- Made progress on tasks (see below):
  - ◆ distribution server
  - ◆ orchestration layer design
  - ◆ logging and trace
  - ◆ integration of PropertySet?

Task	%Done*	Task Title	Comments
28/39	90%	update distribution server	little bit of clean up left
114/111	75%	orchestration layer design	Worked with Steve, Greg
84/535	25%	integrate logging and Trace	Just need to finish tests
79/531	100%	Full integration of PropertySet?	
78/532	0%	PropertySet? Integration into Policy	

\*using new 5-level percentage on tasks where appropriate.

## LSSTC

### Robyn (submitted on 12/11/2008)

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
--	--	90%	DC4	<b>DC3 Software Project Management (SPM) Plan</b>	
9	507	0%	DC3b end	DC3 SQA Plan	
10	508	10%	DC3b end	<b>DC3 V&amp;V Plan</b>	
11	521	100%	DC3a end	<b>Specify test requirements for ea</b>	done

				phase of Product dev	
12	520	100%	DC3a end	<b>Specify pass/fail metrics for each test type</b>	done
13	509	50%	DC3b end	DC3 CM Plan	
14	9		DC3a end	V & V: Acquire SQA support tools	
15	10		DC3b end	<b>Configurable tool to perform software standards checking</b>	Waiting on funds
16	479	100%	DC3a start	<b>C++ LSST benchmark test suite packaged</b>	done
17	522	100%	DC3a end	<b>Benchmark potential tools</b>	done
21	478	0%	DC3b end	Acquire	Jeff said <b>maybe</b> funds in start of new year
22	11	95%	DC3a end	<b>Coverage analysis tool</b>	
23	485	100%	DC3a end	<b>Benchmark</b>	done
24	488	90%	DC3a end	<b>Release for developer use</b>	Waiting on TCT approval
25	24	100%	DC3a end	V & V: Refine Ticket workflow to add more V & V testing	Waiting approval of proposed Ticket workflow
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	90%	03/15/2009	Software Development Plan Overview	In review by Lsst Subsystems
213	503	90%	03/15/2009	Software Quality Assurance Guideline	In review by Lsst Subsystems
214	497	90%	03/15/2009	Verification and Validation Guideline	In review by Lsst Subsystems
--	---	90%	03/15/2009	<b>* Define process to track Requirements to Tested Release</b>	Virtual process defined, need more concrete
216	523	100%	03/15/2009	* Specify test requirements for ea development phase	done
217	499	90%	03/15/2009	Configuration Management Guideline	In review by Lsst Subsystems
218	501	90%	03/15/2009	Develop std labelling for products and provenance	Need to coord w/DB&Build teams

## Database Group (submitted on 12/xx/2008)

### K-T

(This is incomplete.)

- Did substantial work on 43/43 [#334](#) (new templates for build/SWIG files). Maybe 75% done, rest waiting for RHL.
- Generally completed [#531](#) (daf\_data update), but not yet merged to trunk, and `FitsFormatter` removed instead of updated. Contributes to 79/531 and 81/534.
- Nearly finished [#492](#) (`PropertySetFormatter` and update of `daf_persistence`) but not yet merged to trunk. Contributes to 79/531 and 81/534.
- Fixed [#536](#) (`PropertySet` check for nulls).

- More fixes to 77/178 [#480](#) (implement new `PropertySet`). A few more (64-bit) remain.

## Andy H

- setting up account at BNL - needed to run the large scale tests

## Serge

- reviewed DC3a/DC3b schema split ([#519](#))
- persisting classification information discussion ([#415](#))
- database permission discussion/review ([#524](#))
- DC3/DataAccWG telecons, data train telecon
- run deletion proposal ([#511](#))
- proposal/discussion for generically supporting persistence of STL containers of `Persistable` objects
- review of ticket [#371](#) (don't hardcode leap-second table)
- testing/review for new exception code ([#458](#))
- testing/review of new `PropertySet` code ([#480](#))

## Jacek

- work on database schema
  - ◆ DC3 schema split into DC3a and DC3b ([#519](#))
  - ◆ defined units
  - ◆ added schema for ISR ([#407](#))
  - ◆ revisited exposure metadata schema ([#513](#))
  - ◆ mops related improvements
- released schema browser ([#443](#))
- work on database permissions ([#524](#))
- work on multi-run support ([#447](#))
- work on db views ([#426](#))
- discussions about persisting classification information ([#415](#))
- reading up about balanced systems / amdahl's law
- discussions about DB selection for simulation
- large scale tests planning
- documented [UniqueIds](#) discussion in trac
- interaction with Postgres
- telecons: DC3, PMC, data train
- hiring: interviews, candidate selected, paperwork
- graphics for ADASS poster
- organized 4 DataAccWG telecons
- XLDB / SciDB
  - ◆ started organizing [?XLDB3](#)
    - ◇ assembled organizing committee
    - ◇ dates/location selection
    - ◇ setting up website
    - ◇ connected with [?VLDB'09](#) organizers
    - ◇ working on logistics (conference center, hotel)
  - ◆ reviving [?xldb wiki](#)
    - ◇ wiki contents updated
    - ◇ recruiting several authors
  - ◆ updated [?xldb entry](#) in wikipedia

- ◆ work on science benchmark
  - ◆ selecting scidb logo
  - Others
    - ◆ attended Extreme Computing Workshop
    - ◆ travel arrangements for "Real Problems for Imagined Computers" symposium
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## Major Accomplishments

Significant breakthroughs, issues resolved.

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## 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:
  - ◆ Finish clean-up of security incident
  - ◆ Vacation through mid-January
- David:
  - ◆ Complete cleanup of security breach
  - ◆ Transition per developer request to Subversion 1.5
  - ◆ Project plan and emails
  - ◆ Vacation
- Steve:
  - ◆ I'll be on vacation starting 12/20 until the end of the year.
  - ◆ Finish PropertySet? conversion in Events in the ticket by 12/19.
  - ◆ Start working on orchestration layer, consulting with Greg on the UW and ABE requirements.
- Greg:
  - ◆ Work on design and implementation for supporting multiple `InterSlice` communication modes: send/recv between Slices, Bcast from Pipeline to Slices, Scatter from Pipeline to Slices, etc.
  - ◆ Examine incoming application use cases for interslice communication and ensure support for these cases.

- Ray:
  - ◆ Complete Task: Integration of Trace and Logging
  - ◆ Complete Task: Integration of PropertySet? and Policy
  - ◆ Complete Task: Orchestration layer design

## LSSTC

- Robyn:
  - ◆ bring LSST Software Development Plan, including DM specifics to completion

## Database Group

- See [?database related ticket](#)
  - xldb3: agenda, logistics, who to invite
  - sciDB: face to face meeting, science benchmark, coordinating usecase collection
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## Problems Encountered and Solutions Being Pursued

Budget or schedule variance, technical issues, management issues

We had a serious problem regarding a security breach on two systems key for the DM team. We were quickly able to stand up a stand-in for the system holding the subversion code repository and Trac site. We are nearly done clearing up the LSST cluster, but its unavailability for two weeks put a roadblock on the effort to stand up the DC2 pipelines for comparative timing tests.

We have also made plans related to the loss of Cristina Beldica to the Blue Waters project; her management duties have been divided among Ray Plante, David Gehrig, and Mike Freemon, who has just joined the project.