

Middleware/Infrastructure? Status Report for February 15, 2010

Guide on Reporting Percentage Completed:

For software development tasks,

- use 0% if the solution is still being designed;
- use 25% if the solution's design is completed;
- use 50% if the solution is implemented and tested within the Ticket branch;
- use 75% if the implementation review is complete, the Ticket branch has been merged onto the Trunk branch, and the Ticket is closed.
- use 100% if the affected Trunk packages are tagged and released.

For other tasks, still use these increments, but apply their meaning as best as possible.

Note: Please place an asterisk (*) after the percent if you updated this value in this report.

Baker Bill

Reported 2/18/10

ID	Percent	Task	Comments
MWI569	20%	Maintain automated testing structure	
MWI41	25%	(BB) support distributable VMs for new developers	
MWI74	50%	configure test system for automated V&V	
MWI637	25%*	Automated standards checking script	Implementation is about 70% complete.
MWI638	0%	Buildbot to detect ABI changes on trunk	<i>not started</i>
MWI661	0%	Advanced interslice communications support	<i>not started</i>
MWI662	0%	Machine-readable inputs/outputs manifest	<i>not started</i>
MWI707	0%	Automating nightly DC3a run	<i>not started</i>

*Percent updated in this report

Comments:

(This list seems to be drifting away from my real DC3b assignments -- what should we do to sync it?)

Other Activities

Becla Jacek

Reported 02/18/10

ID	Percent	Task	Comments
MWI680	90%*	Updates: source-related tables, Object table	DiaSource and ForcedSource still to be done, Source, CalibSource and Object all done
MWI681	0%	Updates: exposure-related tables	<i>not started</i>
MWI684	100%*	Standardizing names	
MWI691	0%	Partitioning: design partitioning of MovingObject? table	<i>not started</i>
MWI693	75%	Tools for partitioning data	
MWI697	25%	Task manager: design presentation	
MWI700	25%	Benchmarking	
MWI701	25%	Data Release tools	
MWI702	25%	Documentation	
MWI160	0%	capturing full SW/HW info	<i>not started</i>
MWI159	0%	demonstrating re-creation of Calibrated Science Images	<i>not started</i>
MWI165	40%	support persistence and retrieval of deep detection products and inputs	
MWI465	40%	implement objectId synchronization between data releases (not DC3)	

*Percent updated in this report

Comments:

Other Activities

- database schema design (Source, Object, CalibSource tables)
 - ◆ 2 x 2h db schema design meetings
 - ◆ documented at [DbDC3bSchemaUpdates](#)
 - ◆ schema changes implemented in EA, and available via [?schema browser](#)
- coding for qserv
 - ◆ in particular mysqlproxy + lua script
 - ◆ proposal for TCT [TCTDbServPackages](#)
- rewrote [common queries](#) (1st iteration)
- estimated cost of DBMS support needed during construction/production
- coordinated doc for slac describing "valuation" of scidb for lsst
- SciDB
 - ◆ science advisors poll about null values and masks
 - ◆ interactions with new volunteers and plugging them into the project
 - ◆ several internal slac meetings related to licenses and other legal issues
- XLDB
 - ◆ finalized xldb report, now published at codata data science journal, see [?xldb3 report](#)
 - ◆ started XLDB4 planning (interactions with the community, fixed dates, reserved conf room, arranging logistics related to conf fee collection, xldb trac page updates)
 - ◆ planning xldb research expansion, including presentation for ASCR VIPs, writing a proposal for ASCR

Bosch Jim

Reported xx/xx/xx

ID	Percent	Task	Comments
MWI685	5%	Near neighbor query over 2 or 3 nodes	
MWI694	0%	Basic generic query parser in place	<i>not started</i>
MWI695	0%	Demonstrate joining Object table with non-partitioned tables	<i>not started</i>
MWI696	0%	DC3b syntax parser and aggregation	<i>not started</i>
MWI698	0%	Task manager: multiple queries	<i>not started</i>
MWI699	0%	Task manager: interactions with user	<i>not started</i>
MWI701	25%	Data Release tools	
MWI702	25%	Documentation	

*Percent updated in this report

Comments:

Other Activities

Cribbs Chris

Reported xx/xx/xx

ID	Percent	Task	Comments
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*Percent updated in this report

Comments:

Other Activities

Daues Greg

Reported 02/18/10

ID	Percent	Task	Comments
MWI656	50%	Pipeline shutdown mechanisms	
MWI664	0%	Freeze-drying clipboards: Harness support	<i>not started</i>
MWI106	0%	Work to support communication of general serializable types over MPI	<i>not started</i>
MWI107	0%	Develop mechanisms for identifying/accessing	<i>not started</i>
MWI113	0%	Improving harness exception handling	<i>not started</i>
MWI709	25%	Improve simple, interactive harness execution: interface	

*Percent updated in this report

For this time period Daues joined the orchestration efforts in the area of our implementation/use of Condor glidein scenarios on targeted Teragrid systems. Since Teragrid resources do not resemble standard Condor

pools, we do encounter a learning curve in the setup of glidein scenarios wherein multiple nodes on a machine such as the Abe cluster join our LSST cluster nodes in a pool. We work to support both

- single node pipeline (data release type)
- MPI pipeline (alert generation type)

processing within this scenario, and we are continuing to fine tune our setup in this area.

Comments:

Other Activities

Gehrig David

Reported xx/xx/xx

ID	Percent	Task	Comments
MWI147	0%	build warnings if unittest doesn't satisfy DC3 coverage requirement	<i>not started</i>
MWI152	0%	any failures cause automatic 'Failed Nightly Build' ticket at high priority	<i>not started</i>
MWI154	0%	any failure causes automatic 'Failed Production sanity check' ticket at high priority	<i>not started</i>
MWI155	0%	auxiliary automatic notification to highest authority on failure (separate from ticket notification)	<i>not started</i>
MWI157	0%	Standards: specify requirement to version and archive build's provenance;	<i>not started</i>
MWI158	0%	Configuration Management: define procedure to satisfy that requirement;	<i>not started</i>
MWI159	0%	Configuration Management: implement its instantiation.	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Hanushevsky Andy

Reported xx/xx/xx

ID	Percent	Task	Comments
MWI165	40%	support persistence and retrieval of deep detection products and inputs	

*Percent updated in this report

Comments:

Other Activities

Krughoff Simon

Reported xx/xx/xx

ID	Percent	Task	Comments
0%		life-support services	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Lim KT

Reported xx/xx/xx

ID	Percent	Task	Comments
MWI691	0%	Partitioning: design partitioning of MovingObject? table	<i>not started</i>
MWI698	0%	Task manager: multiple queries	<i>not started</i>
MWI699	0%	Task manager: interactions with user	<i>not started</i>
MWI702	25%	Documentation	
MWI160	0%	capturing full SW/HW info	<i>not started</i>
MWI159	0%	demonstrating re-creation of Calibrated Science Images	<i>not started</i>
MWI165	40%	support persistence and retrieval of deep detection products and inputs	
MWI465	40%	implement objectId synchronization between data releases (not DC3)	
MWI180	0%	persistence framework refinement	<i>not started</i>
MWI1643	0%	Upgrade OutputStage? to register outputs	<i>not started</i>
MWI1644	0%	Implement simple, non-Policy retrieval	<i>not started</i>
MWI1645	0%	App Class: remove need to declare friend classes	<i>not started</i>
MWI1646	0%	App Class: remove intrusiveness of Boost persistence	<i>not started</i>
MWI1647	0%	App Class: legacy file-based persistence/retrieval	<i>not started</i>
MWI1648	0%	Python pers: investigate efficiency of methods	<i>not started</i>
MWI1649	0%	Python pers: define app class interface	<i>not started</i>
MWI1650	0%	Implement simple non-Policy persistence	<i>not started</i>
MWI1651	0%	Upgrade InputStage?	<i>not started</i>
MWI1652	0%	Generic ORM: mapping attributes to columns	<i>not started</i>
MWI1653	0%	Generic ORM: collection persistence and retrieval	<i>not started</i>
MWI1663	0%	Freeze-drying clipboards: design	<i>not started</i>
MWI1669	0%	Determine segment images over a given sky tile	<i>not started</i>
MWI1670	0%	LRU cache for raw segment images	<i>not started</i>
MWI1671	0%	LRU cache for calibrated science exposures	<i>not started</i>
MWI1672	0%	Write/retrieve images to disk/tape	<i>not started</i>
MWI1673	0%	Determine, retrieve cutout areas over given sky tile	<i>not started</i>

MWI675	0%	Write to co-add template pixel store on sky tile basis	<i>not started</i>
MWI674	0%	Determine template pixels overlaying given coords	<i>not started</i>
MWI676	0%	Retrieve template pixels	<i>not started</i>
MWI677	0%	Investigate local disk use for postage stamp generation	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

Monkewitz Serge

Reported xx/xx/xx

ID	Percent	Task	Comments
MWI690	25%	Partitioning: research htm/healpix/stomp/dif	
MWI692	0%	Implement generic query partitioner	<i>not started</i>
MWI693	75%	Tools for partitioning data	
MWI696	0%	DC3b syntax parser and aggregation	<i>not started</i>
MWI465	40%	implement objectId synchronization between data releases (not DC3)	

*Percent updated in this report

Comments:

Other Activities

Pietrowicz Steve

Reported 02/17/10

ID	Percent	Task	Comments
MWI665	50%	Expose Event API	
MWI228	25%	Event system failover	
MWI658	0%	I/O stage for interactive pipeline launch	<i>not started</i>
MWI659	50%	Refactor Orca	
MWI538	0%	Event Monitor integration	<i>not started</i>
MWI589	0%	Pipeline Fault Tolerance	<i>not started</i>
MWI570	0%	Events orchestration layer support	<i>not started</i>
MWI666	0%	Scripts to monitor for node/pipeline failures	<i>not started</i>
MWI667	0%	Python-based high-level event monitor scripts	<i>not started</i>

*Percent updated in this report

Comments: Worked on new definitions of object model for Orca. Currently taking code and moving it into this new model.

Other Activities

Plante Ray

Reported 2/19/10

ID	Percent	Task	Comments
MWI624	75%	User preferences directory	
MWI625	75%	Support user/server tags	
MWI626	0%	Improve packages installation/declaration	<i>not started</i>
MWI627	25%	Improve EUPS Docs	
MWI628	0%	Meta releases	<i>not started</i>
MWI629	0%	User publishing of packages to server	<i>not started</i>
MWI631	0%	As-built manifests into install directories	<i>not started</i>
MWI632	0%	Make SConsUtils dependency on EUPS optional	<i>not started</i>
MWI633	0%	Upgrade SConsUtils for latest Scons	<i>not started</i>
MWI641	0%	Logging tasks	<i>not started</i>

*Percent updated in this report

Comments:

Other Activities

The bulk of my time this month has been spent on orchestration strategies for DC3b and its impact on Orca and the pipeline framework.

- worked on orchestration strategy for DC3b
- assisted Steve with Orca reorganization target via reviews and code contributions
- assisted Steve and Greg with Condor testing
- assisted Mike with Hardware planning efforts
- discussed collaboration options with REDDNet team
- participated in code reviews
- participated in Science Data Processing Workshop at Space Telescope, Jan 25-27.

"Vacation": Feb. 15-16.

Wang Daniel

Reported 02/18/10

ID	Percent	Task	Comments
MWI165	41%*	support persistence and retrieval of deep detection products and inputs	Ongoing. Debugging and finishing up async implementation.

*Percent updated in this report

Comments:

Other Activities

- qserv development.
 - ◆ Tested 22 node configuration.
 - ◆ Implemented and tested C++ threaded dispatcher.
 - ◆ Developed new asynchronous dispatcher to replace above. (too much thread contention, lock contention, limits on thread-count).
 - ◆ Work with xrootd developer (Andy) on new LSST-specific features.

Other Activities

Objectives for the Next Period

What you expect to accomplish.

NCSA

LSSTC

Database Group

Problems Encountered and Solutions Being Pursued

Budget or schedule variance, technical issues, management issues.

NCSA

LSSTC

Database Group