

LBNE BNL weekly meeting
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Software and Computing: taking notes from the DOE review charge

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S&C summary

as announced on 3/7/14

From the S&C biweekly on 3/7/14, before the charge arrived:

- ▶ To state the obvious, the DOE review in May 2014 is a critically important event, and S&C is a large part of it.
- ▶ There is a consensus that meeting the charge for the review can be accomplished by delivering the following:
 - ▶ The LBNE Computing Model
 - ▶ Auxiliary material covering issues that are not covered by the Model document (e.g. effort profile estimates, report on the “portable build” status etc)
 - ▶ The “Technology Demonstrator” – running actual LBNE MC payload on the Grid using CVMFS, xrootd and a monitoring system which is yet to be created
- ▶ We must carefully describe interfaces with DAQ: while not a part of S&C proper, this is obviously a very important area and something will need to be stated at the review, even in absence of the actual DAQ-specific review.

Points from the DOE review charge document package (charge section)

I marked items according to how satisfied I am with their status today:

- ▶ Long-term goals for LBNE S&C ✓
- ▶ Key deliverables for the medium-term ✓
- ▶ Statement of resources available, what is needed ✓
- ▶ The management structure and resources put in place for the implementation of the S&C Plan –
- ▶ Current status: both online and offline for the 35t ✓
- ▶ Overall organization and leadership of the LBNE S&C ✓
- ▶ Collaboration and Coordination among the laboratories and between the laboratories and the LBNE Collaboration –
 - ▶ So far there was interest expressed, but real contributions just aren't happening due to other commitments people made

A few points from the DOE review charge document package (self-assessment section)

- ▶ Q: Does documentation of the S&C Requirements exist?
- ▶ A: Yes, was finished recently (available on this Indico page)
- ▶ Q: Is there a Computing Model
- ▶ A: Yes (work currently in progress, to be completed before the review with at least a preliminary version ready)
- ▶ Q: What are the Workload Management capabilities and what are the goals?
- ▶ A: Currently there is no truly distributed WMS capability, and the goal is to have one, by leveraging tools and expertise of the OSG and HEP experiments, where collaboration has already started
- ▶ Q: What are interfaces with DAQ?
- ▶ A: Described in the Requirements and the Computing Model
- ▶ Q: Do we have a plan for software portability?
- ▶ A: Yes we do

So where are we?

- ▶ In general, our educated guesses with respect to the charge were correct (see slide 2) and we made good progress in anticipation of these documents already
- ▶ However, new elements found in the “Materials Requested” section of the charge:
 - ▶ 3 year progress report. This will require successful completion of our “Technology Demonstrator” items in a short timescale (portable build, CVMFS deployment, WMS)
 - ▶ LBNE Computing plan covering 2014-2018: an extra document to produce, that will require some effort
 - ▶ BNL Report (not covered in this presentation) – a serious work item in my view

LBNE Computing Model

- ▶ Work on this document to start immediately (well it actually has, I'm working on it reviewing existing models).
- ▶ Based directly on the S&C Requirements we recently created.
- ▶ The version that we'll have ready in May will not necessarily be final but good enough to meet the charge (and that's already a challenge).
- ▶ Will allow us to answer 90% of question in a systematic way.
- ▶ Hopefully we'll move into implementation stage after that.

Technology Demonstrator

- ▶ Work is under way to set up CVMFS configuration necessary for LBNE Grid jobs to run
- ▶ M.Kirby is covering this area
- ▶ Need to make progress
- ▶ Needed already a few weeks ago (my responsibility) to work out specs for the xrootd server to be configured at FNAL
- ▶ Good cooperation with OSG
- ▶ For now plan to use OSG Grid submission tools
- ▶ Discussions with ASCR Panda Monitoring project under way to see if we can use their product (no commitment)

ANL Workshop (internal review)

- ▶ 20-22 March 2014
- ▶ Broad scope of issues in preparation for the DOE review
- ▶ Now includes the DAQ component (**new**)
- ▶ Need to better define relationships among S&C, R&D and PT
- ▶ What does S&C need to bring to the March event?
 - ▶ A rough prototype of the Computing Model document
 - ▶ “Hello World” exercise with the Technology Demonstrator
 - ▶ For the latter, CVMFS seems to be on the critical path and needed attention