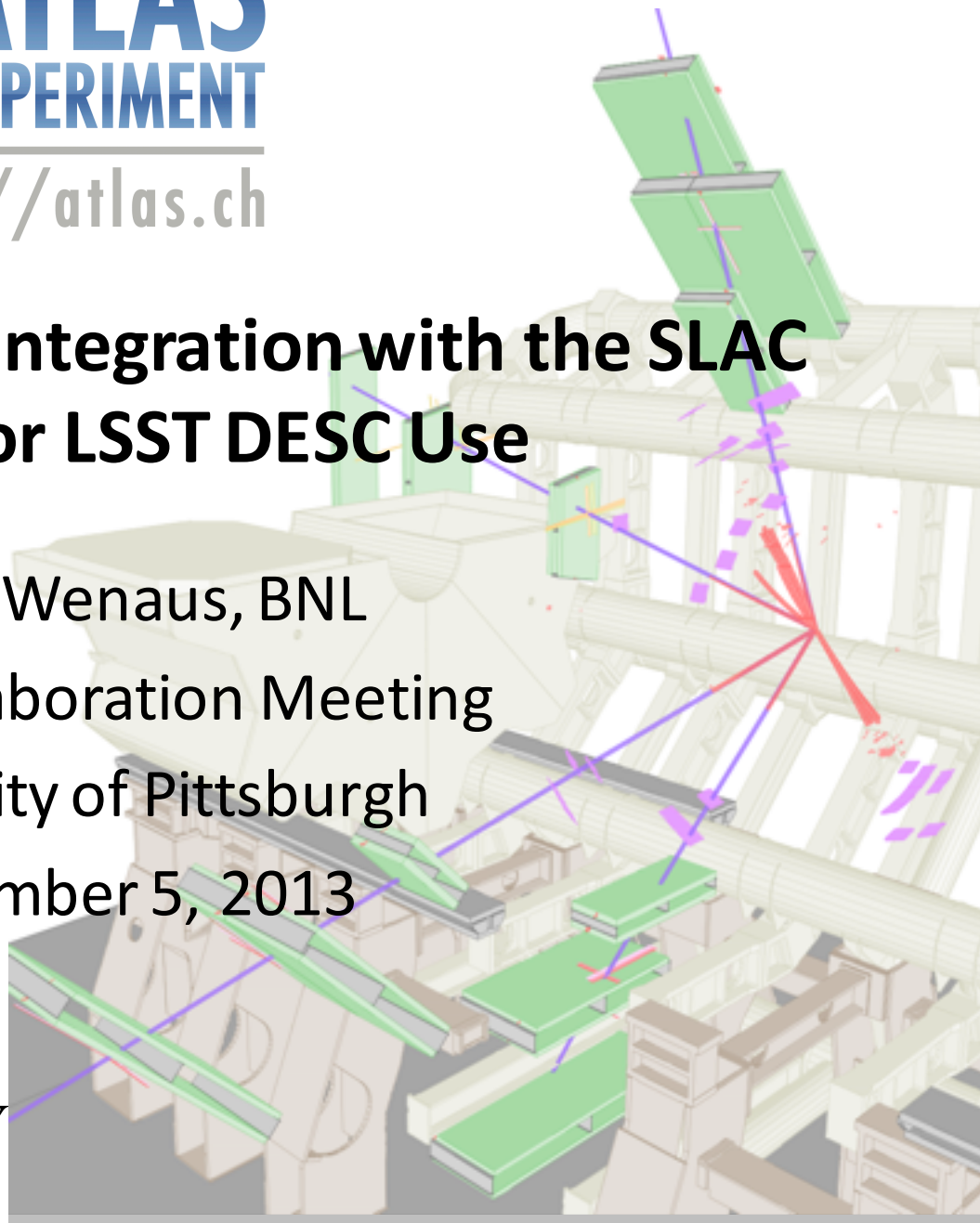




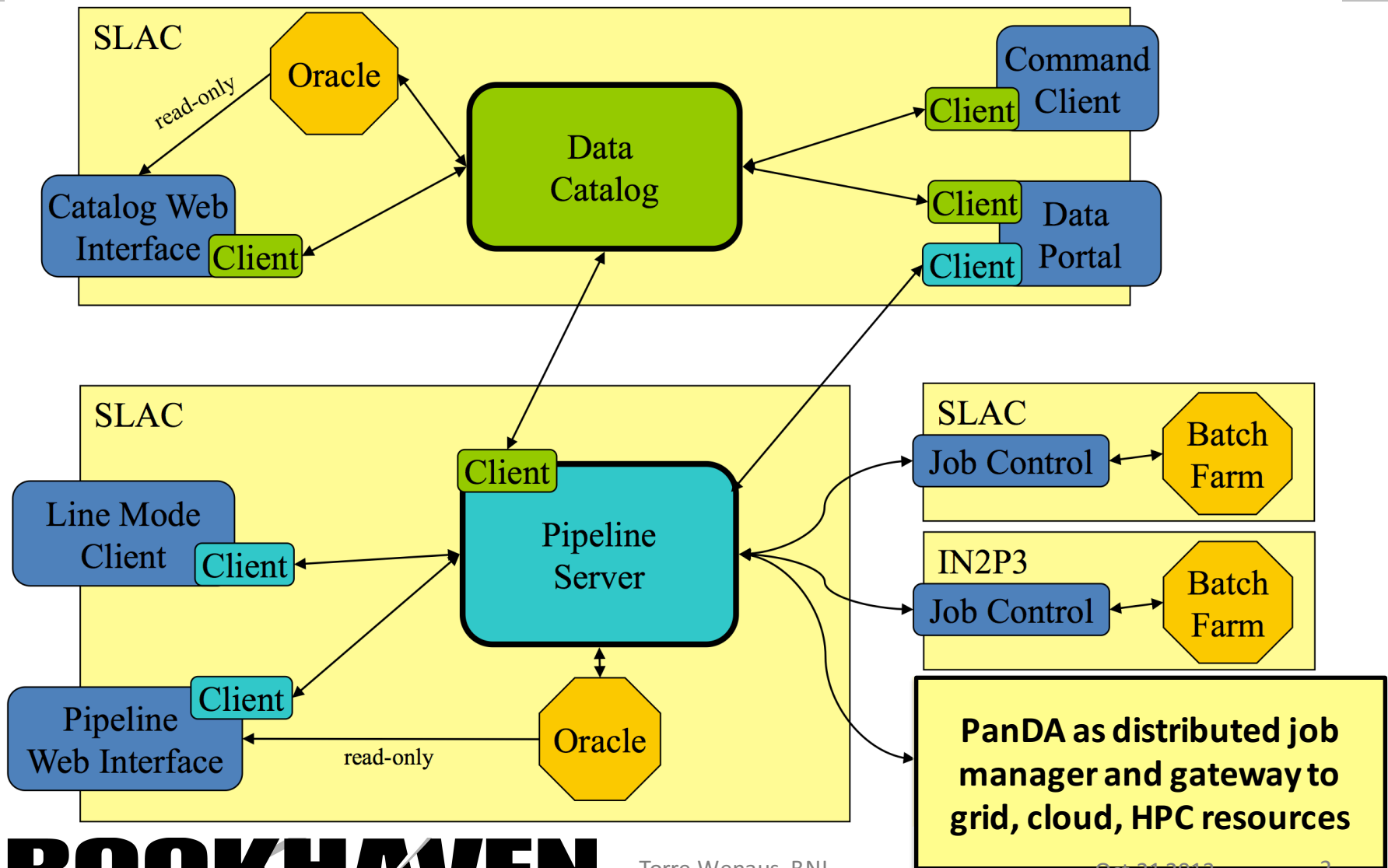
Update on PanDA Integration with the SLAC Pipeline for LSST DESC Use

Torre Wenaus, BNL
DESC Collaboration Meeting
University of Pittsburgh
December 5, 2013

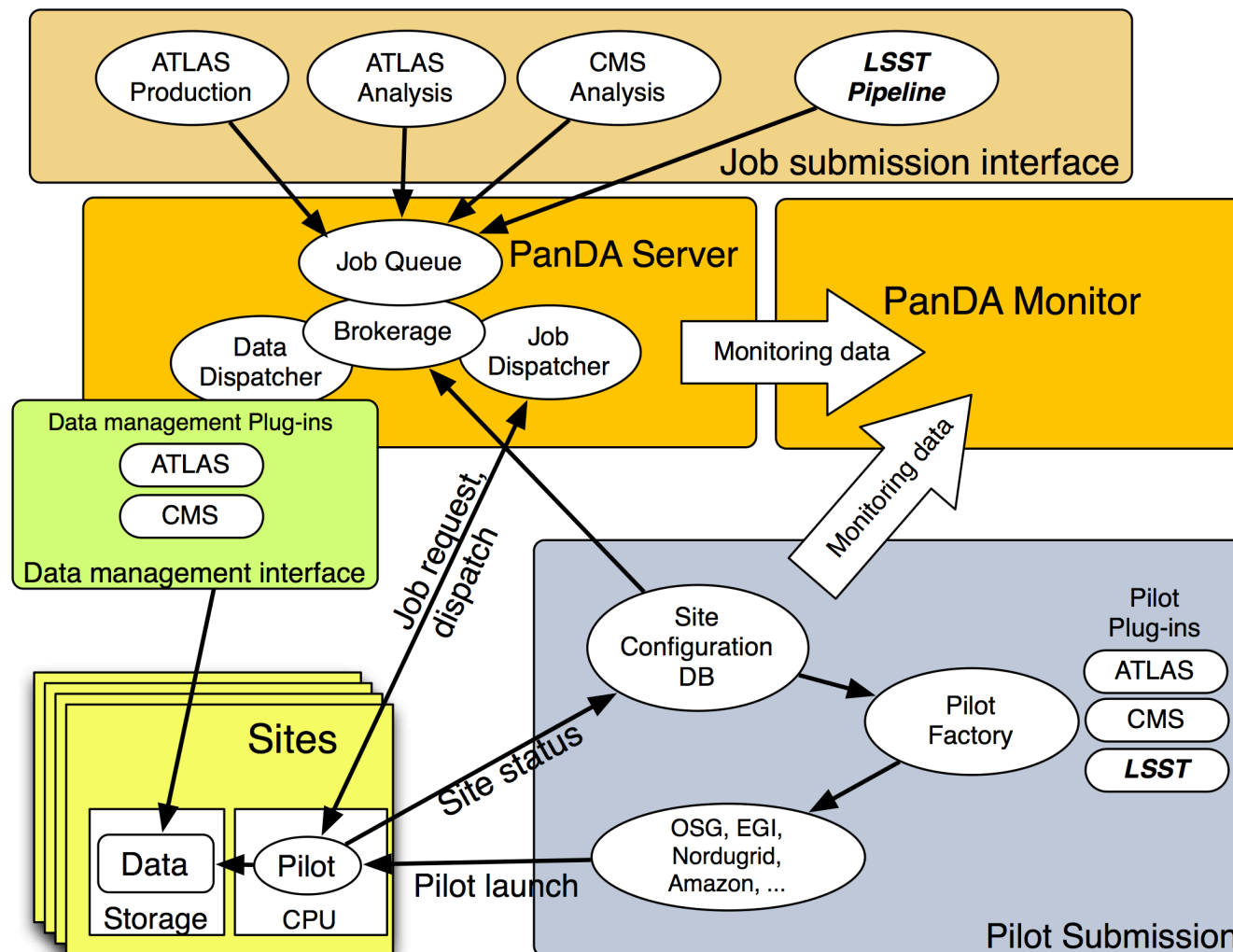
BROOKHAVEN
NATIONAL LABORATORY



SLAC Workflow Pipeline and PanDA Prototype



PanDA System Overview





PanDA and LSST

- Pipeline => PanDA submission implemented and tested with HelloPanda and a standard DESC simulation workflow (phosim, DM stack) last June
- PanDA implementation of Tony's Java interface to pipeline
- Initial tests used ATLAS PanDA queue at BNL and CERN based PanDA pilot submission
- Presented at June DESC computing meeting, FNAL
- Next step to use it seriously: move it to non-ATLAS infrastructure and resources

LSST PanDA jobs in pipeline and PanDA monitors (June)

← → ↺ ↻ 🏠 panda.cern.ch:25880/server/pandamon/query?job=*&ui=user&name=Torre+Wenaus

Showing 40 jobs modified from 2013-06-05 15:04 to 2013-06-05 20:00

add &nojobs=yes parameter to your URL to hide this table

Jobs:

PandaID	Owner	Working group	Job	Status	Created	Time to start	Duration	Ended/ Modified	Cloud/Site, Type	Priority
1839075004	Torre Wenaus		jobsetID=4471 lsst-trf	finished	2013-06-05 15:01	0:02:53	0:01:21	06-05 15:05	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.7e1f114f-5312-4d10-931b-d0f5c0685910							
1839074959	Torre Wenaus		jobsetID=4461 lsst-trf	finished	2013-06-05 15:01	0:01:03	0:01:37	06-05 15:03	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.b7762dc5-4392-4451-9ed9-12733675858a							
1839074941	Torre Wenaus		jobsetID=4451 lsst-trf	finished	2013-06-05 15:00	0:01:42	0:01:08	06-05 15:02	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.cf53640d-509b-4970-b3d4-f2							
1839074933	Torre Wenaus		jobsetID=4441 lsst-trf	finished	2013-06-05 15:00	0:01:42	0:01:08	06-05 15:02	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.c19a6826-3575-4730-ab57-6							
1839045644	Torre Wenaus		jobsetID=2549 lsst-trf	finished	2013-06-05 14:29	0:01:42	0:01:08	06-05 15:02	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.6d07ad4f-a4d8-47c3-b257-16							
1839045614	Torre Wenaus		jobsetID=2539 lsst-trf	finished	2013-06-05 14:29	0:01:42	0:01:08	06-05 15:02	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.edd8055e-c2c0-46fd-ba6c-bd							
1839037042	Torre Wenaus		jobsetID=1245 lsst-trf	finished	2013-06-05 14:07	0:01:42	0:01:08	06-05 15:02	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.105e35aa-e282-475a-be78-1							
1839035320	Torre Wenaus		jobsetID=1083 lsst-trf	finished	2013-06-05 14:04	0:01:42	0:01:08	06-05 15:02	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.3d70ea89-ab79-4720-a065-6							
1839027003	Torre Wenaus		jobsetID=466 lsst-trf	finished	2013-06-05 13:54	0:01:42	0:01:08	06-05 15:02	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.4a0d2d9f-5bbf-44a1-b9ab-3c							
1839024031	Torre Wenaus		jobsetID=307 lsst-trf	finished	2013-06-05 13:51	0:01:42	0:01:08	06-05 15:02	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.588b6abc-4c0b-4519-8d25-8							
1838995930	Torre Wenaus		jobsetID=8679 lsst-trf	finished	2013-06-05 13:24	0:01:42	0:01:08	06-05 15:02	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.c6ab0425-77ff-428c-967f-9f4							
1838012695	Torre Wenaus		jobsetID=6183 lsst-trf	finished	2013-06-04 14:29	0:01:42	0:01:08	06-05 15:02	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.28a87efd-62c5-42d8-a1bc-e9							
1838004938	Torre Wenaus		jobsetID=5101 lsst-trf	finished	2013-06-04 14:11	0:01:42	0:01:08	06-05 15:02	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.337913d9-34b0-4897-819f-e							
1838003396	Torre Wenaus		jobsetID=4929 lsst-trf	finished	2013-06-04 14:08	0:01:42	0:01:08	06-05 15:02	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.0236a4a6-aa38-4080-a83a-d							
1837992821	Torre Wenaus		jobsetID=3927 lsst-trf	finished	2013-06-04 13:52	0:04:45	0:01:36	06-04 13:58	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.730de0b2-8d18-4e1e-bf9a-5c0cc0caa7df							
1837977020	Torre Wenaus		jobsetID=2896 lsst-trf	finished	2013-06-04 13:35	0:02:16	0:01:20	06-04 13:38	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.9705cc65-8937-4472-97b8-33380e014e57							
1837933081	Torre Wenaus		jobsetID=8523 lsst-trf	finished	2013-06-04 12:22	0:00:40	0:01:27	06-04 12:24	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.ce0fcd5-0864-4711-ae8-6d8bc2f31268							
1837918391	Torre Wenaus		jobsetID=7451 lsst-trf	finished	2013-06-04 12:04	0:00:28	0:01:21	06-04 12:06	US/US.ANALY_BNL_SHORT, ptest	1000
			Out: user.wenaus.lsst.b89c2c4f-2397-444b-958b-37607ceeb852							



LSST Pipeline-II

summary / HelloPanda / HelloWorldJob

Streams for process: HelloWorldJob

Processing plots

Task Summary: Canceled: 0, Canceling: 0, Failed: 0, Queued: 0, Running: 0, Success: 8, Terminated: 15, Terminating: 0, Waiting: 0, Total: 23

Top Level Stream: Min Max Status:

Stream Filter: ☐ Regular Expression (?)

Created Date: None None or last N hours 6

☐ Show all streams on one page

☒ Show only latest execution

Stream	Status	Created	Submitted	Started	Ended	Job Id	CPU	Host	Links
15	Success	05-Jun-2013 07:04:39	05-Jun-2013 07:04:49	05-Jun-2013 07:09:46	05-Jun-2013 07:09:46	1839035320	0	acas1021.usatlas.bnl.gov	Messages : Log : Files
16	Success	05-Jun-2013 07:07:19	05-Jun-2013 07:07:29	05-Jun-2013 07:09:45	05-Jun-2013 07:09:46	1839037042	0	acas1080.usatlas.bnl.gov	Messages : Log : Files
17	Success	05-Jun-2013 07:28:53	05-Jun-2013 07:29:03	05-Jun-2013 07:30:08	05-Jun-2013 07:30:10	1839045614	0	acas0198.usatlas.bnl.gov	Messages : Log : Files
18	Success	05-Jun-2013 07:29:06	05-Jun-2013 07:29:12	05-Jun-2013 07:30:32	05-Jun-2013 07:30:33	1839045644	0	acas1399.usatlas.bnl.gov	Messages : Log : Files
19	Success	05-Jun-2013 08:00:37	05-Jun-2013 08:00:45	05-Jun-2013 08:04:08	05-Jun-2013 08:04:09	1839074933	0	acas1586.usatlas.bnl.gov	Messages : Log : Files
20	Success	05-Jun-2013 08:00:46	05-Jun-2013 08:00:53	05-Jun-2013 08:02:11	05-Jun-2013 08:02:12	1839074941	0	acas1586.usatlas.bnl.gov	Messages : Log : Files
21	Success	05-Jun-2013 08:00:55	05-Jun-2013 08:01:04	05-Jun-2013 08:02:20	05-Jun-2013 08:02:20	1839074959	0	acas1525.usatlas.bnl.gov	Messages : Log : Files
22	Success	05-Jun-2013 08:01:04	05-Jun-2013 08:01:14	05-Jun-2013 08:04:11	05-Jun-2013 08:04:12	1839075004	0	acas1525.usatlas.bnl.gov	Messages : Log : Files

Select all · Deselect all · Toggle selection · Rollback Selected



Activities Since June

- Work program established with Open Science Grid (OSG) to move PanDA towards becoming an OSG service
 - US PanDA instance supporting OSG VOs
- Leverages “BigPanDA” project work on generalizing PanDA for non-ATLAS use: modularity, packaging, documentation, no Oracle requirement
 - Much progress since June by Jarka Schovancova (BNL) on the BigPanDA team
 - Implemented MySQL based PanDA server as a tandem (with Oracle) back end for non-ATLAS use
 - Amazon EC2 based MySQL PanDA service set up for OSG PanDA
 - VO-neutral PanDA monitor operating against the EC2 PanDA service for non-ATLAS PanDA monitoring (in progress)
- LSST DESC is the first target for trying it all out
 - LSST DESC specific submission and monitoring



Current Activities

- With the infrastructure in place for OSG VO support, working on LSST VO based pipeline-driven PanDA submission using non-ATLAS infrastructure
- PanDA-pipeline daemon (Tony's pipeline interface) moved to the PanDA OSG EC2 server
- Pipeline-triggered PanDA job submission being set up there
- Readyng the associated job monitoring
- PanDA site BNL-LSST serving the LSST VO created for LSST DESC jobs
 - Submission to the BNL-LSST site being set up



Next Steps

- Slow progress, too often bumped by firefighting higher priorities
- Solution – make this a higher priority by identifying real customers if we can
- Would like to enlist and work with users to get their workloads up and running
 - Get DESC user input to tailor functionality, monitoring
- Then extend to support opportunistic OSG (or non-OSG, e.g. HPC) sites – ie sites that don't necessarily have a local LSST person helping out
 - Issues are software and data availability
 - For software, try out OSG's Oasis service for CVMFS based distribution
 - For data access, xrootd a good candidate
- Down the road, integrate the SLAC data catalog
 - Reported at CHEP to be a few months away from the new VO-neutral REST interface being ready