

DOSAR/OSG Statement of Work (SoW)

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Institution: Iowa State University

- Activities: Production and Cluster Development
- Contacts: Jim Cochran and Charles Zaruba
- *BABAR* MC production cluster to participate in OSG for ATLAS MC production
- Ongoing effort to develop a minimally invasive linux client (initially based on VMware) for the purpose of running OSG/condor jobs on MS-Windows machines
- Initially plan take advantage of ~50 underused MS-Windows-based departmental machines
- In the longer term, deploy a campus-wide system (involving perhaps several thousand MS-Windows based machines)

Institution: Louisiana State University

- Activities: Production and Grid Testbed Development
- The Center for Computation and Technology (CCT) at LSU contribute to DOSAR and OSG production with vast computational resources
 - 1024 processor SuperMike & 256 processor Helix
 - the newly planned 4096 processor Tezpur system & several other smaller clusters
- Tevfik Kosar is leading effort to create a Campus-wide computational Grid at LSU (LSUGrid). LSUGrid will utilize the CCT computational resources, plus idle processor cycles of ~2000 desktop workstations campus-wide → an ideal testbed and production system for OSG activities
- Kosar leads NSF funded distributed data archival, processing, and visualization project called PetaShare
 - PetaShare brings additional 400 TB of tape, and 200TB of disk storage capability to LA
 - PetaShare services potentially available to DOSAR and OSG researchers

Institution: Louisiana Tech University

- Activities: Integration Testbed and Production
- Testbed work is spearheaded by computer scientist Box Leangsuksun
- Leangsuksun with Dick Greenwood, and their students, are applying techniques developed for HA-OSCAR software to the OSG software stack. Goals: to eliminate single-point-failures by incorporating in OSG software self-healing, failure detection, recovery, automatic fail-over, and automatic fail-back
- Production work includes SAMGrid-OSG MC Production at LTU and at the Center for Computation and Technology (CCT) at Louisiana State University (LSU) via the Louisiana Optical Network Initiative (LONI).
- D0 data reprocessing is in production on 384 new Dell processors on LONI grid using SAMGrid-OSG
- ATLAS production will begin on the LONI grid using the OSG stack by late Spring

Institution: SPRACE, São Paulo

- Activities: Tier 2 Production and D0 Reprocessing
- D0 Reprocessing site employing SAMGrid-OSG
 - Currently major participant in D0 Reprocessing
- SPRACE is an active OSG CMS Tier2 associated with FNAL Tier1.

Institution: The University of Oklahoma

- Activities: OSG Integration and Production, ATLAS Tier 2 Production, D0 Production, Campus/Community Grid, and Cyber Infrastructure (CI)
- Condor pool has created. Consists of ~200 student lab PCs; is scheduled to increase to 750 by the Spring
- OSG middleware stack installed, and in use by OSG VOs (including DOSAR and D0) and local OU users.
- Non High Energy Physics science conducted on Condor pool includes materials science (nanotechnology), data storage research (data encoding for storage media), and bio-applications
- Project recently got additional funding by a CI-TEAM grant enabling more efficient incorporation of existing campus Condor pool into both research and education
- The OUHEP group created Condor pool of desktop computers dedicated to HEP and for OSG integration work, ATLAS and D0 production, and also serves as a data storage cache for the SAMGrid-OSG interface for the entire D0 collaboration.

Institution: UT-Arlington

- Activities: Tier 2 Production and Monitoring Software Development
- Kaushik De is co-leading the production software development for ATLAS
- Jae Yu is directing an effort to produce MonALISA based ATLAS distributed analysis monitoring and monitoring for data handling, in addition to the local replica service in data handling for distributed analyses.
- UT Arlington and the University of Oklahoma (OU) are co-hosts of the ATLAS Southwest Tier 2 computing center
- Jae also associate director of HiPCAT in Texas in where he is involved in broader, interdisciplinary grid computing activities as part of DOSAR missions.

Barriers to Success

- Much of DOSAR work supported by left over funds and in spare research time. The SoW listed the following areas where support is needed for OCG-related activities:
- graduate students: ~\$25K/year plus fringe benefits and overhead (~total \$48K/year)
- full time System Administrator (\$30K/year) (assuming match from Institution).

Status

- SoW available at http://www.phys.latech.edu/~greenw/osg/SoW/DO_SAR_Statement_of_Work.doc
- SoW sent by ZDG to R. Pordes Feb. 28 prior to OSG Workshop in San Diego
- SoW circulated among and discussed privately by OSG Council (told to Pat Skubic by Paul Avery).
- No funds available from OSG to support SoW requests
- Suggestions? Further actions?