Report

CERN Visit from 12/June to 12/July 2006

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During our stay at CERN we made the several contacts and arrangements in order to allow our full participation in the CMS experiment and also take part of the Service Challenge (SC4) and the Computing, Software and Analysis Challenge (CSA 2006).

Our group is responsible for the operation of the São Paulo Regional Analysis Center (SPRACE). The SPRACE cluster has 310 kSI2k of computing power and it is processing data for the Fermilab's DZero Collaboration for the last 2 years. We are now making all the necessary change in the configuration of our cluster in order to contribute to the CMS grid infrastructure. We have discussed our plans with the new elected spokesperson Jim Virdee, with Lothar Bauerdick, the co-leader of the CMS computing sub-project, with Ian Fisk, the "Computing Integration" coordinator, with Harvey Newman, chair of the US CMS Advisory Board, among others.

We have discussed the contribution of our group to the MonALISA development through the incorporation of an Ant-based Routing and Wavelength Assignment (RWA) algorithms. Ant-based algorithms are adaptive and distributed and have load-balancing capabilities by natures which are important features when we consider optical networks. Moreover, they can be easily integrated with a GMPLS control plane. They can be an alternative to other heuristics methods, like neural networks or genetic algorithms. Since they are based on mobile agents, they can be straightforwardly integrated in a multi-agent system, like the MonALISA project.

We have also analyzed several scenarios for the implementation of GridUNESP, a grid based computing infrastructure that will be implemented in the São Paulo State University (UNESP). GridUNESP will benefit of researchers across the São Paulo state. supplying computing resources for researchers in physics, biology and bioinformatics,

geosciences and engineering and many other disciplines. This computer power should also be used for processing and analyzing CMS data.

In order to be ready for the Computing, Software and Analysis Challenge 2006 we have to deploy MonALISA modules for network monitoring, to begin PhEDEx load tests and to begin SC4. Our site should move to OSG 0.4.1 and we should deploy a Storage Element on the OSG. The next milestones include:

- Host a large set of new EDM data
- Demonstrate data transfer to/from FNAL
- Generate Monte Carlo for CSA06
- Host appropriate datasets for CSA06

During our stay at CERN we have also participated in several meetings and workshops:

- WLCG Tier 2 Workshop from 12 to 14 June 2006.[1]
- CMS Annual Reviews from 13 to 21 June 2006. [2]
- WLCG Tier2 Tutorials & Experiment Sessions from 15 to16 June 2006. [3]
- WLCG-OSG-EGEE operations meeting from 19 to 20 June 2006. [4]
- CMS Week from 19 to 23 June 2006. [5]

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[1] http://indico.cern.ch/conferenceDisplay.py?confId=1148
[2] http://indico.cern.ch/conferenceDisplay.py?confId=3247
[3] http://indico.cern.ch/conferenceDisplay.py?confId=a058483
[4] http://indico.cern.ch/conferenceDisplay.py?confId=2015
[5] http://indico.cern.ch/conferenceDisplay.py?confId=3361