Contribution ID: **172** Type: **Poster**

File Transfer Service and CMS data transfer optimizations at PIC Tier-1 center

Describe the scientific/technical community and the scientific/technical activity using (planning to use) the EGEE infrastructure. A high-level description is needed (neither a detailed specialist report nor a list of references).

The CMS experiment needs to sustain uninterrupted high reliability, high throughput and very diverse data transfer activities as the LHC operations start. PhEDEx, the CMS data transfer system, is responsible for the full range of the transfer needs. At the infraestructural level, PhEDEx interacts with the grid file transfer services. Optimisations on SWE region and plans for new FTS-interaction are intended to be shown in this poster.

Report on the experience (or the proposed activity). It would be very important to mention key services which are essential for the success of your activity on the EGEE infrastructure.

CMS has demonstrated to have sustained production transfers exceeding 1 PB/month for several months and a core system capacity several orders of magnitude above expected LHC levels.

This year 2007, the PIC Tier-1 center has succesfully transferred about 1 PB of data. The Phedex application is build on top of key services like the grid file transfer service (FTS). The modifications and tuning of the Phedex system to the FTS service have helped to improve the quality, stability and throughput from/to PIC Tier-1 center. In the poster we will also cover some of the new modifications to be included in Phedex in order to accomodate to recent FTS 2.0 release to boost the Phedex performance.

Describe the added value of the Grid for the scientific/technical activity you (plan to) do on the Grid. This should include the scale of the activity and of the potential user community and the relevance for other scientific or business applications

Phedex provides an interface for CMS and site data managers to manage and monitor data placement decisions, schedules transfer requests for execution, and dispatches file transfers to underlying grid file and storage management services.

In order to produce the system with confirmed capability to meet the objectives, the PhEDEx data transfer system has undergone rigourous development and numerous demanding scale tests. While being involved in these global CMS tests, the PIC Tier1 center has carried out several tests in order to improve and optimise the Phedex interactivity to site FTS server. This has improved the quality, stability and throughput between PIC and SWE Tier2 sites, CERN, Tier1 and non-regional Tier2 centers.

The impact of these tests has collapse to new ideas and plans to develop a new FTS backend for the Phedex Data System, that will be reviewed as well in the poster. We expect sharing this to be useful for developers of data management applications.

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