Enabling Grids for E-sciencE

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ATLAS computing readines challenges

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Describe the activity, tool or service using or enhancing the EGEE infrastructure or results. A high-level description is needed here (Neither a detailed specialist report nor a list of references is required).

The ATLAS experiment has gone through two major computing exercises in February and May 2008: the Common Computing Readiness Challenges. The main goal of the exercises was to prove that the four LHC experiment can operate at the same time on the WLCG infrastructure, sustaining nominal job and data throughput rates as during real data taking. Large fraction of the ATLAS resources (almost 70%) as well as many mildleware components are provided by EGEE.

Report on the impact of the activity, tool or service. This should include a description of how grid technology enabled or enhanced the result, or how you have enabled or enhanced the infrastructure for other users.

The CCRC08 exercise offered a complete tests of the EGEE middleware, service infrastructure and procedures. In particular, the exercise offered many input for future development activities, particularly in the Data Management field. It is in fact quite clear that the current system will be able to cope with the first year(s) of LHC data taking, but several aspects, particularly at the level of authorization for data access, and storage reliability and configuration flexibility need to be improved.

Describe the added value of the grid for your activity, or the value your tool or service adds for other grid users. This should include the scale of the activity and of the potential user community, and the relevance for other scientific or business applications.

This contribution will report on the ATLAS experiment activity during CCRC08. The first phase of the exercise consisted mostly in commissioning the new storage implementation (SRMv2) at sites. The second phase was instead focus on testing all the ATLAS use cases for both data and job distribution. The data distribution from CERN to the Tier1 sites (10 in total, 8 on EGEE) has been carried on both at nominal rate, with the objective of testing the reliability of the system in dispatching complete sets of data, and at 200% of the nominal rate, to test the reliability of the system under stress. The full Tier1-Tier1 matrix for data transfers as well as Tier1-Tier2 data distribution has also been tested very aggressively. In terms of workload management, ATLAS performed during CCRC08 the first large scale test of the data reprocessing at Tier1s, where detector data, together with the continuous Monte Carlo production activity at all sites.

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