

Experience Commissioning the ATLAS Distributed Data Management system on top of the WLCG Service

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The ATLAS Experiment at CERN developed an automated system for data distribution of simulated and detector data. Such system, which partially consists of various ATLAS specific services, strongly relies on the WLCG service infrastructure, both at the level of middleware components, service deployment and operations. Because of the complexity of the system and its highly distributed nature, a dedicated effort was put in place to deliver a reliable service for ATLAS data distribution, offering the necessary performance, high availability and accommodating the main use cases. This contribution will describe the various challenges and activities carried on in 2008 for the commissioning of the system, together with the experience distributing simulated data and detector data. The main commissioning activity was concentrated in two Combined Computing Resource Challenges, in February and May 2008, where it was demonstrated that the WLCG service and the ATLAS system could sustain the peak load of data transfer according to the computing model, for several days in a row, concurrently with other LHC experiment activities. This dedicated effort led to the consequential improvements of ATLAS and WLCG services and to daily operation activities throughout the last year. The system has been delivering to WLCG tiers many hundreds of terabytes of simulated data and, since the summer of 2008, more than two petabytes of cosmic and beam data.

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