ATLAS Data Challenge Production on Grid3

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We describe the design and operational experience of the ATLAS production system as implemented for execution on Grid3 resources. The execution environment consisted of a number of grid-based tools: Pacman for installation of VDT-based Grid3 services and ATLAS software releases, the Capone execution service built from the Chimera/Pegasus virtual data system for directed acyclic graph (DAG) generation, DAGMan/Condor-G for job submission and management , and the Windmill production supervisor which provides the messaging system for distributing production tasks to Capone. Produced datasets were registered into a distributed replica location service (Globus RLS) that was integrated with the Don Quixote proxy service for interoperability with other Grids used by ATLAS. We discuss performance, scalability, and fault handling during the first phase of ATLAS Data Challenge 2.

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