Grid production with the ATLAS Event Service

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ATLAS has developed and previously presented a new computing architecture, the Event Service, that allows
real time delivery of fine grained workloads which process
dispatched events (or event ranges) and immediately streams outputs.
The principal aim was to profit from opportunistic resources such as commercial
cloud, supercomputing, and volunteer computing, and otherwise unused cycles on clusters and grids.
During the development and deployment phase, its utility also on the grid and conventional clusters for the
exploitation of otherwise unused cycles became apparent.
Here we describe our experience commissioning the Event Service on the grid in the ATLAS
production system. We study the performance compared with standard simulation production.
We describe the integration with the ATLAS data management
system to ensure scalability and compatibility with object stores.
Finally, we outline the remaining steps towards a fully commissioned system.

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