

# Integration of an AFS-based Sun Grid Engine site in a LCG grid

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The LHC's Computing Grid (LCG) middleware interfaces at each site with local computing resources provided by a batch system. However, currently only the PBS/Torque, LSF and Condor resource management systems are supported out of the box in the middleware distribution. Therefore many computing centers serving scientific needs other than HEP, which in many cases use other batch systems like Sun's Grid Engine (SGE), are not integrated into the Grid. Binding a site running on the SGE batch system is possible thanks to The London e-Science Centre's Globus JobManager and Information Reporter components. However when using AFS instead of plain NFS as shared filesystem some other issues arise. In collaboration with the Max Planck Institute for Physics (Munich), and as part of Forschungszentrum Karlsruhe's involvement in the MAGIC Grid project, we set up an LCG interface to Munich's Sun Grid Engine batch system. This SGE-based cluster is currently at a remote location (Garching's Computing Center) and a secure jobsubmission is achieved relying upon the usage of the AFS filesystem. This allows an established "non-grid" computing center to offer its resources via the Grid without any changes in the running infrastructure.

**Primary author:** Dr GARCIA, Ariel (Forschungszentrum Karlsruhe, Karlsruhe, Germany)

**Co-authors:** Dr KORNMEYER, Harald (Forschungszentrum Karlsruhe, Karlsruhe, Germany); Dr COARASA PEREZ, Jose Antonio (Max-Planck Institute for Physics, Munich, Germany); Dr KLUTH, Stefan (Max-Planck Institute for Physics, Munich, Germany)

**Presenter:** Dr GARCIA, Ariel (Forschungszentrum Karlsruhe, Karlsruhe, Germany)

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