eGee
Enabling Grids
for E-sciencE

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The Grid services of Consorzio COMETA for industry

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COMETA (www.consorzio-cometa.it) is a not-for-profit Organization established in Catania (Italy) in 2005 and formed by the Universities of Catania (www.unict.it), Messina (www.unime.it), and Palermo (www.unipa.it), the INFN (Italian National Institute of Nuclear and Particle Physics, www.infn.it), the INAF (Italian National Institute of Astrophysics, www.inaf.it), the INGV (Italian National Institute of Geophysics and Volcanology, www.ingv.it), and the Consorzio S.C.I.R.E. (www.consorzioscire.it).

The institutional goals of COMETA are to create a Virtual Laboratory in Sicily, both for scientific and industrial applications, built on top of a Grid infrastructure; Connect the Sicilian e-Infrastructure to those already existing in Italy, in Europe, and in the rest of the world improving the scientific collaboration and increasing the "competitiveness" of e-Science and e-Industry "made in Sicily"; Disseminate the "Grid paradigm" through the organization of dedicated events and training courses; and Trigger/foster the creation of spin-offs in the ICT area in order to reduce the "brain drain" of brilliant young people to other parts of Italy and beyond.

The COMETA infrastructure is fully operational and it is distributed over 7 sites in Sicily (located in the poles of Catania, Messina and Palermo) where HPC clusters connected by the gLite grid middleware are installed and functioning. At present, the production service counts more than 2000 CPU cores and more than 250 TB of disk space.

During the presentation, the Grid services developed by the Consorzio COMETA to ease the adoption of the Grid paradigm by industry will be shown. In particular, the porting of gLite on Windows, the Secure Storage System, the support for MPI-2 jobs in gLite, the management of licenses of commercial software in a Grid environment, the QoS and SLA frameworks, the storage accounting, the transactional framework for digital repositories, and the virtualization techniques will be mentioned. Some examples of industrial applications currently supported on the Sicilian e-Infrastructure managed by COMETA will also be shown.

The Grid services shown will demonstrate, through real use cases, how gLite can be extended to satisfy the stringent requirements that come from the industrial world.

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