

A Business Model for the Establishment of the European Grid Infrastructure

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International research collaborations increasingly require secure sharing of resources owned by the partner organizations and distributed among different administration domains. Examples of resources include data, computing facilities (commodity computer clusters, HPC systems, etc.), storage space, metadata from remote archives, scientific instruments, sensors, etc. Sharing is made possible via Grid middleware, i.e. software services exposing a uniform interface regardless of the specific fabric-layer resource properties, providing access according to user role and in full compliance with the policies defined by the resource owners.

The Grid Infrastructure consists of: distributed resources –funded and owned by national and local resource providers –with their respective usage policies, interoperable middleware services installed and operated by resource providers, the Grid middleware distribution and the testbeds for its certification and integration, the Grid operations including authentication, authorization, monitoring and accounting, and, finally, user and application support.

The European project EGI_DS, brings about the creation of a new organizational model, capable of fulfilling the vision of a sustainable European Grid infrastructure for e-Science. The European Grid Initiative (EGI) is the proposed framework which links seamlessly at a world-wide level the European national e-Infrastructures operated by the National Grid Initiatives, and based on a European Unified Middleware Distribution (UMD), which will be the result of a joint effort of various European Grid middleware consortia.

This paper describes the actors contributing to the foundation of the European Grid infrastructure, and the use cases, the mission, the purpose, the offering, and the organizational structure which constitute the EGI business model.

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