



About DEISA

DEISA is a consortium of leading national supercomputing centres that currently deploys and operates a persistent, production quality, distributed supercomputing environment with continental scope. The purpose of this FP6 funded research infrastructure is to enable scientific discovery across a broad spectrum of science and technology, by enhancing and reinforcing European capabilities in the area of high performance computing.

EnginFrame DEISA Portal

The technology partnership with the DEISA Supercomputing Grid project was an important opportunity to demonstrate the flexibility of **NICE EnginFrame** by deploying it in a working context in the Life Sciences sector. From an industrial perspective **NICE EnginFrame** has been successfully deployed in Engineering, Oil & Gas, Telco sectors for many years.

DEISA is a TeraGrid-like funded project, making it the second largest European Grid, connecting eleven of the largest HPC centres in Europe, with Complex security policies. Once deployed on the DEISA-infrastructure **NICE EnginFrame** became the most widely deployed Grid gateway on such an infrastructure.

The DEISA Challenge



From an application perspective the DEISA-EnginFrame project meant integrating several BioMedical applications including; **BLAST RAXML** **NAMD** with schedulers like LoadLeveler, SLURM/MOAB, PBSPRO.

The integration of **NICE EnginFrame** in the DEISA project needed to encompass security policies including authorization, accounting. In this it meant the NICE EnginFrame portal needed to be connected to an accounting system already developed and used by DEISA.

The solution eventually deployed with DEISA was a comprehensive technology overhaul including a full process of dedicated training, installation, configuration, interfaces deployment, workflow design, as well as internationalization/localization stretching across Europe.

For the introduction of NICE EnginFrame in the DEISA infrastructure to run as smoothly as possible it was vital that IT & Application managers did not re-invent the wheel. The solution should simply optimise their current infrastructure without changing the way its users currently worked.



NICE Srl

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About NICE

NICE develops the industry-leading EnginFrame Grid portal, delivering user-friendly, highly customizable access to Grid-enabled applications and infrastructures.

NICE products complete the Grid solution by increasing its usability and user-friendliness, without sacrificing flexibility and control for the most advanced computing scenarios.

The solution for DEISA

The deciding factor in deploying NICE EnginFrame on the DEISA infrastructure was due in no small part to EnginFrame's ability to **reduce the complexity of installation**, deployment and usage normally associated with High Performance Computing Grid infrastructures in heterogeneous environments.

The NICE EnginFrame integration with DEISA project included some specific security features built on an **Accounting** system already developed and used by DEISA. **Encryption**; communication between EF server and Agents, between browsers and EF server (or Apache) must be encrypted. **Authentication**; EnginFrame three different authentication schemes with x509 certificates: Authorization, EnginFrame made it possible to define fine grained, group-based ACLs (in XML).

Benefits

A user-friendly portal for the Life Science user community (VO) for DEISA's scientific users with transparent access to highly distributed, **heterogeneous** pool of HPC resources used for Biomedical Applications such as BLAST, RAXML, NAMD.

The technology partnership means that the DEISA EnginFrame solution gives users a highly tuneable solution. It comes with a proven efficiency and performance levels in some of the most compute intensive Grid environments. The technology partnership is a wide ranging service and support collaboration that includes application, training, support services and maintenance based on the EnginFrame solution.

At A Glance

TeraGrid-like funded project—2° largest European Grid

Connects the 11 largest HPC centers in Europe

Complex security policies, Accounting, Authentication,

Multiple schedulers—Heterogeneous Environment