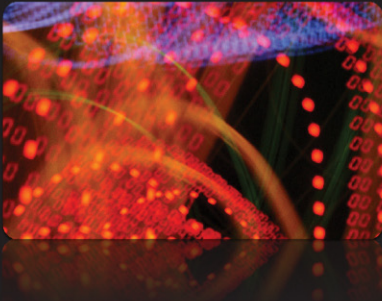


EDR Processing



Introduction

The aim of the NextGRID project is to devise the next generation Grid architecture. In order to design and validate this architecture, it is necessary to experiment with new middleware components, and to use them in application level experiments to verify that they can meet the needs of business Grid users.

Electronic Data Record Processing Application Level Experiment

One of the most data intensive processes that must be carried out by a telecommunications operator is the analysis of all the data regarding the use of its network services. Data related to calls are stored in EDRs (Electronic Data Records) files. These files are processed continuously in high-end machines and then stored in a Data Warehouse that is used by several business processes. Grid Systems S.A, one of the world's leading commercial Grid middleware companies, is performing experiments on its "EDR processor" application which mimics these internal telecommunications processes.

These experiments include checking that the data-throughput capacity and computing capability of the Grid architecture is high enough to support EDR processing at standard rates, checking usability (through virtualisation) of the computational services and checking security levels (EDRs include personal information and travel unencrypted). In addition, the application per se can be either intra- or inter-enterprise depending upon the Grid on which it runs. Currently Grid Systems' customers only use intra-enterprise processing. However, this application puts strict conditions on data throughput when inter-enterprise flows are considered, which may be one of the most interesting experiments. It is unlikely that a telecommunications operator will, in the near future, outsource its databases and data warehouses, but it is possible that it may need to add extra computational resources for EDR processing. In this case, the data would remain inside the provider's intranet and a third party would provide the needed computational capacity. Experiments will check both the security levels and that data access is not slowed below some critical point.

Overall the experiments will focus on the discovery of external computational resources and flexible security policies in the context of necessary high transfer rates and new business models.



Current Status of Experiment

The EDR-processing experiments are presently focussed on the discovery of external computational resources and flexible security policies in the context of necessary high transfer rates including SLAs and workflow compositions.

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