

# Failure Management in Grids

FORTH, UCY, INFN

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## Main results

- A generic framework (called FAILRANK) for managing failures on a Grid has been developed
- Construction of a 38GB dataset for failures on EGEE grid (one month)
- Evaluation of the framework
  - Using the dataset
- Prototype under development

## Work so far

### Papers:

1. G. Tsouloupas, M. D. Dikaiakos, "Grid Resource Ranking using Low-level Performance Measurements." The 13th International Euro-Par Conference (Euro-Par 2007), 28-31 August, 2007, Rennes, France (accepted for publication).
2. George Tsouloupas, Marios D. Dikaiakos, "GridBench: A Tool for the Interactive Performance Exploration of Grid Infrastructures" Journal of Parallel and Distributed Computing, Elsevier (In press, May2007).
3. D. Zeinalipour-Yazti, K. Neocleous, C. Georgiou, M.D. Dikaiakos, "Monitoring and Ranking of Grid Failures using FailRank." (poster) *EGEE '06 Conference*, Geneva, September 26, 2006.

### Technical Reports:

1. Demetrios Zeinalipour-Yazti, Kyriacos Neocleous, Chryssis Georgiou and Marios D. Dikaiakos, "Managing Failures in a Grid System using FailRank" University of Cyprus Technical Report TR-06-4, Department of Computer Science, University of Cyprus, September 2006.
2. K. Neocleous, M. D. Dikaiakos, P. Fragopoulou and E. Markatos, "Failure Management in Grids: The Case of the EGEE Infrastructure." CoreGRID Technical Report TR0055

## (continued)

### Talks:

**12 June 2007: "FAILRANK: Towards a unified Grid failure monitoring and ranking system", CoreGrid Workshop**

**26 May, 2007: "Grid Technologies for Computational Research" presented by Marios Dikaiakos at The ECCO XX Conference, Amathus Beach Hotel, Limassol, Cyprus**

**20 March, 2007: "Top-K Algorithms - Concepts and Applications" talk by Demetris Zeinalipour, University of Cyprus**

## Future work

- **Completion of prototype development**
- **Integration of the prototype with EGEE resource broker**
- **Empirical Evaluation of the Integrated System**