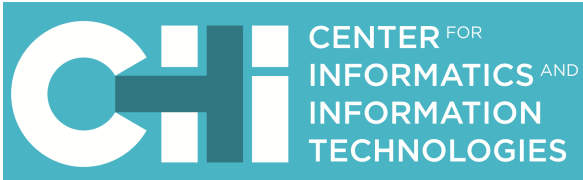


Distributed Systems Monitoring

COMPUTER SYSTEMS / ParaDisE



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SITAN-Services for
Intrusion Tolerant AdHoc
and Sensor Networks

Objectives

- Improve parallel and distributed applications performance and correctness, in heterogeneous and dynamic systems of our days;
- Contribute to improve the information collected and the used performance models;
- Define methodologies and tools that help the programmer to analyze, evaluate and debug the interactions and protocols used in parallel and distributed systems;
- Improve resource management and scheduling in the context of clusters, Grid and Cloud runtime environments;

Methodology

- Improve distributed monitor mechanisms and systems, achieving better information about systems execution, its interactions and the resources used. Balance information detail and quality with system intrusion;
- Investigate prediction models based on past executions or on real-time monitoring, aiming at application/jobs performance tuning, resource management and scheduling and overall system throughput optimization.
- Adapt and evaluate the monitoring approach in the context of algorithm and protocol analysis over large scale sensor networks.

Expected Results

- Tools that can achieve a better understanding of parallel and distributed systems real executions;
- Improved prediction models used in cluster and cloud resource managers and backfilling schedulers, taking into account past jobs executions analysis;
- Make it easy to identify errors and bottlenecks during execution of distributed algorithms and protocols. Elected scenarios include parallel high performance applications and the evaluation of consensus protocols. Improve existing and/or propose new algorithms and protocols

