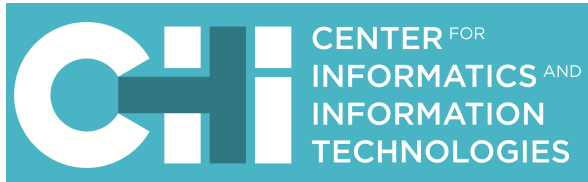


DEPARTAMENTO DE INFORMÁTICA

Cloud Support for Global Computing

COMPUTER SYSTEMS / CR4 Team



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Currently working on
cloud-based solutions for
global computing

Objectives

Global Internet Services require:

- Permanent, fast and safe access to data;
- Fast computation over large amount of changing data.

The goal of our research is to:

- Develop data management solutions with high availability and low latency;
- Develop algorithms for incremental data processing;
- Develop solutions for improving efficiency and reliability of multi-core nodes.

Methodology

Experimental systems research

- Derive requirements and evaluate solutions using realistic workloads
- Propose algorithms and system design that are realized in working prototypes

Main approaches leverage operations properties (e.g. commutativity) to reduce coordination requirements and increase load parallelization

Expected Results

Design of systems that include algorithms for:

- Replicated data management for cloud computing with high availability and low latency;
- Efficient incremental processing of information;
- Replication of software component for improved performance and reliability.

