

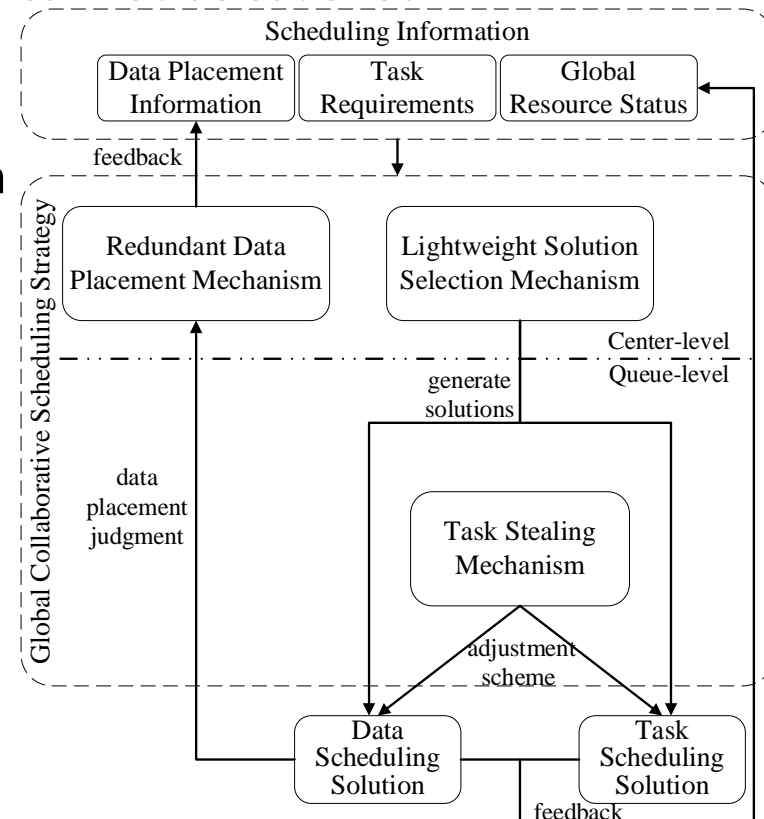
GCSS: A Global Collaborative Scheduling Strategy for Wide-Area High-Performance Computing

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Problems & Ideas

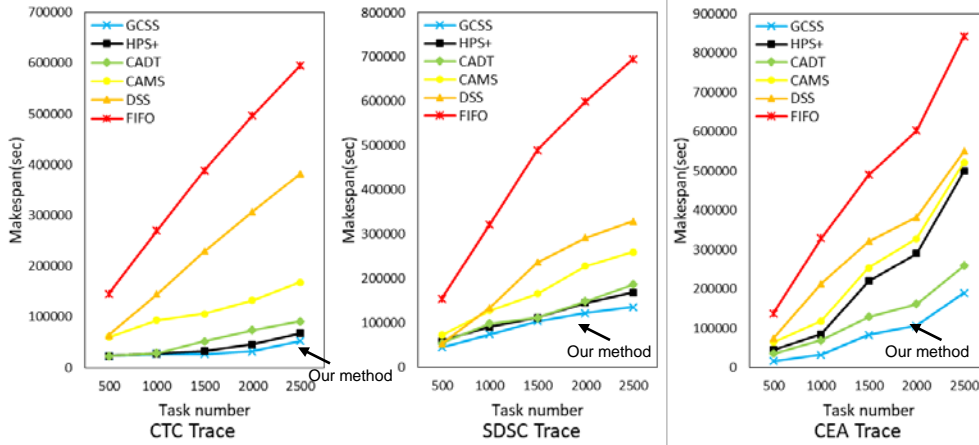
- Problems of scheduling strategies for wide-area high-performance computing
 - Low-cost data migration cannot be met
 - Balanced and accurate task distribution cannot be satisfied
- Ideas: Collaborative scheduling
 - Selecting optimized scheduling solution according to task requirements, data placement information and global resource status
 - Mitigating data migration costs with redundant data placement
 - Adjusting task distribution in wide-area based on task stealing mechanism



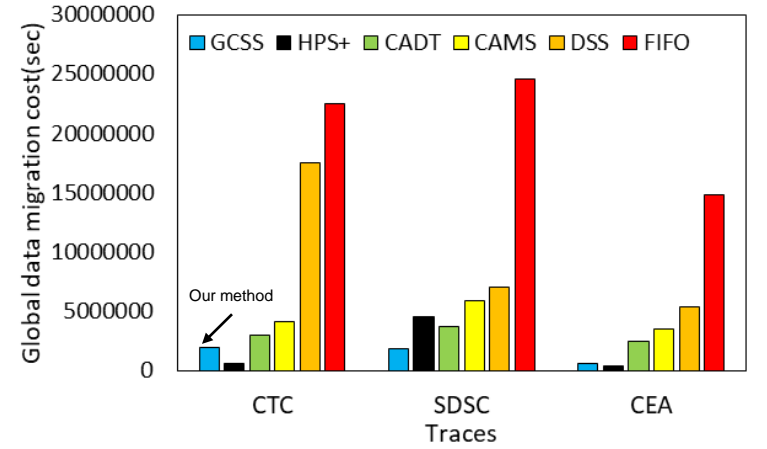
GCSS Framework

Main Contributions

- **Makespan of different scheduling algorithms for multiple workload traces**



- **Data migration cost of different scheduling algorithms for multiple workload traces**



- **Computing and storage resource utilizations of different scheduling algorithms**

