



Application-Level Scheduling on the Computational Grid

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Goal: Provide a mechanism for adaptively and dynamically scheduling individual applications on distributed, heterogeneous systems.

Approach: Enhance application performance by evaluating each system component in terms of its impact on the application's execution. Scheduling decisions are based on dynamic resource availability and performance information, application performance models, and user specifications.

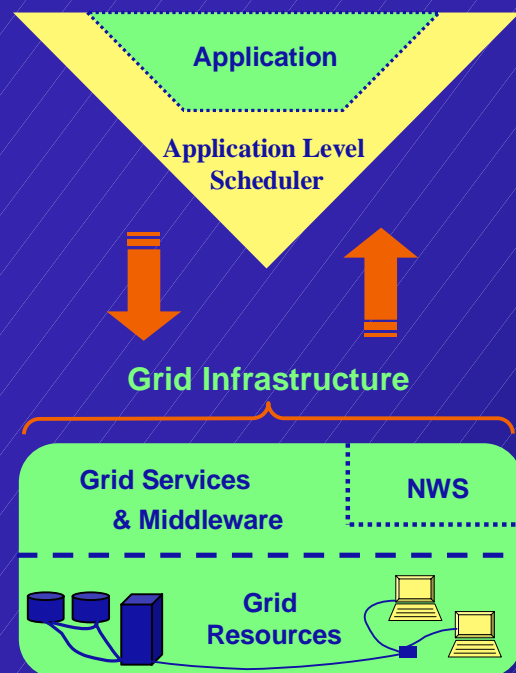
Functionality: AppLeS scheduling services include

- resource suitability evaluation
- resource selection
- data distribution
- task assignment and monitoring

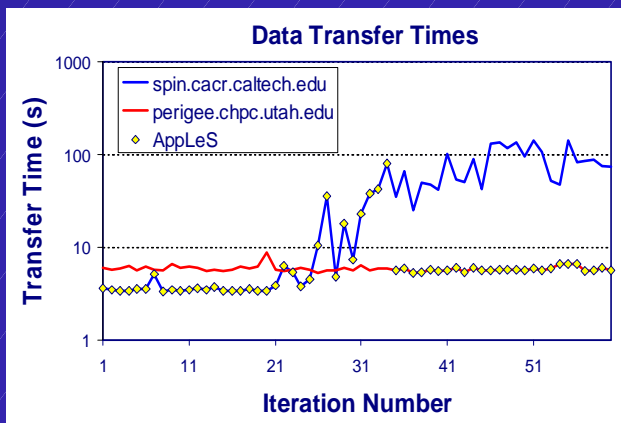
Advantages: AppLeS promotes performance by

- using a scalable **agent-based** approach
- adapting to **dynamic** system conditions
- predicting behavior at **execution time**
- developing **templates** for general application classes

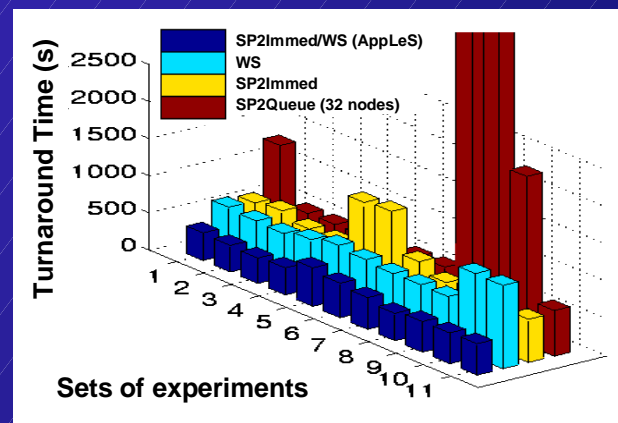
AppLeS Computing Environment



AppLeS Performance with Grid Computing Applications



SARA: Adaptive Server Selection



GTOMO: Adaptive Coallocation Strategy