IC-Scheduling Theory: A New Scheduling Paradigm for Internet-Based Computing

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Abstract

Earlier work has developed the underpinnings of a theory of scheduling computations having intertask dependencies - modeled via dags - for Internet-based computing. The goal of the schedules produced is to render tasks eligible for execution at the maximum possible rate. This goal aims:

- to utilize remote clients' computational resources well, by always having work to allocate to an available client;
- to lessen the likelihood of the "gridlock" that ensues when a computation stalls for lack of eligible tasks.