Enhancing Prediction on Non-dedicated Clusters*

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Abstract. In this paper, we present a scheduling scheme to estimate the turnaround time of parallel jobs on a heterogeneous and non-dedicated cluster or NoW(Network of Workstations). This scheme is based on an analytical prediction model that establishes the processing and communication slowdown of the execution times of the jobs based on the cluster nodes and links powerful and occupancy. Preservation of the local application responsiveness is also a goal.