Grid task scheduling in P2P desktop grids

ABSTRACT

Effective task scheduling is an important matter for the performance of Grid computing. At the same time, researchers are encountering issues and challenges when dealing with Grid Task Scheduling (GTS) because of various factors or constraints that influence GTS. This is due to the fact that there is an assortment of characteristics and types of scheduling in Grids. This paper reviews the GTS problems specifically in the Peer-to-Peer (P2P) Desktop Grids by identifying the factors such as uncertainties, interruptions, and disturbances that have to be considered when designing the scheduling algorithm. The cause and effect of each factor are also enlightened. The factors are then classified according to the most concerned aspects based on the management layers of P2P Desktop Grid architecture proposed earlier in the related study. The findings may provide some significant guide to model more effective GTS mechanisms in P2P Desktop Grids.

Keyword: Computational grid; Desktop grids; Grid task scheduling; P2P network