Trust-aware scheduling for tasks with precedence constraints in heterogeneous distributed computing

ABSTRACT

Demands for reliability in distributed computing systems have become extremely important now a days due to strong requirements imposed by the dynamic behaviour of user and resource communities. With the increasing number of entities in the distributed systems, inadequate information and unsuccessful accessibility have becoming critical factors that impact system performance. We present an adaptive scheduling which attempts to improve system reliability. Specifically, our scheduling approach combines trust-based matching scheme with robust mapping rules to deal with diverse processing requirements and heterogeneous resources. Simulation experiments proved the efficacy of our approach in achieving better system performance and implicitly help to gain reliable and cost-effective computation.