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Analysis on the performance of mobile agents for query retrieval

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Abstract

The factors that affect the performance of mobile agents in retrieving information from the Internet are the number of agents and the total of routing time taken by the participated agents to complete the assigned tasks. Fewer numbers of mobile agents used to execute the tasks will cause lower network traffic and consume less bandwidth, and the total time taken to retrieve the query results can be minimized. In this paper, the performance of mobile agents for query retrieval is analyzed. Specifically, the performance of mobile agent in obtaining a query result from the remote hosts using an extended hierarchical query retrieval (EHQR) approach is proposed. It is based on a hierarchical and a parallel dispatching of mobile agents to the remote servers in order to retrieve the query results. Experimental results show that the proposed approach reduces the number of mobile agents and also improve the total time taken to retrieve the query results compared with other approaches.

Keywords: Mobile agents; Query retrieval; WWW; Databases; Dispatching agents; Performance study