

Message transmission techniques for low traffic P2P services

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Abstract

With the advance of network technology peer-to-peer (P2P) has become a new network application model for state-of-the-art-distributed computing bringing about a lot of research. Message transmission is the most important fundamental operation in the accomplishing of scalable and reliable service in P2P networks. In this paper, different message transmission strategies aimed at reducing the amount of querying and thus increasing resource utilization are presented. The advantages of these techniques are that they are simple, have low complexity and are easy to implement. The experimental results show that the proposed methods were successful in reducing network traffic under different unstructured P2P overlay networks.

The detailed analysis points out the properties and also suggests an improved message transmission mechanism for different P2P environments. Copyright © 2009 John Wiley & Sons, Ltd.

Keyword : peer-to-peer (P2P); message transmission; low traffic; overlay network