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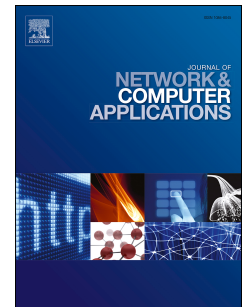
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FriendShare : A Secure and Reliable Framework for File Sharing on Network[☆]

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Abstract

Peer to peer file sharing is an important application used extensively over the Web and is an important software component in managing data for sharing among users. Most of such systems use reputation system to measure the trustworthiness of a user. Reputation in most of such systems is generated by user's feedback only, which can be biased. Further, collusion at-tack, sybil attack and selfish nodes are the other main problems due to open environment of such systems. In this paper, we have proposed a system: FriendShare, to overcome such problems. FriendShare synergistically leverages the concept of "friend of friend" social network. In FriendShare, each node maintains list of friends and transactions will occur through friends. FriendShare includes a reputation system and a weighted graph system. It can also handle collusion, sybil attacks and selfish nodes. FriendShare also includes a proxy server ensuring complete anonymity in the network that enhances the freedom of speech. This system also incorporates a caching system reducing the time for delivery of file. The performance analysis of individual component has been performed. However, the main emphasis of the work is to get better performance for the overall system. Extensive simulation demonstrates the effectiveness of FriendShare.

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