Securing Recommendations in Grouped P2P E-Commerce Trust Model

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Abstract

In dynamic peer to peer (P2P) e-commerce, it is an important and difficult problem to promote online businesses without sacrificing the desired trust to secure transactions. In this paper, we address malicious threats in order to guarantee secrecy and integrity of recommendations exchanged among peers in P2P e-commerce. In addition to trust, secret keys are required to be established between each peer and its neighbors. Further, we propose a key management approach gkeying to generate six types of keys. Our work mainly focuses on key generation for securing recommendations, and ensuring the integrity of recommendations. The proposed approach presented with a security and performance analysis, is more secure and more efficient in terms of communication cost, computation cost, storage cost, and feasibility.

Author keywords:

Peer to peer (P2P),key generation,key management,security,trust