عنوان مقاله:

RTBIMS: Accuracy Enhancement in Iterative Multiplication Strategy for Computing Propagated Trust

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خلاصه مقاله:

Trust Management (TM) systems are frameworks for managing security in decentralized environments. However computing the trust value is a challenge when the source entity has no experience of previous direct interaction with the sink. A popular way to estimate the trust value in this case is trust propagation. It suggests evaluating the trust value between two nodes based on the information received from intermediate nodes between them. As we often use a number between 0 and 1 to represent the trust value, the Iterative Multiplication Strategy (IMS) is usually used to estimate the value of propagated trust. In this paper we introduce RTBIMS, an accuracy-enhanced version of IMS. In our algorithm, we first calculate recommendation trust for each intermediate node based on its trustworthiness in judgments and similarity between its views and the source ones. We then use these values in the multiplication chain. We have examined RTBIMS on a popular trust dataset (Advogato) and the results show that its accuracy in evaluating trust is much higher than the basic IMS.

کلمات کلیدی:

trust, trust propagation, web of trust, trust chain, iterative multiplication strategy (IMS), RTBIMS

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