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Peer-to-Peer环境下多粒度Trust模型构造

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Abstract

Trust is multi-faceted and the peer's needs are different in different situations. A peer may need to consider its trust in a specific domain of another peer's capability or in a combination of multiple domains. Current Peer-to-Peer trust model could not promise the trust computation of different domains. This paper presents a novel Peer-to-Peer multiple-grain trust model and gives a distributed implementation method, which considers the trust computation of different domains. Mathematical analyses and simulations show that, compared to the current trust model, the proposed model is more precise on trust computation of multiple domains and more robust on trust security problems.

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摘要

信任是多方面的,在不同的应用场景中,同一节点在不同领域具有不同的可信度.现有信任模型粒度过于粗糙,不能很好地解决同一Peer节点在不同领域、不同方面的可信度计算问题.据此,提出一种新的Peer-to-Peer环境下的多粒度信任模型,并给出该模型的数值分析和分布式实现方法.分析和仿真结果表明,该模型与已有模型相比,在可信度计算的粒度、模型的安全性等方面有较大的提高.

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