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一种适合分级Ad hoc网络的动态信誉评估模型

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A Feasible Dynamic Reputation Evaluation Model in Hierarchical Ad hoc Networks

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摘要 该文针对分级结构Ad hoc网络的特点和安全需求，提出一种动态信誉评估模型。该模型根据节点的角色和功能划分信誉关系，结合节点之间的关联性建立信誉评价机制，利用相关节点的信誉信息更新各角色节点的信誉。该模型由簇首节点监管全簇信誉，缓解信誉计算收敛慢的问题。仿真结果表明，与传统的信誉评估模相比，该文提出的信誉评估模型能更实时地、准确地反映出分级Ad hoc网络节点的安全状况。

关键词： 分级Ad hoc网络 动态信誉评估 节点角色 关联性

Abstract: In this paper, a dynamic reputation evaluation model is proposed to meet the characteristic and security requirement in hierarchical Ad hoc networks. In this model, the reputation relationship is defined with the consideration of related nodes' roles and function, and the reputation evaluation mechanism is built based on the correlation among nodes to evaluate and update reputation information of nodes with different roles. The cluster reputation is monitored by the cluster head in this model to solve the slow convergence speed issue in traditional reputation calculation. Simulation results show that, compared to traditional reputation evaluation models, the model proposed in this paper can more real-time and accurately reflect the security status in hierarchical Ad hoc networks.

Keywords: Hierarchical Ad hoc networks Dynamic reputation evaluation Node roles Correlation

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