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## 基于动态贝叶斯网络的可信度量模型研究

### Research of trust evaluation model based on dynamic Bayesian network

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中文关键词: [可信网络](#) [可信度量](#) [动态贝叶斯网络](#) [条件概率分布](#)

英文关键词: [trusted network](#) [trust evaluation](#) [dynamic Bayesian network](#) [conditional probabilistic distribution](#)

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中文摘要:

针对可信网络中亟需解决的可信度量模型展开研究,以社会学中的人际关系信任模型为基础,研究网络节点间的可信关系,提出了一种与时间因素关联的基于动态贝叶斯网络的可信度量模型。该模型充分考虑身份认证、网络交互行为对可信度量的影响,引入历史交互证据窗口、时效性因子和惩罚因子,同时给出了直接可信度和间接可信度的聚合方法,提高了模型的动态自适应能力以及计算的灵敏度和准确度,有效地抑制了异常实体的威胁。仿真实验结果表明,与传统的贝叶斯网络模型相比,该模型能够灵敏有效地进行可信度计算,同时具有良好的动态自适应性。

英文摘要:

Trust evaluation model needs to be developed for trusted network. Based on interpersonal trust model in sociology, the trusted relationship between network nodes was researched, and a trust evaluation model based on dynamic bayesian network associating with time factor was proposed. The impact of authentication and network interaction behavior was fully considered, and historical interaction window, timeliness factor and penalty factor were introduced. Also, the polymerization method of the direct trust degree and indirect trust degree was given, and the dynamic adaptive ability of the model was improved as well as the calculation of the sensitivity and accuracy. Furthermore, the threaten of abnormal entity was effectively suppressed. Experimental results show that this model computes the trust degree more sensitively and effectively as well as better dynamic adaptivity compared with the traditional bayesian network model.

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