

网络防火墙内部数据过滤保护算法

彭兆军

(郑州财经学院 网络中心, 河南 郑州 450005)

摘要: 提出一种基于群体信任的网络防火墙内部数据过滤保护算法, 首先把网络防火墙内部数据库模型化为一棵层次树, 网络防火墙内部危险数据获取问题就转化为树的遍历问题. 通过对树中的属性排序, 缩小查询空间. 根据计算树中属性值相关度提高网络防火墙内部危险数据提取的准确度和提取效率. 然后通过计算数据特征, 确定流经网络防火墙的数据信任度, 完成对目标数据的信任评价, 进而实现网络防火墙内部数据过滤保护. 通过仿真实验证明, 所提方法能够有效提高网络防火墙过滤保护的准确性, 提高网络防火墙内部数据过滤保护效率, 具有较强的实用性.

关键词: 网络防火墙; 数据过滤保护; 算法

Network Firewall Internal Data Filtering Protection Algorithm

PENG Zhao-jun

(Network Centre, Zhengzhou Institute of Finance and Economics, Zhengzhou 450005, China)

Abstract: In this paper, an internal data filtering and protection algorithm based on community trust is proposed. Firstly, the internal database of network firewall is modeled as a hierarchical tree, and the problem of dangerous data acquisition in network firewall is transformed into tree traversal problem. By comparing the attribute of the tree, the query space is reduced. The accuracy and efficiency of the extraction of the dangerous data within the network firewall are improved by calculating the correlation of the attribute values. Then, the data trust of the network firewall is determined by calculating the data characteristics. The trust of the target data evaluation, and then to achieve the network firewall internal data filtering protection. The simulation results show that the proposed method can improve the accuracy of network firewall filtering protection effectively, improve the efficiency of filtering and protecting the data within the network firewall, and has strong practicability.

Key words: network firewall; data filtering protection; algorithm

作者简介:

彭兆军 男, (1980-), 硕士, 讲师. 研究方向为网络安全及管理.

E-mail: pengzhaojunjob@aliyun.com.