

虚拟网络下动态路由消息转换研究方法仿真

董振华¹, 张开便¹, 李喜艳¹, 刘佳²

(¹ 郑州成功财经学院 信息工程系, 河南 巩义 451200;

² 华中科技大学 计算机科学与技术学院, 湖北 武汉 430074)

摘要: 虚拟网络下动态路由存在大量的、复杂的、不同格式的消息, 当前动态路由消息转换方法通过提取消息特征实现消息转换, 转换精度低, 为此, 提出一种新的动态路由消息转换方法, 分析了标准粒子群算法和遗传算法, 介绍了虚拟网络下动态路由消息转换的原理, 依据消息转换规则确定动态路由中各标准消息的转换模型, 构建相应的消息转换目标函数, 通过粒子群算法和蚁群算法对消息转换模型的参数值进行修正, 使误差达到最小值, 保证转换前后消息的一致性. 实验结果表明, 所提方法具有很高的转换精度, 且转换前后消息的无关性较低, 转换效率高.

关键词: 虚拟网络; 动态路由; 消息转换

Virtual Network Under Dynamic Routing Message

Transformation Simulation Research Method

DONG Zhen-hua¹, ZHANG Kai-bian¹, LI Xi-yan¹, LIU Jia²

(¹ Department of Computer and Information Engineering, Zhengzhou Chengong University of Finance and Economics, Gongyi 451200, China; ² School of Computer Science and Technology, Huazhong University of Science and Technology, Wuhan 430074, China)

Abstract: Under the virtual network dynamic routing is large, complex, different formats, the current dynamic routing messages transformation method by extracting feature implementation message transformation and conversion accuracy is low, therefore, puts forward a new method of dynamic routing message transformation, analyses the standard particle swarm algorithm and genetic algorithm, this paper introduces the virtual network under the principle of dynamic routing message transformation, to determine the dynamic routing based on message transformation rules of each standard message in the transformation model, builds the corresponding objective function message transformation, by particle swarm optimization (psa) algorithm and ant colony algorithm to modify message transformation model parameter values, make the error minimum value, ensure the consistency of the message before and after the transformation. The experimental results show that the proposed method has a high conversion accuracy, and lower conversion message before and after independence, high conversion efficiency.

Key words: virtual network; dynamic routing; message transformation

作者简介:

董振华 女, (1980-), 硕士, 讲师. 研究方向为数据库、计算机网络技术. E-mail: zhenhuadong1230@163.com.

张开便 女, (1983-), 硕士, 讲师. 研究方向为软件工程、计算机网络技术.

李喜艳 女, (1983-), 硕士, 讲师. 研究方向为信息安全、图像处理.

刘佳 女, (1970-), 工学博士, 副教授. 研究方向为计算机应用.