

网络、通信、安全

基于MZS-DSR的协议性能仿真研究

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收稿日期 2008-5-8 修回日期 2009-2-2 网络版发布日期 2009-5-19 接受日期

摘要 基于Ad hoc网络动态源路由(DSR)协议的特点, 利用最小区域集(MZS)的仿真框架研究Ad hoc网络路由发现和路由维护的过程, 在OPNET网络仿真平台进行实验仿真, 对DSR的性能进行了分析和比较研究。通过对选取总路由流量, 路由平均跳数、平均路由发现时间的实验数据分析发现, 对于基于最小区域集的仿真框架, DSR的路由发现机制并不受节点移动性的影响, 每次源节点获得一条到达相对位置已改变目的节点的新的路由的时间并不受节点的移动性影响而趋于稳定, 可明显减少路由跳数, 增加路由计算效率。

关键词 [动态源路由](#) [Ad hoc网络](#) [OPNET网络](#) [仿真](#)

分类号

Research on performance of MZS-DSR based on OPNET simulator

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Abstract

Take into account some characteristics of Dynamic Source Routing (DSR), make use of the emulational frame based on minimum zone set, research the route discovery mechanism and route maintenance mechanism of Ad hoc network. Using the OPNET network simulator, analyze the performance of DSR under different simulated scenes from aspects as: Total routing traffic, average number of hops per route, average route discovery time etc. From the detailed simulation results and analysis, for the emulational frame based on minimum zone set, the route discovery mechanism of DSR is independent of nodes mobility, every once, the source node acquires a route to a target node which its relative position is alterant, the routing time is steady but not be effected by nodes mobility, the conclusions are obvious helpful for reducing route tip and increasing routing efficiency.

Key words [Dynamic Source Routing \(DSR\)](#) [Ad hoc network](#) [OPNET](#) [simulation](#)

DOI: 10.3778/j.issn.1002-8331.2009.15.027

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