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## A Cluster-Based QoS Multipath Routing Protocol for Large-Scale MANET

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## Abstract

To support QoS routing in MANET (mobile ad hoc networks) is a core issue in the research of MANET. Numerous studies have shown the difficulty for provision of quality-of-service (QoS) guarantee in Mobile Ad hoc networks. This paper proposes a scheme referred to a clusterbased QoS multipath routing protocol (CQMRP) that provides QoS-sensitive routes in a scalable and flexible way in mobile Ad Hoc networks. In the strategy, each local node just only maintains local routing information of other clusters instead of any global ad hoc network states information. It supports multiple QoS constraints. The performance of the protocol is evaluated by using the OPNET simulator and the result shows that this protocol can provide an available approach to QoS multipath routing for mobile Ad Hoc networks.

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摘要

在移动自主网络中,提供服务质量支持是一个核心研究问题.大量研究表明,在移动自主网络中提供服务质量保障具有很大的挑战性.提出一个基 于簇的QoS多路径路由协议(COMRP),通过一种可扩展、灵活的方式为移动自主网络提供服务质量保证.在这个策略中,每个节点只维持局部路由 信息而不是整个网络的全局状态信息.它支持多个服务质量约束.采用OPNET模拟器对协议性能进行了评估,结果表明,这个协议能够为移动自主

网络提供一个可靠的多路径服务质量保证.

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