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SECURE AODV WITH SELF HEALING AND OPTIMIZED ROUTING TECHNIQUE FOR MANETs

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Abstract

An Ad hoc network is a self-organizing, dynamic topology network formed by a group of wireless mobile nodes. Minimal configuration, absence of infrastructure and quick deployment, make ad hoc networks convenient for emergency situations other than military applications. All the nodes are mobile always; any node can enter and leave the network at any time. This causes security problems in MANETs. Security in ad hoc networks therefore has started to receive attention nowadays**.** Several ad hoc network routing protocols (DSR, AODV etc.,) for MANETs have been reported in the literature, but none of them have considered the security problems. In this paper, the security issue in MANETs is carried out using Dual Hash Technique (DHT). The security association between nodes is established, when they are in the vicinity of each other, by exchanging appropriate cryptographic information. DHT is adopted in Ad hoc On-demand Distance Vector (AODV) routing protocol in addition to Self-Healing and Optimized Routing Technique (SHORT) to make the routing, secure for ad hoc networks. While using SHORT, all the neighboring nodes monitor the route and try to optimize it, if and when a better local sub-path is available. The result shows that in a moderately changing network, the proposed technique provides secure routing.

Keywords: Ad hoc, AODV, Security, Dual Hash, SHORT