Abstract

In this paper we study the routing security issues of MANETs, we propose an algorithm to detect malicious nodes based on intelligent water drops algorithm and examine "routing modification attack" problem that can easily be exploited against the MANETs. We also propose a solution for this problem and examine security issues related to proactive routing protocols for MANETs. This could be achieved by adding some extensions to secure routing. These extensions include integrity which means that the message will not change along the route and authentication which means that the sender is the one who introduces himself. This protection is provided by a hash chain and authentication by digital signature which both added to all control massages. We obtained acceptable results depending on the performance of metrics (end-to-end delay and network load). The difference in average of end-to-end delay when using secure protocol is very small and the average of network load is also very small.
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- Wireless Security
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Ad-hoc Network; Routing Security; Routing Attacks; Intelligent Water Drops