



RESEARCH ARTICLE

Wormhole Detection Using Hidden Markov Model Approach

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Abstract— Mobile network is one of most common ad hoc network with lot of problems related to congestion and routing. We are providing one of the solutions to secure the transmission over the network as security aspects play an important role in almost all of the application scenarios. A specific attack called the Wormhole attack disrupts routing protocols by short circuiting the normal flow of routing packets. Such a type of attack is difficult to detect in a network and may severely damages the communication among the nodes. In this proposed approach we will present a handshaking mechanism along with Hidden Markov Model (HMM) to detect the wormhole attack in a network. According to this approach the validity of a node will be identified by performing the authentication mechanism and the communication support will be identified by HMM.

Key Terms: - Mobile ad hoc network; wormhole attack; routing protocols; Hidden Markov Model

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