Abstract

MANETs are a type of wireless networks, typical choice for communication and data sharing. As the application field for MANETs widens so does the need for secure data transmission. Due to limitations posed by wireless and decentralized nature of MANETs the routing protocols proposed for MANETs are vulnerable to different types of attacks. Hence anonymous routing protocols are proposed that provides security and anonymity for secure communications. In this paper we are working on a protocol called E-SHARP which basically secures the data communication between the nodes, where the network is divided into clusters. The problem with underlying protocol SHARP is that it does take in to account the malicious node activity which is done by the nodes within the cluster. The Sharp protocol is improved in this work by adding the concept of helper nodes in the protocol which confirms the data routed internally by nodes is malicious or not by confirming with help of helper node. The proposed techniques evaluated using simulation. Our study shows that it is possible to guarantee a desired level of anonymity with intra and inter cluster data security.
References


Index Terms

Computer Science  Communications
Keywords

RSA, SHARP, E-SHARP, Anonymity, MANETs