Abstract

A Mobile Ad-hoc Network (MANET) is a collection of wireless nodes that can be dynamically set anywhere and anytime without using any pre-existing network infrastructure. MANET can operate without fixed infrastructure and can survive rapid changes in the network topology. The nodes in the network are free to move independently in any direction. The DSR protocol is modified to detect and isolate the selective black hole attack in MANETs. Secure Dynamic Source Routing Protocol (SDSR) is proposed to detect and prevent selective black hole attack. Selective black hole attack is a special kind of black hole attack where malicious nodes drop the data packets selectively. An Intrusion Detection System (IDS) is proposed where the IDS nodes are set in promiscuous mode only when required, to detect the abnormal difference in the number of data packets being forwarded by a node. When any anomaly is detected, the nearby IDS node broadcast the block message, informing all nodes on the network to cooperatively isolate the malicious node from the network. The SDSR is simulated using network simulator (NS2).
Enhanced DSR Protocol for Detection and Exclusion of Selective Black Hole Attack in MANET

- Santhosh kumar and Suveg Moudgil, Detection of selfish node in DSR based MANET using reputation based mechanism, International journal of Research in IT, ISSN 2249-9482.
- Anit kumar, Pardeep Mittal, A comparative study of AODV and DSR routing protocols in Mobile ad-hoc networks, ijarcss, Volume 3, Issue 5, May 2013, ISSN: 2277 128X.

Index Terms

Computer Science
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**Keywords**

Mobile ad hoc network  SDSR  selective black hole attack  IDS