Abstract

A MANET (Mobile Ad-Hoc Network) is a temporary network consisting of wireless mobile nodes having no centralized administration and access point. An efficient and dynamic routing protocol is needed that can adapt to dynamically changing network topology and should be energy efficient and bandwidth efficient. But these protocols are not suitable due to resource constraints. There is an increasing threat of malicious nodes attacks on the Mobile Ad-hoc Networks (MANET). One of these attacks is Black Hole Attack, which grasps all data packets of network. It's an analogy to the black hole in the universe in which things disappear.

In this paper Ad-Hoc On Demand Distance Vector(AODV) and Optimized Link State Routing((OLSR) protocols are analyzed to validate which protocol is more vulnerable to Black hole attack and how much. The impact of Black hole attack on the performance of Manet is evaluated on the basis of throughput and end to end delay and it was observed that AODV is more susceptible to attack than OLSR. The measurements were carried on Simulating in Network Simulation Tool (NS2).
AODV vs. OLSR: An Analytical Approach to Study Black Hole Attack

References


Index Terms

Computer Science  Wireless

Keywords

MANET, Black Hole, Routing Protocols