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Intrusion detection in mobile ad hoc network.

Abstract

Ad Hoc networks do not have an underlying fixed infrastructure. Mobile nodes join on the fly and create a network on their own. Due to the constantly changing network topology and the lack of centralized monitoring or network management functionality, ad hoc networks are vulnerable to number of attacks. Due to the limited physical protection of each node and irregular nature of connectivity security in wireless ad hoc networks is particularly difficult to achieve.

We have simulated two types of attacks. Flooding of the route request packet has been implemented using a profile based intrusion detection system. On the other hand wormhole attack has been implemented using a trust based scheme.

By means of trust based scheme we isolate the malicious node. In the profile based intrusion detection malicious node starts the attack at a particular time and route request packet is flooded into the network which crosses the predefined threshold and attracts most of the traffic in the network. We use ns2 to simulate our scheme and show the performance by means of a figure. These figure have been shown using the XGRAPH tool of ns2