Abstract

Routing in Mobile Ad Hoc Networks (MANETs) is very important because they are infrastructure-less, so the routing protocol in these networks works on each node. If routing protocols do not work properly, the network will stop. In these networks, there is no centralized control or server to control the activities of nodes, so they are more vulnerable to many security risks and attacks such as the black hole attack and the gray hole attack. In this paper, the proposed Defensive AODV protocol (DAODV) is used to defend against these attack using the V-Detector algorithm which is an artificial immune system algorithm. The results show that the proposed DAODV provides much better performance than the normal AODV in the presence of malicious nodes in the network.

References


Index Terms

Computer Science  Algorithms

Keywords

Mobile Ad-hoc networks, AODV, black hole attack, gray hole attack, V-Detector, Artificial Immune Systems.