

عنوان مقاله:

Detection and Prevention of Single and Group Black Hole Attacks to Increasing the Performance in the Mobile Ad Hoc network

محل انتشار:

کنفرانس بین المللی پژوهش در علوم و تکنولوژی (سال: 1394)

تعداد صفحات اصل مقاله: 8

نویسندگان:

Maede Torkian - Department of Computer, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran

Mohammad Reza Khayyambashi - Faculty of Computer Engineering, University of Isfahan, Isfahan, Iran

خلاصه مقاله:

Mobile ad hoc networks are the most common wireless networks. The exchange of information is faces difficulty because of some limitations, including: lack of fixed infrastructure, wireless connectivity and nodes' mobility. The attacks disrupt the network performance and reduce efficiency. Black hole attacks are destructive attacks on the mobile ad hoc network, during which a malicious node draws data packets towards itself by spending more energy in the routing process and then delete them. Although there exist some methods in detecting and preventing single group attacks, and detecting malicious nodes in the routing operation process, they cannot detect the black hole attacks in an efficient manner and many lost packets reveal that they are inconsistent with mobile ad hoc network characteristics. Running studies are necessary in order to prevent black hole attacks. In this proposed method, black holes' attacks are detected by analysis of node's behavior against packets and their response, retransmission of request packet containing the highest sequence number, use of the backup route and the response of the destination.

The results indicate that the lost data packets are reduced and the network performance improved

کلمات کلیدی:

mobile ad hoc network, black hole attacks, safe routing, performance

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/446454>

