Abstract

Wireless network is a growing field of latest technology because of its increased popularities over the rural and urban areas. Such network provides the mobility based service usage and hence removes the location dependencies for the users of mobile devices such as laptops, cell phones, Tablets and PDA's. These networks are categorized on the basis of their infrastructural usage and range of transmissions. Mobile ad-hoc network is one of its types having infrastructure less environment performing short range communications. In this the overall responsibility of communication is shifted from networked components to mobile node itself working as a router. As the facility is increased some relaxation is also made available for malicious users and hence it is more susceptible to network attack due to its open environment and dynamically changing nature. Flooding is used for the most performed network attack aims at degrading the network performance by inserting the several dummy RREQ packets in the network. These packets are large in quantity and hence consume lots of network resources such as, bandwidth and nodes battery power. Over the last few years various approaches is been suggested to overcome flooding related issues. Even after these traditional flooding attacks solutions, there are some problems which remain unsolved like: isolation of fake RREQ from actual packets, maliciousness percentage based on nodes behaviour and previous participation, probability of malicious flooded packet detections. Thus this paper proposes a
CARF-F: Conditional Active RREQ Flooding-Filter based Prevention Scheme for AODV in MANET

novel CARF-F based flooding attack detection and removal mechanism for AODV protocol. At the initial level of analytical results the approach is proving its strong presence in near future.

References

- Jian-Hua Song1, 2, Fan Hong1, Yu Zhang, "Effective Filtering Scheme against RREQ Flooding Attack in Mobile Ad Hoc Networks", in IEEE Computer Society , ISSN:0-7695-2736-1/06, 2006.
- Venkatesan Balakrishnan, Vijay Varadharajan and Udaya Kiran Tupakula, "Fellowship: Defense against Flooding and Packet Drop Attacks in MANET", in INSS Research Group, Department of Computing, Macquarie University, North Ryde, Sydney, NSW Australia 2109
Index Terms

Computer Science  Communications

Keywords

Wireless network  MANET (Mobile Ad-Hoc Network)  AODV  Network Attacks  Flooding Attack  Rate Threshold Limit

CARF-F (Conditional Active RREQ Flooding-Filter).