

A SURVEY:PERFORMANCE ANALYSIS OF BLACK HOLE ATTACK IN MANET

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ABSTRACT:

Mobile ad-hoc network(MANET) is a collection of wireless mobile nodes dynamically forming a temporary network without any standard infrastructure.the network topology changes in MANET.manet cannot prevent itself from the attck.one of the attack is black hole attack.It creates the malicious nodeto get the packet itself.This survey paper says about attack on ad-hoc network using aodv protocol.

KEYWORDS

MANET,AODV RREQ,RREP,RERR,BLACK HOLE ATTACK,OPNET.

1.INTRODUCTION

Mobile ad-hoc network(MANET) is a wireless nodes of connections.it is a decentralised system.Without any centralised access or the base stations the nodes communicate with each other.MANET act itself as a router and at a host at same time.MANET has tha advantage of dynamic nature.its workstations are easy to handle.the limited transmission range and due to this multiple hops are needed.MANET works on TCP/IP structure in order to provide

communication between the work stations.Manet provide efficient functionality of network.

2.AODV ROUTING PROTOCOL

AODV protocol is used to find a special route between source and destination.it has three types of messages,route request(RREQ),route reply(RREP)and route error(RERR),AODV has its capability of both unicast and multicast routing.when the network

needs a connections then it broadcast a request for connections.if the route is not available

3.BLACK HOLE ATTACK

The possible attack in the manet is black hole attack.in the black hole attack a malicious node send the message to the source node tha it has the shortest path to the destination node.if this route is created,malicious node receives the data packet black hole attack is of two types:

3.1 Internal black hole attack

This attack is internally caused.the internal malicious node sits in between the routes of source and destination it make an internal attack in the active data riute element.it has the conducting attack inside of data transmission.this is called internal attack.

3.2 External black hole attack

This type of attack present externally outside of the network it wont access the network traffic in the

network.external attack can be changed to internal attack when it gets control of the malicious node .

4.RELATED WORKS

AI SHURMAN,S-M YOO AND PARK[1] proposed the solutions by suggesting unicasting a ping packet for source to destination and through multiple routes and to choose a soft route based on acknowledge ment received.

AKANSHA SAINI,HARISH KUAR[2]found the problem of black hole attack on aodv and designed a simulation to check the performance.

IRSHAD ULLAH,SHOAIB UR REHMAN[3] analysed the black hole attack on manet using different manet routing protocols and he used the approaches of OLSR and AODV and found it is not effective in DSR,TORA,GRP etc.

AMOLE A.BHOSLE,TUSHAR P.THOSAR AND SNEHAL MEHATRE[4]done the work on black hole and wormhole attack in routing protocol aodv in manet and find that propogation of (RREQ) message can be rectified by watchdog mechanisum.

SURANA K.A,RATHI S,T.B THOSAR T.P AND SNEHAL MEHATRE[5] faced the challenges of how to secure the black hole attack in routing protocol in manet and they used the watch dog mechanism.

E.A MARY ANITA,V.VASU DEVAN[6] developed the prevention in multicast routing protocol for mobile ad hoc network based on demand distance vector using certificate chaining

SHYAMALA RAMACHANDRAN,VALLI SHANMUGAM[7] has the performance comparison of routing attack in manet and he used (LEACH)(PEGASIS)(GMR)(GPS) protocols to avoid the rushing attacks in manet

EKTA BARKHODIA,PARULPREET SINGH,GURLEEN KAUR WALIA[8] has the performance analysis of aodv ,and has the traffic attack in manrt and uses the opnet simulator

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