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RECONSTRUCTION OF PER PACKET ROUTING PATH

M. Deepa[1], M. Lawanya Shri[2], M.B.Benjula Anbu Malar[3], K.Santhi[4] ,G.Priya[5]

[1,2,3,4] *School of Information Technology and Engineering, VIT University, Vellore,*

[5]*School of Computer Science and Engineering, VIT University, Vellore,Tamilnadu, (India)*

ABSTRACT

In our proposed system we discuss about how to resolve node disrupt in the routing path by designing a Dynamic Source Routing (DSR) - based routing mechanism, which is referred to as the cooperative bait detection scheme (CBDS), that integrates the advantages of both proactive and reactive defense architectures. Our CBDS method implements a reverse tracing technique to help in achieving the stated goal. Cooperative bait detection scheme (CBDS), which aims at detecting and preventing malicious nodes launching gray hole(packet drop attack) or collaborative black hole attacks in MANETs(mobile ad hoc network).

I. INTRODUCTION

In paper [1], the protocol proposed adapts quickly to routing changes when host movement is frequent, yet requires little or no overhead during periods in which hosts move less frequently. In paper [2], The MILP-based algorithm provides a significant reduction in computation time compared to existing methods and is computationally tractable for problems of moderate size. In paper[3], It proposes the 2ACK scheme that serves as an add-on technique for routing schemes to detect routing misbehavior and to mitigate their adverse effect The main idea of the 2ACK scheme is to send two-hop acknowledgment packet.

In paper [4], The existing ad hoc routing protocols do not accommodate any security and are highly vulnerable to attacks. The current protocols should not be used in hostile environments unless the applications are especially designed to operate under insecure routing or until protocols with enhanced security are introduced. In paper [5], To survey on routing attacks such as Black hole, Wormhole, Gray hole, Packet Drop attack on various routing protocols like AODV and DSR with their countermeasures.

To identify and discover multiple black hole nodes in MANET.To find a safe routing path from a source code to a destination node avoiding the black hole nodes. Malicious nodes are thereby detected and prevented from participating in the routing operation, using a reverse tracing technique. The effectiveness of various approaches becomes weak when multiple malicious nodes collude together to initiate a collaborative attack, which may result to more devastating damages to the network.

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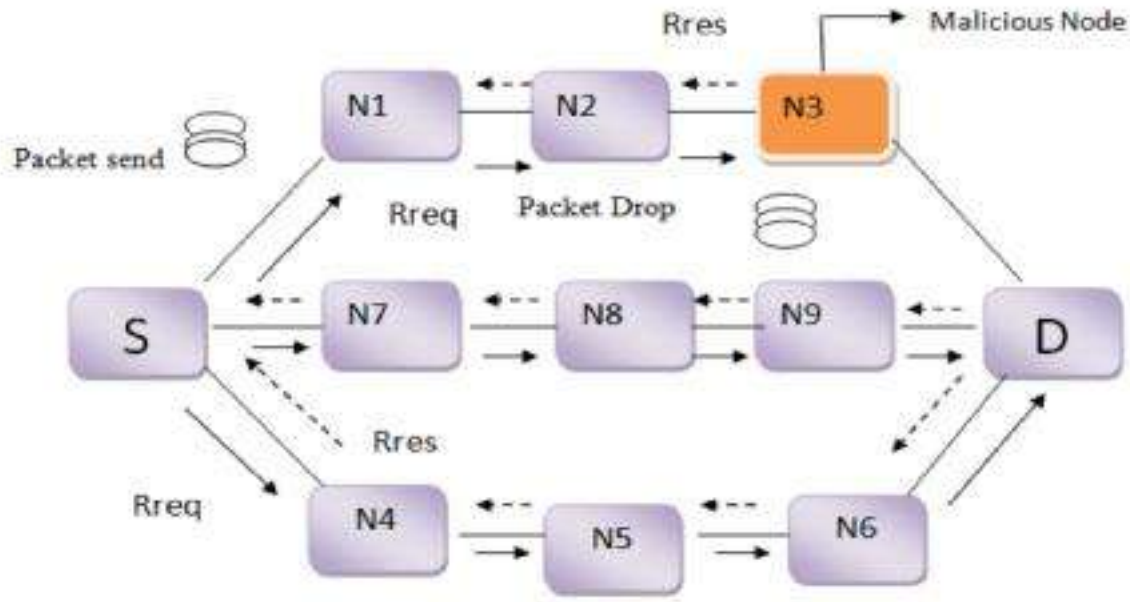
II.SYSTEM ARCHITECTURE



Source node first creates message to be sent from Source to destination. The message will be stored in server. The sending message is converted to packet and sent through node to node. Suppose there is a presence of malicious node in the routing path, packet will be dropped corresponding to at the same time .An alert message is sent to source using reverse tracking technique. The source chooses correct routing path and again sends the message to destination using Route Discovery process. The message is then successfully received at the destination.

III. METHODOLOGY

3. 1. MODULES:

- NODE CREATION
- MESSAGE SENDING SOURCE
- MALICIOUS NODE
- ROUTE DISCOVERY

3.1.1 NODE CREATION

This module is all about node creation. Our project has three paths. One path consists three intermediate nodes. Totally we run nine intermediate nodes at the same time, it automatically creates nodes in server side. Suppose, a sender sends message through one path,the intermediate nodes, due to message drop correspondingly sends the sender warning message . So sender then chooses new path and the message is then sent.

3.1.2 MESSAGE SENDING SOURCE:

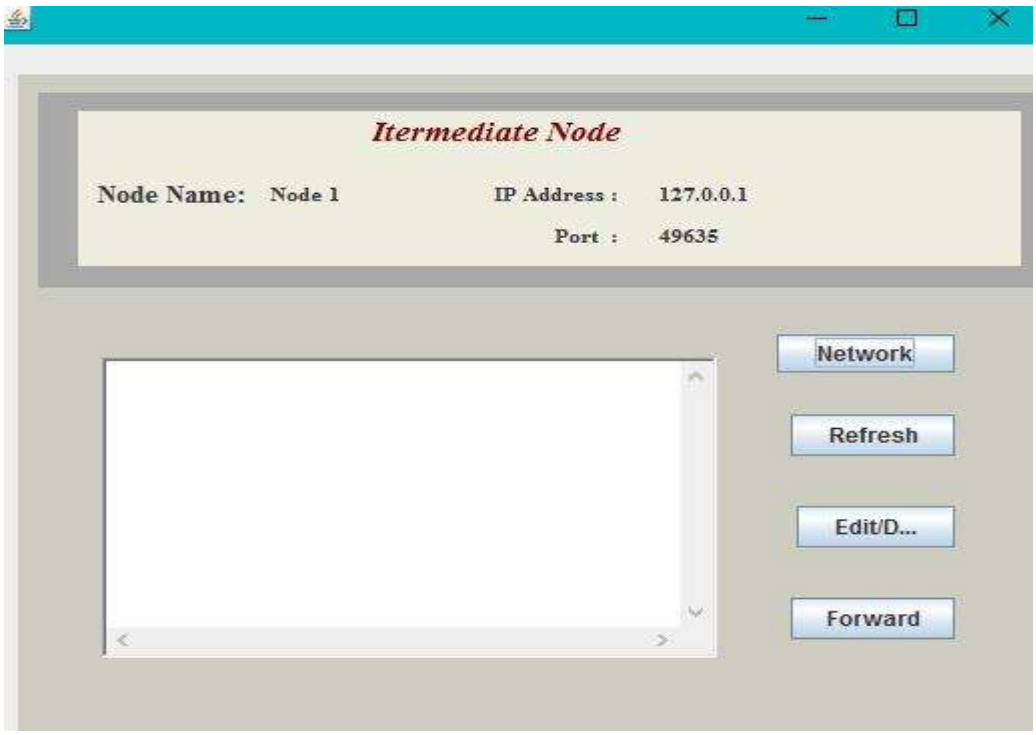
This Module is about message sending from Source to Destination. The source contains the first user, choose the destination and the message to be sent. The messages are stored in Socket i.e.,Server. Message's sending procedure is converting the messages to packets and sending it to destination.

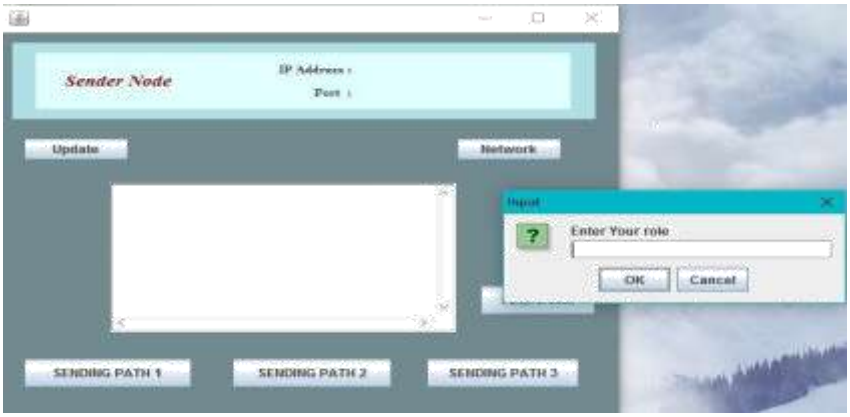
3.1.3 MALICIOUS NODE:

This Module is malicious node. A malicious node is the node under attack while sending message. Presence of Malicious node attempts to launch grayhole or collaborative black hole attacks. In our scheme, the address of an adjacent node is used as bait destination address to bait malicious nodes to send a RREP message, and malicious nodes are detected using a reverse tracing technique.

3.1.4 ROUTE DISCOVERY:

This Module is about discovering the route. In this Module the source can find the route when the data is waiting in buffer without route, by using the route request and route reply. In this scheme, we are also going to use same method with different style, such as creating the fake route request. The source will generate fake request with destination address. Source already knows the information, for RREQ no reply. But incase if there is reply from any node, then that node will be identified as malicious by using the source routing mechanism, Route Maintenance. if route failed means the intermediate node will share the error message. Based on the error message the source node will find another route to destination. With secure route discovery model.





IV. CONCLUSION

In an attempt to find a lasting solution to the security challenges in MANETs, various researchers have proposed different solutions for various security issues in MANETs. Identifying a malicious node in a network has been an occurring challenge. Since there is no particular line of defense, security for MANETs is still a major concern. My approach is based on using cooperative bait detection scheme to detect and prevent malicious nodes attack in MANETs. My proposal merges the advantage of proactive detection that can avoid just using reactive architecture that would suffer malicious node attack in initial stage and the superiority of reactive response that can reduce the waste of resource.

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